

Boys' Life

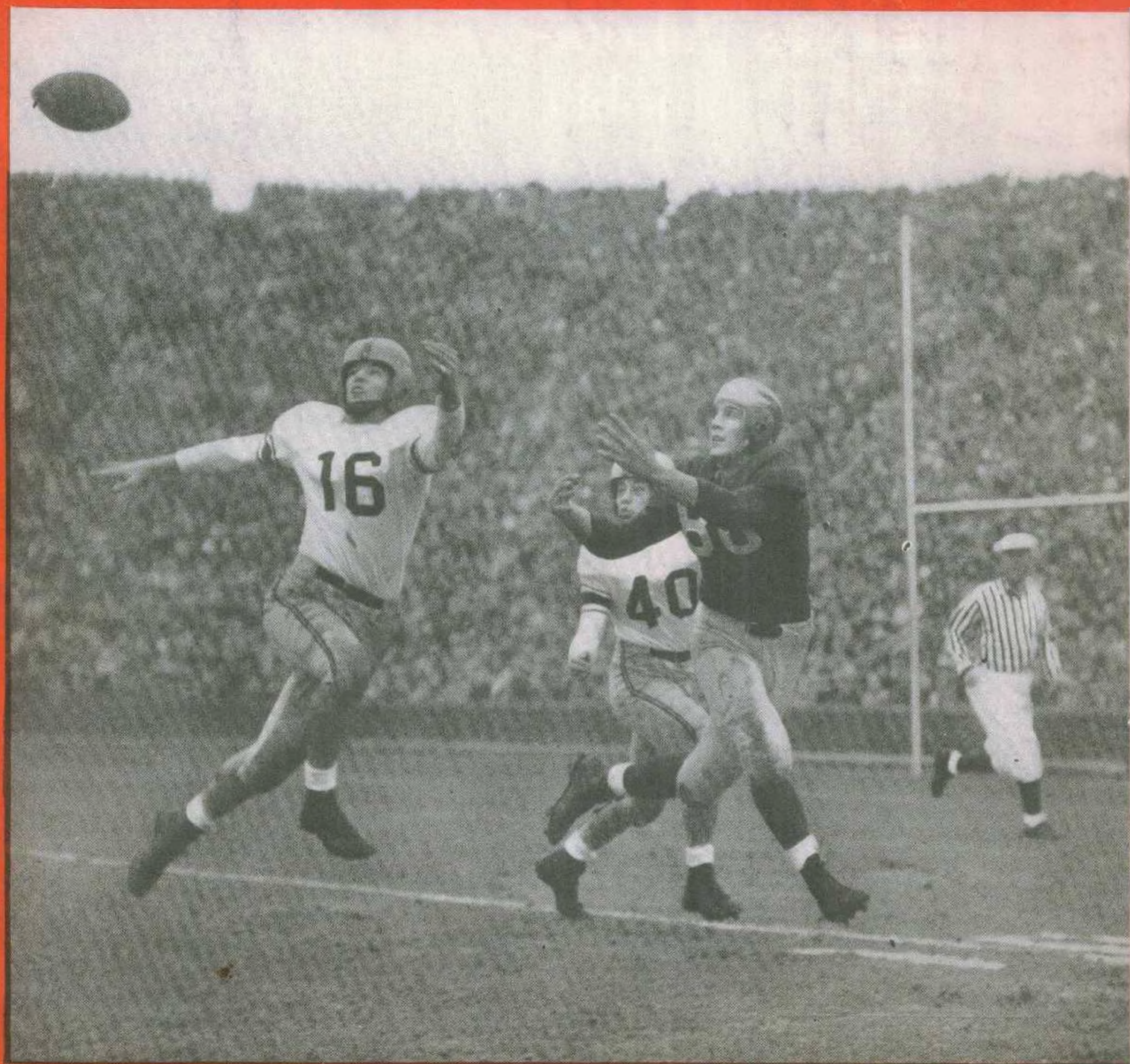
FOOTBALL IS TACKLING
By Yale's Varsity Coach

Plus a New Serial
PLATOON FULLBACK

FOR ALL BOYS

SEPTEMBER 1950

25 CENTS A COPY



The red Lantern

that was put out
by the automobile



It's a foggy night in London town in 1866.

You're groping your way over the slippery cobblestones, when you suddenly stop. By Jove!—there's a red glow ahead, followed by an ominous chugging.

It draws nearer, nearer. Then—you realize what it is. Just a red lantern held by a man walking ahead of one of those amazing new steam-driven highway coaches.

For England has just passed the Red Flag Law. It decrees that these monsters of the road have to be led by a man. During the day, he must wave a red flag—at night, a red lantern.

* * *

That's how it was during the very early days of the coaches, cabs and horseless carriages that finally became the modern automobile.

Many foolish laws were passed, in this country as well as abroad. In many places, men had to lead vehicles and give warning. These vehicles were even banned in some areas. Newspapers and magazines sounded alarms against the "devil wagons."

Matter of fact, the dreamers who worked on those primitive vehicles—and the people who dared to buy them—were not much concerned with safety. They simply wanted something that would run.

Today, of course, your safety is as important to automobile makers as are comfort, performance, sturdiness, and styling.

At General Motors, for example, we have a Safety Engineer and a Safety Committee of engineers from the car divisions. This group continually checks the safety of even minor changes before they go into production.

We also spend a lot of time on such problems as—how far will a car travel after the brakes are applied, under all road conditions? In fact, you may

have seen the GM Braking Charts which are used in many schools—or our films on safety.

Today's traffic laws are very sound, of course. But it's still our job to keep making cars better and better—and better.

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THIS MONTH'S COVER

In America, the four seasons of the year have a lingo peculiarly their own. Each fall, cries of "Block that kick!" and "Hold that line!" reverberate from massive stadiums on college campuses across the country. In such a setting This Month's Cover was taken, as the football giants of the University of Michigan and Navy battled in the huge bowl at Ann Arbor, Michigan.



SINCE PEDRO, our grumbling grub-sack, got nipped by a weasel and countered with a kick that upset the animal kingdom, everyone, from bunnies to mountain lions, has chosen sides. General Pedro deployed his forces in our office when the expected attack came.

"Man the ramparts!" Pedro shouted. The ROBA (Royal Order of Burros of America) picked up inkwells. The BHAA (Honorary Home for Aged Horses) sent up reinforcements armed with gluepots. The SPCW's (Society to Prevent Cruelty to Weasels) BB to PW's (Bat Bombers to Protect Weasels) swept in, covering the BPOO (Benevolent Protective Order of Otter) who were coming in at the windows. The ROBA were holding their own until the SPCW called up the DOS (Deodorized Order of Skunk) as reinforcements.

P-U! Someone erred! Both sides cried sabotage, and retreated to uncontaminated areas. So did your Editors, who withdrew entirely, Pedro covering our retreat with his mark—UU.

Dear Pedro: I just don't like it. We should have more respect.—Francis, *The Talking Mule, Conway, S. C.*

Dear Pedro: It's getting so I can't fly by my saucer any more without seeing burros and weasels engaged in hand to hand combat. I wish they would stop.—Pilot, *Flying Saucer Patrol, Port Angeles, Wash.*

Our readers are in arms, but we beg for peace.—ED.

That Wonderful Scooter

Dear Pedro: I like the plans for the Water Scooter very much. I know something about them as I lived by the Pacific Ocean for ten years. I intend to make one.—Bob Barner, *Sulphur Springs, Texas.*

Dear Pedro: In your July issue you had the plans for a Water Scooter. I think it will be a lot of fun in the water and fun to build too.—John Moorhouse, *Riverton, N. J.*

Dear Pedro: Your Water Scooter looks like fun in the water as well as in the making. I wish more people would put ideas like this in writing as BOYS' LIFE does.—Bob Johnson, *Huntington, L. I., N. Y.*

Dear Pedro: I wish you could continue giving such information on water crafts as the Water Scooter. Out here by the Pacific Ocean every boy enjoys things that can be used on water.—Alfred Carlson, *San Francisco, Calif.*

Thanks for your response on the Water Scooter.—ED.

Re Conservation

Dear Pedro: While reading the July issue of BOYS' LIFE, I noticed Don (Concluded on page 5)

YOUR SUBSCRIPTION STOPS WITH THIS ISSUE!

Hitching Rack

Dear Pedro: Please! Enough of this weasel-burro feud. It is ruining the League of Animals. Something must be done. Not one animal is brave enough to act as a mediator.—Tryguie Lion, *Sec. General, Ashland, Ky.*

Dear Pedro: Now that the ROBA has declared war on the SPCW, I am in trouble. I live in between a group of burros and weasels. After getting a few pin feathers knocked off I tried to arrange a truce. But I just got the stuffin' knocked out of me, so I suggest you cross the burros and weasels and come up with a beasel or a worro.—Wise Old Owl, *Plainfield, Conn.*

Dear Pedro: Every time I turn around I see my Uncle Willie or my Cousin

Elmer in some woman's fur coat. Yet all the credit we get is being called "little stinkers."—One Mad Weasel, *Peoria, Ill.*

Dear Pedro: The ROBA and the SPCW are killing each other, while we stinkers of the DOS (Deodorized Order of the Skunk) can't even get in a scent's worth.—A Mad Stinker, *Jasper, Texas.*

Dear Pedro: Since you are of the horse family and look somewhat like a horse, I have decided in your favor.—Herbert Horse, *El Paso, Texas.*

Dear Pedro: I'm pretty mad about what's been said. The idea of making glue out of burros!—A Mule, *Eq., Bronxville, N. Y.*

Dear Pedro: We burros must stick together. We pledge our support to this noble cause.—Brotherhood of Burros and Mules, *Local 403, Chicago, Ill.*

A CHALLENGE TO EVERY SCOUT . . . CAN YOU

Hit the 100 mark

DURING THE 1950 FALL INSPECTION



Inspection Report

OF UNIFORM AND APPEARANCE
SCOUTS AND EXPLORERS IN TROOPS



years of proud tradition woven into the Scout Uniform. Clad in this Uniform, Scouts have performed thousands of acts of heroism, millions of daily good turns, won countless badges and awards.

of Scouting remained, and as men they went on to serve their nation in times of peace and war. Think for a moment of the more than sixteen million men and boys who have worn the Uniform of Scouting. Think of their achievements in Uniform and in later life when they step into your own

YOUR Official Uniform

It has passed 40 years of rigid inspections . . . always rates 100%.

- No. 504 Field Cap . . . \$1.00
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- No. 661 Khaki Leggings . . . pr. 1.95
- No. 549 Khaki Socks . . . pr. .55
- Neckerchief, 1-color50
- Neckerchief, 2-color55
- Neckerchief Slide10

FOR EXPLORERS IN TROOPS

- No. 665 Explorer Khaki Shirt \$3.00
 - No. 831 Maroon Necktie . . . 1.00
- Other parts same as above.

Inspection Score of

TROOP NO. _____

DISTRICT: _____

OFFICE: _____

PATROL: _____

NOTE: Explorers in Troops have the choice of wearing the Official Forest Green Explorer Uniform or Official Khaki Boy Scout Uniform. However, all Explorers in a Troop must be uniformed and with no mixtures of Khaki and Green Uniform parts.

APPEARANCE: (Allow 6 points for each.) a. Good posture, b. Clean face, c. Hair combed, d. Teeth clean, e. Clean fingernails.

f. Official Cap with embroidered Badge or Official Hat. No metal on Cap or Hat. Worn tilted on the right side of head and down in two-fingers' width above right eyebrow.

g. and SLIDE: Folded smartly and snugly around the neck. Official or a hand-made slide. Ends to be tied in a slip or over-hand knot. Neck should be right side up and centered. Camp Emblems and Neckerchief.

h. "Boy Scouts of America" strip over right pocket. All buttons in Troops wear "Explorers B.S.A." strip instead of "Boy

i. with B.S.A. Insignia on metal buckle. Worn through all equipment.

Fall Inspection and Round-Up Set For October 1st thru 15th

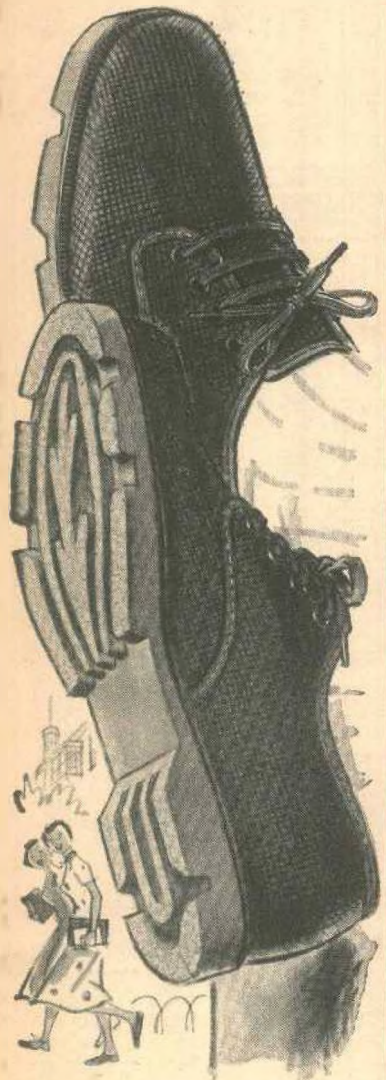
Remember the last Inspection? All the excitement and thrills that led up to the big event, and then the grand climax—a perfect score! Man, that was really a time to remember . . . you ranking right up there with the best. The very best.

As before, you'll get your own personal score card well in advance of the Inspection. That will give you lots of time to check your Uniform . . . replacing needed parts, seeing that all Insignia and Badges are in their proper places. With a little preparation you can look as sharp as any Scout in the land. Then the payoff. On Inspection night you hit the 100 mark—a great personal triumph for Y-O-U. But it goes further than that. Your entire Unit and your Leader share in this proud moment. You have proved to them that in the toughest competition you can be depended upon to come through . . . that you won't let your buddies down in the clutch.

There's no time to lose, though, if you are anxious to be a high scorer at the Inspection. Ask your Leader for your Inspection score card and start getting ready at once. Needed Uniform parts can be obtained at your Local Scout Distributor, Badges of Rank at your nearby Council office. Remember, it's not too easy being a 100 point man. It takes a real effort—and a real Scout. What's your score, buddy?

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The Hitching Rack

(Concluded from page 3)

Hughes' letter. I think he is perfectly justified in writing about our citizens' destructive actions. I think this can be overcome. At least, BOYS' LIFE readers can become more conservation conscious. Here's my suggestion.
 BOYS' LIFE should publish a series of conservation deeds. Each act should count so many points. At the end of a brief period of time, each reader should send to BOYS' LIFE a list of his actions and the number of points achieved. The winner may then have his picture in the following issue. Perhaps a medal could be awarded. But I think the honor is worth it, don't you?
 —Bill Perry, Jr., Scanton, Pa.
 Send us your opinions.—ED.

Now That's Hiking
Dear Pedro: As a former Scout, now with the Army in Japan, I thought you might be interested in this story. Japanese boys are doing their best to learn American Scouting. One Troop of Japanese Scouts recently received the "Handbook for Boys" and set about translating it. In short order they were convinced American Scouts are supermen. It seems the Japanese Scouts were starting their hikes at six p.m., hiking until six a.m. and then reporting to school or work. In their translation of the Handbook, they had changed "over-night hike" to read "all-night hike."—Former Scout.



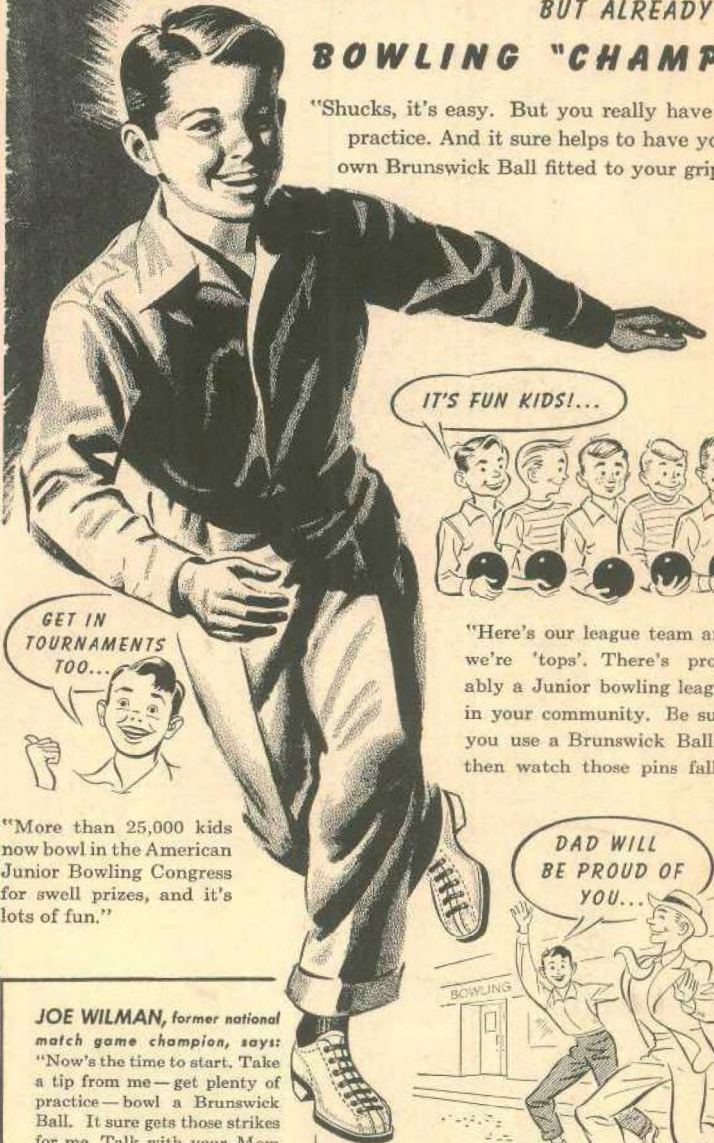
Of Sports And Cooks
Dear Pedro: I would like to thank you and Dean Cromwell very much for your article How to Sprint. The article was one which I could especially use as I am trying to pass my Athletics Merit Badge and needed the advice and training suggestions so well given. That kind of article really makes me appreciate my subscription.
 Incidentally, Pedro, the various short articles on cooking remind me of something I have long wanted, and that is a good complete book of outdoor cookery with all sorts of recipes, methods of preparation, menu suggestions, etc.
 —Will Haworth, Houston, Texas.

Dear Pedro: I'm interested in more tips for cooking and hike menus. I am sure other fellows would be too.—Owen Black, Jr., Muskogee, Okla.
 What's Cookin' in the Hobby Corner is a good lead for cooks, and see also Your Book Scout in this issue. For the camper who's backpacking but still wants good elbow, order the pamphlet *Menus for an 8 Day Wilderness Hike*, announced in this month's feature Featherweight Chow.—ED.

CHANGE OF ADDRESS
 Please send any change of address direct to BOYS' LIFE, 2 Park Ave., New York 16, N. Y., at the earliest possible moment, preferably 6 weeks in advance. Be sure to include the old as well as the new address and the subscriber's name in full.

ONLY ELEVEN!

BUT ALREADY A BOWLING "CHAMP"



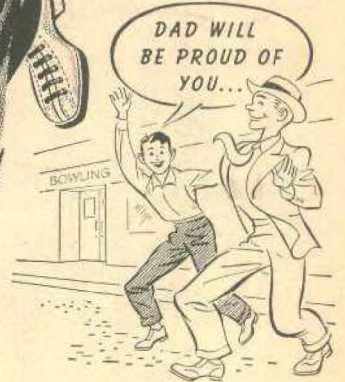
"Shucks, it's easy. But you really have to practice. And it sure helps to have your own Brunswick Ball fitted to your grip."



"Here's our league team and we're 'tops'. There's probably a Junior bowling league in your community. Be sure you use a Brunswick Ball—then watch those pins fall."



"More than 25,000 kids now bowl in the American Junior Bowling Congress for swell prizes, and it's lots of fun."



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JOE WILMAN, former national match game champion, says: "Now's the time to start. Take a tip from me—get plenty of practice—bowl a Brunswick Ball. It sure gets those strikes for me. Talk with your Mom and Dad, ask at school, or at your nearest bowling lanes about this great Junior Bowling Program."



Send today for FREE booklet "How to Bowl". Tells how 'champs' get those high scores. C'mon, let's go!
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BOWL Brunswick
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 Dept. BL, 623 South Wabash Ave., Chicago 5, Ill.
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FORD'S GET-AWAY IS TOPS IN TRAFFIC, TED

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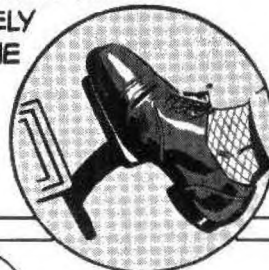


"FINGER-TIP" STEERING MAKES IT EASY TO HANDLE, TOO!

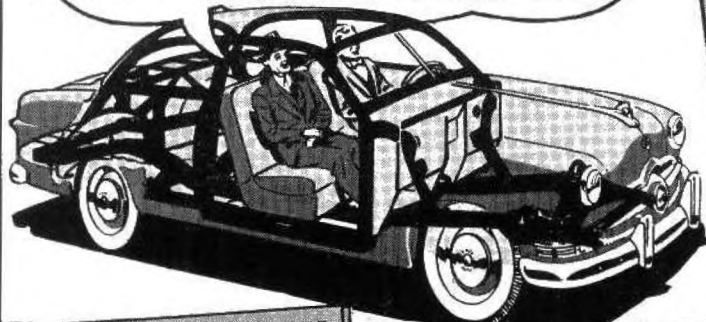
AND IT'S SO QUIET!

AL: QUIET IS RIGHT! NEW SUPER-FITTED PISTONS, A NEW HUSHED TIMINGS GEAR AND THE NEW SILENT-SPIN FAN LET IT WHISPER WHILE IT WORKS.

TED: WHAT BRAKES! YOU BARELY PRESS THE PEDAL!



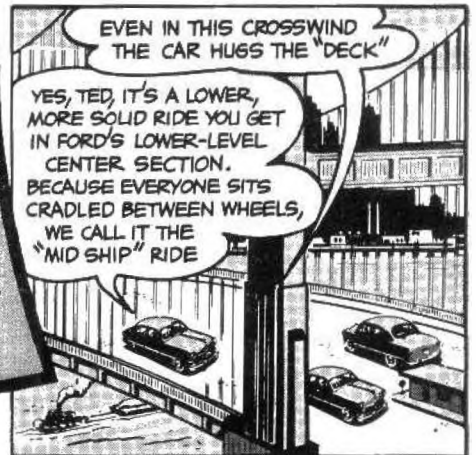
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Platoon Fullback

By JACK PAULSON

Clip Bell took a dim view of the rah-rah spirit and Coach Mann suspected he was really dogging his job

PART 1 OF A 2-PART SPORTS SERIAL

HERBERT "CLIP" BELL was the only veteran regular left from Midstate's great gridiron machine of last year. And as he sat slouched head down on the bench in the varsity dressing room, he was the only member of this year's squad who was not giving his entire attention to the stocky, pleasant-faced man in sweat shirt and baseball pants who stood in the center of the group.

Clip Bell was uneasy. A little inner voice kept nagging him as he half-listened to Coach Mann, new Midstate football mentor.

"We're at the stage where a scrimmage is indicated," Coach Mann said. His tone was mild, easy in tempo, almost slow. "We are entering the stage of workouts where different personalities and degrees of abilities must be fused into a team. Scrimmage is the time-honored way to do the job."

Clip scowled. Talk, he thought impatiently. Corny talk. Why doesn't he knock off the high-sounding oratory and get at the fusing then?

And why don't you knock off the griping? The little voice nagged. Give him a chance. Just because he's different from the driving, tough-talking coaches you've known doesn't mean that he doesn't know his business.

"Football is a great game," the coach went on. "But it has to be more than that. A fellow has to get some fun out of it and it

He broke through by the drive of his high-kneed stride.



ILLUSTRATED BY BOB FINK



The captain staggered backward over a bench.

has to build him. If football doesn't do something toward making a player a better all-around man—doesn't give him a sense of satisfying fun—then he's better off not playing football . . ."

Nuts Clip thought. Why don't we get out on the field and get at it? Does the guy think he can make a football team with just gab?

" . . . Losing practically a veteran team, through circumstances over which we had no control, has left us in a tough spot." Coach Mann slowed even more the tempo of his words. "But honest effort and spirit can do things for a football team. Work and spirit and rest for the game. Now, I know that all of you have the Midstate spirit. So . . ."

Brother! Clip almost exploded the word aloud. How corny can you get? The Midstate spirit! Would the gang we had last year get a boot out of that line! How corny can you get?

His dark eyes held a cynical amusement. His stubby black hair seemed to bristle in derision and Clip was abruptly thinking of the gang of hardboiled football players that had been his teammates a year ago. Kozerki and Janes and the others, who had made Midstate a Conference leader with their tough, hard hitting power-house offense. What did it matter about their motives?

THEY HAD COLLEGE and football and the trappings figured. Like Kozerki had said: The fancy-pants rah-rah boys look down on a man because he's smart enough to grab a seat on the gravy train. I'm getting law training that I could never have afforded except for football and I'm not unappreciative. But you have to be a realist. You have to look out for Number One all of the time. The Joe College boys wave the pennants and go hysterical over dear old Alma Mater's

mighty teams, but they tolerate fellows like us without every really accepting us. You have to keep the *status quo*."

Well, Kozerki had told Clip Bell nothing that he did not already know. The *status quo* with him had always been a contempt for the college snobs. A guy could not grow up in a college town and see the way the campus hot-shots looked down their noses at a fellow because he happened to be from the "wrong side of the tracks" and not feel a contempt for them.

Clip shifted his weight restlessly on the locker room bench. The drone of Coach Mann's slow speech somehow added to the irritation that had been with him since the start of football practice. It was the difference in the squad with Kozerki and Janes and the others gone that was what made him so restless. But the nagging little voice inside Clip needed at this thought.

WELL, WHY DIDN'T you go with them? A fellow ought to be honest with himself. Why don't you confess that most of the contempt you built up for college guys was a sour grapes thing when you were a kid from the wrong side of the tracks and couldn't see any chance of ever being a college man yourself? Why did you use your GI Bill benefits to enter Midstate after you got out of the Navy? Why don't you admit that you're just too blamed stubborn to break down and be a regular guy like you really want to and absorb the school spirit and—

Oh, nuts! That's silly! Clip jerked his attention back to the locker room just in time to hear Coach Mann finish his remarks.

" . . . That should do it," the coach said. "Everybody be sure he wears full equipment out there today."

So the fight-talk oratory was over. Now they'd get out on the field and everybody would just have a swell time with satisfying zest and the Midstate spirit.

"I just want to add a few words to the things Coach said."

Clip looked quickly at the slender player who stood erect facing the squad. Captain Tod Haney's young face was very serious. Now what! Clip stared at the slender captain curiously.

"I want to assure Coach that we're with him, one hundred percent," Haney said. "Midstate is in a tough spot, playing out a schedule that was made before things changed and Midstate quit being a football factory. We—"

HANEY FLASHED a glance at Clip. The captain's fair, boyish features flushed pink.

"Well, anyway," he said, "Everybody who stayed on after the new Presy cut off subsidized players and fired the high-powered coaching staff—well, it's a cinch that we all have the Midstate spirit. Let's go, gang!"

The room was suddenly filled with chatter. Clip felt a quickening something deep inside and the chatter and scuffing of football cleats on concrete was warming and good. Then suddenly the warmth was gone and a scowl wrinkled his square-cut face.

Nuts. Haney didn't have to pull any punches. Clip Bell knew the score. The dickens with Haney and all the rest of the fancy-pants Joe Collegers. Clip Bell could have gone with Kozerki and Janes when they moved out. They had done all right at Seaboard Tech. And his GI benefits were good at any school. Midstate spirit. Bunk! He had stayed at Midstate for just one reason: it figured to be the best deal for Clip Bell.

Yan-u-n-h! The little inner voice jeered. You put up a hardboiled front, don't you? You really stayed because you wanted to—

Oh, stow that hidge. This patty-cake stuff was the tipoff. Midstate was in for a lousy season. But they still played a name-team schedule. They would get plenty of space on sport sheets. And on sportcaster's air programs. A good man would stand out that much more prominently on a crummy team. There was the reason that Clip Bell had stayed on at Midstate.

COACH MANN BLEW his whistle after a few minutes of loosening up exercises.

"We'll try out the plays you've been given," he said. "Nothing savage, please, but let's make it a real scrimmage. Haney at quarterback, Timmons at right half, Cole at left half, Bell at fullback for the varsity. We're operating from a basic single wing, but Tod will run some plays off a modified T formation just to keep the defense guessing. Shake it up, now, everybody."

Clip Bell crouched in the fullback spot. One thing, Mann had sense enough to stick to the single wingback system. The fullback in the single wing is just about the key spot and Clip Bell would have opportunity to boost Clip Bell. He took the snapback direct from center, half spun, laked a handoff to the wingback slashing past. He completed the spin and drove for the hole up the middle.

Powerful legs churned and his cleats bit into the turf. He drove full stride into the slit of daylight in the scrub line, burst through. He slanted away from the lunge of a line backer as he jabbed out a stiff arm and used the backer-up as a fulcrum for the lever of his pivot.

He drove for twelve yards before tacklers washed the legs from under him.

"The way to gol . . . way to drive! . . . let's sock it to 'em, gang! . . ."

Chattering pepper talk in the huddle. Hands slapping Clip on the back. Clip grunted. Sure, he thought. We're all having fun! One play gains a little ground against the scrubs—and we're practically National Champs!

THE SCRIMMAGE WENT ON. Tod Haney ran all the plays that the varsity had been given. The slender captain had been understudy to a quarterback who had won All America rating last year. He demonstrated now that he had absorbed a lot of know-how from the star. He ran the team with authority. For a patty-cake guy full of rah-rah guff, Clip thought, he might turn out not so bad.

It was a very satisfactory scrimmage—for thirty minutes. Then Coach Mann made some changes in players and things began to have a sour tinge. One of the changes shifted Clip Bell to the fullback position in a defensive unit when possession of the ball was given to the second team.

Clip eyed the coach and it seemed for a little space of time that the fullback star was going to say something. Then he shrugged his wide shoulders slightly and took up the line backing spot.

A ballcarrier knifed through a hole off-tackle. The play came through the side of the line that Clip backed up—and it rolled over the half-hearted try that Clip made to nail the ballcarrier.

Two plays later the same scrub back ripped into the same hole. Clip did not even reach him for a half-hearted tackle. The second team back went for an eighteen yard gain.

Coach Mann eyed Clip sharply, as the teams lined up. Clip stared right back. The guy might as well learn (*To page 42*)

Undersea Hunters

In the weird depths of shark-filled waters off the Bahamas, men stalk fish with high-powered underwater guns

By **BOB JONES**

THE BAHAMIAN sun is a hot sun. You take it easy the first few days. Your hide needs hardening up before it can take that fierce baking from sunup to sundown. Partly it's the direct rays of the sun reflecting upward from the white sands covering the shallow reefs. The clear, blue water is clean like the air. The hot light penetrates both with no interruption from dust or haze. For three days you take it easy.

Then one morning you hoist sail on the little sloop just as the dawn breeze begins to stir the palm leaves ashore. There's a little shallow reef to the lee of Rose Cay where you drop anchor. Down below, dark formations of brain coral outline the reef; and you know this place is good for a practice swim underwater. Turtle says it is too, but your own instinct has already made you feel good about it.

There's a lot to do. Your equipment needs going over. After your early morning hour of sailing out to the reef, the plunge over the side and a look or two at the dark edges of the coral through the glass bucket, there's breakfast to fix and get out of the way. And then you're ready to break out the long wooden box that holds the spears. They're five feet long, three-eighths inch thick round shafts of stainless steel. The tips have been ground to a point flat on three sides and an inch long. There's a double barb that has a pin-shaft connecting it with the spear. It snugs back over the spear shaft. When the point of the spear has driven through the fish, the barbs will spread out, keeping the fish on the spear. These points must be kept sharp with a file. They get bent over at the tip-end from banging into the coral when you miss one.

Turtle says there's only one kind of mask that's good for this type of work. It's round with flexible rubber sides that will fit the contours of your face when you put it on. Roy and Guy and you pass the masks around until each has one that fits his face. The swim-fins circulate next. Turtle calls them "duckfeet." They'll drive you through the water, leaving your hands and arms free to use the spear. They'll drive you down to twenty feet in a few seconds, saving your wind for what's coming later. You must find a pair that fits snugly on your feet.

THE GLASS-BOTTOM bucket needs wax around the edges where the round glass plate sets into the wooden staves. You've taken especially good care of this bucket—kept it out of the hot sun when not in use—kept the wooden staves from drying up by

coating them with hard wax. And it doesn't leak a drop. So when you're right over a place where the large fish are swimming twenty or so feet down below, you can punch a hole in the foggy surface of the water to see what's going on down there, clear as a bell. You'll drop your anchor gently into the water until it's wedged in the coral. And you'll slip noiselessly over the side with your mask in place over your eyes and nose: deep breath and your "duckfeet" will drive you down to the fish. If you see him right away, you go right up to him within two feet, drawing back the sling on your spear. The

spot to aim for, if you have a clear view of it, is right behind the gill and a bit higher than center. The fish can't tear away then. It's bony there and the barbs will hold fast without tearing. You must also be in position: not shooting down or up at the fish, but rather straight at him side on so the spear sticks up at a forty-five degree angle. When the spear strikes, the flatness of the fish makes a resistant surface for the spear to drive against.

You feel a strange exhilaration as you realize you are battling the fish in his own element just as another fish (To page 36)



A gas model gun using a CO₂ charge



Too large for the dinghy, this 185 pound seabass—speared by Roy and Turtle, had to be towed ashore.



the Bus Boy and the Criminals

Tommy's keen observation helped to crack this famous true detective case

By ALAN HYND

TOMMY ADAMS, WHO lived with his parents in the Greenwich Village district of New York, celebrated his fifteenth birthday by getting a job as a part-time bus boy in a French restaurant near his home. Tommy's duties began at five-thirty in the afternoon, when he distributed the napkins, glasses, and silverware to the tables in the establishment, and carried through dinner, when he served rolls and butter and filled the water glasses of the patrons. He worked Monday through Saturday, the restaurant being closed Sundays.

Tommy was a particularly observant boy. His hobby was reading character. He used to amuse himself by trying to figure out what this or that patron did for a living. Sometimes he learned their actual professions, especially the steady customers, and it often turned out that he had guessed correctly. He was encouraged to pursue his hobby of character reading further.

Late in the winter of the year that Tommy took the job there came to the restaurant a stocky, middle-aged man with furtive manner and darting, shoe-button eyes who struck Tommy as being in a different line than any of the other diners. Tommy couldn't quite figure the man out. The stranger became a steady patron. The more Tommy studied him, the more the man disturbed him. At length the bus boy had the answer—at least an answer that satisfied him. The man, who spoke English with a decided French accent, was a criminal. Tommy had no proof of his suspicion; he knew in his bones, however, that he was right.

AS THE WEEKS PASSED, and Tommy's suspect continued to frequent the restaurant, he began to have companions. The companions, who seemed also to be French, called the suspect Gabrielle. By April, some two months after he had first appeared, the man called Gabrielle habitually occupied a big round table in the rear of the place where he and his companions could eat and talk in privacy. Gabrielle had four companions in all, and Tommy was convinced that they, too, were criminals. One had a scar on his face,

another couldn't look Tommy in the eye when Tommy filled his water glass, and the entire group talked in low tones or not at all when Tommy approached their table to serve them.

One particular Saturday night in April, Tommy sensed an air of tenseness and expectancy among the group at the big round table in the rear. It was as if Gabrielle and his four companions were up to something. When Tommy went home that night, he couldn't get the five men out of his mind. The next day he found his mind still wandering to them. What had they been up to?

Monday morning at breakfast, Tommy's father was reading the morning paper. "Here's a terrible thing happened yesterday," he commented. "Five masked men locked a millionaire's whole household in a vault and got away with two hundred thousand dollars worth of jewelry."

"What a horrible thing to do—lock people in a vault," said Mrs. Adams. "Did the family get out all right?"

"Yes, but no thanks to the robbers. They were left there to die, but one of the servants in the vault used a penknife as a screwdriver to loosen the screws that held the vault lock to the inside of the door. Then he pushed it out and reached through and turned the outside handle of the vault."

TOMMY READ THE account of the crime when his father had finished with the paper. He filled himself in on additional details. The victims of the crime had been Albert Shattuck, elderly retired financier and philanthropist, his wife, and several servants. The hooded men, waving guns, had descended on the Shattuck home—a three-story mansion on Washington Square North—during the quiet of Sunday afternoon. None of the intruders had spoken; they had used threatening gestures rather than words to convey their commands. They had herded everybody down to the cellar, forced them into a huge vault, slammed and locked the door, and left them to succumb. It had taken the victims more than three hours to get out; another forty-five minutes and they would all have died. The

New York Police called the crime the most heartless on record.

Tommy put the paper down and stared out a window with unseeing eyes. The Shattuck mansion was but a few minutes' walk from the French restaurant where the man called Gabrielle and his four companions had seemed so tense the night before the crime. Tommy was certain—just as certain as he was that he would be late for school if he didn't get going—that the five men he had noticed in the restaurant had committed the most heartless of crimes.

"Dad," he said, "I think I know who engineered that robbery." His father looked incredulous. But incredulity gave way to intense interest and sober belief as he listened to his son's earnest, alarming story. "You could be right, Tommy," said Mr. Adams. "At least it's my duty as a citizen to report your story to the police."

THE POLICE WERE immediately intrigued. They felt that Tommy had put them on the right trail when, after keeping the restaurant under surveillance for several days, they saw no sign of the man called Gabrielle and his four companions. It seemed obvious by now that the quintet had met in the restaurant merely to perfect plans for the crime, then had gone into hiding or fled to distant points once the outrage had been perpetrated.

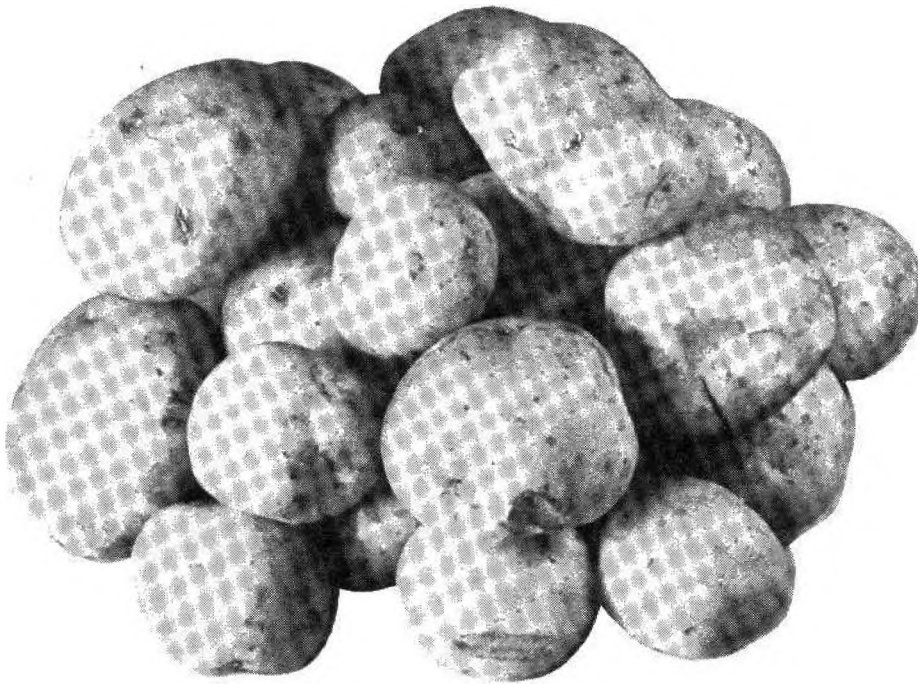
Tommy spent many hours helping the detectives. He described the man called Gabrielle in great detail, even to the fact that he had a slight bald spot, about the size of a quarter, on the back of his head. There was no doubt in the boy's mind that Gabrielle and his companions had all been French. "How can you be so sure, Tommy?" asked a detective.

Tommy shrugged. "I just know a French accent when I hear one. I suppose I got used to French accents in the restaurant." The police incorporated Tommy's information into a long cable to the Paris Police. The latter were asked particularly to look through their files for a criminal whose first name was Gabrielle and whose appearance answered Tommy's description of the suspected bandit leader.

