2 Sheets—Sheet 1.

S. McCARTY.
Fireman's Shield.

No. 211,101. Patented Jan. 7, 1879.

Fig. 1

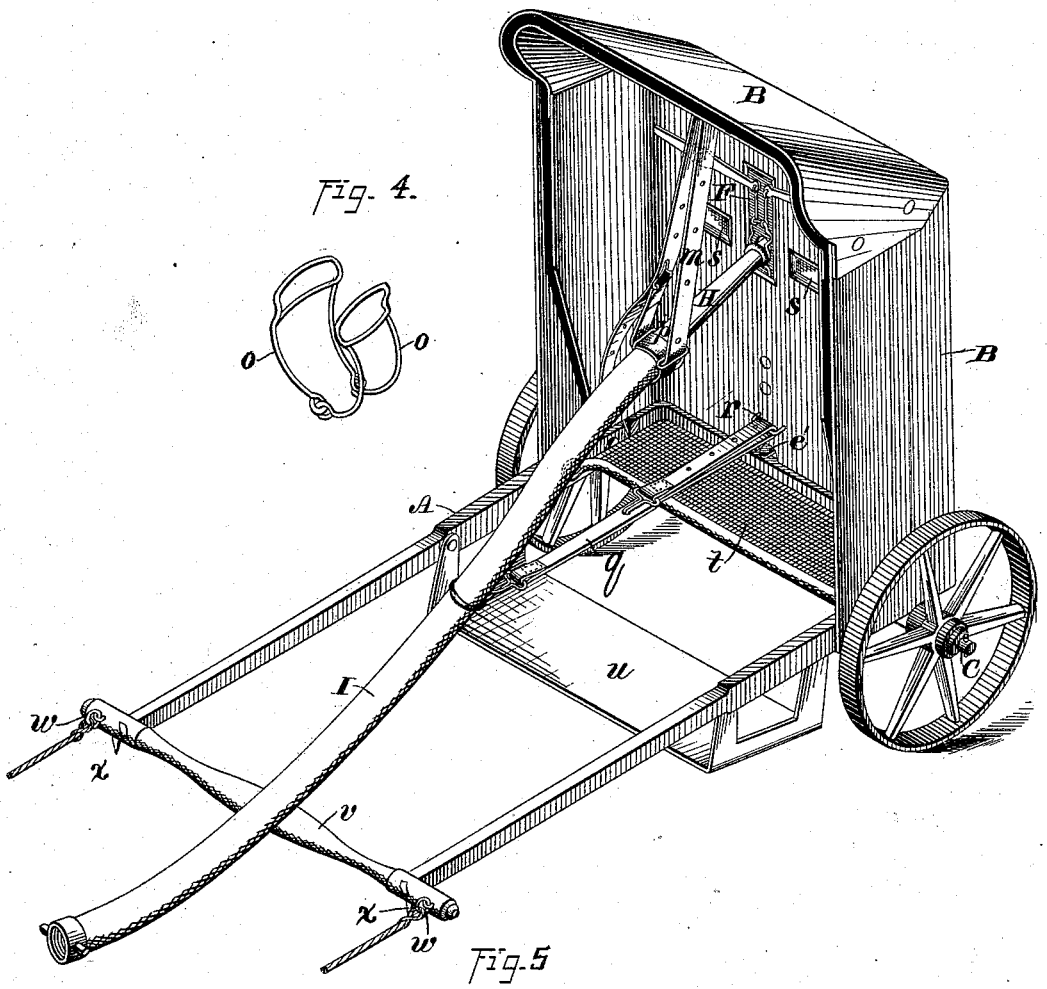
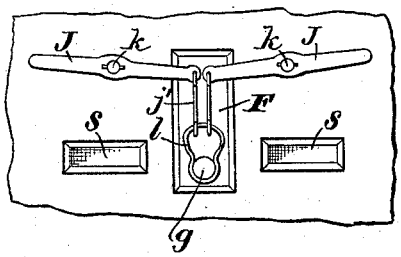


Fig. 4.

Fig. 5



WITNESSES:
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INVENTOR.
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by John J. Halsted
his Atty.

2 Sheets—Sheet 2.

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Fig. 2.

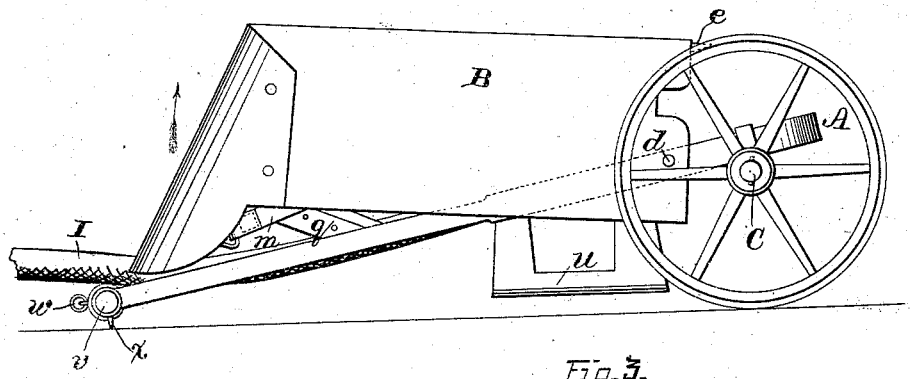