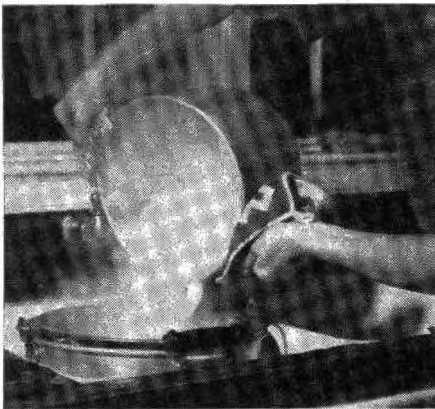
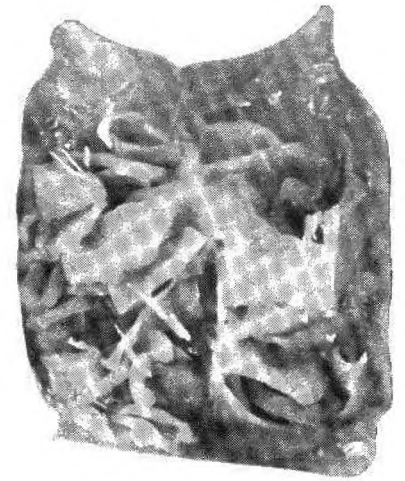
Meantime, the police sent (To page 40)

ILLUSTRATED BY CAROL JOHNSON





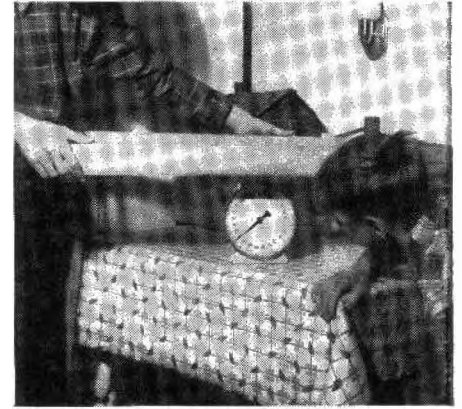
8 lbs. of spuds dehydrated weighs but 1 lb. 2 oz.



We set up a production line, taking turns washing and peeling. Peeled spuds were placed in pan of water containing a teaspoon of salt to prevent them turning black. Using clean sharp knives we made every slice an eighth of an inch in thickness. Next was five minutes of pre-cooking in water that was just under the boiling point.



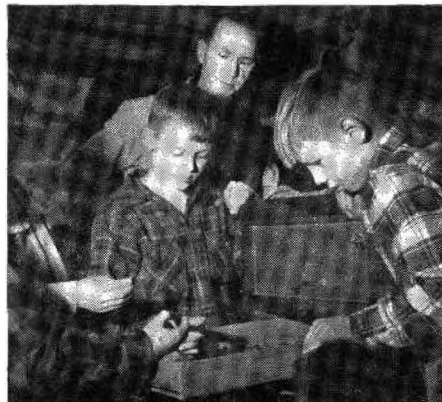
Several hands were needed to keep production rolling when we spread the slices of potatoes out on the "drying" trays. The reason for an even thickness of slices is apparent in this step. Also, all slices must be spread so that none overlap. To be really efficient the rule to follow is 1.2 lbs. of slices of potatoes to the square foot.



To determine the weight of spuds we needed in each tray we first measured the tray, did some figuring, and arrived at square foot measurement. This figure was multiplied by 1.2 lbs. of spuds per square foot. We weighed the tray empty. After filling it with spuds, we weighed the tray again, subtracting the original weight.



Next we checked the temperature of the drier. About 150 degrees Fahrenheit is correct. We used our Scoutmaster's egg incubator. It had five trays made of $\frac{1}{2}$ " wire mesh, electric heating coil, and circulating fan. A regular kitchen oven will work fine too. Just keep a careful check on the oven temperatures at all times.

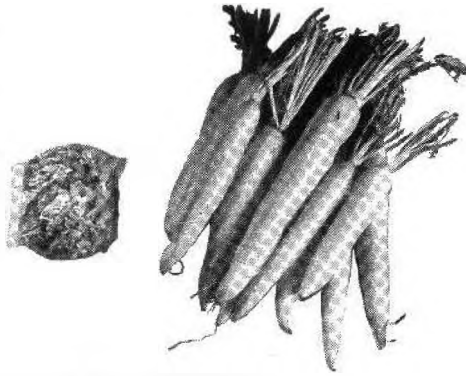


If you use an oven leave the door slightly ajar to keep the air circulating. But, be sure the temperature stays below 150° F or you'll have baked instead of dehydrated spuds. After 24 hours in the drier we packed the dehydrated potatoes in heat-sealing cellophane bags. This takes fast work—from the drier into the bags.



It's important not to let the potatoes lie around, once they are dehydrated, for they'll sop up water like a sponge. We used a warm iron to seal the bags. If iron is too hot it'll burn the cellophane. We weighed the finished product, and believe it or not, our dehydrated spuds were six times lighter than when raw.

Smart campers travel light. Litepac gear solves the weight in equipment, while dehydration eliminates all heavy, bulky grub



Carrots—before and after dehydration.



Carrots—wash, scrub, and slice in cold water. Blanch in live-steam 4 to 8 minutes, dehydrate.

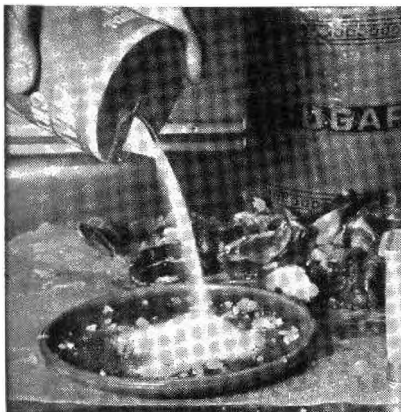
Featherweight Chow

IT DOESN'T MAKE sense to have swell Litepac camping equipment and then break your back lugging heavy foodstuffs on your hikes. At least, that was the conclusion of Troop 7, Weston, Connecticut, who recently toted a "young grocery store" on an overnight trip. They groused about the weight—but of course Troop 7 likes to eat.

Then someone got smart. He investigated dehydrated foods, and learned that with the water content removed from their hike-food, their TOTAL PACK WEIGHT would have been cut in half. The light weight of such chow, plus its good taste, was why old frontiersmen used dehydrated foods. Also, dehydrated foods will keep longer without spoiling. Those frontiersmen were no dopes.

Nor is there any reason for you to be a dope and break your back lugging heavy foodstuffs on your next hike. Dehydrate your own foods, as Troop 7 did, or purchase those you need. Dehydration charts appear on page 33, and are suitable for meats, vegetables, and fruit. For special dehydrated food menus write to BOYS' LIFE, 2 Park Avenue, New York 16, N. Y., for our 8 Day Wilderness Hike Menu, containing complete daily menus and recipes for preparation. Send five cents in stamps or coins to cover handling charges.

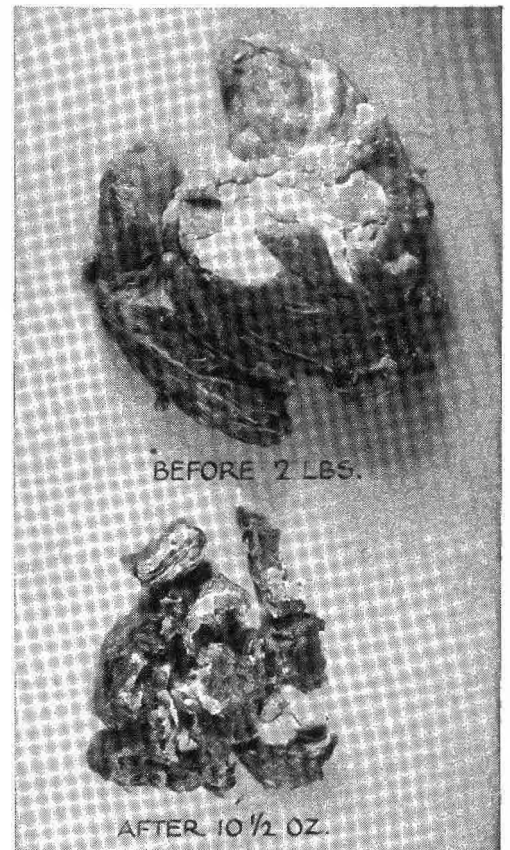
BY A SCOUTMASTER



Dried beef: Round or chuck with little fat is best. Cut into squares $2\frac{1}{2}$ x $\frac{1}{2}$ " thick—cut lengthwise of the grain so muscle fibers may be cut crosswise when beef is sliced for cooking. Mix salt and sugar. To each 20 lbs. of meat use 1 lb. salt, $\frac{3}{5}$ lb. sugar.



Mix well; then divide into three equal parts. Rub salt mixture into meat, which should be at room temperature. Next place meat in glass jars—washed and sealed. Pack meat tight and cover jars. Meat should pickle for nine days in cool place. Remove from jar every third day and rub with salt mix. Juice in jars should cover top pieces.



On ninth day remove meat, wash, soak it 2 hours in water. Next is smoking—takes 5 to 6 hours. Over a bed of coals place wet wood chips. Border fire with rocks on which place a barrel with both ends knocked out. Cover top with wire mesh on which meat is laid. Next place in drier for 8 to 10 hours. When dry, pack in heat-sealing cellophane bags.

The Whirlpool



A sinister silence pervaded the jungle and Barry became aware that a menace greater than any he had ever faced was slowly closing in upon him

By ROBB WHITE

THE OMINOUS SILENCE of the jungle at last alarmed Barry. When the sun came up after the long and dreadful night, the jungle did not come alive with sounds. Slowly, this fact pushed through the wall of pain from Barry's ankles and he felt the threat of that continuing silence.

Barry Benton, Eagle Scout, and already well on his way to becoming a fine naturalist, ordinarily would not have been alarmed by the peculiar and unusual silence. But he was all alone now, and his physical helplessness made it harder to control his feeling of dread.

He had tried not to let John McCall, the other Explorer on the expedition into the Brazilian jungle, know how much he hated being left there with both ankles either broken or badly wrenched. But, with the Professor helpless—his back probably broken—there was no other way to do it. The little, take-apart boat could barely hold two people.

"We'll reach Porto Velho tomorrow," John had said. "I'll get the Rubber Company to send their helicopter up for you tomorrow afternoon." Then John had paused before asking quietly, "Think you'll make out all right, Barry?"

Barry had tried to be funny. "I can do it standing on my head."

That had been yesterday morning. Now Barry had been alone for almost twenty-four hours and his ankles were swollen and purple. He recalled the accident resignedly.

Like most accidents, it had been simple. They were using a fallen tree for a bridge across a deep gorge. The tree seemed to be strong enough. It wasn't. Just as John reached the other side the tree broke, dropping the Professor and Barry down into the rocky gorge.

It was then that John, also an Eagle Scout, really proved himself. Using the light, two-wheeled cart they had brought to move animal cages with, he had gotten both Barry and the Professor back to the camp. Then, before leaving in the boat, he had made the cart into a sort of wheelchair so that Barry could move himself as far as the Lister bag for water, or to the food locker.

BEING alone, helpless and in pain sharpened Barry's sense of danger. At dawn, the jungle should have come alive with noises; the howling of monkeys, screeching macaws, all the birds and beasts should be making noises of some kind. But there wasn't a sound—not even the chirping of insects.

Anything terrible enough to frighten the whole life of the jungle must be also dangerous to him, Barry reasoned. He realized too that the open area of the camp might become a death trap for him.

The Professor had chosen the site because it was perfect for arranging specimens. It was a very large triangle of flat, hard-packed sand. One side of the triangle was formed by a sheer, stone bluff rising some fifty feet to a jungly plateau. The other side was formed by the river, its black, placid water giving no hint of the deadly fish which lived in it. At the top, the triangle came to a point



where the river cut through the bluff, running between two vertical walls of stone. The bottom of the triangle was the long line of the crowding jungle as the river twisted away. In the rainy season, the whole area would be part of the river bed.

Not knowing what terrible thing was concealed in the jungle was more than Barry could bear. With great effort he wheeled himself all the way down the triangle to the wall of jungle.

He could see nothing moving but, slowly, a curious, dry, faint rustling sound came toward him. There were no footsteps and it was not the dry slithering of a snake, nor the swish of wings.

AS HE watched, a young tapir ran across a clearing. That surprised him, for tapirs are shy, night time animals.

The unpleasant, dry rustling grew louder. The tapir began to scream. Then it staggered back into the clearing.

It stood there, screaming, its legs slowly collapsing. Still Barry could not see what



The tree broke, dropping the Professor and Barry down into the rocky gorge

was attacking it. He strained forward.

Bushes made seeing hard but, to Barry, it looked then as though some large, black thing was swallowing the tapir. The black was a shimmering, flowing mass—like a snake but too large to be one.

Just before John had gone down river he had brought the .257 Roberts rifle and put it in the chair. "Might as well bag some specimens," he had joked.

Now Barry was glad to feel the gun in his hands as he searched the shimmering blackness, looking for a head, or for a part of its body where a bullet would stop it.

But there was nothing recognizable about it—just a flowing blackness advancing slowly toward him enveloping everything on the ground with horrible relentlessness.

It passed over the tapir and began trickling away from it.

Barry saw with horror that the tapir had been eaten until only its skeleton was left.

Then, as he recognized his enemy, a sick fear flooded through him. Slowly, he put the rifle away, for no gun could protect him

from the thing creeping toward him slowly but inexorably through the deserted jungle.

Ants! As they flowed closer, he saw that they were the large army ant.

For as far as he could see the jungle floor was carpeted with them, while where they had passed there was total destruction. To them power and size meant nothing—any living thing caught in their line of march went down, poisoned into helplessness by their stings and then eaten alive.

Barry knew then that he had been right—the camp site *was* a death trap. He knew that the bluff ran for miles into the jungle, angling away from the river so that the river and the bluff formed two sides of an enormous funnel. Down it poured the ants.

He couldn't escape by going around them on either side for it would be impossible to get the make-shift wheelchair through two feet of the jungle. And he couldn't climb the vertical face of the stone bluff.

Slowly, his mind going sick with the reali-

zation, and horror crawling on him, he knew that, when the ants reached him, his only escape from them would be to try to live long enough to swim, somehow, across the river.

But—could he escape the piranha in the black water?

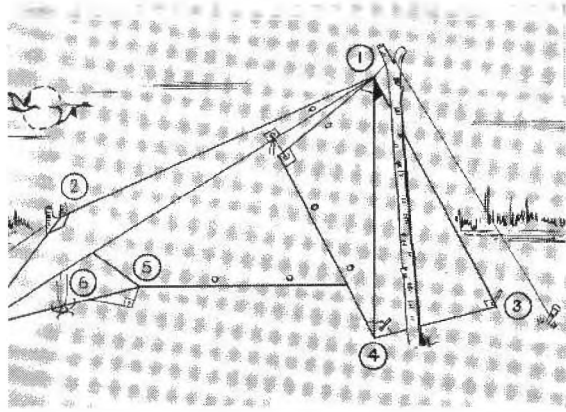
He wasn't too afraid of crocodiles, but the little, deadly piranha, fish which looked as innocent as perch, were as dangerous and horrible as the ants.

HE REMEMBERED a large peccary which had tried to escape from John by swimming. Swarms of piranha had caught it in midstream. For a few minutes there had been a bloody boiling in the water and then—nothing.

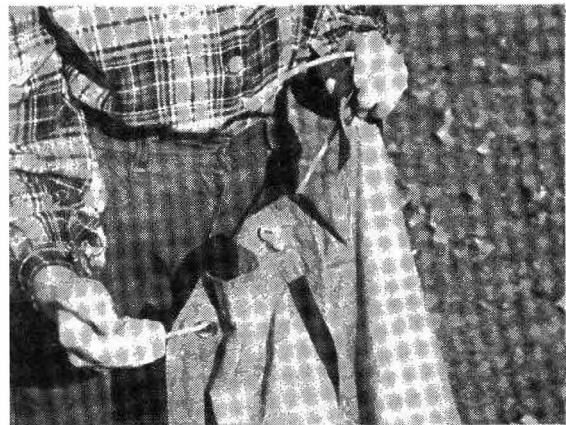
His only other choice was to fight the ants.

But how? Barry knew that there wasn't a beast in the jungle big enough or strong enough to fight them. So how could he, crippled, even attempt it?

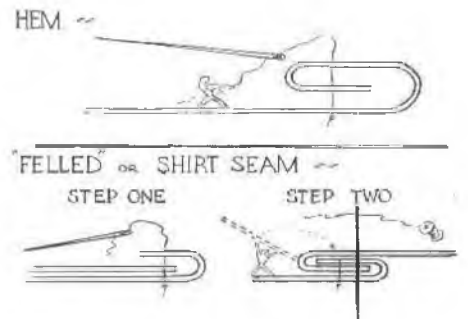
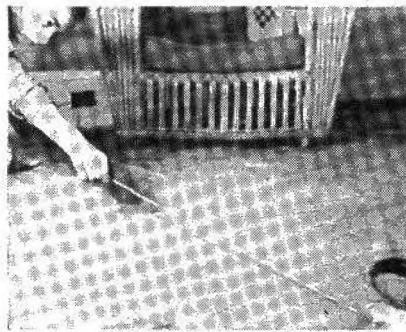
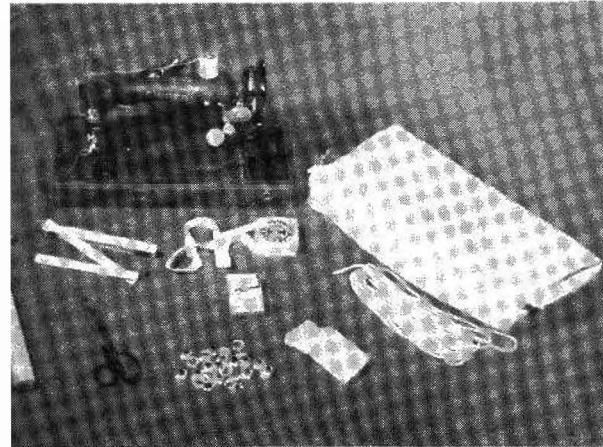
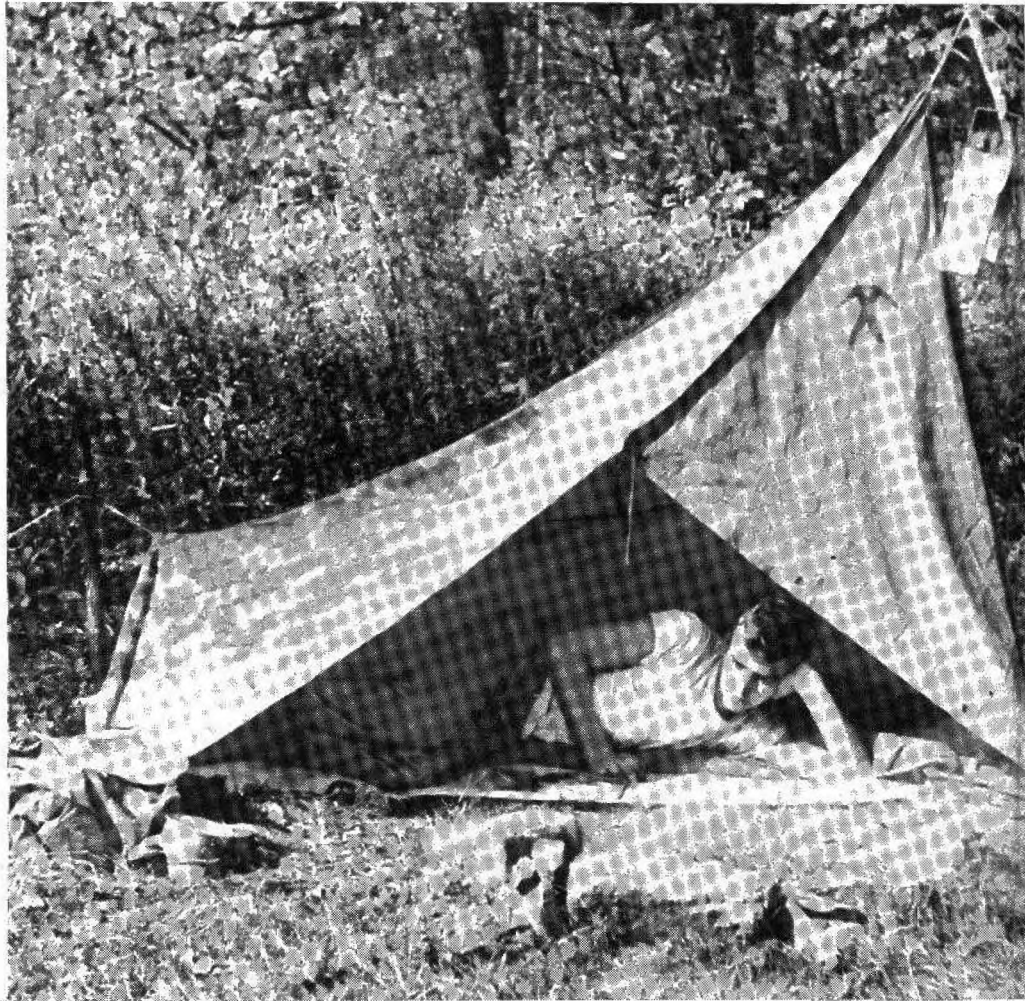
Death was coming through the jungle toward him and now he (To page 62)



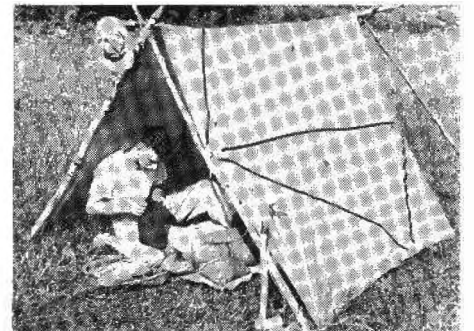
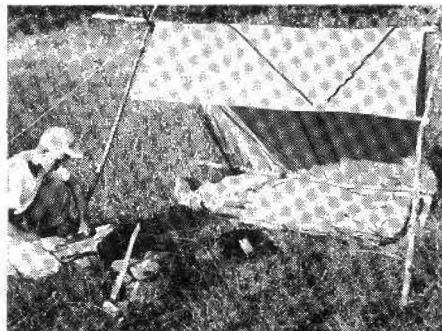
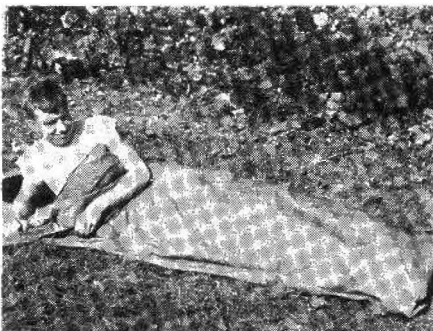
The Hickory Tent is tricky to set up the first time. Just follow this numbered diagram and you won't have any trouble.



When pitching, don't forget to make the lower peak by tying the two Number 6's together with the hickory rope.



Mark your tapes with tent spread on floor. Use this hem on outside edges, and this "felled" or "shirt" seam (where shown on diagram) when sewing canvas.



Here are just a few of the "other" uses for the Hickory Tent, showing how easily it is fitted to the needs of the camping situation.

The Hickory Tent

BY ERNEST F. SCHMIDT

MATERIALS NEEDED

7 $\frac{3}{8}$ yd. light canvas or muslin, 36" wide

12 yd twill tape

22 grommets

35' rope (awning cord is best)

Dye (brown or green)

Waterproofing

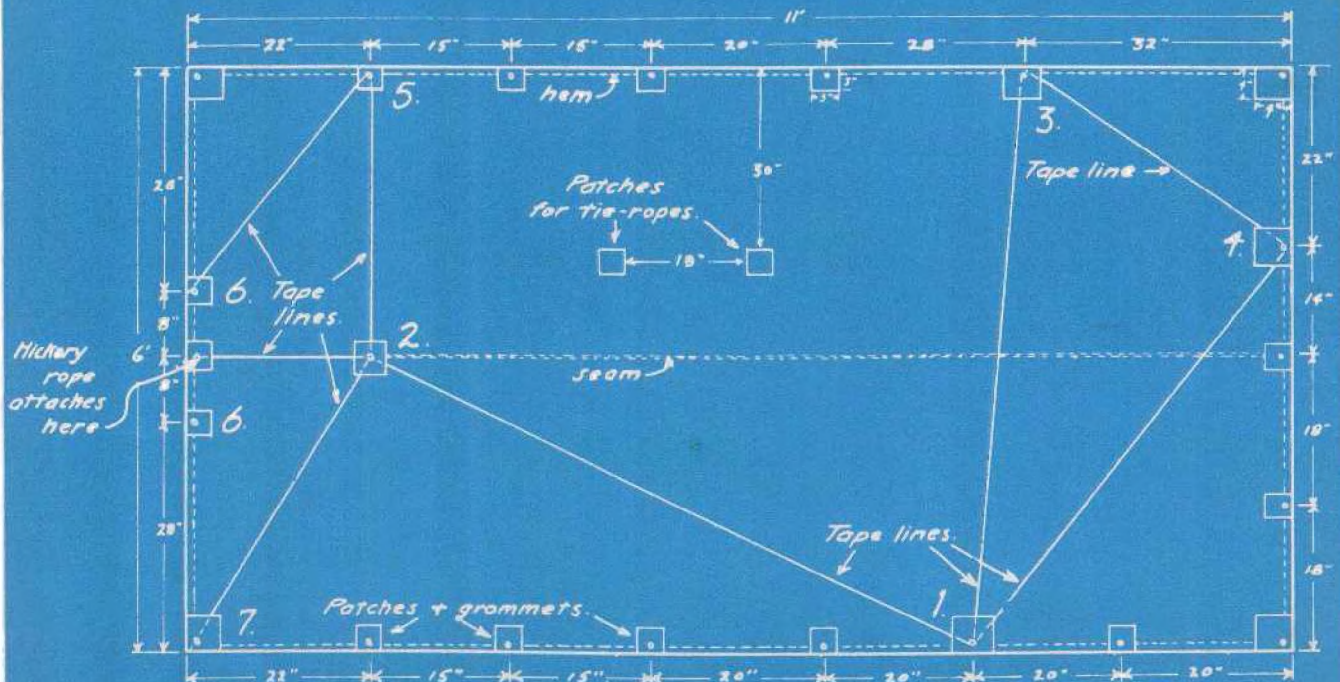
STEPS IN MAKING

1. Lay out material and cut
2. Sew into a 6' x 11' rectangle
3. Mark and sew on tapes
4. Sew on patches
5. Sew hems
6. Set grommets
7. Attach ropes
8. GO CAMPING

WHEN EARLE McKINSTRY was experimenting with simple lightweight shelters he designed the Hickory Tent. It is compact, yet affords ample room for you and your gear. It can be set up in a dozen different ways, but its big advantage is its extreme light weight. Made of balloon cloth it may weigh as little as three pounds.

On wintry nights a little fire in front of your Hickory Tent will keep you warm. In the summertime a six-foot square of mosquito netting (or better, marquisette curtain material) will protect you from bugs.

Tips on tentage: Always dry your tent well after using. This prevents mildew. Protect your tent in a stout canvas bag when it's not in use. On small tents use nylon cord instead of rope—it doesn't shrink, it stays dry, it's extremely strong, and will never rot. Pitch your tent across the wind or at an angle. Ditching is very rarely necessary.—GOOD CAMPING



Yoo Hoo! Mudhen!

It takes more than a falsetto voice and lipstick to play the part of a dame in the school play and after Crane tried to wear skirts nothing was the same including the Beeman living room

By MERRITT P. ALLEN

THE MUDHEN didn't like the way things stood. The dramatic club was his favorite school organization, for he loved acting, but when it cast him as the heroine in the big play he was displeased. Not that he crabb'd openly; he said nothing for all it gave his ego a terrific gripe to be a blonde in a floppy skirt and picture hat. It was, he felt, a slight on himself and a reflection on the manliness of the whole Eagle frat. The choice should have gone to a Bear, as those jerks had no traditions to uphold anyway; yet one of them, Rip Anderson, had been given the hero's role.

Rip was a good actor, but what did he have that The Mudhen didn't have? Possibly a drag with the committee, especially to Mr. Beeman to whom he was very nice—oh *very* nice, the old fox! The Bumble Bee, as Mr. Beeman was called when not present, was not one of the faculty, but the school was his hobby and, as he spent considerable money on it, he was given some voice in its affairs. He was hepped on dramatics and had reached into his pocket more than once to encourage that art in the school. Recently he had even donated an Oscar, that is, a plaque of some sort to be presented to the student who showed most ability as an actor during the year. The Mudhen hoped for a crack at it but now, with only a sissy part to play, none was near to going over the dam.

He brooded on this and it did him no good. His interest in acting waned until J. B. became worried. J. B. was the English prof who doubled as dramatic coach.

"What's wrong, Crane?" he asked bluntly. "You're not the actor you used to be."

"Naturally not, sir." The Mudhen sighed wearily. "I'm an actress."

"So that's it!" J. B. never pulled punches. "Sulking in your tent because you can't have the part you want."

"No, no, no!" The Mudhen protested. "It's not that, sir. The trouble is I don't know how to act in a skirt. When I'm wearin' the darn thing I don't know how to walk or stand up or sit down."

"Oh," J. B. looked relieved. "That will come with practice."

"But it doesn't." The actress threw out his hands hopelessly. "At rehearsals, when all the guys are watchin' me and snickerin', I just get worse instead of better."

"I know you do," J. B. said honestly. "But,

Crane, you can lick this."

"I'd like to know how."

"Practice, as I said. Familiarize yourself with feminine attire. Wear it till you feel at home in it."

"Jeepers!" The Mudhen gasped. "Do you mean I've got to go around in a skirt all the time? I'll leave school first."

"Don't take me so literally. I mean practice during your spare time in your room."

"In my room? With that roommate of mine!"

"I am sure you can count on Bates' loyalty."

"Even if I can handle Frog, the other guys'll get onto it, especially the Bears, and there won't be standin' room. That would be no place for a fellow to be a lady, sir."

"I guess you are right." J. B. smiled at the possibilities. "But I have it. Crane! Come over to my house and practice. My wife has a dress the style of your stage costume. She and I will coach you."

"I couldn't trouble you that much, sir."

"It will be a pleasure, truly it will be. We can solve this problem in our own way and no one will be the wiser. I won't take no for an answer."

So eventually The Mudhen put his fate in the hands of his two coaches. He didn't fancy the idea of working hard to become ladylike, but his dander was up. All right, let 'em cast him as a dame. By golly, he would be the best dame that ever waved a ruffle. He would show 'em that no matter what they dished out he could take it and like it. He would win their admiration if it took his last hairpin.

UNDER THE sympathetic and skillful direction of Mr. and Mrs. J. B. he went at it with gusto. Evening after evening he slipped out of the dorm and over to their home, where he parked his personality and donned that of the heroine. Clad in a long blue dress, a blonde wig and a sweeping hat he walked, sat, went up and down stairs, ate, drank and otherwise went through the motions of a perfect lady. He worked like a dog to learn those new tricks.

And he got results. After one of the rehearsals at school Rip said admiringly, "You're a swell gal, Mud."

"Don't get lresh, squirt," The Mudhen warned, in his sweetest highest falsetto.

"No kidding, Mud. The way you do your stuff makes it easier for the rest of us."

"How definitely super of you, you big handsome man!"

But Rip's praise gave him a lift. His confidence was returning in triumph and with it came a desire to share the victory with Froggie. So he took his roommate into his confidence.

"Huh!" Froggie commented. "All that work so you can act like a sissy. That ain't so hot, if you ask me."

"Sometimes." The Mudhen said wearily, "you have less perception than an under-privileged fish worm."

"I may be dumb," Froggie admitted, "but I know they insulted all the Eagles when they gave you that gal part and I don't see why you are happy about it all of a sudden. But, of course, if you want to wear pansies in your hair and call yourself Agnes it's not my business."

"CAN'T you understand, Frog, it's not the part, but the way a guy plays it, that counts?"

"You sanctimonious dopel! You'll never get an Oscar that way."

"I don't care so much about the Oscar as I did, Frog. I want to show those Bears I can swallow anything they put on my plate."

"Heck!" Froggie blinked at him. "Why didn't you say so in the first place? Anybody could see it that way."

"How wonderful you are!" The Mudhen stood up slowly.

"If I can help, Mud, just push the button and I'll be there."

"You might, at that. To polish up my technique I'm goin' to doll up and take a walk this evenin'."

"You're going on the street in a dress?" Froggie stared.

"Sure. If I get by on the street I'll have a lot more confidence on the stage. Come along and be my boy friend. Savvy?"

"Yeh." Froggie sounded anything but enthusiastic. "But what if we meet somebody we know?"

"They won't recognize Mrs. J. B.'s dress."

"I have a feeling we're putting our heads in a lion's mouth, Mud."

"Stray home under the bed if you're afraid of lions."

"I'll go if you do."

"O.K. Come along."

So they went brazenly. (To page 48)

ILLUSTRATED BY CHAS. HAWES

Their combined descent formed a flying ball of feet, elbows, fur, yells, screams and growls





Among these colored sands pioneers lost their way and died of thirst. The survivors named the place Death Valley

Death Valley Adventure

Where Scouts explore the mysteries of this weird desert land

By JOHN WOODBURY



The famous castle of fabulous Death Valley Scotty

THE Indians called it 'Tomesha—"ground afire"—this long, low bowl of burning desert in southeastern California, a region of desolation nearly twice as large as the state of Delaware and lower in places than the level of the sea. But white men, blundering into it in their march to the California gold fields and almost perishing there before they escaped, gave it the name that it bears today, more than a century later. They called it Death Valley, and this is how it happened:

It was the winter of 1849, the year of the great gold rush. All America was bewitched by the news of prodigious wealth that lay waiting to be taken from Sutter's Fort, on the banks of the Sacramento. Thousands of emigrants struggled westward through the wilderness. Haste was the watchword of the day, for the gold would not last forever.

And so it was that one particular band of '49-ers—perhaps a hundred of them—broke away from the established trail in quest of a short cut. They squirmed their way through a mountain pass and dropped into the great barren valley where no white man had ever ventured before. There they found themselves confronted with a high wall of mountains on the west. Their food and water were running low. Despair and panic overtook them, and the little band began to splinter.

One group, known as the Jayhawkers,

burned its wagons, killed its oxen for meat and finally made its way out of the valley to the north. Another group, called the Bennett-Arcane party, camped along the vast salt flats of the valley floor and sent two of its men to hunt an exit to civilization.

More than three weeks passed before the two men returned. Enduring profound hardships, they had found a pass through the mountains. They assembled the gaunt travelers and led them out of the salt flats and up the mountain slopes toward safety. Reaching the crest, the '49-ers paused. They looked back upon the huge sinkhole which had almost become their graveyard and spoke the words which gave the region its name:

"Good-bye, Death Valley!"

It was just 100 years plus a few months later that we followed the trail of the '49-ers into this region of doom and despondency. There were about 700 of us—Scouts, Explorers and their leaders from all over the Hoover Dam Area Council, from Troops in Nevada, Arizona and California. This was the Council's second annual Death Valley Trek, and by far the biggest.

We'd picked a good time for it—March of this year. For we knew that within a month or so Nature would turn the heat on in Death Valley and transform it into something that was once described as "a reasonable facsimile of a first-class (To page 53)

**Yale's famous coach and the man who helped create
Blaik's great undefeated Black Knights insists
that a team is only as strong as its defense**

Football is Tackling

By HERMAN HICKMAN

SEVENTY-FIVE thousand fans jammed every niche and corner of the Yankee Stadium that November day in 1916. These chosen few were only a fraction of the million who had attempted to obtain tickets. Never had a football game created as much national interest as this Army-Notre Dame game.

Blaik's Black Knights were only a shell of the great Army teams of 1911 and 1915. Most of the linemen had gone, but making their last appearance on a New York gridiron was probably the greatest one-two punch college football had ever known: Glen Davis, Mr. Outside, and Felix Blanchard, Mr. Inside. Not quite so well known before the game, but destined to be the outstanding man in the game, was Arnold Tucker.

This combination had scored more points than any backfield in the modern era. Michigan had been the only team to hold them to as few as three touchdowns in a game.

Notre Dame was even more potent. Back of a huge and experienced line were Johnny Lujack, Emil Sitko, Terry Brennan, Gerry Cowling, John Panelli and many others.

The great Frank Leahy, one of the most adroit coaches in the game, had just returned from a hitch in the Navy. He was continuing the brilliant brand of play that had marked his last season of football in 1943 with the National Championship. He or his men didn't know the meaning of the word "defeat."

Both teams had run rough shod over their opposition. Both coaches predicted a high scoring game. Nothing could stop the Blanchards, Davis's, Sitko's and Brennans from scoring.

The Score: Army 0—Notre Dame 0.

The anticipated high scoring fray turned out to be a tackling duel between two spirited and well coached teams.

No team is stronger than its defense and the basis and backbone of defense is tackling.

The longest run of the day was made by "Doc" Blanchard. It was for twenty-three yards and would have been for a touchdown except for the safety man, Johnny Lujack, who brought him down with a beautiful form tackle. Most of you think of Lujack as a great ball handler and passer (which he is) but to me he is one of the outstanding defensive backs that the game has produced.

Blanchard, too, had his moments. No one who saw the game or the news reels will ever forget his thudding tackle as he came

up from a halfback position to stop Emil Sitko on a wide end run.

Both lines kept the great running backs "penned up" the entire game. Brilliant tackling was evidenced on every play. Two men, in particular, stand out in my mind for making tackle after tackle—Shelton Biles, a willowy 180 pound Army tackle, and George Sullivan of Notre Dame. They were everywhere on every play.

This game was a tribute to tackling. General R. R. Neyland, whose teams at the University of Tennessee led the nation in defense for a period of fifteen years, said that he could tell whether a team is "up" for a particular game by the way they tackled.

Tackling is Natural

Blocking, in football, is an unnatural fundamental to learn. You must abstain from using your hands to hold an opponent. You must contrive to keep contact with him while your hands are close to your body. As



A former All-America Tackle should know

I said in a previous article, you must establish "habit" to perform it legally. Tackling is natural. The first instinct of a baby is to grasp something. The rule book concisely and rather ineptly describes tackling as "grasping or encircling an opponent with a hand or arm." It does not mention the thrill of driving a shoulder into the ball carrier and stopping him cold in his tracks. To the real player nothing else is quite as exhilarating, but before I get into the correct fundamentals of tackling, I would like to say a word about equipment.

The most important piece of equipment for a football player is a good head gear. No player should be allowed to participate in a football practice without (To page 52)



Practically every coach in modern football feels that tackling should be high, safe—and hard!



Heaviest swapping center was International Section. British and American Scouts bargaining



But meeting our Chief Scout Executive, Dr. Arthur A. Schuck, was a pleasure we wouldn't swap with anyone



Hawaiian aloha shirts and palm hats were in demand

Swapping

AT THE JAMBOREE

SWAPPING IS AS native to all Americans as maple sugar is to the Vermonter, movies to the Southern Californian, and bragging to all Texans. We seem to have inherited it from our pioneer ancestors, who bequeathed us the term Yankee Horse Trader. (Yeah, Dixie—you too, Suh!) The sharpness of the American trader received world wide prominence as a result of our clipper ships which sailed the seven seas. It was part and parcel to the economy of the growing west during its infancy.

If any historian or sociologist, or any other interested person, thinks that trading as an art is forgotten in these modern times, he should have seen the National Jamboree at Valley Forge. It is reputed that one Scout from Texas uttered but a single word the entire time he was at the Jamboree, yet never kept his mouth shut. Naturally, he was walking around repeating the single question, "Swap?"

Swapping is the Scout terminology for horse trading. It has no set rules, requires no preliminaries, and can happen whenever and wherever two Scouts get together. When nearly 50,000 Scouts gather, as they did at the Jamboree, there wasn't even time to get in or out of the sun. You just sat down and started swapping.



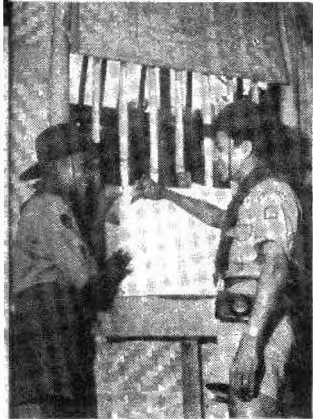
Even on a hot day, swapping in this form was lots of fun



The animal kingdom was transplanted far and near by swaps



Southwestern horned toads soon became standard livestock on the Jamboree exchange



These two Scouts almost swapped this native hut



No tobacco auctioneer ever used a more appealing sales talk



Animal horns are useless only to one not interested in handcraft

PHOTOGRAPHS BY BOB JONES



Taking part in the flag ceremonies in the avenue of flags at GHQ was also an honor we wouldn't swap



Scout patches were the most popular swap items

On The K5 Roundup

Being a rep with the Roberts Outfit meant that a man had to prove himself to be a real cowboy and Jed was trying mighty hard

By STEPHEN PAYNE

HOT STUFF! COME and get it—or I'll thr-t-ow it a-a-way!"

At this lusty summons to breakfast on the K 5 outfit's fall roundup, Jed Hammond sat up in bed, throwing back frosty tarpaulin and soogans and blankets. This action uncovered Jed's bed partner, Spect Arthur, the day wrangler, who complained, "Needn't be in such a yank."

"I don't want to keep Ford Roberts waiting for me one second," Jed answered. A sunny, blond young fellow whose cheeks were noticeably free of whisker stubble, he was quickly pulling on overalls and socks and boots. "Nor give Bert Simmons another chance to hooraw me," he added.

The wrangler groaned and sat up. "Heck! It ain't only Bert who pouts it on you, Jed. They'll keep razzin' you till you prove yourself and git accepted as one of the cowboys."

Jed's face tightened momentarily. All about him, the riders of this roundup were rolling out of their tarp-covered beds spread on the hard ground—men of the K 5, men of two other fair sized cow outfits and also several men representing small owners of stock. Jed Hammond was one of these reps, and had joined the big roundup to gather his father's Lazy H cattle.

Although full daylight had not yet come, Jed could hear jangling bells and beat of hoofs as the night wrangler brought in the cavy. The cook's fire was a bright spot in the dimness, revealing the weathered old cook and the chuckbox end of his chuck wagon. The aroma of coffee, the good smell of steaks sizzling in Dutch ovens and the hunger-provoking odor of baking biscuits greeted Jed's nostrils.

NOT FAR AWAY, cows and calves began to bawl as a herd of cattle which had been night-herded left its bed ground. Already human figures were making a run on the wash basin and the towel, then filling their plates and cups from the cook's pots at the wood fire.

Jed tugged on his hat and his coat—chaps he had none—and answered Spec Arthur. "You know, I'm just achin' to be accepted as one of the cowboys."

He rolled up the bed, carried it to the hoodlum wagon and dropped it with other bed rolls already piled there. He doused his face and hands in cold water, wiped them on the overworked towel, and fell in line behind other cowboys getting their grub from the cook's pots.

The cavy bells were silent now, the cow ponies bunched quietly at the rope cor-

ral, the night wrangler, bundled in sheepskin coat and chaps, whistling as he sat his mount and guarded the open side of the crude corral. Forks tinkled against tin plates, and the last of the stars faded out and was gone from the high, dark-blue arc far overhead.

Jed put his dishes in the cook's wrecking pan, got his rope from his saddle and hurried to the cavy where Ford Roberts was roping horses. This lanky, horse-faced, veteran cowboy was foreman of the great K 5. He was also boss of the roundup, and in Jed's opinion, he was the greatest man in the world!

Leading a clumsy brown plug out of the bunch, Roberts said briefly, "Here's your circle horse, Jed. Take my rope off him and put yours on 'im."

"Thanks, breathed Jed. Whereupon Bert Simmons, who had roped his own mount, taunted:

"I never ask nobody to catch my horse for me."

Roberts gave the stocky, moon-faced and unpleasantly pugnacious Simmons a level look, but offered no comment. Jed, however, was flushing warmly as he led Brownie to where he had left his saddle. It was an old wreck of a saddle, and was practically held together with copper rivets and rawhide strings. Jed must make it do until he could accumulate enough money to buy a new one. But Bert Simmons' jeers about Jed's outfit and his horses were hard to take. Jed had thought of telling the bully that he was a

pretty good hand with a rope. But if he proved that to Bert, it would hit the man harder.

While he was saddling Brownie, Jed took note that several of the cowboys' circle horses had "kinks in their backs" this morning, and were cringing and rolling their eyes when frosty saddle blankets were slipped across their backs and cinches were drawn tight. He wasn't surprised when one cowboy called, "Four bits to the rany who'll take the rough off this bronc for me."

On the roundup were men, bronc busters, who would ride any buckler for a small sum. Yet before anyone else could speak, Jed cried impulsively, "I'll take you up on that, Smitty."

A MINUTE LATER, a dozen other punches were staring as Jed swung up into Smitty's saddle, bridle reins in his left hand, right raised aloft. Smitty turned loose the bronc's head, and the horse exploded. Jed felt himself slipping, and regardless of the fact that it was shameful and humiliating to pull leather, he reached for the saddle horn—to catch instead of handful of frosty sage brush.

Hall stunned, he sat up, dazed, blinking his eyes, and through the humming which filled his ears, he heard Bert Simmons jeer, "Ha-haw-haw! The sod buster busted the sod!"

"Somebody catch that horse!" Roberts yelled, and ran to where Jed sat. "Hurt," he asked, paying no attention to Simmons,



"Take your outfit off this huss, and hike, pronto."



Jed's horse was jerked forward for eight or ten feet before the saddle was torn apart

"No," said Jed, nonetheless grateful that Roberts was giving a hand to get up.

"What made you try it, when you know you can't ride horses like that one?"

Jed pulled in a deep breath, and with the hope that this great cowman might understand, he blurted, "I've got to make some money."

"Yes?" Roberts' eyes were probing Jed's. "You'd risk your neck to make four bits, son?"

"Sure. Every fifty cents helps. Just a little bit at a time. I've accumulated thirty dollars toward a new saddle. But it'll cost forty. I—I hoped I could make a few dollars by topping off broncs. I—I'll try again tomorrow."

"How'd you make the thirty bucks?"

ROBERTS' INTEREST was so genuine that it warmed Jed's heart. Yet he flushed and dug a boot toe in the soil as he replied, "Oh, I got five dollars for hauling a load of wood to a rancher. Last fall and winter I trapped coyotes and muskrats and sold the pelts. I made a buck and a half by daubing the school house and—"

"I see," Roberts cut in, and nodded his head as if he approved. "Well, let's be movin'."

Jed mounted his stolid old brown and joined the punchers who had bunched up and were listening to Roberts' crisp orders: "We're bunching at Alkali Springs, boys. Blaine, take four men, ride Iron Mountain. Curtis, six men, go plumb to the head of Roaring Creek, rake the brush like a curry comb. Bill Cook, three men, work Alkali

Flats. Andrews, eight men: lead a drive along Silver Spruce Ridge, drop 'em off all along the way. I'll take the rest with me. We'll be workin' Goose Creek Valley, boys."

JED FELL IN BEHIND Roberts and three other cowboys. As they topped a low hill, he looked back and saw riders stringing out across the sage; he saw the day herd (the cattle gathered and held so far on this roundup) like a dark snake half a mile in length—wriggling and colorful—crawling northward. The chuck wagon and hoodlum wagon had been loaded, and each drawn by a four-horse team, were on the move.

In fancy Jed could see the night wrangler bedded down aboard that hoodlum wagon, and he really did see the cavvy—bay horses, duns, blacks, pintos, browns, roans, whites, grays, falling into line, like trained soldiers, behind the wagons. Day wrangler and Spec Arthur was bringing up the rear. And the sun was bursting out of the distant hilly horizon.

A deep emotion welled up in Jed, and he cried, "Boy! If I live to be a thousand, I'll never see anything half so wonderful."

"Huh?" said a cowboy blankly. He hipped around in his saddle. "Oh, ye-ah. Sa-ay, 'tis right purty."

Roberts turned his head, and wheeled his mount and halted it. There was a look in the wrinkle-cornered and half-squinted eyes of the great man of the open range which told Jed that he, too, was thrilled.

The sun climbed higher, dispelling the frost and beating warmly into the riders who paused to tie their coats to their saddles, and then rode on. And at last the definite pattern of "circle riding" became crystal clear to Jed.

As a housewife sweeps a kitchen, bringing dust from far corners toward one central point, so the roundup riders, on circle, swept one small portion of this vast open range, bring ahead of them the half-wild cattle. Driving those cattle from mountains and buttes and lesser hills, from wide flats, from deep canyons and creek bottoms and gullies, to one point—the bunch ground.

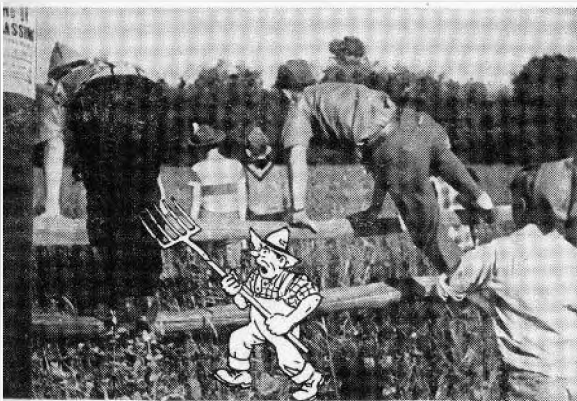
Herds kept pouring in from many directions to form one main herd. Dust, bulls fighting, the everlasting noise of cows and calves bawling for one another; cowboys dashing every which way to head off recalcitrant animals either separately or in bunches, until at length the herd quieted down and became more or less stationary.

NOT FAR FROM this bunch ground, the cook and his helper had pitched camp, the bed-wagon driver carrying water and rustling firewood, while the cook made dinner. In the open beyond the wagons, the cavvy was grazing. Soon the wrangler would drive it to the rope corral so the cowboys could change mounts. And, somewhere in the distance, plodding slowly toward this camp was the day herd.

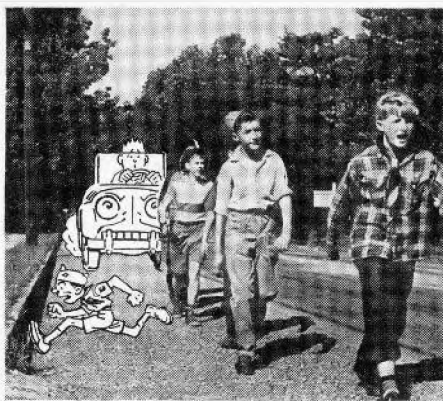
Later, dinner over, Jed, riding a fresh mount, was helping hold one side of the bunch, while Roberts cut (To page 58)



The NONSUCH Patrol consists of expert hikers. They get along beautifully on the food they bring from home—except when there's a road stand in sight.



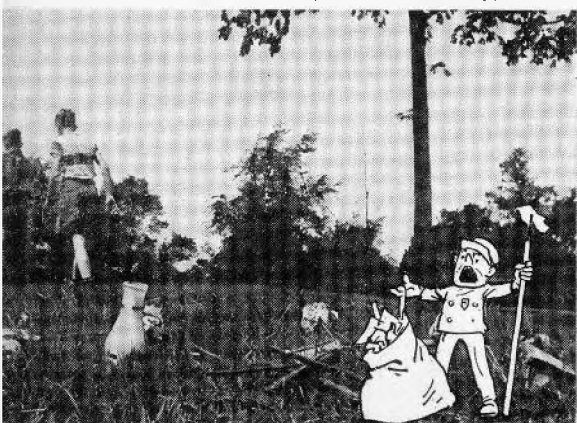
It isn't that the NONSUCHers can't read—it's just that signs saying "Keep Off" mean nothing to them. After all, it's a free country, ain't it?



The NONSUCH Patrol knows the regulations. Rule for cars is "Keep Right." Not considering themselves human, that's what they do!



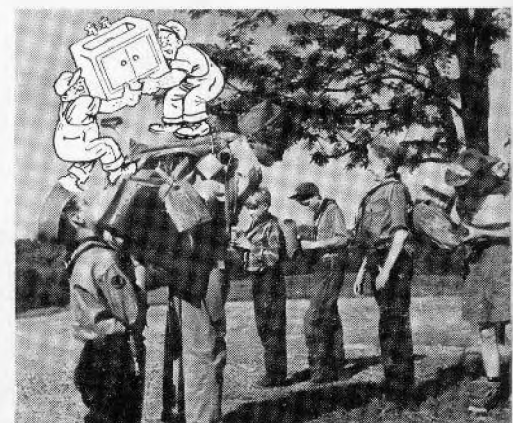
The NONSUCH Patrol has its own way of finding out if brook water is pure. The fellows just drink it. If they are sick tomorrow, it wasn't!



The NONSUCH Patrol has had post-graduate training in landscape decorating. They can dump their trash to make it look impressive.



The NONSUCHers are real outdoorsmen. They can fell the three live trees they need to heat their ambitious dinner of franks and canned beans.



The NONSUCH Patrol travels light. The boys bring all they need—except the kitchen sink. They only take that when they really need it.

The "Nonsuch" Patrol (WE HOPE)



By WILLIAM HILLCOURT

NATIONAL DIRECTOR OF SCOUTCRAFT

O NCEST UPONST a story . . . there was a gang. The fellows decided that they wanted to become Scouts, so they made a Patrol. One of them said, "We're gonna be so good that people will say, 'None such Patrol ever existed.'" That's how the Patrol got its name: The NONSUCH Patrol.

And were they good—I mean, good! You should have seen them! They knew all the answers—not exactly the correct answers, but, after all, you can't expect everything. When the NONSUCHers went hiking, parents along their route pulled their children indoors—so that they could admire the hikers from the windows. When they went camping, land owners fought over the privilege—of sending them elsewhere. And their Good Turns—they really would have been good—if they had been turned over.

Sorry we don't have twenty pages to tell you about the accomplishments of the NONSUCH Patrol. But so that you'll know what we mean, we went hiking with the NONSUCHers recently, and shot them in action—but only with a camera, sorry! Now just take it easy and look at the pictures . . .

What was that? What did you say? "There never really was such a Patrol as the NONSUCH Patrol! Couldn't be! All Scouts are proud of their uniforms—that's why you never see camouflaged fellows like the NONSUCHers, but only well-uniformed Patrols! All Patrols ask permission before trespassing . . . use dead wood only for their fires . . . clean up completely after themselves. You'll never see a Scout Patrol take over a road stand . . . or drink untested water . . . or hitch hike . . . or travel on the wrong side of the road . . . or . . . OR."

Well, anyway—as I was saying when I was so rudely interrupted: "Oncest uponst a story . . ." You go on from there and figure out for yourself what is truth and what is fiction.

PHOTOGRAPHS BY ARTHUR CHAMBERS, CARTOONS BY FRANK RIGNEY



As the sun sinks in the west, you'll see the NONSUCH Patrol enjoying itself all over the road. Or rather, you won't. But then, cars have brakes!



NONSUCH guys are camouflage experts. With no effort they look like a bunch of tramps that not even the FBI would recognize as Scouts.



The botanist of the Patrol identified this pretty plant as Virginia Creeper. If the fellows start itching, they'll blame it on something they ate.



"Why hike when you're hiking when you don't have to hike?" The NONSUCH slogan. Hitch hiking is illegal in their state—or didn't you guess?



Long-legged Tom is the Patrol Leader. Just follow the leader! If Tenderfoot Pete can't keep up, he can go home—he ain't no baby no more.



Lunch at 10:30 wherever they are. The land owner may have the screaming meemies later—but the NONSUCH won't be there to hear him.

Satellite Scout

Even before the spaceship reached Ganymede Bill decided it was important to have a Scout Troop on the new planet and it sure was

By ROBERT A. HEINLEIN

BEGIN THE STORY HERE

BILL, A CALIFORNIA SCOUT, and his dad are emigrants on the spaceship *Mayflower* en route to a new colony on the planet Ganymede, a satellite of Jupiter. With them are Bill's stepmother and half-sister, to whom he is not entirely reconciled. After blast-off passengers are permitted to unstrap from their safety couches but not to move from their rooms. All the boys in Bill's bunkroom obey except Noisy Edwards, who knows more than the captain. Noisy is returned to the room and strapped down for discipline. Just as Bill is deciding that Noisy will be a nuisance, the loud speaker announces that spin will be placed on the ship. He stops wondering about Noisy and awaits with suspense the real beginning of the long trip through space.

Part Two

SLOWLY WE DRIFTED to the outer wall of the ship. That made that wall the floor; gradually we got heavier. Noisy was still strapped in; he yelled for us to help him down. We were discussing it when the same aide came in, unstrapped Noisy, and told us all to follow him.

That's how I happened to attend Captain's mast.

"Captain's mast" is a court, with the Captain as judge. The aide, a Dr. Archibald, told about finding Noisy wandering around during acceleration and the Captain asked Noisy if he had heard the order? Noisy had to admit it.

Captain Harkness said, "You are an undisciplined lunk," then added, "You did this because you were hungry?"

Noisy nodded.

"Ten days bread and water," said the Captain. "Next case."

Noisy looked shocked silly.

The next case was the same, but a woman. She had had a row with her aide and had stomped off to tell the Captain—during acceleration.

Captain Harkness cut her short. "Madam," he said, "have you ever washed dishes?"

"Why, no!"

"Well, you are going to—for the next four hundred million miles."

I looked up Dad afterwards; he and Molly had a stateroom. Peggy was there, but visiting—all the kids over eight were in dormitories. Dad was shifting their couches to what was now the floor. I told him about mast; he nodded. "We saw it in the screen."

"George, the skipper of a ship is an absolute monarch, isn't he?"

Dad said, "No, he's a constitutional monarch. But he's a monarch."

"You mean we have to bow and say, 'Your Majesty?'" Peggy demanded.

Molly said, "I don't advise that, Peg."

"Why not? It would be fun."

"The Captain would probably paddle



I looked down into the bottom of the universe

you."

"Oh, he wouldn't dare!"

I wasn't sure. I remembered four hundred million miles of dirty dishes.

Captain Harkness didn't act like a monarch; he had us elect a ship's council. You know the first thing that council did? They decided we had to go to school!

School wasn't too bad. We started with a tour of the ship, which took all day—"day" by ship's time. The *Mayflower* was top shaped. The point of the top was her jet—Chief Engineer Ortega, who showed us around, called it her "torch." The round end housed the control room, the Captain's cabin, and officers' staterooms. The power plant was shut off from the rest of the ship by a radiation shield that ran right through the ship. From there to the control room was a cylindrical hold a hundred feet across. We were carrying stuff to the colony—machinery, soil concentrates, instruments—I don't know what.

Wrapped around this cylinder were the living decks; "A" deck was the skin of the ship, then "B" and "C" decks. The artificial gravity from spinning the ship made directions confusing—anywhere you stood seemed level, but if you walked far enough you came back to where you started.

Spinning the ship had another odd effect; all around us was "down." Mr. Ortega took us into a view gallery which had a big quartz plate in the floor, surrounded by a guard rail. The first few backed away quick and girls squealed. I pushed forward and looked

down and was staring into the bottom of the universe, a million, trillion miles below.

Stars were reeling across the hole, which made it worse. The Big Dipper passed under me, slid out—and a few seconds later was back. I said, "This is where I came in," and backed away.

We went through the hydroponics room—just plants growing to replace the oxygen we breathed. Then the Chief led us into a mess room, and told us about the power plant. He said there had been three types of ships; first was the chemical-fuel ship like the German rockets used in World War II, except that they were screw rockets. "They were big and inefficient. The next development was the atom-powered rocket.

"THE LATEST IS THIS—the mass-conversion ship. We accelerated at one gravity for four hours and twenty minutes; that brought us up to more than ninety miles a second. If we held that drive for a trifle less than a year, we would approach the speed of light. The *Mayflower* has power to do just that. At ideal efficiency, she would use only one percent of her mass as energy and another one percent as reaction mass."

A kid spoke up. "Mister Chief Engineer, suppose we passed the speed of light?"

Mr. Ortega shook his head. "It can't be done."

I know they say a speed faster than light is meaningless, because it involves the square root of minus one—but scientists change theories the way a snake changes his skin. I stuck up my hand.

"Mr. Ortega, what would happen if we got up close to the speed of light—and then stepped up the drive and held it?"

"Why, it would— No, let's put it this way— He broke off and grinned. "Kid, don't ask me. I'm an engineer with hairy ears, not a mathematical physicist."

"All right," he went on, "what does 'E equals MC squared' mean?"

An older boy said, "It means mass can be converted into energy."

"RIGHT!" MR. ORTEGA agreed. "The first demonstration was the atom bomb. Then came uranium power plants, but until recently we hadn't any idea of how to do efficiently what Dr. Einstein's equation said, clear back in 1905. Does anyone know how much you get when you convert matter into energy?"

Nobody knew. "It's in that one equation," he said. "One gram gives nine times ten to the twentieth power ergs." He wrote it down:

900,000,000,000,000,000 ergs.
 "Nine hundred thousand million billion ergs. A pound of feathers equals more than fifteen billion horsepower-hours. Does that tell anyone why the *Mayflower* was assembled in space and will never land?"

"Too hot," somebody said quickly.

"Too hot" indeed! If we had blasted off from Mojave, Southern California would have been reduced to lava."

A spaceship is a dull place, once the excitement wears off. There's nothing to do, and no room to do it.

Take "B" deck—two thousand emigrants slept there. It was 15 feet across, not quite 500 feet around. "A" deck was larger and "C" smaller. Each of us had room for his bunk and about that much over to stand on. To get the best use from the galley and mess rooms, the council put "A" deck on Greenwich time, "B" deck on Pacific Coast time, and "C" deck drew zone minus-eight or Philippine time. At that we were crowded and time hung heavy.

I used to kill time with Hank Jones, a boy I had known at Scout camp. He came in one morning while I was folding my Scout uniform into my bunk and said, "Why do you keep that?"

"Maybe we'll have Scouting on Ganymede."

"Not that I ever heard of."

That gave us an idea. Why not start up Scouting again right now?"

WE CALLED a meeting for fifteen-thirty, Greenwich time, that is. It was seven-thirty in the morning for the "B" deck boys and a half hour before midnight for "C" deck. By fifteen-forty we had them spilling into corridors, even though we used the biggest mess room. I warmed them up with a couple of tunes on my squeeze box, then Hank called them to order and made a speech. He said that we had enjoyed the benefits of

ILLUSTRATED BY REYNOLD BROWN

Scouting on Earth and it seemed a shame not to continue. Scouting was the tradition of the explorer and pioneer and there could be no more fitting place for it than on a new planet.

He slipped me the wink, I got up and proposed a resolution. It read: Be it resolved—we the undersigned, desiring to extend the Scouting trail out to the stars, do organize as the Boy Scouts of Ganymede in accordance with the principles of Scouting and, in so doing, reaffirm the Scout law.

Hank said, "Is there a second?"

There were seconds all over.

Somebody pointed out that Ganymede wasn't a star. Hank told him that was poetic license. The worst objection was from a weary runt called Millimeire Muntz. He said, "Mr. Chairman, you haven't authority to set up a new Scouting jurisdiction. As a member of Troop Ninety-Six, Gradell, New Jersey, I object."

Hank asked him what authority Troop Ninety-Six, Gradell, New Jersey, had in space? Somebody yelled, "Throw him out!"

Hank banged on the table. "Just ignore him. Are you ready to vote?"

It passed with a yell; Hank was elected organizational chairman, and appointed a flock of committees. There were several men present. One of them, Dr. Archibald, our sector aide, spoke up.

"Mr. Chairman, I was a Scoutmaster in Nebraska. I volunteer my services."

Hank looked him in the eye. "Thank you, sir. Your application will be considered."

Dr. Archibald looked startled, but Hank

went smoothly on, "We need you older Scouts. Liaison committee will take names of any willing to serve."

It was decided to have a Troop for each deck and I was tagged as acting Senior Patrol Leader for "A" deck. At first they were just "A", "B" and "C" Troops, but I wanted a name for mine. We settled on the "Baden-Powell Troop," which tied in with the English time zone our deck used.

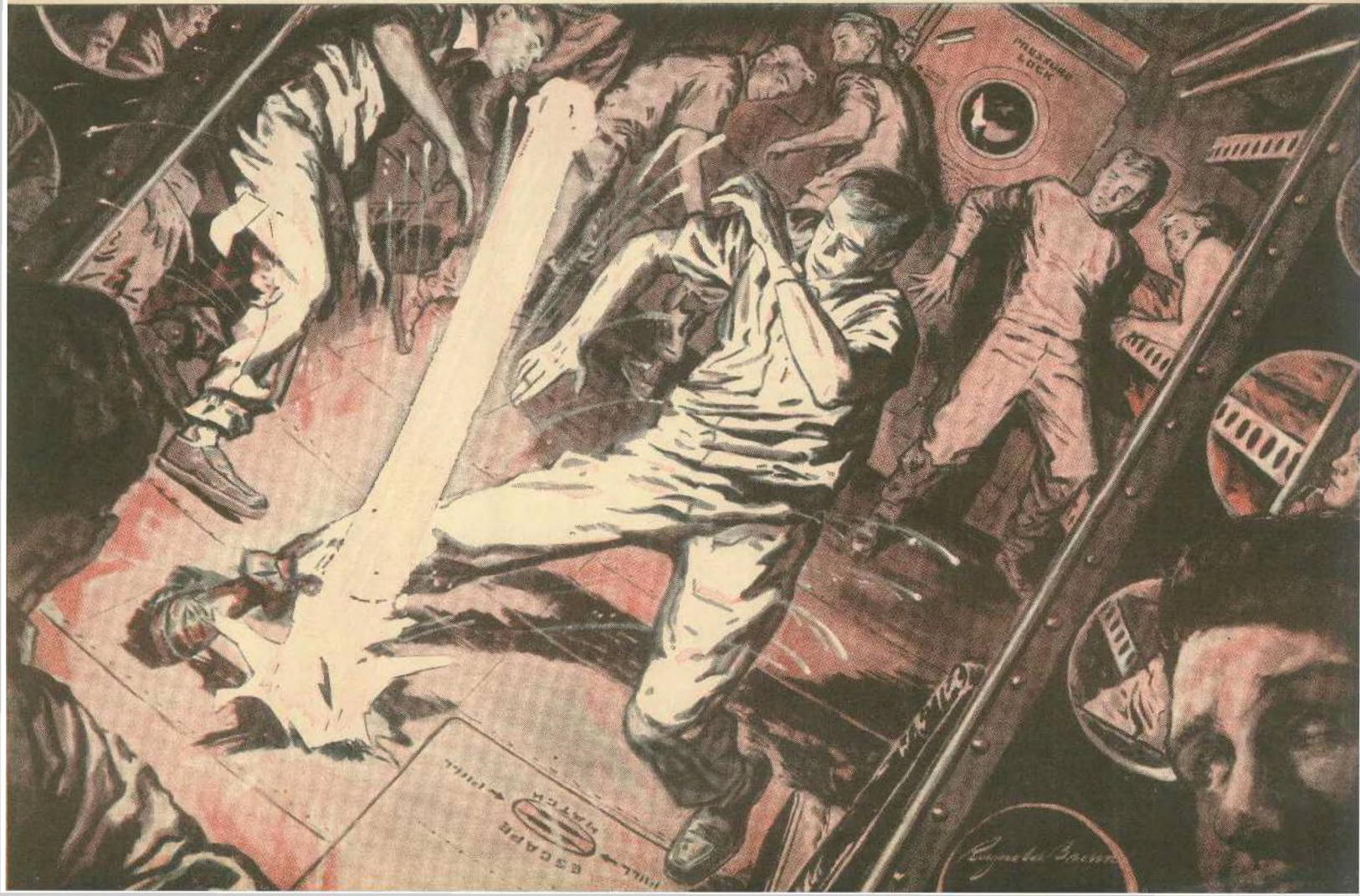
The time-zone idea took hold; "C" deck picked "Aguinaldo," and "A" deck called themselves the "Junipero Serra Troop." Dad says there is a lot in a name.

WE CONFIRMED whatever permanent ranks and badges a boy had held before, but working out new tests and badges was complicated. We could set up a Merit Badge in hydroponics and give tests right in the ship. Mr. Ortega set up another in spaceship engineering and Captain Harkness did the same for ballistics and astrogation. Soon we had enough tests to let a boy go up for Eagle Scout, once we had a Court of Honor. That came last, as Hank kept putting off the final report of the liaison committee. I asked why; he said I would see.

I did see, eventually. At last we had a meeting of all Troops to install Scoutmasters and dedicate the Court of Honor. From then on the adults ran things. Oh, well—it was fun while it lasted.

We were fifty-three days out then and a week to go; Jupiter was already a tiny, ruddy-orange disc. We couldn't see Mars; it was on the far side of the Sun. We didn't even see any asteroids because Captain Harkness had lifted us north of the ecliptic (*To page 50*)

It sounded like a rifle going off by my ear, like a steel door being slammed, like a giant tearing yards of cloth.





"Scram, kid!" a workman cried urgently, "It's a killer that's got away! Sascha!"



Cat Man

By CHARLES COOMBS

ILLUSTRATED BY BOB DOARES

Although Sascha put his father in the hospital Jeff was ready to risk his own life to save the big tiger from extermination



THE MENAGERIE tent was already up. From a short distance came the shouts of the razorbacks as they quickly but systematically unloaded the gaily-colored wagons from the railroad flat-cars. Mixed with the shouting was the chant of the gying-out men as, rope by rope, they stretched the big-top taut in hurried preparation for the afternoon show. These were but two of the sounds that formed a cacophony familiar to Jeff Ralston's ears. The acrid odor of the animals, the dusty odor of the circus lot and the bright splashes of color, added to the vibrant thrill that surged through him.

It was great to be part of it all.

"Hey, you!" a voice warned behind him. "Get away from that tiger!"

Sascha's feline ears snapped back tight against her head. Her greenish-brown eye focused on something behind Jeff. The giant Bengal hissed menacingly through her bared fangs. Jeff's hand froze where he had been stroking the great cat's striped neck. He suppressed the sudden urge to jerk his arm out from between the bars of the cage.

"Easy, girl!" Jeff soothed. "Easy, Sascha!" He realized that, despite the fact that he and the giant Bengal were friends, any sudden movement might well invite a lightning fast slash from the startled tiger's razor-tipped claws.

During the brief moment of uncertainty on Sascha's part, Jeff pulled back to safety. He turned to look at the large, square-faced man dressed in the familiar uniform of a cat trainer.

"You—you should know better than to startle Sascha like that," Jeff accused, struggling to control his rage. "She might've taken my arm—"

"HOW MANY TIMES I got to tell you to keep away from them tigers?" Duff Colton gestured with the lead-weighted handle of his rawhide whip. "You wanna get mauled like your old man did?"

"You still shouldn't have come up like that," Jeff insisted. "You're supposed to know cats."

"Cats. Cats! You call that Sascha a cat? She's a killer!" Duff Colton shoved past Jeff and swung the leaded whip handle between the bars of the cage, rapping the tiger sharply in the nose.

"Back, you stinker!" he yelled. Sascha roared and retreated to the far side of the cage.

Momentarily Jeff's anger flared and instinctively he charged, his fist hitting the large man with all the force of his close-packed 165 pounds. They went down under the force of Jeff's charge but Duff Colton bigger and more powerful than the boy, twisted astride Jeff's body and began to pummel him with his fists. Painfully, Jeff fought back from his position on the ground. He lashed out at Duff Colton's face above him. But his wrist was caught in Duff's strong grasp. He saw Duff prepare to hit him again—realized vaguely that he was powerless to avoid it and prepared for the impact.

"Break it up!" a voice commanded sharply. A boot lashed out and Duff Colton went sprawling in the sawdust. The boot belonged to Boss Leland, general manager and half-owner of the Park & Leland Circus. "Fine thing!" he accused. "Just great! Riling up the cats like this just before a show. Colton, you go get cleaned up. Beat it! Jeff, don't let me catch you around the cats again."

Jeff sucked in his breath. "But, Mr. Leland, I—"

"Keep away from the cats!"

It was almost like telling Jeff to stop breathing. He had been raised with the big cats. As long as he could remember, all of his vacations had been spent under the big top, helping his father and dreaming of the day when he, Jeff, would be working the cats. After graduation he had caught up with the Park & Leland Circus, and his father had started at once to train him to handle the famous Ralston Cats.

BUT IT HADN'T been long until Jeff discovered that Duff Colton had similar ambitions for working the cats. Duff was getting tired of being a zooman; tired of all the chores that went with the job of nurse-maiding the menagerie animals. He seemed suddenly attracted by the steel arena and the bright lights that went with it.

"He'll never work the Ralston cats if I can help it," Jeff's father had confided in him one day. "Duff Colton's no cat man."

But the very next week near tragedy struck during an afternoon performance in Des Moines. Jeff's dad was working a mixed act of lions and tigers. The cats were pyramid-

ing themselves nicely when, without warning, Sascha suddenly leaped.

The big top was filled with screams, fainting women and near panic. Alert attendants soon drove Sascha off—but not soon enough to prevent the badly crushed arm and serious lacerations that still kept Jeff's father hospitalized.

Duff Colton, into whose hands the rat act immediately fell, was all for destroying Sascha. Nor was there much opposition to his proposal. And Sascha would undoubtedly have been shot as a killer had Jeff not noted a strangely bloodshot pattern in the great striped beast's eyes.

"I tell you there's something wrong with Sascha," he pleaded with Boss Leland. "Sascha's no killer."

"Funny that you'd be wantin' to defend her, Jeff, it bein' your own dad who's fighting for his life in the hospital," the manager had said.

"If Dad was conscious, he wouldn't let you destroy Sascha," Jeff insisted. "Something's wrong, I tell you. You've got to wait. Anyhow, they're Dad's cats."

"You're wrong there, son. The cats have belonged to the show ever since that accident to your kid sister. Your dad had to borrow some money. We took a mortgage on the cats. Sure, we still call 'em the Ralston Cats—good business, see—but they ain't really your pa's cats any more, son."

THAT DIDN'T alter Jeff's persistence, and he finally prevailed upon Boss Leland to postpone Sascha's sentence at least until the following day. And, within twenty-four hours Jeff's observations proved valid. By mid-morning of the following day, Sascha was more dead than alive with pneumonia.

That helped account for the cat's sudden ferocity during the previous day's show. It accounted for the beast's bloodshot eyes. And it drew a new sympathy from the kinkers and the roughnecks alike. Yet, not one of the performers or the workers had enough sympathy to risk ministering to the stricken animal—except Jeff.

For three days and nights, aided somewhat from the outside by Doc Carter, the circus' aged veterinarian, Jeff made hypodermic injections into the artery that ran to the tip of the feline's tail. Cautiously and soothingly he worked with the giant beast to keep an improvised pneumonia jacket on her. The fever reached its peak; then broke. Jeff talked soothingly and steadily to the Bengal. Whenever he entered the cage, Sascha raised her head warily, seemed to recognize him, and let her head back down on the sawdust.

During the evening of the fourth day, Sascha managed an uneven purr while Jeff was in the cage. The boy pursed his own lips and blew through them in a coarse imitation of the cat's friendly sign.

"You'd better come out of there now," Doc Carter warned. "That cat'll be well enough pretty quick to do the same thing to you that she did to your dad."

During the next few weeks, the circus had continued westward with a series of one and two-day stands. Duff Colton was still working the cats, except, of course, Sascha.

DUFF'S ABILITY as a cat man was questionable. He worked them with a dogged ferocity almost equal to that of the Bengals. Every time he entered the steel arena his face was bathed in sweat, and he overemployed the whip. He showed little affection for the tigers, and was seldom seen around the dens between performances. It seemed strange to Jeff that Duff Colton had ever wanted the cat act. (To page 60)



The Flying 1037's

**A schoolroom on wings is provided for these students who
are being taught the complicated trick of three-way navigation**

By **JOSEPH STOCKER**

IF YOU had been standing somewhere in the vicinity of San Francisco's Golden Gate that morning, you'd probably have seen it—a big four-engine airplane sweeping high across the Golden Gate Bridge and out over the vast maw of the Pacific. And if you were up on your aircraft identification, you could have tagged it for what it was—a C-54 transport.

Maybe, too, you'd have spotted the big white star and red rectangle of the Air Force glistening on the underside of its wing. And if you were in a mood for idle speculation, you'd have supposed that here was a planeload of Air Force personnel winging off to new assignments.

On any other day, with any other C-54, that might have been a pretty good guess. But not on this particular day, with this particular airplane.

In the first place, it wasn't going anywhere to speak of—just 100 miles or so out over the ocean's azure void and back again. And in the second place, if you could have had a glimpse into the cabin of the big ship, you'd have seen a strange sight.

Instead of four rows of seats containing some fifty slightly bored passengers, you'd have seen twenty desks—a row on each side of the cabin. It was a flying schoolroom. At each desk was installed an identical mass of equipment, dominated by a round, tubular radar scope. And at each desk a young man sat peering at little blobs of amber light flickering on his radar scope.

As the plane droned over the Golden Gate, they could "see" the great bridge below without looking down through the portholes beside their desks. They could have "seen" it even through a layer of San Francisco's early-morning fog, just as—an hour later—they could "see" a freighter lying low beyond the horizon, too far distant for the naked eye to pick up.

The Meaning of 1037

They "saw" these things through the modern-day miracle of radar. It was a miracle they were learning to fathom as they flew this navigational practice mission to nowhere in particular and back again aboard the C-54. And when they had completely fathomed the miracle weeks or months hence, these young officers would attain the coveted rating of "1037" in the U.S. Air Force.

To the outsider 1037 is only a random combination of numbers. To the Air Force, however, it means a combination of technical, highly-refined skills by which one man learns to function in the triple-threat role of navigator, bombardier and radar operator.

The skills are taught at the Bombardment School at Mather Air Force Base, near Sacramento, California—the only school of its kind in the country and, for all that Uncle Sam knows, in the entire world. From there nearly 600 men graduate each year and fan out to tactical assignments aboard the mighty B-36's, the swift high-altitude B-15 jets, the B-29 and its souped-up sister ship, the B-50.

Many of these young officers are former Scouts. Typical of Mather's recent graduates, for instance, was a twenty-eight-year-old first lieutenant by the name of Jack Little, who worked his way from Cub Scout to Eagle during his career as a member of Troop 71 at Mount Clemens, Michigan.

The Base Has Its Own Scout Troop

Scouting, as a matter of fact, goes on apace in the very shadow of the huge training school for 1037's. Mather has its own Scout outfit. It is Troop 155, composed entirely of boys whose fathers are officers and enlisted men on the base. One of them is Kenneth McDaniel, fourteen, son of the commanding

officer, Brig. Gen. Carl B. McDaniel.

Mather also plays a part in the Scouting programs of Troops located at Sacramento and other nearby cities. Every year at least nine different Troops are treated to special tours of the base. There they get a glimpse of the ingenious electronic devices which the Air Force's 1037's are learning how to master—the tools of one of the most exacting of trades.

It is exacting because of the very nature of today's airplanes—because the very nature of postwar aviation itself has made imperative the training of triple-threat men.

Today's big planes do their work six or seven miles above the earth, at speeds of 500 miles an hour or more, in daylight or night and regardless of the weather. The job is to guide them over great trackless distances to tiny dots thousands of miles away, to pinpoint places which can't even be seen from the air—places over which they are flashing at nearly the speed of sound. Gone forever, in the mid-century sweep of aeronautical science, is the luxury of suf- (To page 33)

Scout Mike Allison of Troop 155 inspects the astrodome of a C-54 "flying classroom"



DRYING TABLE FOR FRUITS AND VEGETABLES

See "Featherweight Chow," pages 12 and 13

FOOD	PREPARATION FOR DRYING	DRYNESS TEST
FRUITS		
Apples	Wash, core and cut in one-fourth inch slices or rings. Sulfur outdoors 30 minutes, or dip in solution. Spread not more than one-half inch deep on trays—overlap rings.	Pliable, springs feel creamy white.
Apricots	Same as peaches	Pliable and leathery.
Figs	Steam or dip in boiling water for 1 minute. Peel if desired; cut large figs in half.	Glossy skin, slightly sticky.
Peaches	Peel if desired. Cut in halves, remove pits. Sulfur outdoors, peeled 30 minutes, unpeeled 2 to 3 hours; or dip in solution or precook. Dry pit side up.	Pliable and leathery.
Pears	Wash and remove core and woody tissue. Cut into one-fourth inch slices or rings, or into quarters or eighths. Sulfur outdoors 2 to 4 hours, according to size of pieces; or dip in solution; or precook.	Leathery, springs feel.
VEGETABLES		
Asparagus	Use 2-inch tips only, split lengthwise after cooking. Steam 10 minutes, or until tender but firm.	Very brittle, greenish black.
Beans, green lima	Shell. Steam 15 to 20 minutes, or until tender but firm.	Shatter when hit with a hammer.
Beans, snap	Trim and slice lengthwise or cut in 1-inch pieces. Steam about 20 minutes, or until tender but firm. Spread about one-half inch deep on trays.	Brittle, dark green to brownish.
Beets	Trim off all but 1 inch of tops and roots. Steam whole about 30 to 60 minutes depending on size, or until cooked through. Cool and peel. Cut in one-fourth inch cubes, or slice one-eighth inch thick. Spread not more than one-fourth inch deep on trays.	Brittle, dark red.
Cabbage	Trim, cut in strips one-fourth inch thick. Steam 5 to 10 minutes, or until tender but firm. Spread evenly to a depth of not more than 1 inch.	Crisp, pale yellow to green.
Carrots	Steam whole about 20 minutes, or until tender but firm. Scrape or peel. Slice crosswise one-eighth inch thick, or dice in one fourth inch cubes. Or shred before steaming. Spread not more than one-half inch deep on trays.	Very brittle, deep orange.
Corn	Husk, trim. Steam on cob until the milk is set, about 15 minutes. Cut from the cob. Spread one-half inch deep.	Shatters when hit with a hammer.
Greens	Trim off tough stems. Steam 5 to 20 minutes or until tender. Spread leaves that mat, such as spinach, about one-fourth inch deep; others, not more than 1 inch.	Crisp, very dark green.
Onions	Peel, slice into one-eighth inch rings. Steam 5 to 10 minutes. If dried for seasoning, do not steam.	Very crisp.
Parsnips	Same as carrots	Very brittle.
Peas, green	Steam shelled peas 15 minutes, until tender but firm. Stir frequently during the first few hours of drying.	Shatter when hit with a hammer.

Source: U. S. Department of Agriculture

Oven-Drying Arithmetic

The tabulation below gives some idea of the yield of dried food that can be obtained from a peck of a fruit or vegetable, as bought or picked. Weights per peck given below are approximate.

Apples	12 lb. yield 1 1/4 lb. (3 pt.)
Beans, lima	7 lb. yield 1 1/4 lb. (2 pt.)
Beans, snap	6 lb. yield 1 1/2 lb. (2 1/2 pt., 1-inch pieces)
Beets	15 lb. yield 1 1/2 lb. (3-5 pt.)
Carrots	15 lb. yield 1 1/2 lb. (2-4 pt.)
Corn	18 lb. yield 2 1/2 lb. (4-4 1/2 pt.)
Greens	3 lb. yield 1/2 lb. (5 1/2 pt.)
Onions	12 lb. yield 1 1/2 lb. (1 1/2 pt., sliced; 4 1/2 pt., shredded)
Peaches	12 lb. yield 1-1 1/2 lb. (2-3 pt.)
Pears	14 lb. yield 1 1/2 lb. (3 pt., quarters)
Peas	8 lb. yield 1 1/2 lb. (1 pt.)



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Green Bar Bill says:-

Make use of the lessons of our National Jamboree for the future success of your Patrol.

WELL, WE'VE HAD a couple of months now to settle down after the National Jamboree and to try to get back to normal. Now's the time to look back and pick up some the lessons of that grand experience.

There's no doubt about it: The memories of the Jamboree will live in the hearts of the Scouts who took part in it for years to come. It will influence their Scout work, their leadership, their whole way of thinking.

The greatest inspiration I got out of the Jamboree was our being together—forty-seven thousand of us, in one tremendous camp—rubbing shoulders, talking, swapping, making friends with boys from every region.

This whole feeling of being together swept through me the strongest, of course, when we were all gathered for those great Jamboree events—opening night, Sunday convocation, Fourth of July, closing night.

It still makes shivers of excitement run up and down my spine when I think of those occasions. I was usually way up on top of everything—on a vantage point from which I could see the Sections moving in, like bright colored snakes winding their way over the hills as far as you could see. What a sight, as I watched the vast expanse of hillside in front of the arena filling up with an almost endless mass of young bubbling Americans—Scouts and Scouts, and Scouts!

I got a catch in my throat that Sunday night when, on a signal, all arena lights went off and almost fifty thousand candles sprang into flame—and the sight on World Friendship Night of thousands of right arms raised in the Scout Sign!

Yes, those were the days! Lucky you if you were among those present!

The Patrol Is the Thing!

But when you came right down to it, those present at Valley Forge were only a small percentage of our membership. If the Jamboree had benefited only the few of us, with nothing for the other two and a quarter millions, it would have been but a small success.

So what did we learn at the Jamboree that'll influence Scouting for the future? The answer is "Plenty!"

The first big thing is this: "The PATROL METHOD works!" Well, some of us have known it all along, and have tooted it from the housetops. But there were those who doubted it. When we planned the National Jamboree on a Patrol basis, a lot of sceptics said, "It won't work—you'll be sorry!" But it did—and we aren't!

Yes, it was grand! *The National Jamboree was truly a Jamboree of Patrols.*

The Jamboree Troops came from all over the country, and the Patrols had had only a few days to get themselves working together before arriving at Valley Forge. But the minute they got to the Jamboree, the tents flew



The National Jamboree was truly a Jamboree of Patrols. Three times a day each Patrol sat down to a family meal—throughout the day, Patrol life was lived to the full.

up, and Patrol kitchens and dining shelters and camp gadgets sprang up.

The fellows camped by Patrols, cooked by Patrols, ate by Patrols, lived by Patrols. It worked! And it worked for two reasons:

1. *The Patrol was the only way to do it!* There was no other way possible at the Jamboree—so it simply had to work.
2. *The Patrol was organized to work!* Every Patrol received a sheet on arrival suggesting a routine for getting the work done, with a job for every Scout. The Patrols worked out the rotation of duties—ranging from Cooks, Fireman, Cleaner-Uppers, to Waterman—and all the fellows lived up to their responsibilities.

What will work at a great Jamboree will work even better in a Council camp, still better in the Troop camp—and best of all in your Patrol's own camp!

So let's take this for JAMBOREE LESSON ONE: *A well organized Patrol makes Scouting go.*

You've probably heard that all Patrol cooking at the Jamboree was done on charcoal briquets. It was a cinch—as long as the Fireman "seen his doody and doodit." It's a matter of starting the charcoal fire, then giving it as much time to come up as you would ordinarily spend in cutting wood.

Something New Has Been Added

Predictions of things to come, by Emerald-Stripe Willie: *"I predict that Patrol cooking on charcoal briquets will sweep the country!"* All you need for three meals for a Patrol overnight is as many briquets as will go into a cooking pot, or, by weight, as much as an axe would weigh.

Now, don't get me wrong: I don't want to see the axe, or the ability to use an axe properly, go out the window. Let's stick to wood fires when that's the thing to do—but let's use charcoal briquets when that's the smarter stunt.

So, JAMBOREE LESSON TWO: *Charcoal briquets for camp cookery is here to stay.* And if you want to know more about it, drop me a line and ask for the pamphlet

"Patrol Cooking on Charcoal Briquets."

We've been giving you a lot of suggestions on Patrol equipment in BOYS' LIFE over the years—on this page, in double-page photo features, and in back-of-the-magazine short features. We've tried to give you the best, based on our own experiences—but you never can tell: What seems good to me may seem punk to you.

So, fellows, one of the greatest thrills that I got at the Jamboree was to see a great number of BOYS' LIFE features come to vigorous life in thousands of Patrols.

Keep Your Patrol Humming

Take the tents, for instance: As you looked over the vast expanses of the Jamboree from Fort Washington, what dominated the scene? The Explorer Tent that we've featured in BOYS' LIFE—hundreds of home-made ones sewn from our pattern, and hundreds more of the ready-made Supply-Service version. That tent is picturesque, of good size, easy to make—truly the tent for Patrol camping.

The Patrol food box that we've been advocating was a feature of every Patrol camp! It will be with us for long-term Patrol camping far into the future. The majority of Patrol boxes were of the straight Wood-Badge-BOYS'-LIFE design—but others were improvements, even to the point of being brought in on sulky wheels, trek-cart fashion.

Charcoal burners, reflector ovens, tent decorations, monkey bridges, signal towers, and many other big things—plus smaller things like Indian-costumes, Patrol flags, totems, whittled gadgets, neckerchief slides, personal equipment: right out of the pages of your own magazine!

So here's JAMBOREE LESSON THREE: *Use the program features and handicraft ideas we give you in BOYS' LIFE, to make your Patrol hum.* The Jamboree showed us that the stuff works!

The National Jamboree taught us a good many other lessons—but I'll be satisfied if you make use of the three above for the benefit of your Patrol.

THE END

The Flying 1037's

(Continued from page 32)

efficient time for three men to work separately to locate a place on the landscape below. Now everything must be done by one man and done fast before the place in question has faded into the distance.

Thus the three-in-one 1037—a technician trained to a fine point and proudly wearing his special silver wings with an insignia in the middle depicting radar flashes clutched in the talons of an eagle. "He's the most important individual on a mission," says General McDaniel, and not a single pilot in the Air Force has come forward yet to challenge that. For when the pilots are awed by the versatility required of a 1037.

He Learns Several Methods

As navigator, he must be able to plot the course of his plane by any one of several methods, including dead reckoning, radio and radar, day or night, under every conceivable condition. He must be able to locate points on the ground instantly and as radar man, he needs to operate and calibrate different types of equipment and broadcast and receive from air or ground on all types of radio equipment.

And he must even master the intricacies of weather forecasting sufficiently to predict weather conditions, on a limited scale, for a flight anywhere in the world.

It costs Uncle Sam more than \$30,000 to put him through a highly concentrated course lasting eight or nine months at Mather—a course comparable to two years of college. And millions of dollars worth of equipment—the most modern of any Air Force base in the country—has been assembled there to teach him accuracy and precision.

Radar is, of course, the heart of it all. This electronic marvel, which came along late in the war, works on the principle of electrical impulses bouncing against a given object—on the ground, on the water or in the air—and bouncing back again. It has revolutionized not only the techniques of aerial bombardment and navigation but of blind landings and air-sea rescue. In fact, it may soon provide a protective shield for almost the entire North American continent for planes are under way to construct a radar barrier encircling the U.S. and Canada.

Once he has learned to master radar, the Air Force's three-in-one specialist can do almost anything but shave with it. He can navigate through soup and overcast. He can spot the thickest and thinnest portions of storm areas so as to choose the safest course for his airplane. He can detect another aircraft in the immediate vicinity of his own. And when his work is finished and the pilot finds it necessary to sit down on a "socked-in" airport, radar brings them in.

"It's an amazing thing to us, even when we deal with it every day," says Major R. K. Crown, who, as assistant director of training at Mather, probably knows as much about radar as any man in the Air Force.

The APQ 23 Will Think for Him

By far the most spectacular single piece of equipment at Mather is that in which radar has been wedded to a mechanical computer. The result is a massive machine which goes by the prosaic designation of "APQ 23." This wonder-working mechanism solves the 1037's problem electronically for him, literally taking him to his destination, and bringing him back.

But the machine by no means supplants the man. It is still up to him to preset certain data into his computer involving speed, altitude and other factors.

The computer by itself costs \$18,000, contains approximately 100 tubes and weighs 1,000 pounds. It takes the student officer eighteen hours of classroom instruction alone just to learn how to turn it on, tune up and calibrate the computer for a mission.

Coupled with radar into the whole navigation—and—bombing apparatus which the Air Force calls APQ 23, it affords an accuracy to within about 600 feet from altitudes as high as 35,000 feet. For purely navigational purposes, it is accurate to within 1/100 of a mile.

The precision of this twentieth-century marvel seems all the more astonishing when one realizes that at such altitude winds up to 130 miles an hour must be contended with. But the APQ 23 takes these cyclonic blasts in its stride. And, as Mather's men will tell you, even better radar equipment is on the way. For science is moving forward with gargantuan steps to keep pace with the demands of jet and rocket flight at ever-mounting speeds and altitudes.

How to Become a Scopehead

A special vernacular and even a superstition or two have grown up around the APQ 23. A student who spends hours peering into his radar scope comes to be known as a "scopehead." He also develops "Eddie Cantor eyes," caused by the fact that the rotating radar antenna sends a toothpick of yellow light constantly sweeping around the screen of his scope.

In the early days of radar there was a genuine apprehension of something a bit more serious than "Eddie Cantor eyes." Radar men feared "phosphorized eyes," because of the electron emission from the cathode ray tube inside the radar scope. Flight surgeons actually ran tests and concluded that there was no danger.

Navigationally the APQ 23 is limited in its range to 300 miles. To find his way over greater distances, especially water, the 1037 must turn to a device called LORAN (Long Range Navigation).

LORAN, which enables him to plot his course without looking at his compass or breaking radio silence, works in this manner:

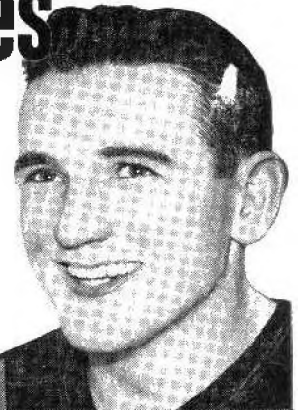
Two ground stations located a short distance from each other fire radio impulses into the air—the "master" station first and then the "slave" station a moment later. These impulses travel far greater distances than the conventional radio beams which for many years have helped guide airline pilots across the nation.

The navigator, through his own LORAN set, measures the time differential between receipt of the two signals, a measurement which often is as fine as 1/1,000,000 of a second. With that he can then fix his position on his LORAN chart.

Still another application of radar in the 1037's bag of electronic tricks is a device which goes under the technical name of "718 Radar Altimeter." This instrument is designed to show him his absolutely true altitude at all times, which is a very handy bit of information to have on a mission.

It is built around a screen similar to that of a radar scope. But instead of seeing blobs of amber light on the screen, he sees a wavy green circle of light. The circle remains still as he

What great athletes say about Scouting



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flies over smooth water. But over rough land it undulates to reflect the constantly changing distances from the plane to the nearest point of earth. Here again it's the basic radar principle of an electronic impulse bouncing straight down to the ground and back.

Conked by a "Bug"

The Mather student does much of his work on "mock-ups." These are earth-bound training aids, cleverly contrived, which simulate actual problems he'll confront in the air but save Uncle Sam the expense of taking him there in an airplane.

There is, for instance, the Radar Super-sonic Trainer with which he can travel anywhere without ever leaving the ground. And there's the G-2 Trainer—a small cubicle containing various types of instruments by which he can be called upon to solve almost any conceivable navigational problem.

"They make it so stiff for us," said one 1037-to-be with a slight shudder, "that when we get into the air it seems easy."

But even earth-bound training has its hazards for the aspiring 1037. On the roof of each cubicle is a moving piece of equipment known as a "bug," which records on a sheet of graph paper how well the student executes any given mission. One young officer managed to get so far askew in his calculations that the "bug" ran right off the roof and, as he stepped out of his cubicle, conked him on the head!

The student's chance to put his new skills to work comes when he reaches the actual stage of flight training. It's then that embarrassing things really begin to happen to him.

They delight in telling the story at Mather of the student who was flying home at night from a cross-country mission at Lubbock, Texas, in a C-54. Glancing around for check points on the terrain below, he spotted what looked from his window like a lake. Five minutes later he looked again and

it was still there. Another five minutes, ditto. Ten more minutes, likewise.

"Gosh," he thought, "we must be going awfully slow, or that lake is a whopper."

When the persevering lake was still there after twenty-five minutes, the student called an instructor. The instructor looked out and quickly solved the mystery. It wasn't a lake at all, he said. It was a spot of light caused by the moon reflecting on the wing!

The Lake That Wasn't There

They tell of another student who looked down and saw what he thought was Buena Vista Lake, near Bakersfield, California. Only there was something strange about it. One of the Air Force's new "flying wings" seemed to be resting right on the water. Then the student realized what had happened. It wasn't Buena Vista Lake that he saw but Murco Dry Lake, where the Air Force tests its new experimental planes. His compass had gone out and he was 100 miles off his course.

Such harmless boners as these, with the ragging that inevitably follows, are perhaps a luxury in which the 1037 can indulge himself while he's still in school. But the luxury is one which he knows he can ill afford after he has finished. For then he will have taken up his duty as the eyes and ears of a large ship splitting the stratosphere at near-sonic speeds. It may be a six-engine B-36, a four-jet B-45 or some new and fantastic mammoth of the sky which is now only on the drafting boards.

Then, indeed, will the chips be down for America's aerial triple-threat man as he crouches there in his tiny radar compartment. Strong within him will be the realization that only through his training, skill and alertness can his ship get from where it was to where it wants to go and get home again.

THE END

Undersea Hunters

(Continued from page 9)

would do. You are that other fish in all truth. You are both subject to the conditions of the water! The contest is fairly even, each with his own weapons, each swimming in the water. Yours is the disadvantage of a limited time in the field of battle.

YOUR LUNGS are ready to burst. It seems much longer than forty-five seconds. You know a minute is the best you've ever done and it took several days to get in that condition. The surface is way up there above, brightly studded with dancing, gem-like ripples. Now you need those "duckfeet" more than ever. Your ears are ringing; sharp pain beats against the softness of the eardrums. Up, up you drive. From the boat they're watching. They see the surface busting wide open, your red snapper on the end of the spear, whirling around. You're pleased at being up, and having made a good shot, and you're trying not to remember how scared you were at first.

There's the medicine kit, too. Mostly it'll be the peroxide that will be used for cuts that you get when you're not careful around the coral. The coral is sharp. It cuts your hands, your knees and your feet. Not deep cuts, but a series of small clean scratches that you don't notice at first until they bleed a little. The salt water keeps them from bleeding until you've been out of it for a while; then you pour on the peroxide. It's good to care for the little cuts right away and then they

won't bother you any more. In a few days, you'll learn to treat the coral with respect, and you'll be tougher then too, so it's mostly at first that you'll need the first aid.

Getting to know Turtle is a slow process. Not that he's the kind who keeps to himself. But even when he's with you, you have a feeling that he's somewhere else. His eyes are a pale blue, the blue that you see in the waters of the Caribbean and the Bahama Bank. He never uses a hand, as you do in the hot glare of the sun, to shield his eyes. It isn't necessary. His eyes are set deep in their sockets. From long exposure to the elements, his brow seems to have pulled itself down low over the eyes. Bushy hairs, bleached white from the combination of salt and sun, finish off the brow so that he has a built-in sunshade to protect and deepen his gaze, possibly from long experience at peering into the depths of the coral.

HE WAS BORN on the island of Tarawa in the Gilbert Islands of the South Pacific. His father, a Scotch sea-captain, loved the place and brought his wife and five children there with him to live. Turtle got his name because from the start he loved the water and was natural in it. It's his right name, we never knew him by any other. Turtle was picked up by the Navy during the war. Or it might be more accurate to say Turtle picked up the Navy. With a group of his fellow

Tarawans he was living on an atoll several miles from Tarawa, hiding out from the Japs. The Tarawans came in their outrigger to the Navy boat where it lay off the lagoon. Turtle showed the sailors how to fish the coral reefs; to swim long distances under water.

And the Navy needed Turtle; it brought him to the Bahamas where they were training men to swim under water. Since the war, Turtle has kept on living in the Bahamas because he likes it there and it reminds him of Tarawa in some ways; more than Miami or Havana or New York. Some day he'll return to Tarawa, but meanwhile he's fishing and swimming in the Bahamian reefs.

Roy and Guy are like yourself; not exactly greenhorns, good swimmers and healthy, but with a lot to learn about underwater hunting. And like yourself, they were captivated the first time they entered this strange new world under the surface and saw it clearly through the glass window of the face mask. It was the first close-up of a bright little fish that caught your fancy. You were surprised when he didn't swim away from you but came right up close. And then you felt like you were just another kind of fish to that fish. Fish are curious about everything in their world. The little ones nose into the crevices of the coral looking for small bits of food. If you're perfectly still, they'll swim all around you. Curiosity. The bigger ones, groupers, red-snappers, angel-fish and nut-tun fish are wary. When you've been around for long, they'll gradually drift away. But at first you can swim around with them without seeming to attract their attention. Make a quick pass at them and off they go.

Those gray, shadowy forms at the

outer edges of the reef are the barracuda. Always there, swimming back and forth where the reef drops off into the deep blue-green far below. The barracuda is cowardly. He rarely comes into the garden patch of coral where vegetation and crevices may hide an enemy. Not unless there is another fish, wounded and helpless, floundering around there. Then he'll come like lightning on an arc, streaking by with a flash and gone before you can turn into him.

"Hey, there, Guy," Turtle shouts, "don't flip your feet so much on the surface or Mr. Shark will come." He always calls a shark "Mister," whether through respect or humor is hard to say. Probably for respect. He tells us over and over how to behave when Mr. Shark is around.

Bring your speared fish right out of the water without dragging it along the surface. Make as little commotion as possible on the surface where the sparkle of splashing water in the sunlight will attract Mr. Shark. Turtle has speared many sharks.

Now we spend the whole day out on the water. We go from one coral patch to the next. We aren't fishing now for more than we need. We carefully select the ones we want for food. Last night we had our fill of red-snappers. On the beach at our campsite, we cooked the fish slowly over hot coals. We brought up conchs from the shallow water where the sloop lay at anchor. The large twisted shell of the conch is easy to find; always where there is a patch of grass-like seaweed they nestle, feeding off the bottom. The conch is like a huge clam. You break off the spiral end of the shell and it comes right out. And then you

clean it off in salt water, scraping away everything but the firm white meat. Then you squeeze limes 'til the juice covers it all over and you chop up little red peppers and celery and you've got conch salad that you eat right away with your fish.

Turtle was sitting up on the bowsprit. He came all where Roy sat holding the mainsheet in one hand, tiller in the other. The light breeze gave us little headway. "Off Shilling Cay is a place," Turtle said. "If we come about we can drift around the island into the channel where the current will take us there."

He had that look about him. The one that tells you something new is about to happen. You wouldn't say that Turtle went out looking for sharks, but if he did that's the way he would look in his eyes.

"There's a wreck in here where they are," says Turtle.

"Where what are, Turtle?" we ask. "Octopus," answers Turtle.

The gunwale of the old wreck floats two feet under the surface. Turtle stands on it bending over, looking down through his mask. We bring the dinghy over, letting enough line out on the anchor to hook it around the piece of wreckage. Hardly rippling the surface, Turtle slides into the blue water. There are huge shapes of machinery, deck winches possibly, jutting out here and there, but so covered with barnacles and growth they are more like the orange and yellow coral around them. The decks of the old ship are split open, long timbers poking out into the bright blue water, easily seen against the white sandy bottom. We see Turtle through the bottom of the glass-bucket poking around down there. Bubbles stream

up as he moves about. Bubbles of air struggling upward for release to the air from whence they were brought down. Turtle can stay down two minutes with no trouble. And then he beats his way back up to the top.

"You, Roy, come with me." He stays in the water gripping the side of the dinghy with one hand, the spear in the other. Then when his breathing is steady again he says, "It will take us both to bring him up. You follow me down to where he is and we'll both spear him."

TURTLE DIDN'T like the octopus being around the old wreck. It seemed to be the one thing he was afraid of if he had fear of anything in the water. Possibly it wasn't fear; respect maybe. That's why he carried a sheal knife on his belt when he swam. He often said that an octopus could wrap around your arm or leg and hold you down until you drowned. The rest of the octopus was anchored to something solid and there you were and would remain.

They brought up the octopus impaled on the two spears. He was eleven inches across the bulk of his body. Not a big one, but it took two spears and two men to pry him off the wooden timber. Turtle said there was a way to cook an octopus so it tasted good, but for some reason we never tried it.

Perhaps what happened next drove away all notions of eating our prey. Here is the way it was:

While Turtle and Roy were dragging up the octopus from the old wreck, Mr. Shark came along to see what was happening. All the time Turtle had been watching for him. He saw the grey shape as it maneuvered around for a better look before

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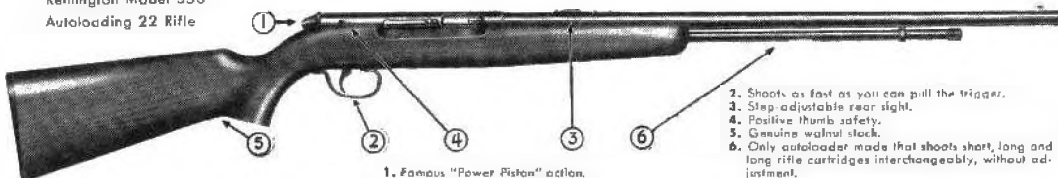
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striking. Leaving the octopus with Roy, he quickly drew out his spear by pulling it on through; set the sling over the end; took a deep gulp of air and plunged downward.

Little of what happened could we see through the bucket; only flashes of white here and there. The water swirled. The first minute seemed more like five; the second dragged on. We all began to think along the same lines: adjusting our face masks and spears automatically.

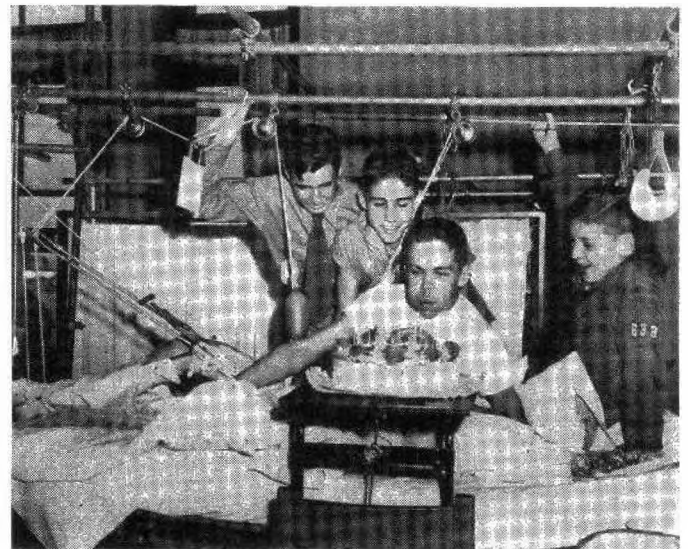
THEN THE SURFACE burst wide open. Turtle came up quickly to the boat asking for another spear. He plunged again. After that he took a large hook down with him attached by line to the dinghy. And we knew then he had nailed Mr. Shark for good.

For supper that night we fixed a mess of Spanish lobster. They're called crayfish sometimes. They look every bit like a lobster should, but they have to get along without claws, a fact which makes them easily caught. On the way in from the wreck, we had spotted a good place to try for them. We dove together for them, something never done when spearing. To get the Spanish lobster, we used our hands for the easy ones and a three-pronged long-

handled fork called a "grains" for those hard to reach where they lay deep under the coral heads. Their long feelers give them away. You see the feelers first; they protrude out from the head about two feet. The crayfish backs away quickly when touched. You must grab it around the middle and hold tight.

Willie, a native Bahamian, had sailed over from the town in his small sloop. We saw it anchored near the beach when we came in. Willie was a friend of Turtle's. He had started a fire on the beach. The curling smoke looked good. Willie's white teeth flashed a big smile in his black face when he saw the lobster. He set to work splitting open the tails, throwing away the rest. He took out the white meat of the lobster and separated it into chips, as it comes apart in its own way. Then he fried them in butter in the pan over the fire. We ate the lobster with fresh lime juice over it. And we talked. The fire warmed us. The moon came up so we could see the shape of the two boats riding quietly on the water. And Turtle was singing a quiet song of Polynesia. That was more like it than any song of Miami, or Havana or New York.

THE END



Arizona Scout Has "Jamboree" in N. Y. Hospital

This Jamboree Scout, Byron Lay from Douglas, Arizona, didn't quite get to Valley Forge. What finally happened was that part of the Jamboree—in spirit at least—was brought to him.

How so? Well, Byron, who was visiting New York City with his Troop on its way to the Jamboree, somehow got in an argument with a truck. The truck won and Byron got all tangled up in a bed in lower Manhattan's Bellevue Hospital.

Scouts and Scout leaders who heard of Byron's accident dropped in daily for visits. Then police and firemen who were on duty at the hospital made a habit of dropping around. The nurses tell us that Byron got more attention than the Bronx Zoo's prize armadillo.

When Scout Lay's friends found out that Friday, July 21, was his birthday . . . well, they just had to

throw a party. The candle puffing ceremony was followed by the gulping down of ice cream, candy and cake. All the patients in Byron's ward capitalized on his accident, because they shared in the celebration. Among the party gifts Byron received are a camera, slacks, sport shirts, a jig-saw puzzle and fountain pens. The memorable part of the party came when a Brooklyn Scoutmaster, William M. Hammond, presented Byron with the Bronze Palm for his Eagle Badge. In addition to all this, BOYS' LIFE photographer Bob Jones gave Byron an album of fifty professional Jamboree photographs.

Although Byron didn't get to take part in the swapping and touring at Valley Forge, he did get part of the Jamboree brought to him—and that's more than most of us can boast of.

Scanning The Sports Scene

with **STANLEY PASHKO**

Double Twist Plus A Flip

THE MOST DIFFICULT dive listed in the intercollegiate diving tourneys is described as "the running double twisting forward one and one half somersault." Properly enough, the man who invented this double twister in 1912 is the best in the country when it comes to performing it. This proficiency gave him a big jump on his competitors when he was diving for Ohio State University and won him the N.C.A.A. title of Swimmer of the Year.

Miller Anderson is the proud innovator, and the most amazing thing about his achievement is that he came back to competition after a war injury which almost cost him his leg. When his P-47 was hit he bailed out and broke his leg in the landing. His leg became so infected that American doctors seriously considered amputation when Anderson was finally rescued. They finally saved it with a silver plate, Anderson built up his muscles by conscientious exercising, changed his diving style to compensate for the weakness, and returned to help his school win the N.C.A.A. Swimming Meet in his Junior year.

Smart Like A Foxx

Jimmy Foxx, the Hall of Fame slugger, was best known as a first baseman with the championship Athletic teams of a decade or so ago. One season, though, Connie Mack needed a catcher and Foxx agreed to give the job a try. He was no Mickey Cochrane, but Jimmy proved he could think as well as slug the ball.

In one game, with two out and two strikes on the batter, the runner on third attempted to steal home as the ball was delivered. It was a perfect strike which Jimmy caught and quickly tagged out the sliding runner before he crossed the plate.

With Foxx and the umpire knowing who had made the last out, the Athletics took their turn at bat, then went out into fielding positions again. The batter who was at the plate in the last inning again came to bat. The umpire properly kept quiet as the batter connected for a triple. To his surprise and chagrin, upon the request of Foxx, he was immediately thumbed out. With two strikes on the batter, and a third thrown over before the base runner was tagged out, the team naturally thought the runner had made the final out in the preceding inning. —Thanks to Don Tarbet, Ackerly, Texas.

Scholastic Track Champions

Jack Latham writes that his high school in Fort Collins, Colorado, has won permanent possession of the National Interscholastic Track Trophy. The school's track team won the National Meet four years ago, failed the following year, then came back to win the next two years in succession. The record is particularly impressive since Fort Collins High School has only 600 students.



Yogi Berra defends home plate, this time without the ball!

Baseball Records in Reverse

Andrew Leonard, of the Boston Braves, committed nine errors in a single game.

Carl Weielman got to bat six times, struck out every time in a game on July 25, 1913.

William Gray, pitching for the Washington Senators in 1909, walked eight men in a single inning.

Leon "Goose" Goslin, a really fine hitter, grounded into four double plays in four consecutive times at bat on April 28, 1934.

Leonard Meccillo made four errors in one inning for the Chicago Cubs.

This list of baseball boners was submitted by John Goodenough of Ridgewood, N. J.

Diamond Dirt

Nobody can say that sixteen-year-old Frank Paterson didn't put everything behind that throw from left field to home plate during a Chatham High School practice game in Massachusetts. He threw so hard he fractured his arm.

It took a little time, but Moral township of Shelby county and Franklin township played off seven innings of baseball in Indiana this summer.

Franklin won 42 to 4, getting 25 hits off three Moral township pitchers. Moral's porous defense committed 17 errors.

In 1944, Joe Nuxall pitched in a major league game for the Cincinnati Reds at the age of fifteen. This beats Mel Ott's famous beginning with the Giants at the tender age of sixteen.

Until 1882, umpires often took testimony from players and spectators before ruling on a disputed play.

The Berra Legend

Yogi Berra, the Yankee catcher, is fast becoming a legend in baseball. His antics may rival those of such celebrated screwballs as Goofy Gomez, Dizzy Dean, Rube Waddell, and Casey Stengel. Two new ones have come to our attention.

It seems that the Yankee brain trust was disturbed about Yogi's inability to let any kind of pitch go by unmolested. They called him away from the plate in one game, telling him not to go for bad pitches. "When you get up there," they admonished, "think—think—think."

Yogi went up, took three called strikes and returned to the bench.

"How can anybody think and hit the ball at the same time?" he complained.

• • •

The second anecdote is told by a teammate. It seems that Yogi was arrested for speeding and the teammate was kidding him about it.

"How fast were you going?" asked the teammate.

"I was going so fast I covered 200 miles in two hours," growled Yogi.

"That's impossible! You couldn't do 200 miles in two hours."

"I sure did," Berra insisted. "I was driving sixty miles an hour all the time."

Baseball For Boys

The Brooklyn Dodgers have their famed baseball factory in Florida, the Giants operate a school near Poughkeepsie, but the Chicago Cubs take the cake. They conducted a baseball school for boys eight to twelve years old at Springfield, Missouri.

The trend toward youth is also taken up by the directors of the American Association who expect to form a "Little (To page 44)

The Bus Boy and the Criminals

(Continued from page 10)

circulars throughout the city, state and country, and abroad, describing in detail the stolen fortune in Shattuck gems. There were rings, earrings, pendants, necklaces, and bracelets of rubies, pearls, diamonds, and emeralds—truly a king's ransom.

AN ANSWER CAME from the Paris police. They did not have any idea as to the identities of four of the five men. But they were pretty certain that the leader had been one Gabrielle Mourey—an Apache criminal who had a long record as an evil-doer and who was, at the moment, a fugitive from French justice. A photograph of Gabrielle Mourey was en route, Paris advised.

Tommy Adams sat in police headquarters thumbing through a stack of rogues' gallery pictures. In order not to influence his selection, the police had mixed Gabrielle Mourey's picture in with a dozen "mugs" of other criminals. When Tommy came to Mourey's picture, he stopped, opened his eyes a little wider, looked up at the detectives, and said, "This is the man from the restaurant." The fifteen-year-old boy had definitely put the police on the right trail.

When Albert Shattuck and his wife, who had both had such a close call from death, studied the rogues' gallery photos of Gabrielle Mourey, they recognized the criminal as a man who, under another name, had once worked in their household as a butler. "I could never forget that face," said the financier-philanthropist. "There was something evil in it."

Gabrielle Mourey's face was forthwith incorporated in a police flier that was distributed throughout the United States, Panama, Mexico, Central and South America, and in England and the Continent. The most distinguishing mark on his body, also described, was a tattoo on his right forearm.

THE POLICE were not through with Tommy yet. They kept questioning him as to whether he had overheard any bits of conversation between Gabrielle Mourey and his companions that could be of any value in the manhunt. Tommy could not recall any such conversation. "Keep thinking back, Tommy," urged a detective. "Often times a person hears something and then forgets it unless he really strains to recall it."

The detective was right. Tommy recalled that one of Mourey's henchmen—the one with the scar on his face—had once said that he had friends in Plaindale, New Jersey. There was no such town as Plaindale in New Jersey, but there was a Plainfield. Detectives went to the New Jersey community and began to watch the patrons of some of the restaurants there.

Early in their search, the detectives spotted a scar-faced man who answered the description of one of the quintet. He was a regular patron at a little French restaurant. But the detectives had to be sure. One night they took Tommy to Plainfield. For several hours Tommy stood on a street corner with a detective. Toward midnight a man came out of the restaurant.

"Here he is, Tommy," whispered the sleuth. "Get a good look at his face when he passes under the street lamp there and poke me twice if that's him."

Tommy held his breath as the man came closer. Then, when he passed under the street lamp, Tommy got a good look at his face. He poked the detective twice. The detective brought out

a handkerchief and blew his nose—a signal to two other detectives nearby to close in on the quarry. The man with the scar was taken without a struggle—thanks, again, to fifteen-year-old Tommy Adams.

The prisoner's name was Moise Bagnoli. He readily admitted his identity and his participation in the Shattuck crime. He corroborated the police premise that Gabrielle Mourey had been the leader of the gang. Mourey had taken half of the loot—one hundred thousand dollars worth of gems—as his share and divided the rest among his confederates.

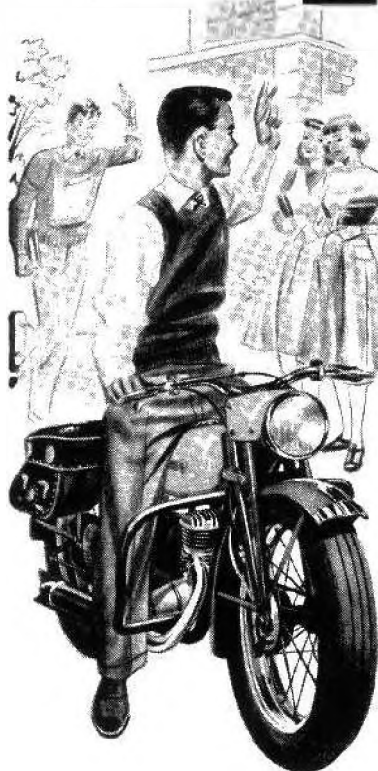
WHO, THE police wanted to know of the prisoner, were the other participants in the crime, and where were they—and Mourey? Aside from Mourey and Bagnoli, the others had been Eugene Diasset, Pierre LaMonte and Paul Camilleri—hardened European criminals all. Bagnoli had not the slight idea as to the whereabouts of Mourey the leader and Camilleri, a close friend of Mourey's, but he knew where Diasset and LaMonte were. He led the police right to Diasset in a hideout in New York. The police reached LaMonte's hideout too late; he had

been killed in a quarrel with some other criminals over the price for a hideout they were selling him. Bagnoli, the scar-faced one, and Diasset were quickly convicted and sent to Sing Sing Prison for sixty years. With two of the bandit quintet in the big house and one dead, that left two at large—Gabrielle Mourey, the leader, and his close friend, Paul Camilleri.

SEVERAL MONTHS had passed since the outrageous crime had been committed in the house in Washington Square North. Albert Shattuck, the victim, made a public announcement. He would spend the remaining years of his life and all his millions if need be to see that the case was completely solved, meaning the apprehension, conviction and imprisonment of the two remaining fugitives. "I will personally track these men down to the ends of the earth if necessary," said Shattuck. The police admired the retired financier's courage; he was seventy-one years old and in frail health.

The first clue came from San Francisco. There a jeweler bought two ruby rings from a dark, stocky stranger, later to discover that they were part of the Shattuck loot. The stranger had lived at a small hotel near the jewelry shop, but when the jeweler notified the police the man had checked out of the hotel.

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YOUR BOOK SCOUT

The Outdoor Chef by Paul Handel. Scouts will find this useful and so will their dads and mothers. It covers the field of outdoor cookery from the first twig of the fire to the last flourish on a barbecue. Its emphasis is on cooking that can be done in camp or on the trail, but it also contains excellent plans for construction and use of plain and fancy backyard fireplaces. It has interesting little sidelights like how to break an egg with one hand, how to flip flapjacks in the pan, how to make hobo stoves. There are good suggestions for cookkits for all occasions, instructions for inus, clam-bakes, barbecues, foil cookery. Menus and recipes of proved practicality are given, and all the explanations are enlivened by the author's own cooking experiences on wilderness trips, in camps, or backyards. (Published by Harper and Brothers, N. Y. \$3.00. Can be ordered from National Supply Service, B.S.A.)

Dances and Stories of the American Indian by Bernard S. Mason. Twen-

ty chapters full of material on Indian dances, movements and steps of the dances, and staging the dances. Many full page photographic illustrations. This is a re-issue of a book first published in 1924 which was popular at that time. (Published by A. S. Barnes and Co., N. Y. \$5.00. Can be ordered from National Supply Service, B.S.A. Catalog No. 3581.)

Treasure Cave by Carl D. Lang. A good story about three fellows who owned their own sailboat and earned their way for a summer off the coast of Maine, where they found jobs with a movie company on location. The big excitement comes when they fight it out with some unruly competitors in a black sloop for the unsuspected treasure of a strange cave. The book is rich with sailing lore, and Sea Explorers should like it especially. The writer, who knows boats well, is also the author of the Sea Scout Manual. (Published by Little, Brown & Co., Boston, \$2.75)

Shattuck took the first train for San Francisco upon receipt of the information. He went to the hotel where the suspect had stayed. He questioned bell-boys and other employes about the man. Shattuck emerged with one clue: the suspect had been looking at travel folders on Mexico when a waiter had gone to his room with breakfast one morning just before his departure. Shattuck knew the suspect had been Mourey. He had had a small bald spot, about the size of a quarter, on the back of his head—a clue first given to the police by observant Tommy Adams.

SHATTUCK NOW WENT to Mexico. The Federal Police there had just run down a clue in a small town twenty miles from Mexico City. A man reported to look like the fugitive Mourey had visited the town and given someone a handsome piece of jewelry as a present. The jewelry turned out to be part of the Shattuck loot. But by the time the police reached the town, the quarry had disappeared.

Shattuck travelled throughout Mexico, sometimes going into the mountains alone on horseback in search of his quarry. The aged man underwent trying rigors of various kinds but his spirit carried him through.

The hunter was in Mexico when the quarry turned up in Panama. There a man with very dark skin went into a physician's office and asked that a tattoo mark be removed from his right forearm. The tattoo was the one mentioned on the police flier describing Mourey, but the physician had not seen the flier and didn't know this man was wanted by the police. The doctor told the patient that the removal of the tattoo would be very painful and suggested an anaesthetic. The patient was against an anaesthetic. He insisted that the removal be done without one. He could, he said, stand the pain.

DURING THE operation, the man fainted from the pain. By way of reviving him, the doctor loosened his collar and shirt. When he did so, he noticed that his patient's chest and neck were several shades whiter than his face. Here, then, was a man who had darkened his skin as disguise. Why? The doctor went into another room and reported the suspicious patient to the police. When he returned to his operating room, the man had revived and disappeared. The police showed the doctor a flier of Mourey; the French criminal had been the patient.

Shattuck went to Panama. There he organized expeditions into the jungles of the Isthmus, seeking the fugitive's hideout. While Shattuck was on one such expedition, Mourey turned up in Rio de Janeiro. There the story was similar to that of San Francisco: the man had sold some of the Shattuck gems to local jewelers, only to have them discover the true source after he had vanished from his hotel.

In Rio, Shattuck, standing up miraculously under the rigors of the chase, questioned employes of the hotel where Mourey had stayed. The man had fallen into conversation with a chambermaid about the Philippines. The maid had once worked in a hotel in Manila, and Mourey had asked her all manner of questions about the country.

On the strength of the information from the chambermaid in Rio, Shattuck went to Manila. When he reached that city, he went to the police with the information he had picked up in Rio. The police had news for him—the most disheartening sort of news. Mourey had been in Manila. But it was the same story all over again—he had sold

some gems, the gems had been recognized as Shattuck loot, but Mourey had gone by the time the police could act.

ALBERT SHATTUCK returned to New York. A year had passed now since the quiet Sunday afternoon when he and his wife and servants had been entombed. He knew he could not have very much longer to live. He was not well. His body was weakening, but his spirit was as strong as ever. He rededicated himself to catching the two fiends at large. He booked passage on a round-the-world cruise ship. He had a strange hunch that somewhere, along the route of the liner, he would spot one or both of the remaining criminals.

In every port at which the liner docked as it travelled westward around the globe—Honolulu, Yokohama, Hong Kong—Albert Shattuck got off and roamed the main streets, the side streets, and the alleys, searching, searching. Death, he knew, was coming closer; the criminals seemed to be as far away as ever. Then one day as the ship was going slowly westward through the Suez Canal at Port Said, the toughest city in the world, and Albert Shattuck was leaning on the rail, looking at the laborers on the edge of the canal, he spotted a familiar face—the face of Gabrielle Mourey. His long hunt was at an end almost. Mourey, in laborer's garb, was scanning the faces of the passengers. His gaze and the gaze of Albert Shattuck locked. But the ship was in motion, on its way from Port Said. Gabrielle Mourey began to run. "Stop that man!" shouted Shattuck. "Stop that man! Stop this ship! Stop this ship!" The crew and the other passengers looked at the old man as if he had suddenly gone out of his mind. The ship did not stop. Neither did the running man on the shore. The distance between the ship and the running man grew greater. Soon the man was out of sight. Presently, courageous old Albert Shattuck sank into a deck chair and burst into tears.

Back in New York, a strange happening came to pass. Tommy Adams, the youth who had originally put the police on the trail, suddenly recalled something, a bit of information dredged up from the recesses of his subconscious after more than a year. He recalled that once he had heard Mourey saying that there was no place in the world like Paris in June. This was June. Tommy turned the scrap of information over to the New York Police. The latter had been apprised of the episode at Port Said. The police in the Suez port had gone to work trailing Gabrielle Mourey. The fugitive's path was picked up here, lost there, picked up again, lost again, in several European countries. But the trail pointed to the general direction of Paris—and this was June.

GABRIELLE MOUREY and his confederate Paul Camilleri were known to prefer Apache joints when in the French capital. Albert Shattuck, kept abreast of developments by wireless to his ship, disembarked from the ship at Marseilles. He took a train to Paris. There he came to the end of his long trail.

He reached the capital just in time to be greeted by the news that the French Police had picked up both Gabrielle Mourey and Paul Camilleri. Albert Shattuck sat in a French courtroom and heard Mourey and Camilleri sentenced to life on that fortress of the condemned—Devil's Island. Mr. Shattuck lived long enough to return to the United States and reward Tommy Adams, the lad who played such a vital role in one of the most unusual manhunts of modern times. THE END



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Platoon Fullback

(Continued from page 8)

the facts of life. Quick. The seconds ran a play on Clip's side of the line again and once more he failed to make a really good try and the seconds notched a ten yard gain.

They made the varsity defense look like a sieve every time they ran a play that got through on Clip's side. Then the Coach put Timmons and Cole and Haney into the varsity backfield, sent in four new linemen, left Clip in at fullback, and gave the varsity the ball. Tod Haney looked levelly across the huddle at Clip as he called the play.

"We're supposed to be paying football," Haney said. "Defense or offense, it's still football. Let's go!"

Clip's lips tightened in a mirthless grin. Okay, so maybe Haney had it figured. He could learn the facts of life along with Mann. Clip Bell had his program laid out and Mann nor Haney nor anyone else was going to throw a block on his plans. Clip noticed casually that Mann said something to Haney as they came back to the huddle after the first play.

Haney called a forward pass. Clip's assignment was to take a swipe at the defensive end then drift out into the flat zone for a possible option pass if the deep man going down that side was covered. He carried out his brush-block and cut out into the flat. He saw the pass that Haney tossed and a thought popped into his mind which he instantly dismissed.

The ball spiraled directly into the arms of a second team back almost as though Haney had aimed the pass at him. The defensive man grabbed the oval and high-tailed for the goal. Instinctively Clip took a path to narrow the angle between the ballcarrier and the sideline. He played his man cagly, forced him to make his try and then easily covered the fake. Clip hit the second team halfback with a driving tackle that spilled him out of bounds and the runback of the intercepted pass came to an abrupt halt.

"Nice tackle, Bell," Coach Mann said. He looked steadily at the fullback. "So you can tackle!"

CLIP GLOWERED. Anger bit through him in an instant. That thought he had dismissed had been right.

"Yeah," he growled. "I can tackle!" Teammates looked sidewise at him. Clip's anger was increased because of a queasy little feeling deep inside that he would have fiercely denied if anyone had accused him of having.

Coach Mann whistled the end of the scrimmage a few minutes later. Clip jogged toward the fieldhouse and he was very much aware that he jogged alone. He looked around at knots of two and three players moving off the field together and he scowled and the queasy little feeling gnawed deep in him again. He scowled harder. Be your age, Bell. What do you care if the snobs give you the cold shoulder?

The blowup came in the dressing room just as Clip was snaking off his practice jersey. Tod Haney stood before him as Clip's head emerged from the sweaty garment.

"Bell," the captain said. "There are some things that better be said right now. In plain words. You deliberately dogged it out there when you were put at backing up the line!"

Clip pulled idly at a lacing of his shoulder pads while he eyed the captain. It seemed a full minute before he spoke.

"Look, sonny-boy," he said carelessly. "You can get in trouble yakety-yaking."

"So you don't deny that you dogged

it. You—you—and you're supposed to have Midstate spirit! You—"

"Nuts!" Clip cut in. He jerked the shoulder pad lace so hard that it broke. His eyes were black pinpoints. "You're the Joe College gent who yapped about Midstate spirit," he said. "Me, I've played more football for Midstate—and I'll play more this year!—than you and all the 'spirit' boys put together. But the football I play will be my kind of football. If anybody's got an idea that Clip Bell will be out there batting his brains out to soften up the other guys so the patty-cake boys can come along and pick the grapes, they better get another idea quick! 'S far as dogging it goes, how about you tossing that pass right into the guy's hands out there? Do you call that kind of stuff the Midstate spirit?"

TOD HANEY FLUSHED. His fists clenched. He said, "I won't take that kind of insinuation from anyone, Bell!"

Clip gave the slender captain a curious look. Why, the blamed fool meant it! Didn't he know that he wouldn't stand a chance against a guy who outweighed him thirty pounds and tons in toughness? Clip grinned. He put out a hand and gave Haney a little shove.

"Be your age, sonny-boy," he said. "You—"

The next instant he threw up his left arm and knocked Haney's fist high enough that the blow barely grazed the top of his head. Pure reflex shot Clip's own balled right fist crashing against Haney's jaw. The captain staggered backward over a bench and his shoulders slammed against the row of lockers as he sprawled to the floor. Clip was instantly standing over him. Then Clip's fists unclenched. He reached down and pulled Haney to his feet.

"Trouble with you," Clip said tightly, "is you're so young! I'm sorry I belted you. You wouldn't stand a chance in a fight with me." He shrugged, tried a grin which did not quite come off. "You wouldn't prove anything by getting your block knocked off. You're just too young!"

The dressing room was very quiet as Clip slucked out of his pads and peeled off his undershirt. Nobody said a word as he headed for the showers

CLIP SLAMMED the covers of the book he had been trying to study, tossed it aside with a gesture of disgust. He walked restlessly across the room and looked out the window. Across the areaway, in a room of the opposite wing of East Dorm, four boys were laughing and goofing around. Clip scowled, moved impatiently away from the window. What was wrong with him? What difference did it make that nobody had come to his rooms since that incident three weeks ago? If the patty-cake boys wanted to sulk because a guy wouldn't be a patsy for them, why let 'em sulk!

He picked up the sport sheet of a metropolitan newspaper. Automatically his mind registered words that he had already read several times.

MIDSTATE TO CONTINUE PLATOON SYSTEM.

Coach Mann confirmed today that he plans to use separate offensive and defensive units in Midstate games this year. The new Midstate mentor frankly admits that he lacks manpower to use the platoon system as Michigan and Notre Dame and Army and other gridiron powers utilize it. However, Mann is a firm believer in giving as many boys as possible an opportunity to play football and derive the benefits from—we quote—"the greatest game of all." Insofar as practical, Mann will use the platoon system in furtherance of his belief.



REELING IN

NOW that the fishing season is over for most of you, you'd better think of taking care of that line or you won't have any when next spring rolls around.

Here's what we think is a pretty good line drying trick. First, remove all your line from

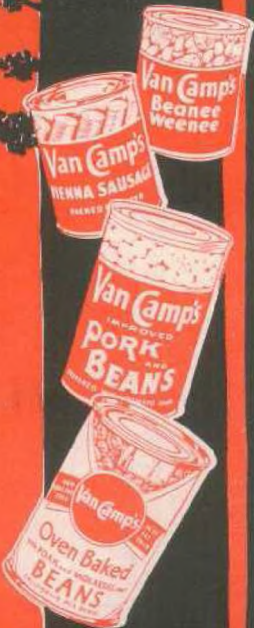
the reel. Next, glue an empty cereal box to the center of an old or cracked phonograph record. Now, place the record on your turntable and start the machine. Wound on this new reel, your line will dry out while it is stored in your tackle box.

IT'S ALWAYS A PICNIC

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flavor THROUGH and THROUGH



Refreshingly, Mann does not drag out the traditional crying towel when speaking of Midstate prospects. We quote: "Certainly we have been hard hit by loss of experienced material. No squad could lose the men that Midstate lost and not feel it. But we figure to have a football team. We won't be National Champions—but I don't expect any of the teams we meet to chase us out of the stadium . . ."

Clip threw the paper to the floor and scowled at it as he jammed his hands into his pockets. Mann had a head full of rocks. Putting out that kind of line to the sports writers! Who did he think he was kidding?

THREE WEEKS of practice gone. A tough schedule opening tomorrow with the Ohio game—and Mann did NOT have a football team. Oh, he had developed a pretty good offensive outfit. They would score against just about any aggregation if they gave Clip Bell a little help. But scoring is no rarity in modern football. You have to keep the other guys from scoring more than you do.

Clip glanced morosely again across the airway. What the dickens was the matter with him! He told himself that he was moping like a sap and went to bed and dreamed about a lot of other fellows all having fun while Clip Bell was mired in a bog of touchdowns with rah-rah boys dancing on the shore and jeering at him.

He felt sour and edgy even the next afternoon when he left the dressing room for the playing field.

Tod Haney came back from the coin-toss with the Ohio captain and told the squad that he had won the toss and had elected to receive. The offensive unit gathered around Coach Mann briefly before taking position for the kickoff.

"A study of movies of our game with Ohio last year indicates a nut-too-strong center trio," the coach said. "Our spinners and buck-laterals inside the tackles may pay off. Tod will run Series A first. A touchdown without losing possession of the ball wouldn't do us any harm."

"Let's go right from the whistle! . . . The old vinegar gang! . . . Everybody dump somebody!"

Pepper chatter came from the players as they gripped hands around the hand of Coach Mann in the center. A little thrill ran through Clip and for a second's fraction he was carried away with the mass enthusiasm and was not thinking primarily of Clip Bell. He stood in his position on the goal line directly in front of the goal posts and marveled. Was he falling for this Joe College guff!

THE OHIO KICKOFF was a booming, end-over-center down the middle. Clip gauged the arc of the ball, took a couple of steps back then charged forward to be in full stride as he grabbed the descending oval. He sped in behind the V of interference as he sized up the pattern of tacklers.

He stuck with his blockers until he had none. He saw an opening to the left and swerved toward the sideline. He was not a brilliant open-field runner but he ran with such power and deceptive speed that he was very difficult to knock off his feet.

Ohio tacklers did not hem him in until he had crossed the thirty-five. "Nice going," Tod Haney said in the huddle. "You fellas blocked. Keep blocking. It's Series A."

Series A was a set of three plays run in sequence. The first of the series called for a full-spinner by Clip after taking a direct snap from center and

taking a handoff to the wingback. "Set!" Haney barked. "Hep!" The ball snapped back to Clip on the "Hep." He half-spun, masked the ball and laked a handoff to Leo Cole as the wingback slashed past. Clip completed his spin and drove for the hole that had been opened over the Ohio left guard. The space yawned invitingly and Clip knifed through, slanted away from a backer-up.

HIS POWERELL legs pistoned high and he broke the hold of one tackler who had a shot at him by the sheer drive of his highkneed stride. Tod Haney threw a block on an Ohio man who threatened and Clip was across the midfield stripe before tacklers swarmed him to the ground.

"First down!" the referee shouted as he placed the ball. "First and ten, Midstate."

The second of Series A was run from the same setup and looked exactly as though it was a repeat of the spinner. But as the Ohio secondary converged on the threatened point of attack, they discovered that Clip did not have the ball. He had made the handoff to Cole. It was not quite a wingback reverse, but it had the same general effect. Cole caught the Ohio defense leaning the wrong way and he was around the flank before they recovered. They managed to chase him out of bounds at the twenty-eight yard line.

Another first down. Thirty-seven yards in two plays. Hey, Clip thought. We're better than I figured.

But Ohio was not a team to lose its poise over a pair of ground gaining plays. Their defense tightened. The third play of Series A, a variation of the first wherein Clip drove almost to the line of scrimmage then lateraled the ball to Timmons, the right half, gained a bare two yards. Ohio stopped Cole after a three yard punt-off-tackle. Clip drove and churned and tore and made the first down on the Ohio eighteen—just made it.

"It's a jump pass," Haney said in the huddle. "To Bell. Give him some blocking, gang—and get through there and cut fast, Bell!"

CLIP NODDED. He brush-blocked an Ohio lineman as he came through, slipped past him and cut fast to the left. Haney delayed just long enough, then ran forward as though it was not a pass but a line smash. He jumped high at the line of scrimmage and fired a bullet spiral that was right in Clip's hands.

Ohio knocked him out of bounds short of the end zone but the ball was inside the five and it was first down.

Four surging, ripping, battering tries into the aroused Ohio line—and Clip Bell had scored the first Midstate touchdown of the year. He trotted off with the offensive unit and watched Midstate's try-for-point specialists do their stuff. The big 7 that went on the scoreboard looked mighty nice.

That touchdown would give the boys up in the press box and the radio booths material to work on. Clip Bell's name would figure very prominently. Clip felt pretty good. He rubbed a shoulder that he had not noticed being sore. Those Ohio babies were tough, at that.

Ohio proved almost immediately that they were tough.

They took the kickoff. They ran a routine line buck and then uncorked a pass play that was perfectly executed. The Ohio receiver was all alone twenty yards beyond the scrimmage line when he gathered in the ball. He could have waited over for the touchdown and when the conversion was good, it was

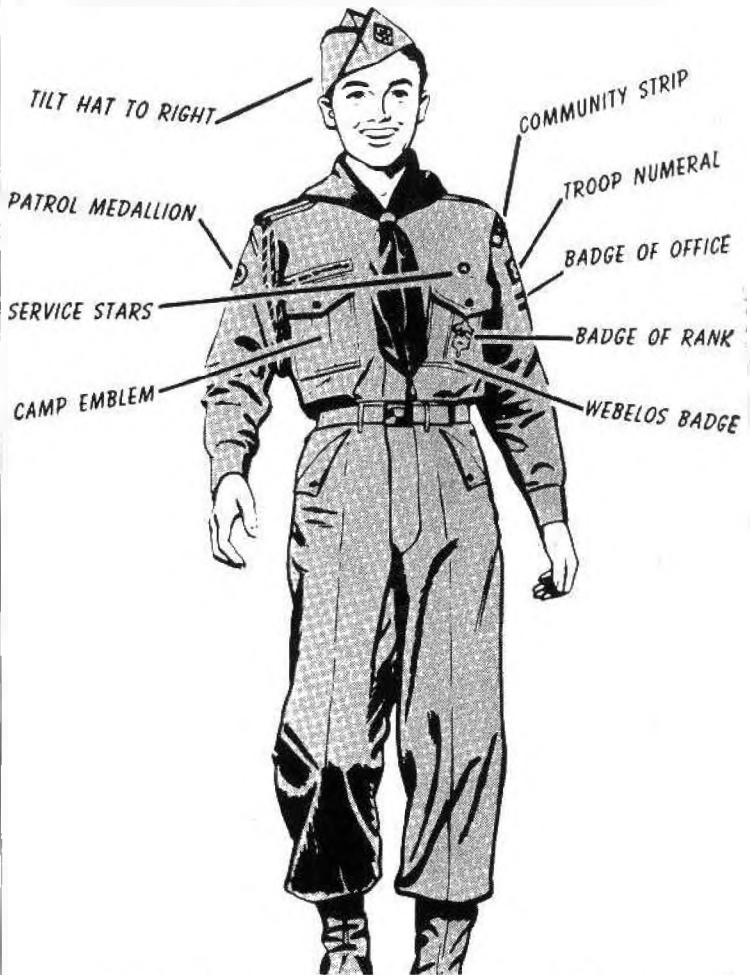
Insignia—the personal part of your Uniform

Wear them correctly and look smart!

No matter how well your Uniform fits, it's never right—never really smart until all your Insignia and Badges are stitched in place. That's when it becomes *your personal Uniform* complete with the record of your achievements in Scouting. Yes, every last piece of Insignia tells the thrilling story of your progress up the ladder of advancement. If you want to look smart in your Uniform, wear all the Insignia you are entitled to. But even more impor-

tant—wear them correctly. There's a given spot on your Uniform for each Insignia, and that's the only place it should be worn. The illustration on this page shows you how and where. Clip this page and keep it for a handy reference when you get your Uniform in shape for the coming Inspection. Insignia rate 20 points, you know, so you can't be a 100-pointer if you miff the ball on this important part of your Uniform . . . the personal part.

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a deadlocked score and a new ballgame.

It did not stay a tie ballgame very long.

Midstate received after the Ohio touchdown. They found the Ohio defense much more alert. Clip made one first down, getting the necessary three yards on a delayed back on third down. But as he drove through between two brawny linemen, he felt a wrench of pain in his shoulder. These Ohio guys were made of scrap iron!

Coach Mann sent in a replacement. Clip protested when he got to the bench.

"I'm okay. Just a little bang on the shoulder. It's nothing."

Mann nodded. "Take a breather," he said while the trainer has a look."

THE TRAINER'S verdict was that the shoulder was bruised, not badly. Ohio scored once again in the second period. A place kick from ten yards out after a fumble in their backfield stalled a sustained drive. It was 10-7 on the scoreboard at the end of the half.

The second half was a different story. The relentless, hard-driving Ohio backs began making more and more yardage. Midstate's line dug in, battled hard. But the Midstate defense came more and more apart.

"One good line backer in there and they wouldn't make us look so bad," Clip heard Coach Mann mumble to himself. He looked sharply at the coach and he met Mann's gaze. Mann said, "How about it? Think that

shoulder would stand up to slowing down those Ohio backs?"

An odd feeling went through Clip. He lifted his weight slightly from the bench as though he was going to dash out on the field. Things flashed through his mind at a mile-a-second.

Don't be a jerk. Go out there and get yourself banged up for the rah-rah boys, huh? Your shoulder isn't really bad. What's eating you? You know blamed well you couldn't go out there and dog it. Not in a game. Mann has deliberately maneuvered you into this spot. Let him get away with it now and you're sunk.

He slumped back to the bench. He was thinking of advice Kozerki had given him . . . look out for Number One all of the time . . . keep the status quo . . . He massaged his shoulder as he looked the coach squarely in the eye.

"Nope," he said. "I don't think my shoulder could take it." He never knew why he added, "We'd better just keep the status quo."

Coach Mann held the fullback's gaze for a long moment. There was a different something in the back of the coach's eyes. He nodded slowly as though he had come to a decision.

"Status quo, the condition in which things are," Coach Mann spoke softly but there was a thread of steel beneath the softness. "I think there will be some changes made in the status quo. I'll see you in my office after the game!"

(To be Concluded in Boys' Life for October)

Scanning the Sports Scene

(Continued from page 30)

Or Get Behind And Blow

During the Golden Gloves tournament in Texas, two middleweights, a redhead and a blond had been flailing away for almost three rounds. The crowd egged them on until they grew so tired they could no longer lift their gloves except for half-hearted swings that landed with all the impact of roasted marshmallows. Spectators wondered what power was holding the lads up.

Finally as the boxers staggered away from a clinch, a loud Texas baritone bellowed above the ring hubbub: "Hey, Red! Hit him now! You got the wind with you."—Submitted by Paul Rhiney, Spartan, Ill.

The Endless Belt

Many tales are told of Jack Dempsey's awesome punching power, including stories of what happened to exhibition boxers who tried to sneak in a fast punch to get a reputation. During such an exhibition match, one of the Marassa Mauler's walking punching bags tried to get cute.

Much later, he stretched and yawned, observing to his roommate, "They sure have nice Sunday mornings in Memphis, don't they?"

"Go back to sleep," was the retort. "This is Wednesday and you're in Salt Lake City."

When Men Were Men

When old timer Honus Wagner broke into baseball, the sport was rough and tough. A rookie had to fight to survive and didn't even dare take batting practice with the regulars. Wagner claims he was in the big leagues three years before anyone even spoke to him. But, finally the happy

day arrived. A Giant hit a screaming homer and Honus complimented him as he jogged past second base.

"Nice hit," said Wagner admiringly.

"Shut up, you fresh buster," snarled the Giant.

Wagner says it was the happiest day of his playing career. At last a big leaguer had spoken to him.

And Watch Out For Splinters

Knute Rockne, famous coach of the Notre Dame football team, used to illustrate tough spots in a football game and then suddenly turn upon some player to ask him for a solution to the blackboard problem.

Once, after posing such a question he suddenly picked on a third string quarterback for the answer.

"What would you do in such a spot?" he barked.

"Why, Mr. Rockne, I'd slide a couple of inches down the bench to get a better look at the next play."

Scanning Sports for Cash

You can earn five dollars in cash by sending unusual true sports stories to the Boys' Life Sports Page Reporter, 2 Park Avenue, New York 16, N. Y. Any news which proves usable will be followed up and printed, and the reader who first provided the story will receive five dollars. Unusual achievements by high school athletes or teams, anecdotes about boys in sports, stories of outstanding young sports personalities, or any outstanding sports event in which youthful contestants star may prove to be worth five dollars to you. Use a postal card, send a newspaper clipping, a magazine clipping, or write a letter—but get in your sports tip.

You Tell Me!

By Quizie Jr., Tenderfoot Scout



Quizie, Jr.

SEPTEMBER'S HERE again and school is just around the corner, which makes the weekends just twice as enjoyable! You'll probably be hiking the trails every chance you get, exploring the countryside, breathing that fresh mountain air. So let's check up on our hiking skills and see what we know. Check the answers you think are right, then turn to page 63 for your score.



1. You won't have to worry about becoming lost if you have a compass. Scouts put it on a rock to simplify reading stop needle motion.



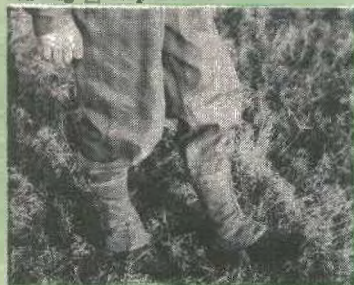
2. These Scouts are following a trail left by someone who has gone ahead of them. If you were in their place you would go right, left, go straight.



3. Scouts should know that the trail sign tells you: short distance to the right, quite far to the right, not far to the left, danger, stop.



4. Drink only water you know is pure. When in doubt purify it with Halazone tablets or iodine drops, and let it stand at least 15, 30, 60 minutes.



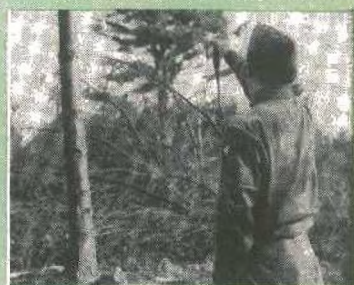
5. If you want to get close to animals and birds to observe them, you have to walk quietly. This Scout should, should not put heels down first.



6. If you get a blister on your foot while out hiking, you should wash the foot and break the blister. apply antiseptic, cover with sterile bandage.



7. Scouts are careful with knives and axes. Either should be passed handle first, with the blade edge to one side since it's safer, a woods custom.



8. This Scout is using his axe as a plumb line to see which way to fell the tree. He will first cut on the leaning side, opposite the leaning side.

From our DUFFEL BAG

Your Rustic Troop Sign

An attractive Troop sign can be made from inexpensive or even give-away materials from any saw-mill. All you have to do is get a slab of wood with the bark on one side. Then get small strips of clean wood from one-half to one inch wide. Cut these into lengths needed to form whatever letters you want, then stain them and tack them on the slab to spell out your Troop or Patrol sign.—Paul Gentry, Jr., Troop 27, Sylva, Ala.

Another Foil Cooking Hint

When you next use aluminum foil try cooking oatmeal, stewed fruit or the like. Here's how: find a forked sapling, bend it around in hoop fashion, and fasten the ends together. Form a double layer of foil and press it through the hoop to the required depth. Next fold the foil edges tightly over the rim of the hoop. You now have a pot you won't have to wash. Be sure to put your food in your foil basket before holding it over the fire.—Alan Myerson, Troop 75, Los Angeles, California.

Try This Personal Trail Kit

Your trail kit is made up with a leather electric shaver pouch which holds the following handy items: a pocket flashlight, a razor blade, six band-aids, a few sheets of toilet paper, some aspirin tablets, a pocket knife, a compass, a coil of copper wire, a small roll of adhesive tape, some string, about eight water-proof matches, a small note book and pencil.—Rodney Corona, Troop 1, Galveston, Texas.

Wind Yourself a Toaster

You'd probably have toast on each of your camping trips if you

knew any convenient way to make it. Well, here's one: simply find a forked stick, then wrap wire back and forth from the base of the fork to the ends. All you do now is rest a piece of bread on the wire crossings and hold it over your fire.—Jim Loding, Troop 12, Warren, Pennsylvania.

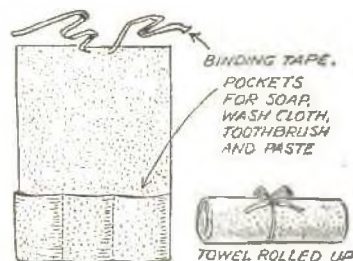
Salt And Pepper Shakers

Stop in your nearest photographic store and ask the clerk for two 35mm film containers. When you get home punch a series of holes in each top. An ample supply of salt and pepper can be kept in these containers.—R. C., Troop 1, Galveston, Texas.

A Camping Pressure Cooker

The next time you go on a hike, take with you a one pound coffee can. When it's time to start cooking

put your potatoes, carrots or what have you inside the can. They should rest on a makeshift rack to keep them out of the small amount of water in the can. Next put the top of the can on and seal it around with scotch tape. A small pin hole in the top of your coffee can will allow the steam to escape. You'll have to experiment with the time it takes different types of food to be pressure cooked. Bob Bever, Troop 72, Charles City, Iowa.



Here's A Towel-Toilet Kit

Fold and sew one end of a turkish towel one-third of the way back. Next sew a piece of narrow binding tape to the top of the towel. This is your tie-string. To form the three compartments stitch as shown in illustration. The entire unit is washable and can be used as a face towel and toilet kit.—John Gibson, Troop 462, Chicago, Illinois.

SEND US A FIVE-DOLLAR POSTAL CARD

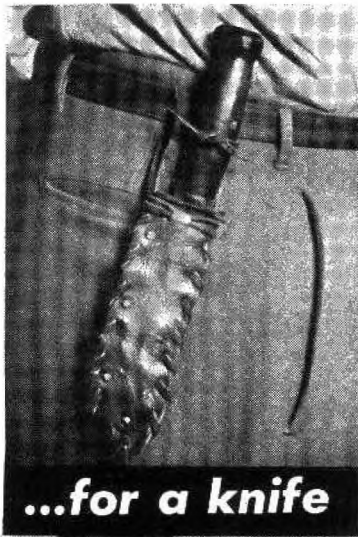
Get you have several stunts or tricks just as good as those above—maybe better! LET US HAVE THEM!

Write out your suggestion for a game, contest, handicraft, Patrol activity, camping idea and what not ON AN ORDINARY PENNY POSTAL CARD. Include your name, address, Patrol name, Troop number. Send to "Our Duffel Bag," c/o BOYS' LIFE, 2 Park Avenue, New York 16, N. Y.

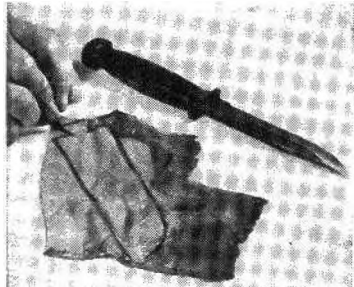
BOYS' LIFE will now pay FIVE DOLLARS for each suggestion published.

If the same idea is submitted by more than one reader, the first one received will get the money.

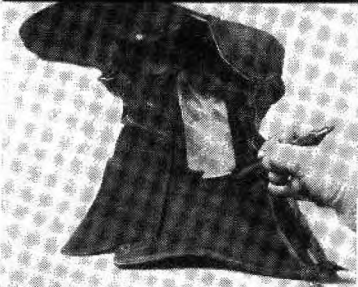
HOW TO MAKE YOUR OWN SHEATH ...



...for a knife



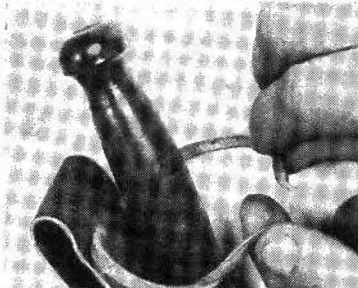
Outline blade on piece of leather. Allow 1/4" margin around edges. Be sure to leave wedge shaped piece at top.



Old boot is useful. Match first piece on strip long enough for belt loop. Then outline it with crayon and cut out.



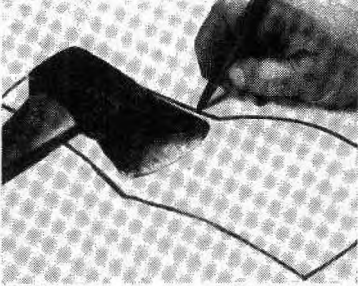
Punch holes and lace with rawhide. Cut slot for wedge and push it through. Fold over belt loop. Fasten securely.



To prevent knife edge cutting the leather, rivet that side of sheath. Then slip over belt; tie in knife.



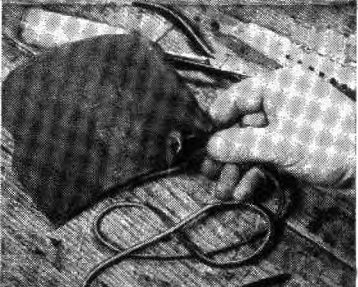
...for an axe



Cutline axe on paper allowing space for flap and huck edge of axe. Allow 3/8" margin for rawhide-lacing holes.



Lay pattern on leather, outline with crayon, then cut evenly. Single edge razor blade or jackknife blade best.

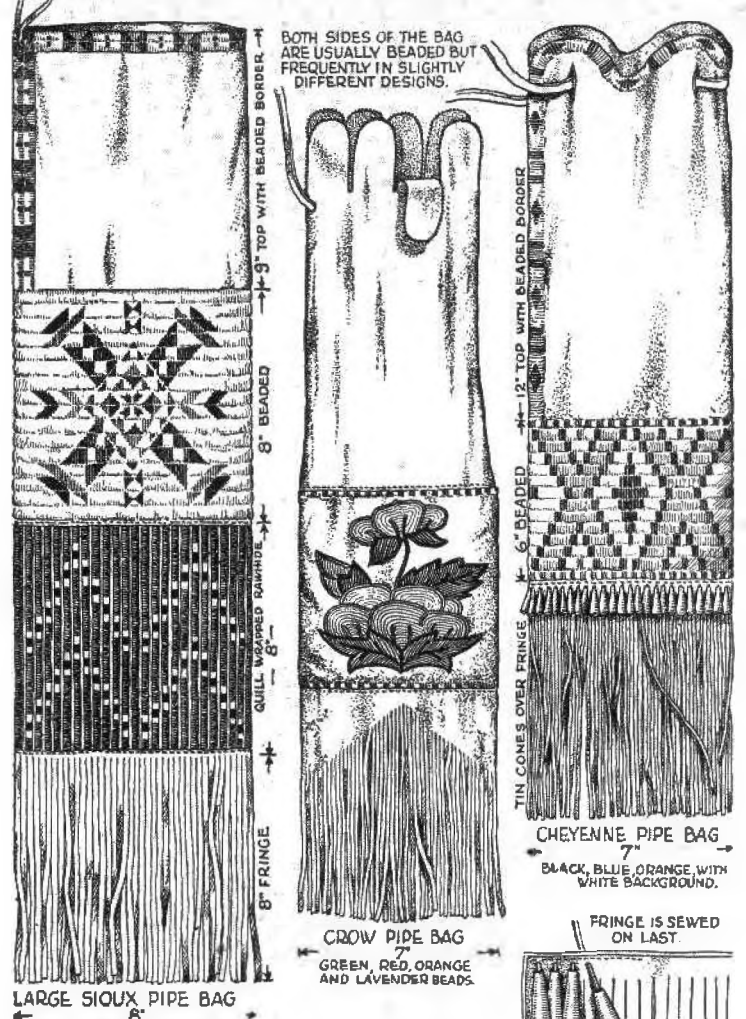


Punch holes. Start rawhide laces with overhand knot. Cut belt slots even with axe handle. Rivet as for knife.



PIPE BAGS AND POUCHES

SINCE THE INDIAN'S COSTUME HAS NO POCKETS HE CARRIES A BAG TO SERVE THAT PURPOSE. IN THE OLD DAYS A LARGE BAG WAS USED FOR HIS PIPE AND TOBACCO AND SOMETIMES A SMALLER ONE FOR PAINT, FLINT AND OTHER SMALL ITEMS. WE USE THESE BAGS FOR A SAFE PLACE TO CARRY SUCH ARTICLES AS BILL-FOLD, WATCH, LOOSE CHANGE, KEYS OR WHAT HAVE YOU. BESIDES BEING USEFUL A NICELY BEADED AND FRINGED PIPE BAG ADDS A LOT TO ANY INDIAN COSTUME.



PIPE BAGS AND POUCHES ARE BEST MADE OF BUCKSKIN, SUEDE LEATHER OR SPLIT COWHIDE.

MOST OF THE LARGER BAGS ARE MADE UP OF THE PARTS SEWED TOGETHER; TOP BEADED SECTION AND FRINGE.

A GOOD IMITATION OF PORCUPINE QUILL WRAPPING CAN BE DONE BY PAINTING 1/4\"/>

BAG MAY BE TUCKED UNDER BELT EITHER WAY.

OPEN TOP POUCH.

BUCKSKIN & CANVAS.

4 1/2\"/>

14\"/>



GLASS 'EM IN

BY GLENN A. WAGNER

THIS IS A FIVE-GALLON 8" x 10" x 14" aquarium. Here's how to make it.

You can cut and bend the metal strips by hand, but you'll be able to do a better job if you can use a machine, perhaps in your shop class in school.

For the soldering, use a well-tinned iron, coat the joint with a little flux. Don't overuse solder.

The materials needed are few. Get a piece of lead-coated gutter stock or galvanized iron 12" x 19" (approximately) and about .020" thick. We used the lead-coated stock. Cut eight strips 1 1/4" x 19" first, then cut four pieces exactly 1 1/8" long for the side strips, four pieces 10 1/8" long for the corner posts, and four pieces 8 3/4" long for the ends. The pieces must be cut to length before they are bent 90°.

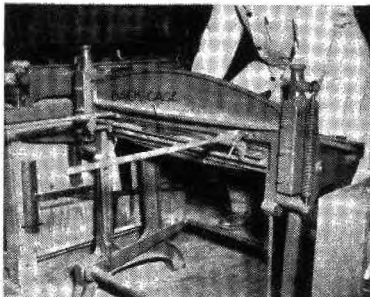
You'll need two pieces of double-strength glass 8" x 10" and two pieces 10" x 14".

The bottom is a piece of roofing slate 8" x 13 3/4", about 1/4" thick. Blackboard slate is ideal if you can get it. Glass may be substituted for the slate if necessary.

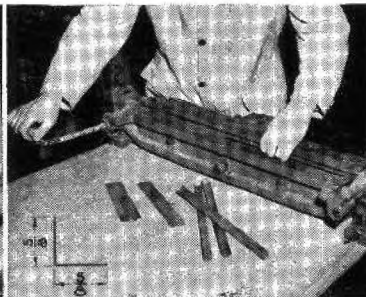
Aquarium cement can be purchased at most any store that sells pet supplies. This cement is flexible, easy to use, and will make a perfectly watertight joint.

In setting the glass, the two side pieces are put in place first. Then the end pieces are set in next. Finally the slate bottom is set in place. In this way, the ends hold the sides, and the bottom locks everything.

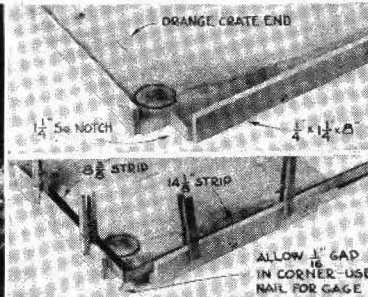
After your tank is completed, clean it thoroughly inside and out, fill it with water, and let it stand a week before you put plants and fish in it. Don't move the tank when it has water in; empty it first.



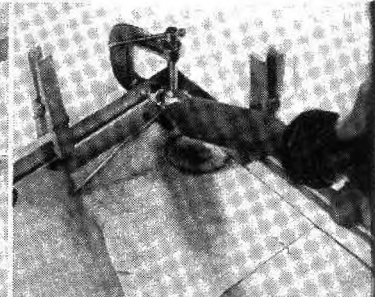
Cutting the metal strips is easy if you use squaring shears. The back gauge should be set for 1 1/4" to cut strips.



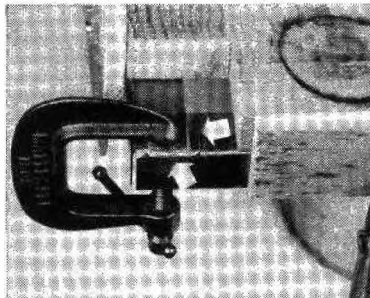
The bar folder is used to bend the 90° angle. It should be set so each strip will be bent exactly in two: 45° sides.



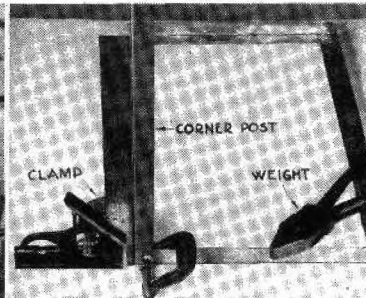
Make a simple jig to hold the strips at right angles for soldering. Set up two pieces like this ready for soldering.



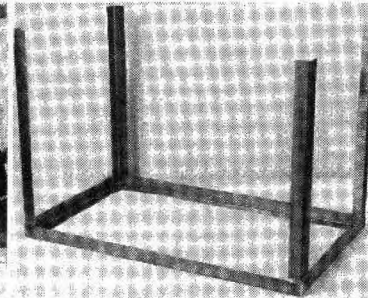
Use a 1" C-clamp to hold pieces firmly together, then solder the joint on the inside of cover.



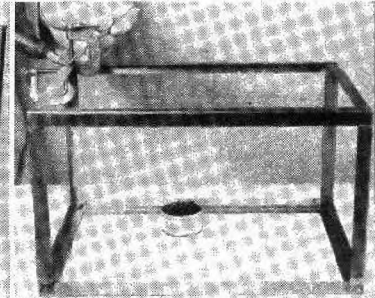
Now turn the assembly over and solder the joint on the outside. Note how little solder is used, also the corner gap.



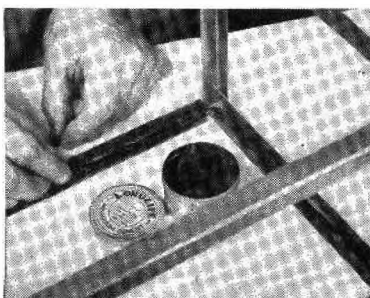
Complete top and bottom frames, then set up one of the corner posts. Check post with square before soldering joint.



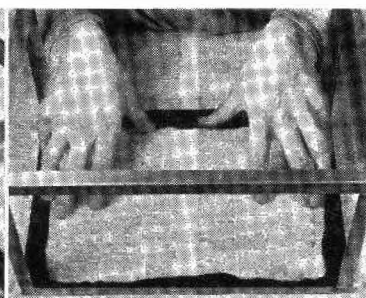
After the other three posts are added, the framework looks like this. Note the joint details, how the corners are done.



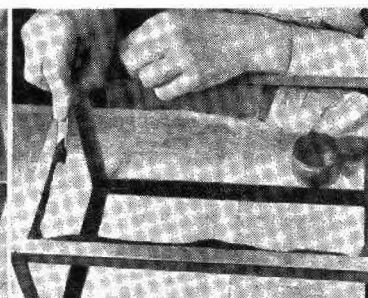
Next, the top frame is set in place and soldered to the corner posts. Clean off all flux, dirt.



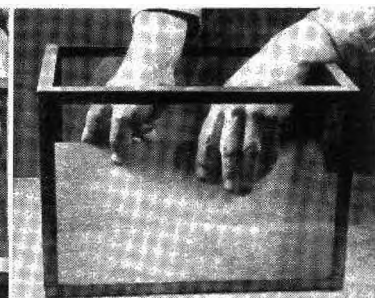
Roll the cement between the palms of your hands; make "worms" about the size of a pencil. Line one side frame.



Set one of the side glasses in place and press it into the cement with a steady pressure. Cement will ooze out.



Clean off excess cement inside and out with a blunt tool, then wipe glass with a cloth. Do other side next, then ends.



Last of all, put the bottom in place. You may have to apply some pressure with your foot.

Yoo Hoo! Mudhen!

(Continued from page 18)

The J. B.'s shared Froggie's doubts but were ready to sanction almost anything that might strengthen The Mudhen's faith in himself. If his femininity was not questioned on the street he might gain the assurance he so much needed. Therefore they buttoned him up with care, pinned the big hat to his wig and sent him forth to test the ways of providence.

Though Froggie had a large surplus of skepticism he was loyal to the core, so when they reached the sidewalk he took The Mudhen's arm with a gallant gesture and faced the world. And he had to admit that old Mud had something on the ball. He tripped along laughing and chatting with his escort in a voice that would have run the blockade at a junior prom. His beauty was not the kind to launch a thousand ships, but there was something about him that suggested he could paddle his own canoe. He had acquired confidence.

They took in the business section, idling along window shopping while Froggie dripped cold sweat for fear the galoot would enter a store and price nylon stockings or perhaps something worse. When they had navigated the crowd in front of a movie house they bore away toward the residential district again and Froggie saw with delight that his date was tiring. Even the zest for acting could not for long withstand The Mudhen's inborn aversion to physical exertion. A few more blocks and this mystery ship would be safe in port after the most hazardous voyage the good tug "Frog" had ever made.

In the creed of a good Eagle one thing above all others was law: never refuse a dare from a Bear. Never give those despicable varmints a chance to throw out their chests and say they had stopped a member of the rival frat. The Mudhen looked more than half asleep, but he was thinking fast. The Bumble Bee was a trifle slow at putting two and two together and also he was myopic, which would help. If the lights weren't too bright there would be a good chance of pulling the gentleman's leg, an attractive possibility in itself, not to mention wrapping up the dare.

"I'll do it," he accepted. "If you guys want to see how an actor works, come along."

They went and they saw. When Mr. Beeman answered the doorbell his pudgy form was nearly concealed by a long rubber apron. Beside him stood a bulldog whose facial expression was as reassuring as a truckload of TNT.

"Dear me!" Mr. Beeman's sideburns quivered with embarrassment. "I hope you, whoever you are, will pardon my attire."

"Definitely," The Mudhen answered in his pretty voice, keeping one eye on the dog. "I am Myrtle Tewksbury. I heard you want a maid."

"Yes indeed!" the Bumble Bee bubbled. "Mrs. Stebbins, my housekeeper, needs assistance. Please come in."

The dog muttered something under his breath to the effect that he, personally, was allergic to maids.

"And your friends also," Mr. Beeman added, peering through the doorway.

"They're kids from the school," The Mudhen explained. "I have worked there so I brought them along as sort of references."

"How nice!" Mr. Beeman seemed relieved to find himself among friends, for all the boys liked him. "Good-evening, Bates—and Eastman—and Anderson. How kind of you to come."

"No trouble at all, sir," Cheese said truthfully.

"Myrtle is bashful with strangers," Rip added.

"The dog won't bite, will he?" Froggie asked anxiously.

"Oh no," Mr. Beeman smiled confidently. "Alfred is a perfect lamb."

The lamb sniffed Myrtle's dress and made a noise quite unlike anything usually found in a junior sheep's vocabulary.

"Go away, doggie," the maid suggested, edging into the hall.

Alfred curled his lip, showing a set of teeth that Red Riding Hood's pseudo-grandmother might have envied.

"Come right into the sitting room." The Bumble Bee turned and nearly collided with a washtub of water that stood near the foot of the stairs. "This is the day to wash the rubber plants. They have become so large it is easier to carry the tub to them than them to the tub." He motioned toward three large plants that stood in a huddle as though dreading the bath.

"I just love flowers," Myrtle trilled.

"You may have use for some before I'm through with you," Alfred said in dog language.

"That mutt don't like—women," Froggie whispered to Rip.

Mr. Beeman smiled toward a chair.

"Please be seated, Miss—or is it Mrs?—Tewksbury."

"I am unmarried," The Mudhen answered demurely.

THEN a mine exploded under her bow—Cheese Eastman and Rip Anderson came around a corner under a street lamp.

"Hi, you g-guys!" Froggie tried to sound nonchalant and missed by two hundred and ninety-nine points out of a possible three hundred.

"Hi, Frog!" And though the other two were Bears they made wolf noises as they passed.

Froggie glanced back and saw them doing a double take. Instinctively he knew it would be fatal. For The Mudhen's stern was the most unconvincing part of his hull.

"Hi it ain't Mud!" Rip exploded, while Cheese remarked that he would be a monkey's uncle.

The Mudhen knew the jig was up and made no attempt to escape. "What," he asked languidly, "is wrong with my practicing the histrionic art in public? Does it offend the little boys' sense of propriety?"

"You didn't fool anyone," Cheese crowed.

"Quite a few," The Mudhen answered complacently.

"I bet he could walk right into a house and make 'em think he's what he looks like," Froggie declared loyally.

"Yeah, what he looks like," Cheese jibed.

"I'm not so sure he couldn't get away with it," Rip admitted, for he appreciated his brother actor's ability.

"Want to try it, Mud?" Cheese's eyes had a sudden glint.

"No," The Mudhen sighed. "These darn shoes hurt my feet."

"I dare you," Cheese cried.

"What you mean?"

"Listen. In today's paper the Bumble Bee advertises for a maid. I dare you to go up there right now and apply for the job."

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"Yes, yes, only a girl, I assume."
 "I am seventeen, sir."
 "A tender age, a mere rosebud, if I may say so."
 The rosebud's three escorts looked hard at the rug, while Alfred walked back and forth in a stiff, unsocial manner. The critter might be a lamb, but Myrtle had an unpleasant hunch that no one was going to pull the wool over his eyes.
 "Do you like dogs, young lady?" Mr. Beeman inquired.
 "They fascinate me."
 "Have you noticed how Alfred fixes his gaze on you?"
 "Yes, sir."
 "Dogs have a way of appraising strangers."
 "Yes, sir."

"Now as to your qualifications," Mr. Beeman became businesslike. "I suppose you are familiar with housework?"
 "I was raised by a good mother," Myrtle cast her eyes down.
 "I am sure you were." The Bumble Bee stroked his sideburns thoughtfully for a moment. "But I feel constrained to consult Mrs. Stebbins inasmuch as you would be her assistant. Excuse me, please." He trotted from the room.
 "Nice going Mud!" Rip whispered. "Rosebud," Cheese giggled.
 "I don't like that pouch," Froggie confided.
 "He's a stinker," The Mudhen declared.
 "GRRR!" Alfred commented.
 "Ignore him," Cheese said. "He'll know if you're afraid of him. Animals have a sixth sense that way."
 "So have I," The Mudhen said, "and it doesn't tell me to ignore that kind of a noise. I wish—"

"Red light!" Rip warned.
 Mr. Beeman entered with the middle-aged housekeeper, who went to work on Myrtle. The results were so good that she suggested they go upstairs to look at the maid's room. Myrtle demurred, but Mrs. Stebbins insisted, and when Mrs. Stebbins insisted a Missouri mule would move if his tail were frozen in the Greenland ice-cap. So they went up the stairs and Alfred followed. There was something sinister in the way he did it, as though righteously aware that he had been chosen to play a part for which he was suited.

At the top of the stairs he got his cue, Myrtle, whom he knew darn well was a phony, casually put out a hand toward a small table that was littered with miscellaneous articles. So she was a thief, eh? Alfred lunged, but his feet slipped just enough to shorten his aim by an inch. With a snap like a bear trap, his teeth caught the sleeve of Myrtle's dress. Right then The Mudhen cast aside pretence and stood forth for what he was—not a timid girl, but a husky young man who was plenty scared. With his other hand he grabbed Alfred's collar and began twisting, at which the dog let out a growl that would have set Daniel Boone looking for Old Betsey. Mrs. Stebbins also raised her voice, which was in excellent working order and ascended with the rapidity of a rocket.

An angry bulldog is a bad thing to have on one's hands. The Mudhen's urgent wish was to get rid of this one as soon as possible. He raised both arms and swung Alfred, who straightened out gracefully in the air and sideswiped Mrs. Stebbins amidsthips.

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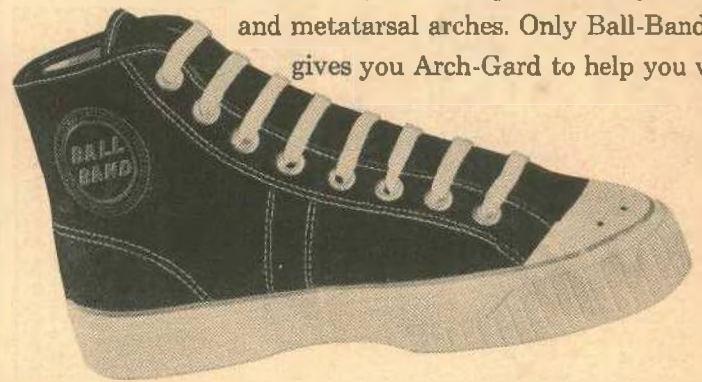


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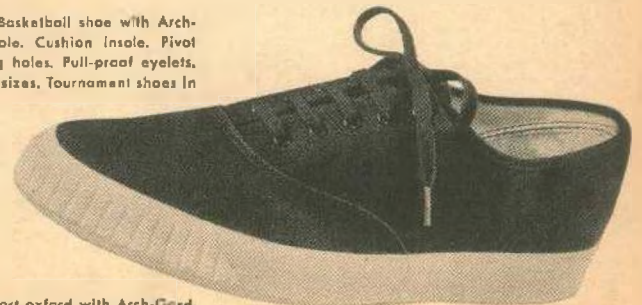
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Do You Know That?

About two centuries ago barbers were allowed to perform surgical operations on humans. For this reason the colors of barber poles are red and white—the red originally representing blood, the white representing bandages.—Charles Ormsby, Waterford, N. Y.

The oceans, including the inland seas connected with them, cover 142,132,980 square miles, or seventy-two per cent of the total surface of the earth.—Larry Trayer, La Grange, Wyoming.

Many people who lived 4,000 years before Columbus knew that the world was round.—Calvin Walker, Oakland, Calif.

In Brazil the Torana Indians imitate falling rain by tapping on drums to bring tucandrea ants to the surface of the ground. The ants come up to get moisture, and are captured. The Indians consider these large insects especially good in soup.—Melvin Uyehara, Honolulu Hawaii

The entire world was once sold at auction and purchased for five million dollars. When the Roman Emperor Pertinax died, the world was auctioned by the Praetorian guard to the highest bidder. A wealthy merchant, Didus Julianus, offered the highest price and in his own right became the supreme ruler of the world.—J. Fred Navinger, Millersburg, Penna.

Nearly 100,000 men worked twenty years to build the Pyramid of Cheops which is the largest and supposedly the oldest pyramid in Egypt.—Frank L. Weingartner, South Pasadena, Calif.

The mountains on Venus range up to one hundred miles in height, and those on the earth's moon are four miles high in some instances.—Isabel Stafford, Salt Lake City, Utah

The earth moves in three different directions at the same time. It rotates upon its own axis. It revolves around the sun. And it participates in the sun's own forward motion in the direction of the fixed star, Vega.—David Graef, Fort Wayne, Ind.

The Beaded Chae Todon, a fish in India, catches flies by shooting them with drops of water from his leak gun. The fish ejects the water drops in rapid succession at the insects on leaves along the river banks.—Charles Johnson, Las Cruces, New Mexico

Cannibalism supposedly began with the belief that when a man died, someone else would inherit his good qualities by eating some of his flesh.—Jackie McAuliffe, Belmont, Mass.

Engineers are now equipped to build a rocket ship capable of reaching the moon. But they can't find any one to finance the ship's construction.—James Dick, Colorado Springs, Colo.

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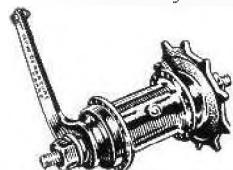
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The good woman was quite upset, so much so that she rolled over on the floor and then went merrily bumping down the stairs, completely at the mercy of gravity.

AT THE VERY MOMENT of her downfall Alfred's collar broke, the dress sleeve gave way. The Mudhen spun off balance and dog and boy joined the lady on the downward path. Their combined descent formed a flying ball of feet, elbows, petticoats, fur, displaced balustrade, yells, screams and growls. Even when the mass came to rest among the rubber plants several moments passed before its individual elements could be identified.

The Mudhen broke away first and stood half-crouching as he tried to get his feet under him amid the tangle of his skirt. Alfred came next, fast. The Mudhen leaped for the piano, but the dress stayed with the bulldog. Cheese, always calm in a crisis, snatched up a rug and enveloped Alfred, a by-product of the maneuver being an upset chair that landed on Froggie's shin. Rip came around right end to help Cheese, but met the Bumble Bee instead. The older gentleman skidded on the bare floor and slid under a corner whatnot, which collapsed, crowning him with a framed picture of Uncle Eben Beeman. Cheese, Rip and Froggie converged on rug-wrapped Alfred, carried him to the door and threw him out.

Even when he was gone the sitting-room was not what it used to be. The

furniture was scattered like wind felled trees. Mr. Beeman sat on the floor surrounded by the whatnot and its cargo of bric-a-brac, and on top of the piano stood The Mudhen wearing only his B.V.D.s. Suddenly Mrs. Stebbins, who had been temporarily mislaid, rose from the wreck of the rubber plants, pointed a condemning finger at the late Myrtle Tewksbury and screeched, "She's a man!" She took a horrified backward step, swayed and sat down in the wash tub of water.

Everything had happened that could happen, so eventually the shouting and the tumult died. Standing in the midst of the wreckage, the Bumble Bee glared at the shivering Mudhen.

"Crane," he said sternly, "I demand an explanation of this prank."

"Prank!" The Mudhen made a hopeless gesture. "I was only trying to perfect my art, Mr. Beeman."

"Your-art?"

"My acting. I was given a feminine part in the school play." He paused, then laid it on thick. "I thought if I could deceive a person of your keen intelligence I would be able to act convincingly on the stage. It was an experiment for art's sake."

Whatever Mr. Beeman may have thought, he was good enough sport to only say resignedly, "Very well, Crane. But in the future please experiment in a circus ring or some other place that is suited to the exercise of your talent."

"Yes, sir," The Mudhen answered humbly. THE END

Satellite Scout

(Continued from page 29)

to avoid the asteroid belt. Anybody knows that meteors are no real hazard unless a pilot does stupid things like driving into the head of a comet. On the other hand the asteroid belt has a lion's share of sky junk. The older ships drove straight through, and none was ever hit to speak of. But Captain Harkness, having power to spare, played safe. By avoiding the belt there wasn't a chance in a blue moon that the *Mayflower* would be hit.

Well, it was a "blue moon." We were hit.

It was revcille, "A" deck time, and I was folding my uniform to put it under my pillow. Suddenly I heard the goldarulest noise I ever heard in my life. It sounded like a rifle going off by my ear, like a steel door being slammed, like a giant tearing yards of cloth.

Then I couldn't hear anything and I was dazed. I shook my head and looked down—and I was staring at a raw hole almost between my feet and as big as my fist. Through the hole was blackness—then a star whipped past and I realized that I was staring out into space.

There was a hissing noise.

I DON'T REMEMBER thinking, I wadded up my uniform and stuffed it in the hole. It seemed as if the suction would pull it on through, then it jammed. But we were still losing air.

Noisy was yelling and alarms were ringing. The airtight door to our compartment closed automatically and locked us in.

That scared me silly.

Sure, it's better to kill a few than to let a whole ship die—but it was my neck.

The pressure was sucking away at the plug but I was afraid to stuff it in harder, for fear it would pull through and leave us chewing vacuum. Noisy Edwards was beating on the

door and screaming, "Let me out!" and the loudspeaker was shouting, "H-twelve! Can you hear me?"

I yelled "QUIET!"

One of my Cubs was staring at me. "What happened, Billy?"

I said, "Grab a pillow! Put it on top of my hands!"

He gulped and did it.

It was an ordinary foam-rubber pillow. I snatched one hand out and then the other, and pressed it down. It dimpled in and I was scared. But it held.

The loudspeaker was still shouting for compartment H-12 to report. I yelled "Quiet!" and added, "Slug Noisy!"

Somebody poked him and they swarmed over him. "Now everybody keep quiet," I gasped and shouted, "H-twelve reporting!"

The Captain answered, "What is the situation?"

"There is a hole in the ship but it's corked up."

"How? How big a hole?"

I told him and that is about all there was to it. First they had to isolate that corridor, then two men in space suits opened our door and chased out everybody but me. "You can get up now, kid," one said, his voice hollow through his helmet. The other took over holding the pillow.

They sent me out; the corridor was empty but I banged on the air-tight door at the end and they let me through. Then we waited and finally we were allowed to go back to our bunk room. There was a plate welded over the hole.

THAT WAS WHY I went to Captain's mast again. George was there and Molly and Peggy, and my Scoutmaster, Dr. Archibald, and my roommates and the ship's officers.

The First Officer shouted, "Captain's mast for punishments and rewards!" as Captain Harkness came out. Dad

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Division Entered	Target Rifle <input type="checkbox"/>		
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Witness' Name			
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City	Zone	State	
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"I hereby certify that, I am the Shooter's parent or guardian, Scoutmaster, Assistant Scoutmaster, Camp Rifle Instructor or Junior Rifle Club Instructor (Underline one) and after acquainting myself with the rules governing the 1950 BOYS' LIFE—DANIEL BOONE TARGET SHOOT, I personally witnessed the firing of the scores listed above. Those scores were fired by the shooter specified and in full compliance with all rules."

Signature of Witness _____

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shoved me forward.

The Captain looked at me. "William Lerner?"

I said, "Yes, sir."

He said, "I read from yesterday's log: 'On twenty one August at oh-seven-oh-four Greenwich, the ship was broached by a meteorite. Interlocks isolated the punctured compartment, H-twelve, with no serious pressure drop elsewhere.'

"A passenger, William J. Lerner, contrived a patch and succeeded in holding pressure for breathing until a repair party took over.

"His alertness saved the lives of all persons in compartment H-twelve."

The Captain added, "A copy will be sent to Interplanetary Red Cross. I have no way to reward you but you have my heartfelt gratitude. I speak for all hands and most especially for the parents of your bunk mates."

He went on in a low voice, "A good job, that. You were on your toes."

I said I had been lucky.

He said, "Luck comes to the man who is prepared for it."

We left, George and I together, Molly and Peggy following. I heard Peggy saying, "That's my brother."

Molly said, "Hush, Peggy. Don't point."

A COUPLE OF DAYS later I ran into Noisy by himself. "I want to talk to you," he said.

"What's on your mind?"

"You think you're smart!"

I didn't like his tone. I said, "I don't think so; I am."

"Pretty cocky! You think I ought to be kissing your hand for saving my life?"

I said, "Skip it; it wasn't for you."

"I know," he answered, "and I'm not grateful, see?"

"Fine," I told him. "I wouldn't want gratitude from a guy like you."

He was breathing hard. "That's enough from you," he said. Then I caught a mouthful of knuckles.

I got up cautiously, trying to surprise him. It was no good; he knocked me down again. I tried to kick him but he danced out of my way.

The third time I stayed down. When I quit seeing stars he was gone—and I

hadn't laid a finger on him. I lay awake that night trying to figure out ways to fix him, but they weren't any good.

ON THE TWENTY-FOURTH Captain Harkness started bringing us in. We decelerated and as we passed Jupiter to came out of eclipse. First black sky, then a dark blood-red disc, and then it was a brilliant orange. It popped up like magic.

Callisto was behind us; Europa was off to the right; Ganymede was almost straight ahead—and here was a funny thing; Callisto was silvery, Io and Europa were orange; Ganymede was downright dull.

I asked George; he said, "Ganymede used to be as bright as Io and Europa. It's the greenhouse effect—the heat trap."

I knew about the greenhouse effect; it is the biggest part of the atmosphere project. When the 1985 expedition landed Ganymede was a couple of hundred degrees below zero—cold enough to freeze a ghost!

"Look, George," I objected, "I know, but why is it so dark?"

"Light is heat; heat is light," he answered. "Light goes in and doesn't come out—and a good thing, too."

Captain Harkness put her in a circular orbit about a thousand miles up from Ganymede. We had arrived—as soon as somebody came and got us.

The trip down to Ganymede made me suspect that being a colonist wasn't all glamor. There was just one shuttle ship, the *Jitterbug*, and she could carry only ninety at a time. At last it came our turn; the *Jitterbug* was terrible, stale air and dirt. There weren't any rouches—just pads which we covered shoulder to shoulder. The skipper was an old female called "Captain Hattie." She drove away so hard that I blacked out, then we dropped for twenty minutes; she gunned her again, and we landed, with a terrible bump. And Captain Hattie was shouting, "Out you come, ground hogs!"

THE *Jitterbug* carried straight oxygen at ten pounds; now Captain Hattie spilled pressure to adjust to Ganymede's three pounds. Three pounds of oxygen is enough to live on,

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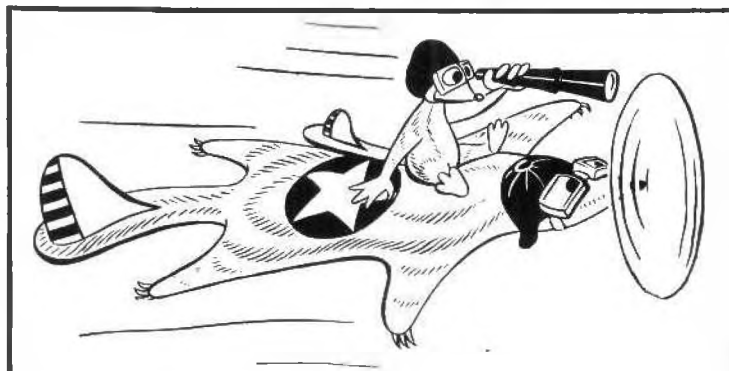
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but such a sudden drop makes you gasp. Peggy got a nose bleed.

We had to climb down a rope ladder, the wind was howling, and shaking it. There was snow on the ground except where the jet had melted it. I could hardly see, but a man grabbed me and shouted, "Over that way!"

I headed the way he pointed and found a path, trampled to slush. I could see people disappearing in the snow ahead and I trotted after.

It was half a mile to the shelter and cold all the way. I was chilled through by the time we got inside.

The shelter was a big shed, not much warmer and jammed with people. The colonial men were bearded and some of them had long hair as well. I finally found George & Co., you could see that Peg's nose had been bleeding and there were tears and dirt on her face. George looked gloomy. I came up and said, "Hi, folks!"

George looked around. "Well, Bill. How is it going?"

I answered, "It's a shambles."

I had understated it. Just how had a shambles we had still to find out. The colony wasn't ready for us. They had been moseying along, getting about five hundred immigrants a year, which was all the old-type ships could deliver—when suddenly the Colonial Commission dumped six thousand people on them.

They did the best they could for us: they turned their town hall into a barracks and set up a kitchen to feed us, but we were almost as crowded and uncomfortable as we had been in the *Mayflower*, and families were split up—all the men and boys on one side, all the women and girls on the other. That made Dad pretty sore.

THEY HADN'T BUILT more buildings for us because they couldn't. Except for a few buildings made from sheet metal brought out from Earth, like the receiving station and the town hall and the hydroponics sheds, all the buildings in the town of Leda and all the farmhouses were cut from country rock. No wood, no glass, no plastics, no hardware—Ganymede had been just a ball of rock and ice before the atmosphere project was started. Putting up new buildings on it wasn't easy.

The worst of it was that there was no telling when we would get land of our own. We had come out there on the promise of free land, expecting to farm. The land was there, millions of acres, but it was just bare, dead rock. The rock had to be crushed, looted by loot, and worked into living soil, using cultures and soil concentrates from Earth. But that takes power machinery—rock crushers and soil choppers—and the colony didn't have enough machinery. It might be two to four Earth years until it came our turn to crush our land.

We had been cheated.

There was an awful rumpus about it, with the immigrants getting mad and the colonials getting sore back at them and mass meetings and protests and proposals and counter-proposals. Finally the captain of the *Mayflower* had to agree to take some of us back to Earth, on authority of the immigration representative at Leda. The rest swallowed their disappointment and stayed.

It made a family crisis for us—go back, or stay?

George and Molly and I held a powwow in Peggy's room in the hospital. The plain fact was that Peggy had not adjusted to Ganymede's low air pressure. Worse than just nose bleeds—she would faint and could not eat, until the doctors put her in a sealed room. Dad managed to get us a

cramped little apartment of our own by taking an engineering job with the colony government—government employees got government quarters—but that still didn't bring us all together as Peggy had to stay in the hospital. Worse still, it meant he wouldn't be free to prove a farm even when it came our turn for the machinery.

I CAME TO THE FAMILY conference feeling grim and ready to go back to Earth. In addition to everything else that was wrong I had just had a run in with a couple of colonial boys—some of them delighted in hazing us newcomers. I felt that I would give my right arm for a sight of San Diego Borough, sprawling over the hills, short rations or no short rations.

Do you know what changed my mind? That pressurized room of Peggy's. I had gotten used to low pressure and straight oxygen. I couldn't breathe; it felt like swimming in warm soup.

We discussed it back and forth, me not committing myself. Finally Dad said, "There's no help for it, Molly. We've got to go back." He turned to me and said, "That doesn't apply to you, Bill. If you want to stay,

I'll arrange it."

I said I guessed I would stay.

Molly said, "No, George."

Dad said, "Dear, it's got to be. Peggy isn't getting well; we've got to take her back."

Molly squared her shoulders. "I know Peggy has to go back. But that doesn't mean we all have to go back. I—"

"No, Molly!" Dad interrupted. "I didn't marry you to split up. You—"

"Nor did I! Peggy has to go; she can go with the Hamiltons and my sister Phoebe will meet her at the other end." She reached out and took Dad's hand. "If women turned back at the first trouble, there would be no pioneers."

PEGGY HAD BEEN following the talk with big eyes, like a little lemur. Now she let out a wail. "I don't want to live with Aunt Phoebe! I won't go back." She turned to me. "I'm a pioneer, too. Tell them so, Billy!"

I don't know what got into me. The brat had been nothing but a nuisance. But I found myself patting her hand and saying, "Don't worry, kid. If you have to go back, I'll go with you."

Dad said sharply, "Bill didn't stop

to think, Baby. He didn't mean it."

Peggy turned to me again. "You did so mean it—didn't you, Billy? But it doesn't matter; I'm going to stay and be a pioneer."

I swallowed and told her that I had meant it.

Dad looked at Molly. She shrugged and said, "The children seem to have taken matters in their own hands."

Dad said doubtfully, "I suppose I could seal off one room in our apartment."

Peggy squealed. "You mean I could come home?"

Molly said, "That doesn't solve anything. That would just tie you down to your job—permanently."

"What can't be cured must be endured."

"But, George!"

I stood up. "George, Molly."

"Eh?"

"I'm pretty near as tall as you are, George. I'm strong and handy."

"What are you driving at, Son?"

"You keep your job for now and take care of Molly and the kid. I'll make us a farm."

To be continued
in BOYS' LIFE for October

Football is Tackling

(Concluded from page 21)

an adequate head guard. Practically all serious injuries stem from the lack of sufficient protection of the head. I have a rule that seems rather cruel at times which I always enforce: Each player wears his head gear from the moment he arrives on the field until practice is over. When a coach is lecturing or time is out, we allow the players to remove their head gears, but they must have them in their hands. The safety value of this rule is inestimable.

We do not believe that tackling should ever be practiced full speed. Many prospective young football players have had their confidence shaken by full speed tackling drills before they ever had a chance to develop the proper technique.

We have our players count off by twos, and have the ones face the twos about five yards apart. First, we have the ones tackling the twos, who simulate ball carriers. The ball carrier does not try to dodge or make the tackler miss him. He jogs slowly toward the tackler and allows himself to be tackled. Later on we put a little more "zip" into this drill but never do we have it full speed.

Stance and Approach

The proper stance is then taught and demonstrated by the coach. The feet are well spread about the width of your shoulders. The weight is well forward on your toes. The knees are slightly bent so as to throw the body in a crouched, yet comfortable, running position. The body above the waist is slightly forward and the head is up.

The approach to the ball carrier is made from this position with short digging steps. Try to keep yourself in perfect balance and under control. Keep your eyes fixed on the waist of the ball carrier. Never watch his eyes because a smart runner will fake you completely out of position. Also never watch his knees or feet as they are moving rapidly and present a very difficult target. We feel that the hips and waist are the most stable parts of a runner's body and by fixing the eyes on this point you can maintain the proper balance which is so necessary in executing a tackle. The head is always

up. I cannot emphasize this particular point too much. Practically all of the injuries occurring in tackling can be laid to the fact that the tackler had his head down. In this way he may get a hard blow on his head from the runner's knees or feet or he may suffer a neck injury. Each time a player of mine makes a tackle, I shout, "Head up." Aside from the possible physical risk, it is very poor form. A football player cannot hope to become a good tackler until he learns to keep his eyes open and his head up.

High and Safe

When the would-be tackler is about a yard from the ball carrier, he should make a quick dip of his knees and coil his body for the shock of the contact. He should aim his shoulder (either shoulder) at what I describe as the soft part of the under belly of the ball carrier. This is the easiest and safest point to contact. In the old days they used what they called "shoe string tackling." They attempted to hit the runner above the shoe tops and trip him. Of course, when they missed, and they did miss often, there were a lot of bloody noses and lacerated faces as they plowed the ground with their noses, or caught cleats from the runner's shoes in their face. For years a football player was considered "yellow" if he tackled high. Practically every coach in modern football feels that tackling should be high and safe.

As the player drives his shoulder into the waist of the ball carrier he slips his head to the opposite side and attempts to pocket the runner as close as possible to the base of the neck. At the moment of contact, he uncoils and drives up and through the ball carrier with his feet digging like pistons. The arms instantaneously encircle the runner's legs and are locked by grasping the other hand or wrist at a position back of his knees. Pressure is exerted at this point by squeezing the arms as tight as possible and lifting him completely off the ground. The hard digging of the legs should never cease until he has been deposited flat on his back. Never let up in your efforts until the whistle blows. Many games have been lost by a tackler's assuming that he had stopped the ball carrier and

then having him break loose for a long run and a touchdown.

There are varied methods of teaching tackling and many different types of tackling. Some coaches use a tackling dummy to practice on, but I feel that this does not give a player the true feel. We have each of our players take three tackles with the right shoulder and three with the left shoulder using the method that I describe each day. We feel that with this one fundamental drill and form to work on they will be further advanced when the time comes for a full speed scrimmage or the opening game than they would have been by practicing several different methods.

Often in close line play it is impossible for a player to make a clean form tackle as I have described, because he is partially blocked. He should be taught in a situation like this to grasp the ball carrier with either hand on his jersey, pants or a place he can possibly get hold of him and try to drag him down.

In going down under punts or in making other open field tackles, the player should be more cautious. Make the runner "show" first, unless you can hit him just as he catches the ball, slow down about three yards from him, get set with your legs wide apart and feet moving and let him become the aggressor. Let him make a few extra yards in a situation like this.

Good Tacklers Are Made

Remember this: You do not have to have a lot of ability to become a good tackler. Some players are born runners, but to become a good tackler, all you need is to practice hard and to have the desire.

With the advent of the two platoon system in football with one team for the offense and another team for the defense, any boy can become a valuable member of a football squad if he can tackle.

Eleven good tacklers are seldom defeated, and if they ever are, they hold the respect and admiration of their opponents. There is something good for one's character in making himself a fine tackler.

Football is tackling.

THE END

Death Valley Adventure

(Continued from page 20)

Inferno, in a state of suspended animation."

But now the nights were still cool and the days mild and warm. The Scouts made camp at Death Valley Monument headquarters, in a cluster of old wooden buildings that stood scoured and scarred by the sun and the blasts of sand which sweep every once in a while across the valley floor.

Our Camp in the Desert

Jim Moss, Scout executive of the Boulder Council, was there with his famous "chuck wagon"—the big trailer kitchen which I had last seen a year before when the Council staged its first Aquarado at Lake Mead. Ted Werner, camping and activities chairman for the Las Vegas, Nevada, district, had left his automobile business to lend for itself while he worked himself into a ladler to keep the grub moving out of the "chuck wagon" and across the serving counters.

Camp was a busy place mornings and evenings. But between times it looked almost abandoned as the Scouts fanned out in a sort of mass evacuation to take in the sights which have made Death Valley one of the prime tourist meccas of the West and to probe its endless lore. For there is a story behind almost everything the Scouts saw in the valley: Bad Water, the lowest spot in the Western Hemisphere. The ghost towns of Rhyolite, Ryan, Skidoo and Panamint City. The tumbled borax mills, and the paths once pounded by the famous twenty-mule teams. Stovepipe Wells and the Sand Dunes. And Scotty's Castle, the fantastic \$2,000,000 desert edifice of Death Valley Scotty, who is the region's most famous living legend.

Bad Water is Good for You

The Scouts swarmed southward along the valley to Bad Water, 280 feet below sea level. Some of them clambered up the nearby cliff to the "Sea Level" marker mounted high on its precipitous face. (It's something to be able to say that you went *up* to sea level!) The others gathered to hear the park naturalist, L. Floyd Keller, tell the story of how Bad Water got its name from a man who made a mistake.

He was a map-maker, and he found the place many years ago—a small pool of water standing in a depression of the salt flats. The salt there is 1,800 feet deep, but the water, fed by an underground river, runs to a depth of only a few inches. The map-maker tasted it, made a wry face and reported to his bureau in Washington that it was bad water.

But it wasn't bad at all. Actual tests revealed that it's really very good water. It contains epsom salts in just the right proportion, and Keller recommended, with an impass grin, that every Scout should drink a half-glass of it. Recommendation rejected.

There's a story, too, behind the ghost town of Rhyolite—several stories, really, and, as with almost everything else in Death Valley, it's hard to tell where fact leaves off and fiction begins.

But it seems to be pretty well established fact that Rhyolite was born because an Indian called Johnnie Shoshone discovered gold there and then sold his rights to a man named Bob Montgomery for two dollars and a pair of new overalls. The mine yielded up about \$5,000,000 worth of treasure and Rhyolite burst into life and became one of the wildest and richest mining towns in the region. It had a railroad and 10,000 people. It flour-

ished for five years, but when it died, it died quickly.

The Scouts found it a typical Western ghost town. They prowled gingerly through its dusty, ramshackle ruins, its famous Bottle House, with walls made of bottles laid horizontally in adobe clay, its old railroad depot. They met Rhyolite's one permanent resident. His name is Norman Westmoreland, and he describes himself as Rhyolite's "barkeep, cook and chambermaid" and adds that "when there isn't any wind, I blow to keep the flag flying."

Then some of the Death Valley trekkers swung over in the direction of Skidoo and Panamint City, on the western slope of the valley's mammoth bowl. They were once as rich and woolly as Rhyolite, and they died just as abruptly. And the ghosts that took them over were the first and second cousins of the ghosts that took over Rhyolite.

Ghostly Cousins Took Over

Skidoo, as the Scouts learned, got its name from a bit of slang that was fashionable in that early period. The town didn't even have a name, in fact, until quite awhile after it was established. That bothered the townsfolk a little. Then a leading citizen announced that he was going to install a pipeline to bring water in from springs on Telescope Peak, which was all of twenty-three miles away. "Twenty-three skidoo!" came the inevitable wisecrack from someone in the immediate vicinity, and Skidoo it was forever after.

Wading deeper into the ghost town legendry of Death Valley, the Scouts discovered that Panamint City also earned its name from a popular expression of the time and locale. Prospectors heading up into the mountains were wont to receive a cheery sendoff from their friends. "Pan a lot of it!" someone would sing out. Or—"Pan a mint o' gold!"

Thus Panamint City, a town so wild and lawless that even Wells Fargo, that hardy operator of stagecoaches through the badlands, refused to haul silver hullion out of it. As the tale was told to the Scouts, someone finally contrived a solution to the problem. He had the silver cast up in 500-pound cannonballs, big enough and heavy enough so that they could be shipped out in unguarded wagons without fear that anyone would try to hijack them.

Ryan is a ghost town, too, but not as ghostly as the others, the Scouts perceived. Crouching on a mountain shelf up above Death Valley to the east, Ryan was once a center of borax operations. And a very important place it was, since borax had become the white gold of Death Valley. It was dug from the mines in huge quantities and moved out of the valley in high-wheeled wagons pulled by strings of twenty mules.

Ryan died when the borax plant shifted elsewhere. But the Pacific Coast Borax Company keeps the town in a good state of repair for the benefit of tourists. Many of the Scouts saw it on their way up the road to Dante's View. This is the most accessible of Death Valley's high places and afforded the trekkers much the same spectacular view that they would have had if someone obligingly had moved in the Empire State Building, complete with elevator service.

Stovepipe Wells, located over on the west side of the valley, near the Sand Dunes, isn't one of the ghost towns, but it also has a story, as the Scouts



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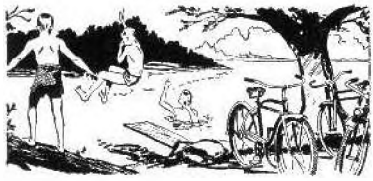
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found out. Prospectors trudging between Rhyolite and Skidoo would pause at a half-way point along the trail to drink from an underground spring. But they had to dig eighteen inches below the surface to get the water, and between visits the hole would be covered up with shifting sand. Some unnamed genius finally hit upon an answer. He plucked a piece of stovepipe to mark the location of the water hole. Presto! Stovepipe Wells.

But the Scouts found the people of Death Valley even more interesting than its places. For the history of that fabled area is so recent that there still reside there some of those who helped to make its history, or saw it being made.

Johnny is 106 Years Old

There's Johnnie Shoshone, the Indian who sold a \$5,000,000 mine for two dollars and a pair of overalls. The Scouts learned that he's still alive and watches time go by at the tiny Indian village south of Furnace Creek Ranch, in the heart of the valley. Johnnie is a very, very old man. He thinks he's about 106 or 107 years old, and if that is true, he was there in the valley when the '49-ers stumbled in and struggled out again.

And there's Louie Blum, an old bearded prospector of seventy-two with a face that is browned and seamed by many summers of fiery heat and many winters of sharp desert cold. I visited Louie with two Scouts, Kenny Seales and Jimmy Cameron-Stuart of Troop 619 in Las Vegas, and he told us how he quit the sea nearly forty-five years ago and drifted in to Death Valley to hunt for gold and silver.

He's been there ever since, and we doubted if he's found very much gold and silver. But he watched the mining towns spring up, flourish briefly and then sputter out like a spent Roman candle.

What with his three burros and a little prospecting on the side, Louie manages to live. In the winters he poses with his burros for camera-toting tourists at two bits a picture. Then, come summer, he blows his earnings on gunpowder and supplies and shuffles into the Panamint Mountains to mine for silver and lead.

Louis told Kenny, Jimmy and me that he doesn't go to town very often. Last time he was in Las Vegas was five years ago, and he didn't stay long, because he couldn't find a place to park his burros.

He loves those burros—Shorty, Mike and Johnny. Shorty is the oldest—a ripe nineteen—and Louie says "he's liable to outlast me." The venerable prospector snorted when the Scouts asked him about the popular notion that burros are stubborn.

"They're not," he said firmly. "They're just smart."

When Louis makes camp, he turns his burros loose in the desert. They wander as far as a mile and a half away, but when they see the smoke of the campfire, back they come for their dinner. Try doing that with a horse, says Louie scornfully.

How Smart Can a Burro be?

The Scouts learned that burros run wild in and around Death Valley and they multiply fast. Since it is their irritating habit to pollute springs and ravage the grazing grounds of mountain sheep, the Park Service occasionally sanctions a burro hunt to thin out the population. This has resulted in a favorite Death Valley fable—or maybe it isn't a fable at all, but a true story—about the burro with a bell.

This particular burro, a fugitive

from some prospector, had a bell wired around his neck, and, of course, the bell would jangle as he moved. That would have made him a sitting-duck target for a burro hunter, except that, whenever a hunt was on, the burro would stand stockstill. His companions would bring him fodder and he'd move his head only enough to reach down for a mouthful of grass, without the slightest betraying tinkle.

Well, anyway, that's the story the Scouts heard around Death Valley, and Death Valley folk say it only goes to show how a smart burro is.

But of far greater renown than the burros and Louie Blum and Johnnie Shoshone all put together is the man they call Death Valley Scotty. His real name is Walter Scott, and he's somewhere in the neighborhood of eighty, with a wild shock of snowy hair and a face that's white and soft because he sleeps in the daytime, out from under the fierce Death Valley sun.

Thirty-odd years ago, in strange and lordly isolation up on the northern slope of Death Valley, the incredible place known as Scotty's Castle was built. And that's precisely what it is—a Spanish-style castle replete with drawbridge, donjon, turret and rugs and furnishings so costly that the Scouts had to wear felt slippers over their shoes as they went through.

Death Valley Scotty

To the hundreds of Scouts descending en masse upon the castle it seemed to lack only a king. And then, for a moment, it seemed to have one. There suddenly, on the ornate balcony overlooking the courtyard, appeared Scotty himself, peering down up on the horde of Scouts for all the world like a monarch greeting his subjects. But his first remark didn't sound regal. "Where d'y'all come from?" asked Scotty.

Then he came down into the courtyard, to be engulfed in a tide of khaki. He blinked into the clicking cameras of half a hundred Scout shutter bugs while he chatted about the early days in Death Valley, when he was a swamper, or No. 2 man, on a twenty-mule team and a prospector for gold.

One day Scotty found a fantastically rich gold mine and that this is how he came to do the things which made him a legend in the West. Once he

chartered a Santa Fe train for a run from Los Angeles to Chicago that broke the world's record. And the Scouts were told how he scattered gold coins on the streets of San Francisco and Sam Bernardino and flipped out fifty dollar bills for one of his famous red neckties, telling startled clerks to "keep the change."

What We Found

But the skeptics say Scotty didn't have a gold mine at all, unless you could call Albert Johnson his gold mine. Johnson was a wealthy Chicago financier who took a fancy to Scotty and to Death Valley. The skeptics claim it was Johnson's money that erected the Castle and financed Scotty's fabulous exploits. They say Johnson did it just for the fun of watching Scotty build himself into a legend.

Johnson, his wife, and Scotty resided in the castle until the financier's death two years ago. Scotty lives now at a ranch a few miles away, and his prospecting days are far behind him. But he likes to talk about the gold of Death Valley. And something he said about it came back to me one night as we had our big campfire.

The fire was built up against a short bluff. The dancing flames threw grotesque and monstrous shadows upon the bluff as though it were a screen for some huge stereopticon machine gone berserk. The sky was a carpet of stars, and in the starlight we could see the shadowy bulge of the mountains close by us to the east. Up from the campfire and out across the silent reaches of Death Valley floated the muted words of the Scout vesper song. "Softly falls the light of day, as our campfire fades away . . ."

And it was then I remembered what Scotty had said about the gold of Death Valley. He'd said there's still gold a-plenty in the valley, but it's all beneath the surface and "it would take a million to get a million out." But Scotty was wrong. We found the golden treasure that night around the campfire, hard alongside the starlit mountains, and along the trails which the '49-ers trod. We found it in the wondrous places and the endless lore of Death Valley, and in the pleasures of comradeship in the out-of-doors.

THE END

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<p>Region VI David Woodard Smithfield, North Carolina</p>	<p>Region XII Tommy Gustafson Bakersfield, California</p>

About Coins

By JIM RAUEN

WHEN YOU START a coin collection, you don't need old coins to make it interesting. The most inexpensive collection you can start is one made up of coins now in circulation. You'll find that several current coins are worth many times their face value. They are also the easiest for you to obtain.

But on the other hand, if you like old coins and get lured out of tracking down those hard-to-get ones, don't let anyone turn your mind. You'll find that your collection will be more valuable if you keep to one subject such as Indian head pennies or Buffalo nickels. Later, you may want to branch out as you become familiar with the field and earn your title of numismatist.

IF GRANNY DOESN'T have any old coins with her stuff in the attic, you can buy some at any of the coin stores located in all large cities. Coin dealers will furnish you with up-to-date prices or you can buy a coin catalogue with illustrations and prices of coins you

want to buy or sell.

It was not until the year 1792 that a mint was established to coin money for the entire United States. This mint was located in Philadelphia. On crude, hand presses they produced copper cents and half cents in 1793, silver in 1794, and gold in 1795. It is not unusual to find on the surface of early coins cracks and lumps.

In addition to the mint at Philadelphia the government also operates branch mints at Denver and San Francisco. Coins from these mints are usually more scarce than those minted at Philadelphia because smaller quantities are minted. Occasionally, you may get change coins marked Carson City or New Orleans. Branch mints engrave the initial of the city in which they are located to specify where they came from. "D" represents Denver, Colorado; "S" San Francisco, California; Philadelphia has no mint mark (the only exception of Philadelphia appears on the five cent piece which bears a "P" above the Capitol dome to show

a change in the alloy of the metal); "O" New Orleans, Louisiana; and "CC" Carson City, Nevada, the latter two of which are closed. Gold coins were minted at Dahlonega, Georgia, and Charlotte, North Carolina as well as other mints.

Condition of Your Coins

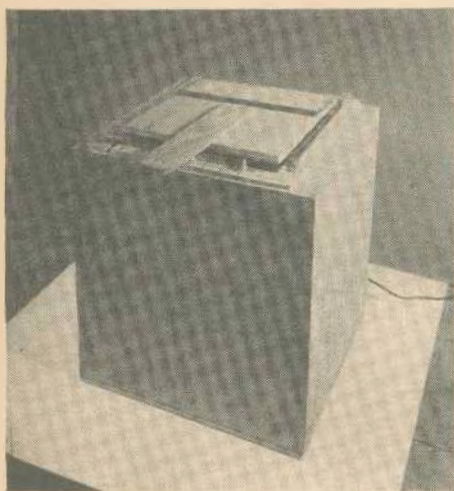
A collector grades his coins of various conditions. The better the condition of your coin the higher its price will be on the market. Here are the classifications:

A coin in **GOOD** condition is abbreviated **G** or **GD**. It is worn, but every important part of the lettering and design is still plain. Coins in poorer condition are seldom worth more than the amount shown on the face. A coin in **VERY GOOD** condition is abbreviated **VG**. It will have little wear and tear and the letters and design will be clear. **FINE** coins are worn only on their high parts, and have sharp designs. They are abbreviated **F**. **VERY FINE** denotes a handsome piece with very sharp features. It is abbreviated **VF**. **UNCIRCULATED** means the coin is like new and has no scratches or signs of wear or other imperfections—

just as if it came from the mint press. It is abbreviated **UNC. PROOF** coins are special coins with a mirror-like surface no other condition can equal. These coins are not intended for circulation. Especially struck and polished by hand, they are strictly collectors' items.

It is best not to clean your coins, but modern silver coins can be cleaned with a paste of baking soda and water. Gently rub your coin into the compound and dry it carefully. Don't try this method on copper or bronze coins though. The high parts will be shiny and the low parts will be dark and unnatural. You will lower the market value. Placed in cellophane envelopes and sealed your collection will be safe from discoloration. Give the best of care to your coins.

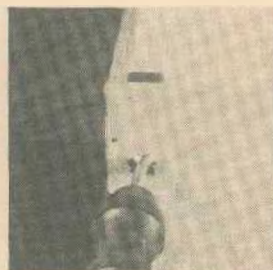
Beginner collectors' notes: Always hold a coin by the edge to prevent wear, even if it isn't a rare one. The *obverse* side of a coin is the head side. The *reverse* side is the back or tails side. *Lettered edges* refer to those early coins that carried on their edges various letters. *Overdate* means that one date has been stamped over another on the same coin.



1. Use $\frac{3}{4}$ or $\frac{1}{2}$ " plywood. Top and base measure 11" sq. Sides measure $13\frac{1}{2}$ x 14". Inside corner posts are 11 x 1". Note staggering of corner joints—makes cutting uniform, adds strength. Be sure to use good wood glue on all joints.



2. Attach lamp bases to back and side; one for white light, one for red safe light; set them 6" from bottom.



3. Join sides first with brads. Then fasten corner posts with 2 strips of copper with $\frac{3}{4}$ " screws. Use small plate. Insulate from wood top at back. Glue the drill and counter sink them, with pieces of inner tube, felt over whole piece.



4. Make contact switch. 5. Mortise piano hinge.



MAKE THIS CONTACT PRINTER

By Bob Jones

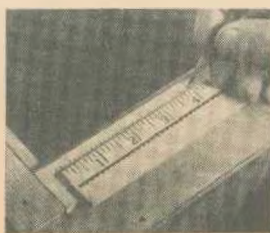


6. Use welding rod for masking runners. File ends smaller to fit slot brackets made from bits of metal, punch holes.



7. Use .012 gauge aluminum for masking runners. Cut square and use pliers to make tight fit on welding rods.

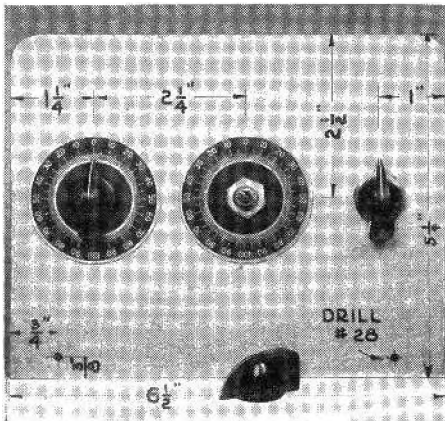
8. Connect lamp cord. Attach hinge on back, regulate hand grip to switch rod so lamp will light on contacting.



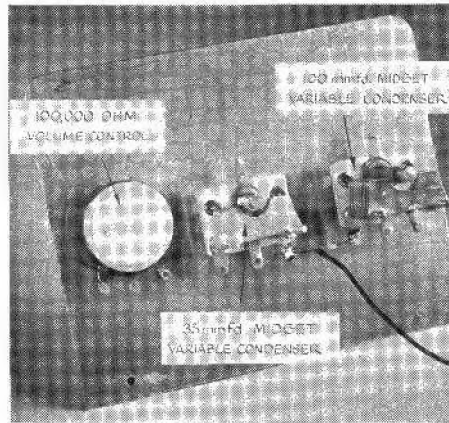
9. Place top in position. Bring handle down till flat on glass, regulate rod to contact handle and switch together.



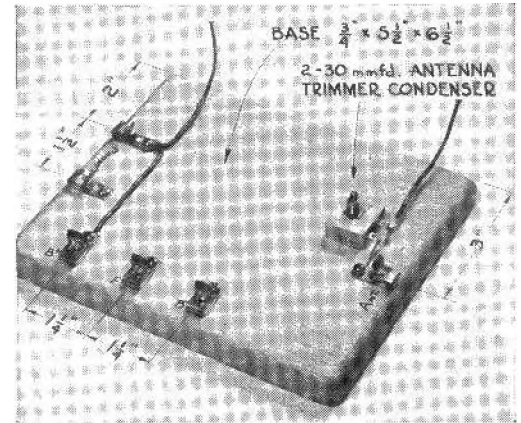
10. Paint inside of box enamel white. Use plate glass for printing surface $11\frac{1}{4}$ " by $9\frac{1}{4}$ ". Cut out opening in top panel $10\frac{1}{2}$ " x $8\frac{1}{2}$ ". Leave $\frac{3}{4}$ " mortised edge to hold glass. Remove glass to change bulb. Nail strips flush with glass to support runner brackets and margin strips. One 8 x 10 sheet will print (8) $2\frac{1}{4}$ x $3\frac{1}{4}$ " or (12) $2\frac{1}{4}$ x $2\frac{1}{4}$ ". Cut negatives in strips of (2) or (4) together for ease of handling and filing.



1. This view is of the front of the panel with the two variable condensers and the volume control installed. First drill $\frac{3}{4}$ " shaft holes.



2. This view is of the back of the panel. Now solder a jumper between the two condenser stator lugs. After that attach a 6" wire lead.



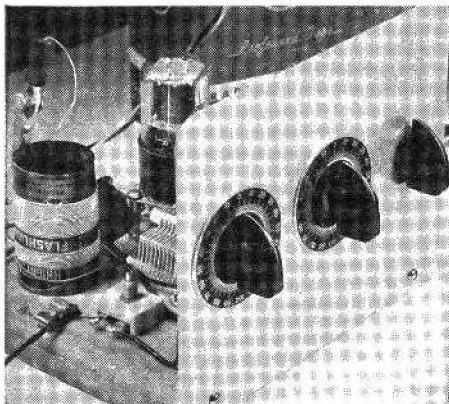
3. Orange crate or similar wood can be used for the base. After rounding the edges, shellac. Install clips and condenser; wire parts as shown.

Short Wave Receiver

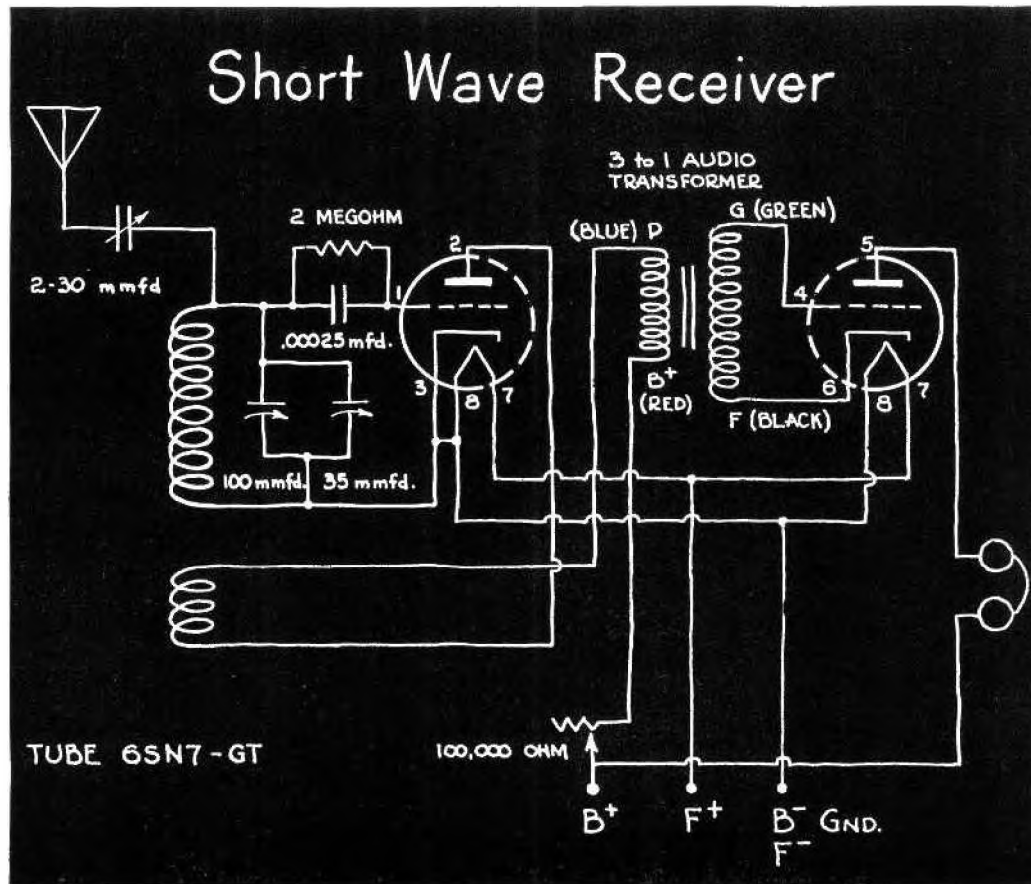
BY FRED RODEN AND GLENN A. WAGNER



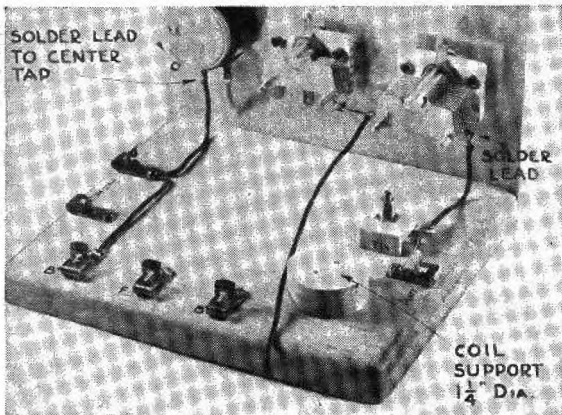
13. The first time we tried this set at Albany, we picked up London, England. Reception was clear and strong. Its range is world-wide.



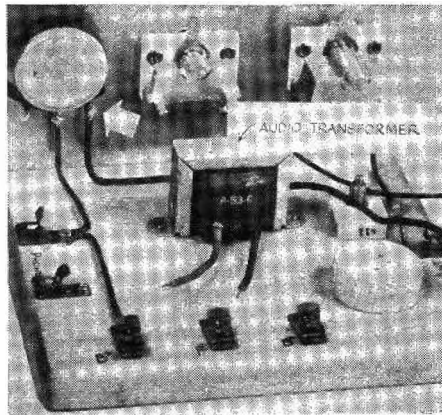
12. This is the two-in-one short wave receiver complete. It is a sturdy, compact, and inexpensive set, yet is comparatively easy to construct.



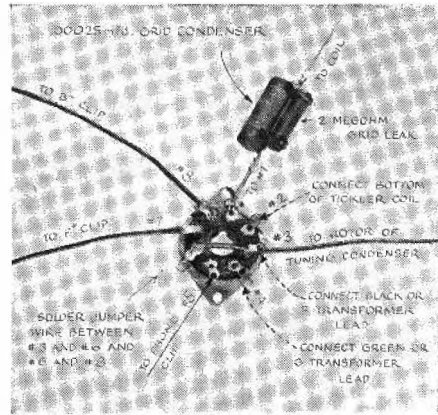
Here is the short wave receiver wiring diagram, which should be followed exactly to obtain maximum efficiency from this short wave receiver. Although the plan is quite simple, any good radio repairman or electrician can give you valuable assistance in assembling the materials.



4. Fasten the panel to the base with $\frac{3}{4}$ " No. 6 R.H. wood screws. Make a coil support and attach leads to volume control and condensers.



5. Now mount the audio transformer on the base, about $1\frac{3}{4}$ " from the front panel; then solder red (or R) lead to volume control lug.

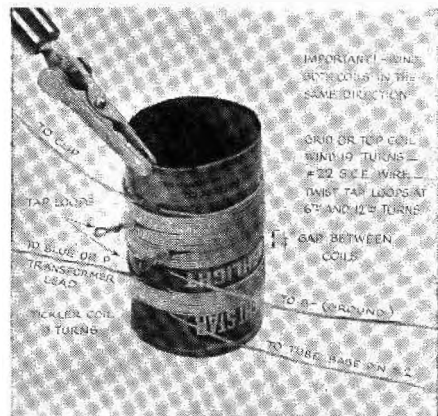


6. This view is looking at the bottom of the tube socket. Solder the short leads to the various lugs as shown before mounting socket.

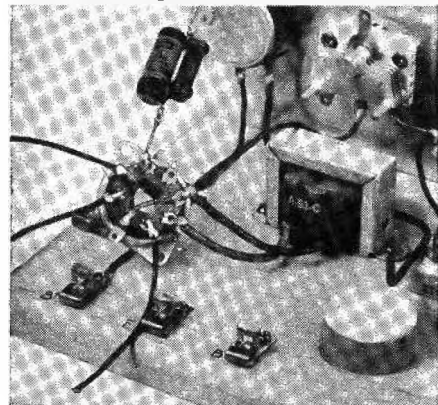
IF YOU ARE interested in listening to foreign broadcasts, amateur broadcast bands, airways radio, and ships at sea, then here is the radio for you to build. This short wave receiver is actually a two tube set which uses a 6 volt 6SN7 tube; that is, two tubes in one glass envelope. It is made from standard and easy to get parts. Power is supplied by a 45 volt "B" battery and a 6.3 volt, 1 ampere transformer which plugs into a 110 volt A.C. light socket. The coil is home made. For best reception, use a pair of 3000 ohm earphones. Use an antenna about 100 feet long and a ground wire to a cold water pipe. Be sure all connections are tight and soldered where possible.

LIST OF MATERIALS

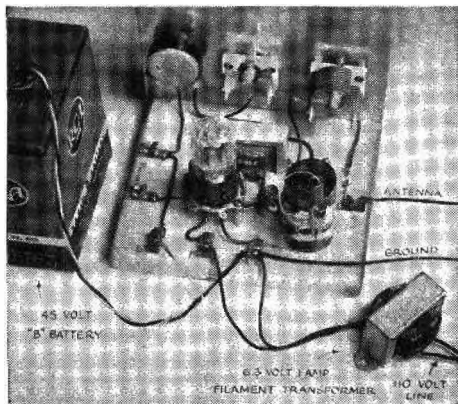
- 1-2 megohm grid leak
- 1-.00025 mfd. grid condenser
- 1-3 to 1 audio transformer
- 1-2-30 mmfd. antenna trimmer condenser
- 1-100 mmfd. midget variable condenser
- 1-35 mmfd. midget variable condenser
- 1-100,000 ohm volume control
- 1-Octal tube socket
- 1-6 SN7 tube
- 6- $\frac{3}{16}$ " x $\frac{3}{4}$ " (medium size) Fahstock clips
- 1-#22 single cotton enamel covered magnet wire
- 1-#18 or #20 hook-up wire
- 1-45 volt "B" battery
- 1-6.3 volt 1 ampere filament transformer
- 1-Alligator clip
- 1-Set earphones (3000 ohm)
- 1-Panel $\frac{1}{16}$ " x $5\frac{1}{4}$ " x $6\frac{1}{2}$ " aluminum
- 1-Base $\frac{3}{4}$ " x $5\frac{1}{2}$ " x $6\frac{1}{2}$ " wood
- 2-2" calibrated dials
- 3-Dial knobs



7. Wind the coils around a cardboard flash-light cell cover. First wind the tickler coil, and follow with the grid coil. Punch holes for leads.



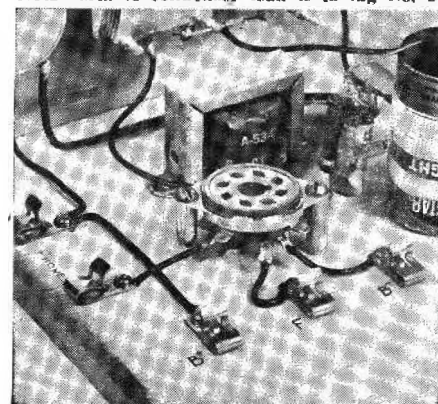
8. Solder green (or F) transformer lead to No. 3 lug, green (or G) lead to the No. 4 lug. Note variable condenser lead is to lug No. 3.



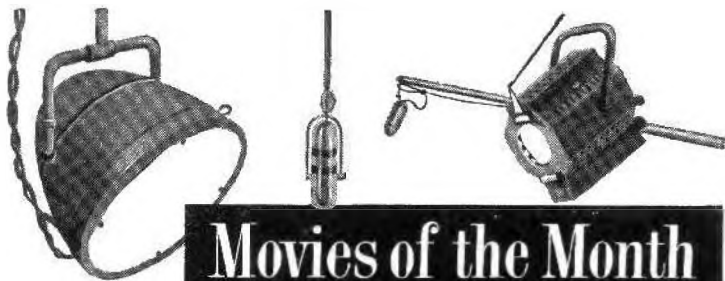
11. Wiring arrangement for the power supply. Follow instructions; attach cord and plug to the 110 volt leads of the filament transformer.



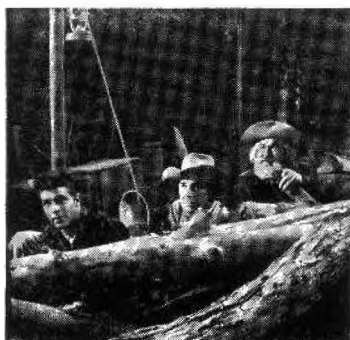
10. Fasten the coil to the base piece with model airplane cement. Solder the leads as indicated in the previous photo. Note directions carefully.



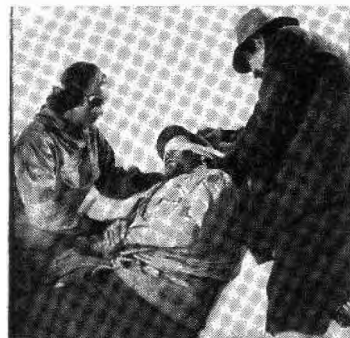
9. Mount the tube socket on two tubular posts $\frac{3}{4}$ " high. Attach tube pin No. 5 to the phone clip; No. 7 to F clip, and No. 8 to the B- clip.



Movies of the Month



Randolph Scott and Gabby Hayes appear in fast moving *Cariboo Trail*

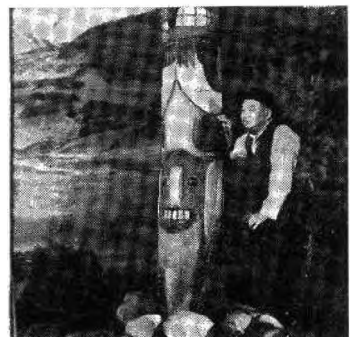


Here's popular Glenn Ford snow blind in a mountain climbing movie



In *Saddle Tramp* Joel McCrae adopts four boys, and life gets interesting

Klieg Sidelights...



A totem pole illustrates the use of local color detail in movie making

THE CARIBOO TRAIL (20th C-Fox)

THE CARIBOO TRAIL leads through the mountains of British Columbia that were the scene of a gold rush in 1890. This is a yarn of cattleman Randolph Scott's struggle to overcome the gold greed of Victor Jory. It is as packed with action as a bonanza vein with ore. Cattle stampedes, gold strikes, Indian fights, gun duels are well blended in Cinecolor. Not the least interesting element is the rough historical background of a wild land and a period little known to most Americans. For added measure there is Gabby Hayes and his beard. Gabby's beard is a genuine, twenty-year-old one and has gone through dozens of westerns.

THE WHITE TOWER (R.K.O.)

THRILLING CLIMBING incidents and magnificent scenery in color are the overkill for an adventure film and a lesson in cooperation. Six people from six different nations and with six different reasons want to climb a symbolic mountain in Switzerland. In spine-tingling shots you see them belaying and rappelling over cliff faces, squirming up rock "chimneys," hand traversing over tiny ledges, pitching their little mountain tents in a fierce alpine blizzard. One by one the party falls apart until there are left only a young American (Glenn Ford) and an arrogant, unregenerated Nazi officer struggling toward the summit.

SADDLE TRAMP (Univ.)

CHUCK CONNORS (Joel McCrea) rides his empty-headed cayuse to the diggings of his old pal Slim. When the brainless horse kills the pal, Chuck finds himself temporarily foster father to Slim's four sons. As if that weren't enough, Chuck lands in the middle between two hot-headed ranchers accusing each other of stealing cattle. After Chuck is knocked out by the real rustlers, Tommy, the twelve year old son, and the other kids organize a rescue party. The color photography in Saddle Tramp is notable, being produced with a special new type of lens. And while technicians were producing a terrific rain storm they accidentally got a photographable rainbow, something they have long been trying to do.

A FULL TEAM of professional football players is being used in THE HERO. They include men from the Cardinals, Lions, Redskins, and Rams.

The totem pole at the left was used in THE CARIBOO TRAIL. The mountains you'll see in that movie are not real British Columbia Rockies, but some United States numbers that can't be told from their northern brothers. The location shots were made in the Rocky Mountains of Colorado.

Trigger, Jr., and Champ, Jr., are following in the hoof-prints of their famous fathers, and have made their movie debuts with Roy Rogers and Gene Autry respectively.—F.C.S.

The K-5 Roundup

(Continued from page 25)

K 5 cattle from it. On the opposite side of the herd other cowboys were cutting other brands. But there was no one close to Jed when the boss reined up close to him and asked, "See any of your dad's cattle, Jed?"

"I've spotted three cows and a yearling steer. As the herd shifts, I keep looking for others . . . I know all of dad's cattle by sight without even looking at the brand."

"You do?" Roberts gave him a quick look. "Good start toward making a cowman. Yet you want to learn to read brands, too. Whose is that red cow right over there?"

Jed's gaze followed Roberts' pointing arm. "She's a B X Bar and belongs to Andy Walker."

Roberts nodded and pointed his clever cow pony back into the herd. Jed glanced again at the B X Bar cow and noted that she was closely trailed by an unbranded heifer calf. He was astonished when Roberts singled out that unbranded calf, paired it with a K 5 cow, and then cut the two of them out of the herd.

Jed spurred his pony in front of the cow and calf, heading them off.

"What's the big idea?" Roberts demanded.

"That calf belongs to that B X Bar cow."

"Suppose I say it belongs to the K 5 cow I cut out with it?"

Jed was red-faced. Contradicting the roundup boss was well, it was something a fellow just didn't do. He stammered, "But—but I know it does belong to the B X Bar cow."

"So? Well, it's old enough to be weaned and K 5'd look good on its ribs. Here," reaching to his overalls pocket and bringing out a five dollar bill. "Take this and keep your mouth shut."

Jed flinched. His stomach tightened up and every nerve in him seemed to crawl. "No— You—you can't mean—" He was unable to go on.

ROBERTS' EYES were squinted, and the corners of his mouth had drawn down as he said slowly, "You told me you wanted a new saddle mighty much. Mighty much." Again he held out the greenback.

And Jed hesitated. On any roundup cows and calves did get separated and never again got together. Sure, Roberts could slip that calf into the K 5 cut. Get away with it too. Nobody the wiser—except Jed and Roberts himself. So, when Jed did want a saddle so much why not let it go? He reached for the bill—and jerked his hand back as if it had been burned.

"No! I don't want a saddle that much!" Jed turned his horse and spurred it to get away from the boss of the roundup.

Then reining in, he noted with bleak eyes that Roberts turned the calf back into the main herd, where he saw it find its mother, the red B X Bar cow.

At this bad time for Jed, when he felt sick and disillusioned, who should come riding up to him but the cowboy who considered himself so much Jed's superior, smug, taunting, bully-like Bert Simmons.

"Well, well, if it ain't my friend the sod buster! Gosh, I'd hake to work for a two-bit nester outfit. Why didn't your old man get you a string of horses to ride, if he was going to send such a green punk on the roundup? Take that plug you're forkin' now—Ain't he a dinger?"

Although Jed's eyes flashed, he answered no word. Bert Simmons worked for the K 5, had a first class outfit and

was mounted on a splendid K 5 horse. Jed couldn't help being a little bit envious, and he resented the fellow's rubbing it in.

"Lost your voice?" Bert jibed. "From hollering at the dogies, I spect. 'Bout all a gink like you can do is holler. When it comes to cow work—"

Jed did not hear the rest. A big black steer he had noticed several times earlier today, suddenly broke out of the herd like a thunderbolt and beelined for the hills. Even as Jed spurred his mount in ahead of the steer, he realized that it was what is called an "old ranyhan." A big, rangy, picturesque brute of an animal, coal black, one horn long, sharp-pointed, upcurving, the other broken at its tip and bent downward.

THE PLAIN brand on it was B X Bar, and at the moment Jed put his horse in front of the wild old steer, he heard Andy Walker shout, "Stop that outlaw and bring him back and there's ten dollars in it for you, cowboy!"

Jed waved his hat and yelled at the steer. But it only lowered its head and, eyes flaming reddishly with anger, charged his horse. By the narrowest of margins, Jed jerked his mount aside in time and the wild steer lunged on. In the wink of an eye, Jed jerked loose his rope, and tearing along after the bovine, he built a loop in the end of it, tied the other end fast to his saddle horn.

Even had there been no reward, Jed would have tried to rope the steer. Real cowboys simply didn't let cattle get away from them! But now—now he had a triple incentive to prove himself: to show Bert Simmons he was a hand, to bring back the outlaw, and to earn the reward.

Ten bucks added to the thirty Jed already had would buy a new saddle! . . . Oops! He needed it right now. This old one of his would not hold that big ugly steer if he did rope it!

All in a flash he knew he ought to back out of this situation. He hadn't a chance. He was sure to fail. But the same grit which had prompted Jed to try to ride a bronc this morning now prompted him to do his damndest.

THE STEER WAS travelling like a bullet. So was Jed's mount. A plug, yes, but it did have a burst of speed in its wobbly old legs for a short distance. Jed bent far forward and cast his rope, and the loop, floating through space like a great flattened O, dropped neatly down over both the wide-curving horn and the bent and broken one as well.

Deftly, Jed jerked the loop taut and set his horse for the shock, planting it back on its haunches. As the big steer took the slack out of the rope, it twanged like a taunt fiddle string. Jed's horse was jerked forward for eight or ten feet before there came a frightening, crashing, ripping sound—as the saddle was literally torn apart.

Jed catapulted into space and landed on his head and shoulders against the hard ground. Bounding to his feet, he saw that the ranyhan, with some parts of Jed's wrecked saddle bouncing at the trailing end of Jed's rope, was lumbering onward. An instant later Jed took note of the arrival of Bert Simmons, who had halted his mount and was bent double, exploding with laughter.

"Ho! Second time today Jeddie boy has hit the dust!"

Jed's hands ballled into hard fists, his dust-rimmed face tightened. "Walker

said ten dollars to the man who got that old ranyhan. Don't you want it?" he demanded.

"For a hundred bucks I'd not tie onto a wild outlaw like that! I know better. But you—"

Jed lunged upward and threw his arms around Bert's neck, and he tore the man out of his saddle, the horse cavoring and shying away.

WITH BERT YELLING, "Stop it. What you—?" Jed gave the fellow a punch in the nose that put him down in the sage, and he heard someone cheer. Yet he didn't even look to see who it was, as he leaped to the saddle on Bert Simmons' horse, and spurred it.

As he unstrapped Bert's rope, Jed had the surprised thrill of knowing he was astride a good horse—a horse such as he had never ridden before, a horse that was simply burning up the earth as Jed sent it after the black steer. Then, for the second time Jed Hammond roped that old outlaw!

Aha! This horse was a rope horse knowing what was expected of it. It instantly increased its speed to dash on past the left side of the running bovine. In the nick of time, Jed flicked the loose rope over the steer's rump, the way he had seen expert ropers do in contests, and, as the horse hit the other end of that rope, the steer's legs were jerked from under its body. For a moment it was floating in the air, all doubled up. Then it hit the ground so hard it lay still, the horse straining away at the taut rope to hold it down. Jed bounced from the saddle, ran to the fallen outlaw, and because he had no pigging string with which to hog tie it, he got the tail hold and held it down.

Horsemen came pounding up. Walker of B X Bar and Roberts among them. A little behind them, on foot, was Bert Simmons.

Roberts' eyes were shining through their dust mask as he swung off and deftly hogtied the fallen ranyhan. Walker came up to Jed. "Here's your ten bucks, cowboy. Pretty work!"

"Aw," stammered Jed, "I didn't earn the money. This wasn't any more than I should have done. Keep it, Mr. Walker."

WALKER SHOVED the bill into Jed's pocket. "Now we'll have to get a tame steer and neck this old outlaw to

the tame one so's to get him into the herd. But my boys'll attend to that, you bet."

Bert Simmons came up, panting loudly. "The darned fellow yanked me out of my saddle and took my horse. Let me at him. I'll punch—"

"Hold your breath, Bert," snipped Roberts. "You're fired. Take your outfit off this K 5 horse, get your own private nag, and hike, pronto."

"Wh—why'm I fired?"
"Steal of helping Jed, you sat on your mount like a turnip and laughed at him. That's not all, Bert. The K 5 don't need any bullies on its pay roll. I've been hoping Jed'd turn on you—and he surely did it! Now git and good riddance to you!"

Bert Simmons stamped away, indignant, yet silent and shamelaced. The other men and Walker rode back to the herd, leaving Jed alone with the roundup foreman. Roberts put a hand on the young fellow's shoulder, forcing Jed's eyes to meet his, and Jed looking into them, saw that they were kind and understanding eyes. The foreman said slowly, "You'll be one of the boys now."

"I—I will! That's wonderful. But—" Jed's voice trailed off.

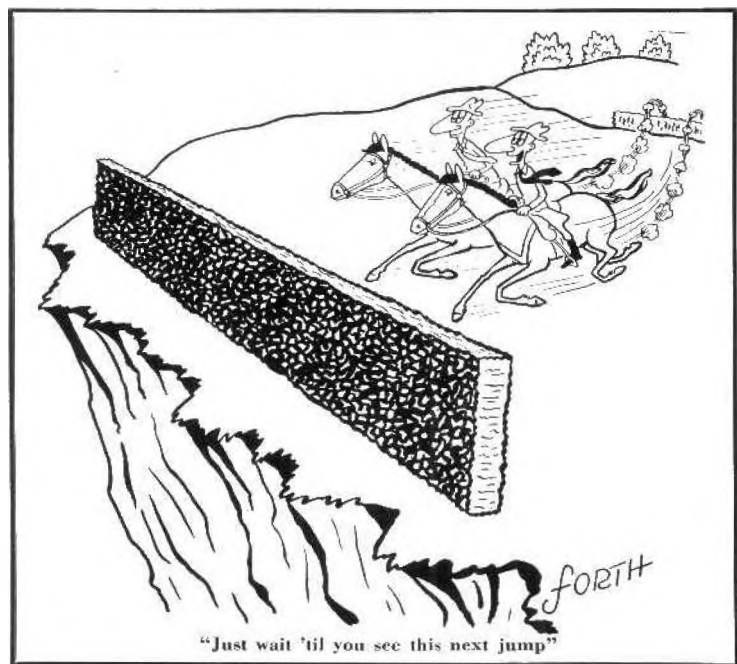
"ABOUT THE GATE," said Roberts. "I realize now that I had no right to put you in such a ticklish spot. I shouldn't have done it, Jed, except that I knew how plumb bad you wanted a saddle. You see, I was testing you—" Sudden dampness welled into his eyes. "Boy, if you'd accepted that greenback, I'd have been the most disappointed man on this roundup."

"Oh," gasped Jed, seeing it all now. "Oh, Roberts, you're just as well a guy I thought you were."

The man held out his hand. "Jed, we're trailing our cut from this roundup to the K 5 yet this afternoon, and we'll find a saddle at the ranch for you to use until you get your new one. What's more, there's no reason why you can't work for K 5 and gather your dad's cattle at the same time. For the duration of this roundup, until you have to go home with your father's cattle, you're on as a K 5 cowboy. That suit you?"

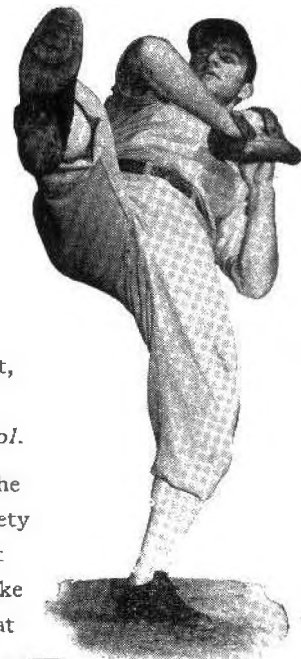
Jed didn't answer. He couldn't utter a word. He simply gripped Roberts' hand hard. *Hard.*

THE END



Big Wheel

IN ANY LEAGUE!

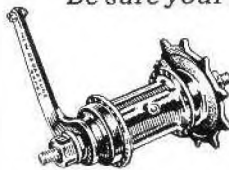


IN baseball, as in every other sport, the star performer, the big wheel, is the fellow with *constant control*.

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MOUNT JOY PENNSYLVANIA



Wrap it first in cheesecloth then in burlap.

FOR SEPTEMBER HAVE A

Western Barbecue Round-Up

Clay Potts, Oklahoma's barbecue king, says you can do it in eight steps—and he'll guarantee your success if you. . .

1. Be sure to select good beef—a half pound for each person. Cut, bone, then roll the meat into eight or ten pound chunks. Wrap them in cheesecloth, then in burlap, and tie with heavy twine.
2. The cooking pit should be 3½ feet deep by 3 feet wide. A trench 10 feet long will hold 100 pounds of meat. If you expect rain cover the barbecue pit with a tarpaulin. You should also have ready a board covering for the cooking stage.
3. Your fire should be made of dry poled or split black-jack oak or hickory. (But any good hard wood will do). You'll need about 18 inches of coals so don't go light on the wood, and make sure it's thoroughly dry.
4. Light your fire at least three hours before you want your coals. Since it will take ten hours to cook the beef allow 13 hours before serving. Light the fire from the bottom of the trench and burn it as rapidly as possible until you have hot coals 18 inches deep.

5. Now dip your chunks of meat in water. This will keep the burlap from burning. Toss them into the pit, then immediately fill the pit over with dirt. Now lay your boards over the dirt and fill in the cracks with wet sand. And cover this with a tarp. Ten hours later dig everything up and serve it immediately.
6. While the meat is cooking make this sauce—it's not too hot but just right. This recipe is good for 50 pounds of meat: 4 quarts of catsup; 1 quart of Worcestershire sauce; 1 pint of prepared mustard; and 1 pint of barbecue sauce. Your menu consists of the meat, potato chips, pickles and onions, baked beans, fresh fruit, ice cream, coffee or punch.
7. Serve the meat while it's still hot. Set up a long table and serve cafeteria style. Paper plates and wooden forks manipulate each person's two barbecued beef sandwiches, the beans and the rest. Keep the ice cream cold until later.
8. Clean up will be easy if you set up a few large cans to catch your labor saving paper plates. Now, have at it.

—Ray R. Matoy



Dunk it in water . . .



Now bury and cover it.

Cat Man

(Continued from page 31)

Undoubtedly, the man had been blinded by the glamour of the steel arena, for he seemed to dislike working the creatures.

Sascha hadn't been out of her rolling den since her illness. And had it not been for the protesting letters Jeff's father continued to send Boss Leland from the hospital, Sascha would long since have been done away with or donated to some local zoo, few of which could afford to feed her the twenty pounds of fresh meat she required daily. So Sascha went along with the circus.

WHEN IT BECAME apparent that Jeff's father would not return to the show for at least another season and, perhaps, longer, Jeff approached Boss Leland for permission to start working the cats during part of each rehearsal period. But his request was politely refused.

"Someday, maybe," Boss Leland encouraged, "but you're pretty young, kid. You got a lot to learn about tigers before you try working in the steel arena. Maybe someday, huh?"

But "someday" would be too late, Jeff knew. Duff Colton was already remodeling the act; eliminating some of the stunts which he seemed to consider particularly hazardous to his own welfare. Duff's sole control over the cats was based on fear. True, as Jeff knew, fear was a requisite in maintaining the tigers' respect. But he also knew that an element of trust was essential between man and animal in order to accomplish a smooth act inside of the steel arena.

Soon, Jeff thought soberly, the last vestige of the carefully worked out and once-famous Ralston routine would be gone. Jeff was surprised that Boss Leland, usually a perfectionist, would allow the act to slip the way it had since Duff Colton took it over.

IT WAS A WARM summer night and the gaily decorated big top was packed with the eager and excited populace of King City. The cat act had just opened the show, drawing what seemed to Jeff a rather polite round of applause. The tractors had pulled the rolling dens out of the tent into the circus backyard. Inside the tent the roustabouts were hastily dismantling the linked steel arena. Out along the railroad siding the workmen were busily loading the cook tent, the animal tent and the greater portion of the wild animals onto the cars that made up the circus train's first section. As soon as the performance was finished, the Flying Squadron would be all ready to move out through the night toward the next day's stand.

The tinny blare of the band seeped through the canvas sidewalls, as Jeff helped load the rolling kitchens onto the flatcars. Suddenly, from forward along the train came the splintering crash of wood. Startled shouts sounded over the confusion, but were quickly suppressed.

As Jeff broke into a run toward the front of the train he knew that whatever had happened to cause that crash of sound had been serious.

SOMEONE SPED past Jeff. "Better go back, kid," he panted. "Tiger's loose!"

Jeff paused a moment; then moved cautiously forward. He was soon near enough to discern some of the work crew hanging to telephone poles or perched on various high vantage points of safety. He also saw the cage lying at

a steep angle, one end on the ground and one end still resting on the bed of the flatcar. He saw how the wheels had slipped from the ramp running between the cars. He saw how one barred end of the cage—the end resting on the ground—had burst open at the impact.

"Scram, kid!" a workman cried urgently from a nearby telephone pole. "It's the killer that got away! Sascha!"

"Sascha!" A chill surged along Jeff's spine. "Where is she?"

"Last I saw her," a voice volunteered from the semi-darkness, "she was headed toward that orchard out there the other side of the tracks. But you never know what them cats are goin' to do. She might've doubled back and—and maybe she's under one of them flatcars right now!"

Boss Leland, Duff Colton and several others came running up carrying rifles and strong-beamed flashlights.

"We're going after her," the circus manager said quickly. "See that this doesn't leak into the big tent. Don't want any riots on our hands."

Jeff quickly recalled costly circus panics that his father had told him about. "You—you're not going to shoot Sascha?" he said anxiously.

"Can't take any chances, Jeff," Boss Leland replied. "You fellows with the rifles spread out in pairs and start through the orchard. If you see her, be sure you make your shots count or—hey, Colton, what's the matter with you?"

JEFF SAW THEN how Duff Colton was edging away; saw the pastiness of the trainer's face in the dim light.

"I—I'd better stay here," he managed, "in case Sascha should double back and—well, tigers often come back to familiar places, you know, and—"

"Yeah, yeah, I think you better stay," Boss Leland snapped, scowling at him. "And maybe you better find a place to hide while you're at it!"

Without a word Duff Colton walked back towards the lighted tent.

The searching beams of the flashlights soon disappeared into the orchard. Cautiously, the workmen climbed down, raised the empty cage to its proper position on the flatcar and watchfully resumed their labor. Jeff went back into the big top where the show was reaching the midpoint. Although word had quickly passed among the performers, not a single person in the packed bleachers was even remotely aware that a cat was loose.

A HALF HOUR passed. A half hour during which Jeff busied himself breaking down and setting up the ring trappings for each new act. He tried to keep busy enough not to think of what might be happening outside in the darkness, as men with rifles stalked the tawny Sascha.

Then it came—a single sharp report—like someone breaking a dry stick over his knee. An involuntary sob shook Jeff. He bit down hard on his lower lip; felt it tremble against his teeth.

"All I hope is that they got her with that shot," Duff Colton said hoarsely.

Jeff turned away, fighting down the rage that seethed within him.

The band was blaring out its brassy fanfare for the aerial act, the final feature of the show. At his post near one of the trapeze guy wires, Jeff was still thinking of Sascha, of how he could break the news to his father. For years Sascha had been his dad's favorite tiger.

Duff Colton loitered nearby, apparently much more at ease since hearing the single rifle shot.

Jeff thought it was strange that a clown should suddenly come rushing in through the performer's exit. He quickly recognized him as Perry Prince, king of the bulbous-nosed jocos. Perry shot nervous glances around, spotted Jeff and rushed over to him. Despite the thick greasepaint, Jeff immediately saw the fear in the clown's eyes.

"It's Sascha!" Perry Prince shot a quick glance back over his shoulder. "I just saw her coming out from under a wagon. She's headed this way, kid! Where's the Boss? Get a gun! Hey, Duff, you—"

Duff Colton had already come over. At hearing the clown's words, his face suddenly blanched. "But that shot?"

"Musta missed," the clown said. "Hurry up. You better do somethin'! If that car—" Perry Prince's words trailed off. His eyes widened.

STARING PAST him, Jeff saw Sascha move into sight out of the dark shadows beyond the performers' exit. The great Bengal stalked forward in a low crouch, swaying her head slowly from side to side.

"Beat it!" Duff Colton's hoarse whisper was filled with fear. "Let's get out of here! That—that cat's on the prowl!"

"Wait, Duff!" Jeff said quickly. "Stand still! Want to start a panic!"

But the cat trainer had already moved to a position where one of the big tent poles offered him a measure of protection.

"Better beat it!" Perry Prince said, edging away. "I don't want any truck with that killer."

"Stand still, you fool!" Jeff stopped him with his voice. "Don't run!" His eyes and mind were quickly sizing up the situation, groping—groping. He fought back the natural impulse to follow Duff Colton's lead and find some kind of protection. But at any cost, when at the risk of his own life, he must prevent the people in the bleachers from knowing that danger threatened them.

"Perry, Quick!" Jeff grabbed the clown's arm. "Get some help. Roll a chute out here and an arena cage . . . slow, easy. Don't get Sascha excited."

"But . . ."

"Go on!" Jeff commanded. "Go on!" The clown moved quietly away, and Jeff could only hope that he wasn't following Duff Colton's lead.

"Sascha!" Jeff called. "Sascha!"

The tiger turned her head slowly and fastened her greenish-brown eyes

on Jeff. Even at the distance Jeff could see the frightened uncertainty in the beast's actions. Without taking his eyes off the Bengal, Jeff eased over beside the ringmaster, who stood with his whip held loosely in his hand—stood with beads of sweat pebbling his forehead—paralyzed at the sight of the approaching tiger.

"Quick, Lou," Jeff whispered, indicating the walking microphone held in the ringmaster's other trembling hand. "Tell 'em this a special tiger act. Hold up the trapeze stunt."

"Hey, kid, you can't—"

BUT JEFF WASN'T paying any attention. Sascha had moved into full view under the brilliant arc lights. Now Jeff saw the large blotch of red on Sascha's right shoulder, and again fought desperately against the impulse to turn and run for freedom. Sascha was wounded! Jeff saw now the crazed, feverish look in her eyes.

"Don't move!" Jeff called tensely to a panic-faced usher. "Don't move or she'll kill you!"

The ringmaster hadn't had time to make his announcement. The band suddenly went mute. Everything under the big top suddenly froze into immobility. The arena ached with silence, a silence that could at any moment transform into a terror-ridden panic. It was too late now for any pretense.

One scream; one person suddenly breaking for freedom would create complete havoc.

Jeff took the whip from the ringmaster's trembling hand. "Sascha!" he moved forward, popped the whip to center the tiger's attention: "Come on, Sascha!"

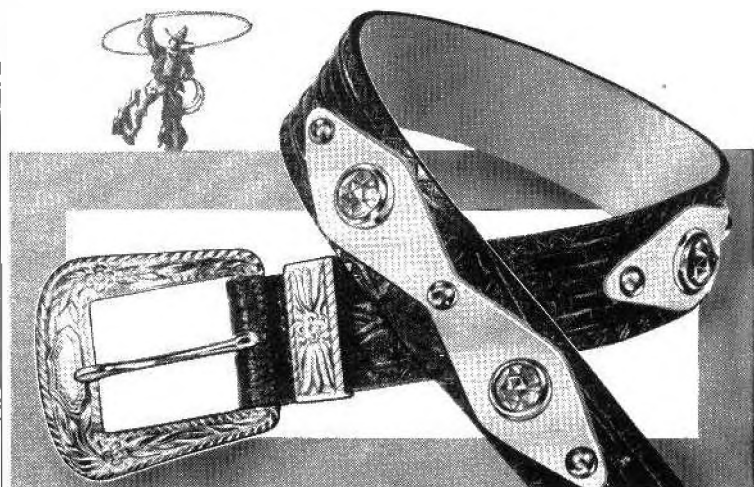
The great Bengal hissed and crouched back on her haunches. She lashed out uncertainly at the whip. Jeff wondered if Sascha, in her wounded state, even recognized him.

"Easy, Sascha, easy. Come on, girl!" Jeff petted her with his words; moving slowly backwards as she came on. Her mammoth striped head swayed back and forth with pain and uncertainty. Jeff popped the whip again, when Sascha's attention was diverted by a group of laborers who started to move away, unable to hold their positions any longer.

"Stick to me, Sascha," he coaxed. He simulated a purr by blowing through loosely pursed lips.

SASCHA HESITATED, as though she might be recalling similar soft tones and similar purrs from the past when she was sick or hurt.

"Come on, Sascha. We've been



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through worse than this together."

Beyond the crouched animal, Jeff caught a quick glimpse of Boss Leland and the rest of the searching party. They stood transfixed by the scene taking place before their eyes.

Jeff hazarded a quick glance behind him—saw that Perry Prince had come through, and that cage and a chute had been moved in and made ready to receive the cat.

Watching Sascha's wandering, pain-filled eyes, Jeff realized that he was beginning to lose control of the Bengal's attention. Once that was lost, once Sascha sensed the fear around her anything might happen. And the silence, the complete absence of any movement was mute testimony that everyone inside of the big top was putting his trust in Jeff's ability to control the loose tiger.

Sascha stopped and licked at her wound, as though the pain was setting in stronger. She swung her leverish eyes around, focused for a moment on the fear-paralyzed ringmaster.

Jeff knew that he would have to act fast now—act and hope.

"Sascha!" he shouted, turning and snapping the whip at the opening of the chute. "Sascha! In, girl!"

Then he shifted to one side and snapped the whip sharply over the Bengal's head.

"In, Sascha, in!"

THE tiger looked at Jeff a moment. She started to bare her fangs in a vicious snarl. Then she seemed to realize that Jeff was still her friend, that Jeff had nothing to do with the pain in her shoulder. With a half-hearted roar, she rose up and lashed out almost playfully at the whip. Just as she would in a rehearsal of the act. Jeff jerked the whip away and popped it quickly again Sascha's rearing head.

"In, Sascha, girl!" he popped the

whip again. "In!"

Sascha seemed to catch the cue now. She took three quick steps toward the chute; then stopped and eyed Jeff uncertainly. Jeff held his stare into the Bengal's eyes.

Sascha swung her head away, and rushed into the chute.

Instantly, Jeff dropped the whip and slammed the barred door of the small cage.

"Good girl, Sascha," he breathed. "Good girl!"

Sascha blinked back through the bars, as though she was glad to be home again.

There was a long moment when the only sound was the sucking in of starved breath. Then the tent thundered with applause. Jeff wanted desperately to sink down onto the sawdust and just sit there and wait for his strength to return. But he stood and forced a smile onto his sweating face, as a rush of humanity, led by Boss Leland, swarmed in on him.

"No one else in the world could have controlled that wounded cat!" Doc Carter said admiringly.

"Nor the crowd."

"Sascha and I got pretty well acquainted," Jeff smiled, "back when she had pneumonia. She remembered. But it took her a little while. She's hurt. I'm going to help her."

"She's your cat if you want, Jeff," Boss Leland beamed. "They're all yours, if you want them. But you got to work them for me. No one else."

Jeff looked up. "You mean that I—"

"I mean that I know a real cat man when I see one. And, come to think of it, I've never known anyone who could work the Ralston Cats like a Ralston. Hey, Jeff, where you going?"

"I've got a wire to send to my dad," Jeff said, grinning happily as he backed through the crowd. "A long wire!"

TIDE END

The Whirlpool

(Continued from page 15)

could smell it, the odor clinging and nasty. It was the smell of potato blossoms and rotting flesh.

Then the first ants came out on the bare sand.

He stared at one of the inch-long things walking toward his chair. With cold sweat breaking on him, he backed away.

Somehow, the animal specimens John had collected sensed their danger for they began to howl and beat at their cages.

His mind misty with fear, Barry debated about them. If he didn't let them go the ants would pause to devour them. That would give him a little more time—and a miracle might happen. But he couldn't do it. He opened the cages. The monkeys took one terrified look at the ants and fled straight up the stone wall. The tapers, peccaries and other small animals plunged into the river, some living to reach the other side, but many being literally eaten alive by the piranha. The birds flew silently away.

When the cages were empty, he turned to face the ants.

The whole base of the triangle was now black with them and they came on, streaming endlessly out of the jungle.

In about ten hours, Barry thought, John will come in the helicopter.

It wouldn't take the ants more than one hour to march down the triangle.

He wondered if, when at last the black mass of them flowed over him, the poison of their stings would make

him unconscious? He hoped so.

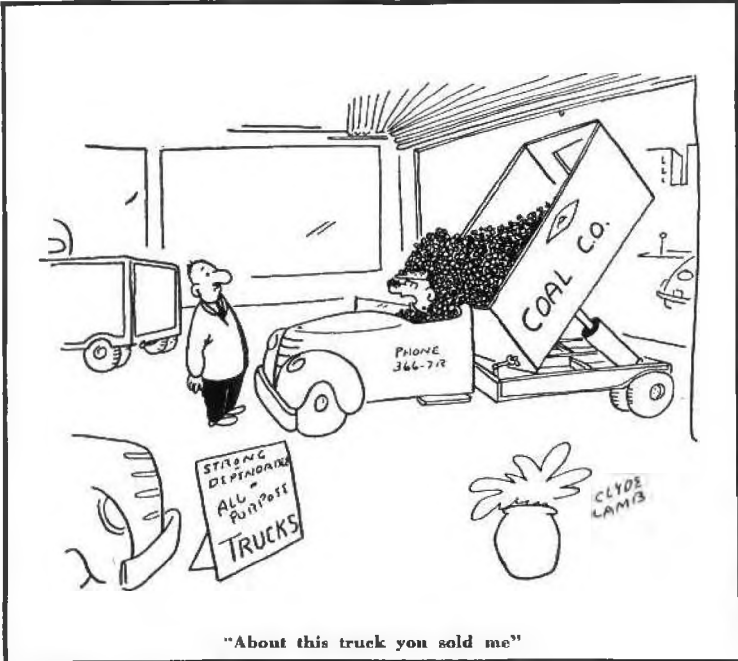
THINKING OF THAT, Barry tried to remember all he knew about ants.

Hymenoptera—in the order with bees and wasps. He knew little about them for he was more interested in lepidoptera—moths and butterflies. But, as he sat there watching death coming, he remembered a chat he'd had with the Professor.

"Barry," the old man had said, "if you want to be famous just find out what makes ants really tick. Even scientists have said that ants behave the way they do because they have some sort of super intelligence." Then he had picked up a little formica ant. "Look at this. Here's a critter who is fifty million years older than Man. If it's so intelligent why is it still practically blind and deaf? If this little nuisance is so smart, why can't you teach it anything? Shucks, you can teach a flea more than you can an ant. Maybe ants aren't as smart as they're cracked up to be. Maybe they're really stupid."

Remembering those words, Barry slowly began to think. He had done some thinking in his life—in school; as a quarterback; in Boy Scout work—but he had never thought the way he did now. It was cold, clean, swift thought, put together with the precision of a fine machine.

First, he examined his horrid, sick fear. As long as he let that run wild in him he would be helpless and the ants or the piranha would soon eat him alive. If he controlled his fear, he



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Answers to YOU TELL ME on page 45

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1. Putting the compass on a solid support lets the needle stop swinging and makes it easier to read. Take twenty points if you checked both answers, ten points if you checked either one.
2. You'd turn to their right.
3. Long distance to the right.
4. The water should stand at least thirty minutes.
5. On grassy ground the Scout should put heels down first.
6. Take twenty points if you checked the last two answers, ten if either one. You DO NOT break the blister.
7. It's safer.
8. On the leaning side.

might be able to find an escape. He controlled it and forced his mind to attack the problem.

TIME WAS THE KEY. Time. If he could stall, or even slow, the march of the ants for ten hours, John would save him.

His mind raced through all he knew and had observed about army ants and ended with only one real fact: the entire mass of ants moved forward in an almost straight line, regardless of obstacles.

Why? Did they know where they were going?

Barry decided to find the answer to that question. He wheeled himself close to the ants, his stomach revolting at the odor rising from them. Then, holding the muzzle of the gun down in the seething front, he let a dozen or so climb up it before wheeling away again.

He picked the ants off the gun and dropped them on the ground. Then, his face intent and drawn with pain, he leaned over and watched them. If, he reasoned, these ants all began to march again in a straight line, then they knew where they were going. And he was lost.

But the ants milled aimlessly around, often bumping into each other.

Part of Barry's mind cheered, the other part, which promised to make him a great scientist, filed away another fact: not one single ant had any idea where it was going.

But, the great, seething mass of them did. Barry thought of a snowball rolling downhill. No individual flake of snow would move by itself, only the mass and speed of the ball moved them.

TIME WAS DRAINING swiftly away, the ants marching fast now. Barry fought back his fear of them and went on experimenting with his little group. With the muzzle of the gun he forced one of the ants to walk in a straight line. Each one of them, by some process he couldn't discover, soon found the trail and followed it to its end before wandering off again.

His dread was like a fog, always trying to close over his mind like walls rolling together. Even as he watched the ants plodding along, his vision got misty as he let himself think of them swarming over his body.

What would happen, he asked himself, if there wasn't any end to the trail they were following?

He could feel his mind fighting its way back to tackle that question. Excitement began to build up in him, his hands tensing on the wheels of his chair.

No end to the trail? Carefully and gently he forced one ant to walk in a complete, foot-wide circle.

Then, as he sat waiting to see what would happen, there was nothing else

in the world for him except his little group of ants. His whole mind concentrated on them, forgetting the army of them, and the pitañha in the river, forgetting his pain and fear and loneliness. He was a pure scientist watching a laboratory experiment.

As one ant approached the invisible circle made by the first one, Barry held his breath, his fingers hard on the wheel rims. As the ant slowly began to move along the trail, he still did not breathe nor move.

The ant went all the way around the circle.

Barry, his whisper an agony, said, "Now! Now!"

The ant kept on, its antennae flicking along the bare ground.

It went around the circle again!

One after the other, the ants found the endless trail and went around it slowly, one behind the other, around and around.

BARRY SLOWLY let his breath out and dropped back, looking up at the high, clear sky. As though talking to the Professor, he said, "You see, they're following an endless trail. They cannot think, nor reason. They're following one another either by scent or by some tiny vibration. And—if nothing breaks that circle—they should go on, around and around, until—they die."

He looked down at the circling ants. Slowly, he said, aloud, "If a dozen ants are stupid enough to walk an endless trail, so are a hundred, a thousand, a million!"

His mind became strangely calm, clear and ice cold. He had a weapon now. Whether it was great enough, he did not know, but he was ready now to pit his mind against the quivering mass of ants.

He knew very well that if he lost he would die.

The ants were approaching him with the front of the army in a huge U shape. One leg of the U streamed along beside the bluff, the other along the bank of the river.

It was, indeed, a formidable army which seemed to be directed by a master mind—an intelligence great enough to guide this myriad of insects so that they could trap and devour him.

But Barry Benton was staking his life on his belief that this was not true. He was staking his life on his belief that their line of march was determined, not by intelligence, but by one blind ant following another, multiplied a hundred thousand times.

Barry wheeled his chair toward the column of ants coming along the river. As he came close, so that the horrid reek of the ants flowed around him, and he could hear the dry rustling of their bodies, his dread and fear of them swept over him again. The enormous risk he was about to take almost overwhelmed him, so that he stopped turning the wheels of the chair for

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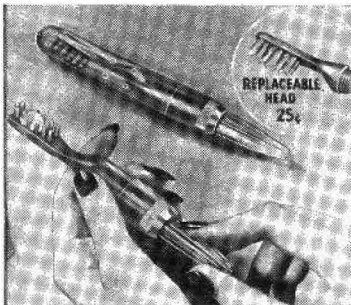


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You can carve these easy to make totem poles that come in kit form. They're made of soft whittling pine and come in triangular lengths ready printed. So all you beginners have to do is follow the lines.

The Thunderbird-Bear Kit (left) includes the printed block and wing piece, base, nails, instructions and coloring chart. The Kingfisher-Wolf Kit also comes complete. Each kit retails at 50 cents postpaid. A 32 page crafts catalog is offered for 20 cents. The manufacturer is Magnus Brush & Craft Materials, Dept. T., 108 Franklin St., New York 13, N. Y.



All you do is twist the handle of the Tuth-Pak and the toothpaste squirts out automatically between the bristles. A transparent head fits snugly over the brush section. The unit retails at \$1.00 postpaid, and comes in red, blue, green or amber. The manufacturer is Tuth-Pak Co., 717 No. La Cienega, Los Angeles 46, Calif. Dept. CH-2.

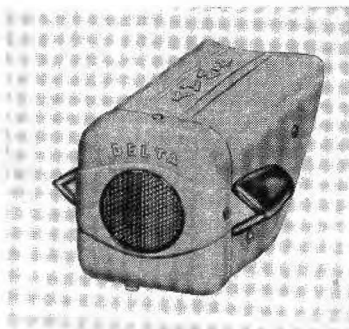
FOR YOU GUYS who are on the lookout for new camping gimmicks, birthday presents for your brother or pals, and mother's and father's day gifts, here's a column that may give you an idea when you really need one.

Most of the items you'll read about will be new. Others won't be new, but will have appeared on the market only in limited areas. Boys' Life will bring them to you by showing you what they look like, how much they cost and where you can get them.



With the Magnus Horn Harmonica you can sound like a whole band—at least that's what the manufacturer says.

By opening and closing your hand rapidly over the bell of this amplifying horn (see photo above) you can imitate different musical instruments and still sound like a harmonica player. The horn has ten tone holes that enable you to reach two and a half octaves. The Magnus Horn is made of Bakelite plastic, comes in red, blue or green, and retails at 89 cents. The manufacturer of this harmonica with instrument variations is Magnus Harmonica Corp., 439 Frelinghuysen Ave., Newark 5, N. J.



The Delta 4-Way bicycle light (see photo above) is mounted on your rear fender and works this way.

By using the switch on your handlebar you can light the red plastic arrow signals for either a left or right turn. The tail light unit works three ways. It's a normal reflector. It shines constantly when you turn on a switch. And you increase its brightness automatically when you work your brake.

The unit takes standard flashlight batteries, is made of white baked enamel. Made by the Delta Electric Co., Marion, Indiana, the light retails at about \$4.00. Its dimensions are 5 1/2" long, 3 3/8" wide, and 3 1/2" high.



a moment and just sat, sick with fear, his face gray, his breath choking in his throat.

It took all his strength of will to begin again turning the chain wheels.

AT THE HEAD OF the column he stopped and sat for awhile watching. The ants looked to him like black, boiling oil as they seethed across the bare ground.

With the flat of the gun butt he gently shoved the lead ants of the column around in as wide a circle as he could reach.

Almost immediately the circle was destroyed by the surge of blind ants moving forward.

Panic swept him as he saw ants beginning to climb up his chair.

He brushed them off and forced his mind to think. With only a few ants there was no pressure to break their circle; with thousands there was. Because of this, he must form his circle so that it would drain off the pressure instead of opposing it.

Again with the gun butt, but this time choosing only those ants on the inner edge of the top of the column, he formed another circle.

When a few hundred ants were going slowly around and around, he concentrated on the rest of the column. Those near the circle joined it, any who wandered past, he shoved into it. Some he smashed with the gun butt to make the rest pause.

Many of the ants escaped him, found his chair and crawled up it. Their stings were painful—a slow, eating fire—and they bit into his flesh with their mandibles at the same time, but he was too busy to stop to get rid of them.

Gradually, as he forced more and more ants to join the senseless circle, the circle itself began to help him. It developed a force of its own exactly like the flowing water around a whirlpool, the perimeter of it sucking ants into the slow revolving mass.

THE WHIRLPOOL grew steadily greater as it was endlessly fed by the column pouring into it. But, as it grew, it also became an obstacle in the path of the forward movement of the army. Soon, Barry realized with fear, this pressure would break over the whirlpool and destroy it.

His only chance was to force the entire mass of ants into one tremendous, revolving wheel, one great, endless trail.

Driving himself against pain and exhaustion, he wheeled his chair all the way across the triangle to the head of the column following the bluff.

With his breath dry and raw in his throat, and the pain from his ankles blurring his eyes, his mind was still able to think.

The first whirlpool was going in a clockwise direction. Therefore, he started the next whirlpool going counterclockwise, and as far from the bluff as he could so that there would be room for it to grow.

With both whirlpools now slowly circling and each draining ants out of the central mass, Barry could stop long enough to pick the insects off his body. The poison of their stings was seeping through him and the scientific part of his mind made a note of the fact that the poison had a tendency to paralyze him but did not make him unconscious. If he lost this battle and was overwhelmed his mind would stay perfectly clear until the ants ate down to his vital nerve centers.

Endlessly, pain and fatigue enemies almost as great as the ants, Barry fought them. By forming small whirlpools all along the line, he drained off pressure which always threatened to break his two great pools. His hands raw and bleeding from the wheel rims, he kept on until, as the sun marked noon, the outer edges of the two whirlpools touched.

NOW, HE KNEW, HE could lose. If one whirling mass of ants broke the rhythm of the other, the entire army would begin again its straight march of death.

Tenderly, gently, while hundreds of them crawled on him, paralyzing him with their poison, he meshed the two perimeters, guiding the ants from the smaller pool into the larger.

When, at last, he could see a distinct current running in the shiny mass and knew that soon there would be only one great, black slowly circling mass, he barely had control enough of his hands and arms to wheel himself out of danger.

Sick, numb, with pain a blaze all over his body, he looked at the single whirling mass of ants now stretching from the bluff to the river.

He had done what he had set out to do and yet, as he watched, he realized that, at last, he had lost.

He slumped in the chair and let despair flow over his mind.

He was beaten. And space, not time, had whipped him.

Already the outer rim of the whirlpool was growing ragged, small groups of ants tearing away from it and wandering off. Because—there simply was not enough space between bluff and river for all of the ants to keep on circling.

Barry knew then that no brilliance of mind, no feat of intelligence could overcome that dumb, mechanical matter of space.

Making his mind function once more, he looked at his wrist watch. Two o'clock. According to his calculations, John was just arriving now at Porto Velho. It would take, Barry figured, an hour to see about the professor. And another hour to arrange for the helicopter. He could not hope for rescue until four o'clock.

By three o'clock, he figured, the whirlpool would be gone, the ants would occupy all the space left.

Barry had lost the battle by about one hour.

Slowly, the whirlpool slowed, stumbled. Two columns began to form.

WHEN THE ANTS WERE lapping at the wheels of his chair he wearily rolled back away from them. Then again. And again.

Then the sand under his chair wheels was soft, wet. The river was against his back.

Which way did he want to go—ants or piranha?

The fish, he thought. They were faster, less horrible. He would not have to endure that nasty odor of the ants.

All right, the fish. He swung his chair around and turned the wheels, watching them go slowly down into the black water. He stopped once more and looked back.

The ants were at the edge of the river. As one was pushed into the water, it clung to a piece of sand on the bank. The next one walked down its body, fell in, grabbed the first one and held on. Slowly, each ant clinging to the last one, they began building ten thousand little living bridges across the stream.

Barry rolled his chair deeper into the water, watching the black surface coming up, inch by inch, until his swollen feet felt the cool wash of it.

As soon as I get my body in the water, he thought, I'll try to swim. The piranha may not kill me before I reach the other side. Then, perhaps, I can drag myself away before the ants get across. But—can John ever find me in the jungle?

He gripped the wheel rims with his bloody hands . . .

Then there was a sound like that of a toy noise-maker at a children's party. A clattering, disconnected noise coming down from the sky.

Above him, looking silly as it floated slowly down, was a helicopter.

Barry's mind was too exhausted to feel any emotion at all. Only a remnant of the scientific part was embarrassed by the error in his calculations. John wasn't due for an hour more.

Barry looked at his wrist watch. Two o'clock.

Two o'clock? his mind asked, bewildered.

Then he listened. The watch wasn't running.

John was yelling, "Don't go any deeper! Stay there."

Barry gazed up at the helicopter hanging just above him. He could see John's face and the dark hair of the Brazilian pilot.

"Hold your arms straight up, Barry," John yelled.

It took his last strength to do that, but John's fingers clamped hard around his wrists.

Then, as Barry floated upward from the chair, softly and slowly, he looked down at the black carpet of ants.

Whispering, he said, "Dumb. They're just dumb little insects."

He was still looking down at them as John hauled him on up into the helicopter.

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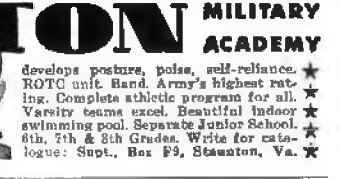
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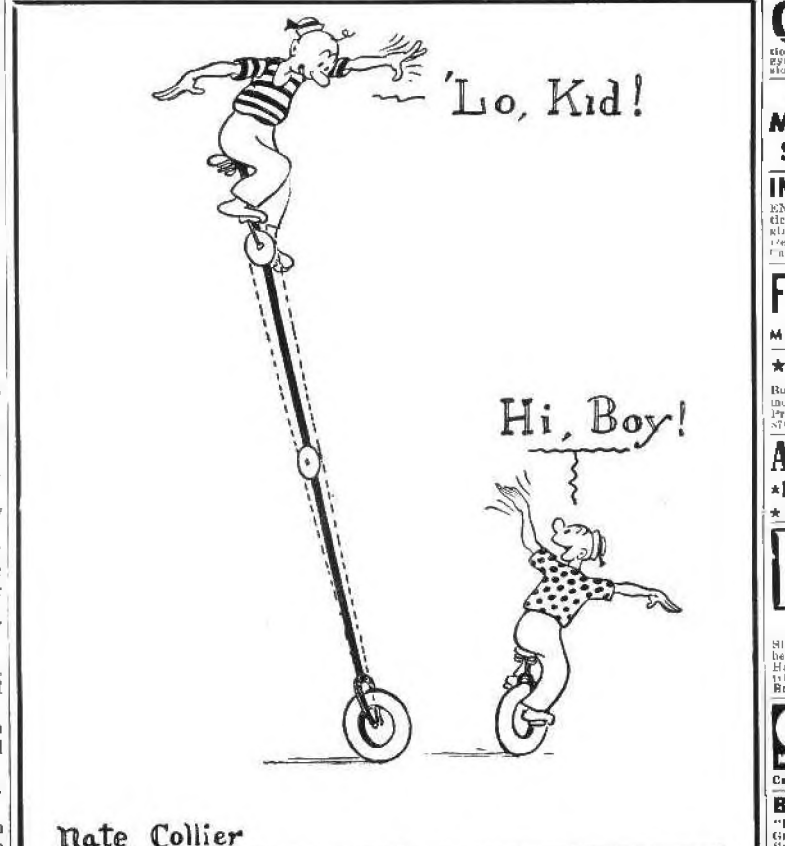
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Nate Collier THE END

Think and Grin



From a home where Boys' Life is read regularly comes the following story. "Recently, Lifebuoy soap has been favored by one of the members of our family. A few days ago our five-year old daughter was sent to wash her hands before dinner, and upon returning was asked whether her hands were properly clean. 'Oh, yes,' she replied, 'I washed them good with Boys' Life soap.'"—George E. Ward, Washington, Ill.

Woman: I'll have a large lamp chop with buttered carrots and peas. And have the chop lean.

Waiter: Yes, madam, which way?—Walter Woerne, Brooklyn, N. Y.

"But, Mrs. Jones," protested a neighbor, "isn't your son rather young to join the Army?"

"Oh, yes, but he's going in the infantry."—Helen Kohls, Kentland, Ind.

"How's business?" a friend asked the scissors grinder. "Fine," he replied. "I've never seen things so dull."—Ronald Amalong, Greenville, Penn.

Bill: Do you believe in clubs for women?

Joe: Yes, if kindness fails.—Fred Perkins, Beverly, Mass.



Clerk: These are especially strong shirts, madam. They simply laugh at the laundry.

Customer: I know. I had some returned from the laundry with their sides split.—William Boehmer, Eden, N. Y.

Bystander: Catching any?

Dick: Caught forty bass and perch here yesterday.

Bystander: Do you know who I am?

Dick: No, sir, can't say that I do.

Bystander: I'm the fish and game warden.

Dick: Do you know who I am?

Bystander: No.

Dick: Well, I'm the biggest liar in Minnesota.—Paul Chell, Kensington, Minn.

Teacher: Name two shooting stars.

Pupil: Roy Rogers and Gene Autry.—John McCormick, Manchester, Iowa

A Scotsman who had worn the same hat for fifteen years decided with heavy heart to buy a new one. Going into the only hat shop in the neighborhood he said, "Well, here I am again."—Kenneth Kubofcek, Johnstown, Pa.

New Boss: Have you any references?
Boy: Yes, here's one letter. It says "To whom it may concern. Tom Jones worked for us for one week and we are satisfied."—Roy Smith, Denver, Colo.



1st: What do they call a sleeping bull?

2nd: I don't know, what?

1st: A Bulldozer.—Edwin S. Hughes, Austin, Texas

Doctor (after bringing his patient around): How is it that you took that poison? Didn't you read the sign on the bottle? It said "POISON."

Patient: Yes. But I didn't believe it.

Doctor: Why not?

Patient: Because right underneath, another sign said "Lyc."—Ronald Huse, Teaneck, N. J.

1st Student: Too bad about the disappearance of Professor Smith. He was such a profound thinker.

2nd Student: Yes, I understand he was always thinking, regardless of where he was. Why, just a few days ago when I last saw him, he was swimming and suddenly called out, "I'm thinking! I'm thinking!"—Ernest Hanna, Washington, Pa.

Customer: This steak is awful. How was it cooked?

Waiter: Why, it was smothered in onions, sir.

Customer: Well, it sure died hard.—Walter Johnson, Dexter, Maine

The city boy was visiting his uncle's farm for the summer. "Oh," he said as some small calves scampered across the meadow, "what cute little cowlets."

"I'm sorry, son," replied the uncle, "but them's bullets."—Tom Gustafson, Bakersfield, Calif.

Aunt: How did Jimmy do on his history test?

Mother: Not too well. But it wasn't his fault. They asked him about things that happened long before he was born.—Edmund Carter, Houston Texas.

Lessing, a famous German writer became quite absent-minded in his old age. After he had arrived home late one night, he discovered he had forgotten his key. He began knocking heavily on the door. Finally his servant stuck his head through a bedroom window, and not recognizing his master who was by now lost in thought, shouted, "Professor Lessing is not in just now."

Still lost in thought, Lessing answered, "Oh that's too bad. Tell him I'll call again tomorrow."—Sidney Gamow, St. Louis, Mo.



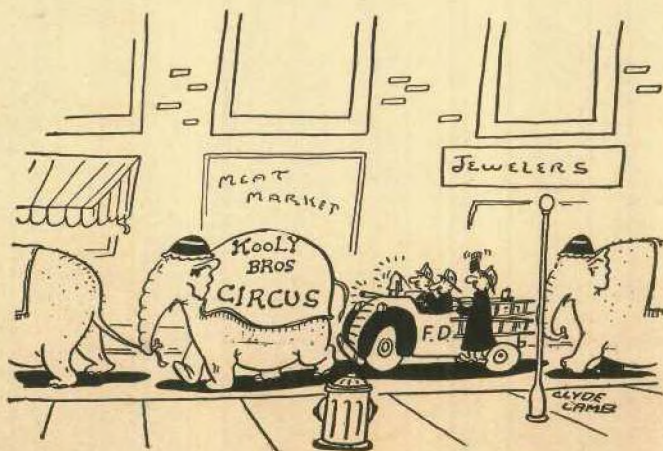
The farmer was trying to sell his old horse. After trotting him around a while, he said to his prospective buyer, "He has a beautiful coat, hasn't he?"

The buyer, noticing how hard the horse was breathing, said, "His coat's all right, but I don't like his pants."—Sidney Schuster, St. Petersburg, Fla.

Teacher: Jimmy, correct this sentence. Girls is naturally prettier than boys.

Jimmy: Girls is artificially prettier than boys.—Romaine Barrett, Hammondsport, N. Y.

MILLICENT



SCOUTS in ACTION

TENDERFOOT SCOUT JOHN WHITEMAN OF TROOP 51, SEDALIA, MO., IS ON A HIKE TO THE MUNICIPAL GOLF COURSE WHERE HE AND HIS THREE COMPANIONS ARE CADDIES...

BY STAN PASHKO
AND JOHN SINK

HURRY UP GANG. LET'S GET THE FIRST FOURSOME THIS MORNING.

I HOPE WE GET A CHANCE TO CADDY ALL DAY.

I'M GOING TO SAVE MY MONEY FOR A NEW SCOUT UNIFORM.



CAN YOU SEE IF THERE'S ANYONE ON THE FIRST TEE, DELBERT?

NOT YET, JOHN, BUT I BET I COULD IF I CLIMB THIS TREE.

UNSUSPECTINGLY, DELBERT PERCHES ON THE SLIPPERY BARK ABOVE SOME DEADLY POWER LINES.



I CAN SEE WAY PAST THE SIXTH HOLE FROM HERE. COME ON UP, YOU GUYS.



HELP!! I'M FALLING!

HE'S HEADED FOR THOSE LIVE WIRES!

HE'LL BE ELECTROCUTED!!



I'M GOING UP TO SEE IF I CAN KNOCK HIM LOOSE. RUN FOR HELP, PAUL!

I'LL GO TO THAT FARM HOUSE NEAR THE ROAD.



I DON'T DARE TRY PULLING HIM LOOSE. THE CURRENT WOULD TRAP ME, TOO. A FLYING BODY BLOCK MIGHT WORK.



BOO! HERE GOES! IT'S THE ONLY CHANCE TO KNOCK HIM LOOSE!



HE'S CLEAR, BUT IT'S A LONG FALL!



ARE YOU HURT, JOHN?

OOF! NEXT TIME I'LL USE A PARACHUTE.



LOOSEN HIS CLOTHING, THEN RUB HIS FEET TO HELP RESTORE CIRCULATION. I'LL GIVE HIM ARTIFICIAL RESPIRATION. HE'S STOPPED BREATHING.

HIS BACK IS BADLY BURNED. PAUL BETTER GET BACK WITH HELP BEFORE IT'S TOO LATE.



THE FARMER ARRIVES QUICKLY WITH A PICK-UP TRUCK TO TAKE DELBERT TO THE HOSPITAL.

WE'LL HAVE HIM AT THE HOSPITAL IN A JIFFY. MY WIFE PHONED DR. BROWN ALREADY.

HE'S BREATHING AGAIN, NOW.

THAT ARTIFICIAL RESPIRATION DID THE TRICK. I'M GOING TO LEARN HOW TO DO THAT.



DELBERT SPENT MONTHS IN THE HOSPITAL, BUT HE WAS ON HAND WHEN HIS FRIEND, JOHN, GOT SCOUTING'S HIGHEST AWARD, THE GOLD HONOR MEDAL FOR LIFE SAVING.

... AND SO, SCOUT JOHN WHITEMAN, I AWARD YOU THE HONOR MEDAL FOR SAVING YOUR FRIEND AT THE RISK OF YOUR OWN LIFE.

THANK YOU, SIR. I JUST DID MY BEST.

I SURE AM GLAD TO BE ABLE TO SEE JOHN GET THAT MEDAL. HE'S A REAL HERO.



Refresh... Add Zest to the Hour

In town, ice-cold Coca-Cola is around the corner from anywhere.

But out where there are no corners, the hero of the party is the one who brings the Coke along—ice cold in the handy picnic cooler.



Ask for it either way...
Trade-marks mean the same thing.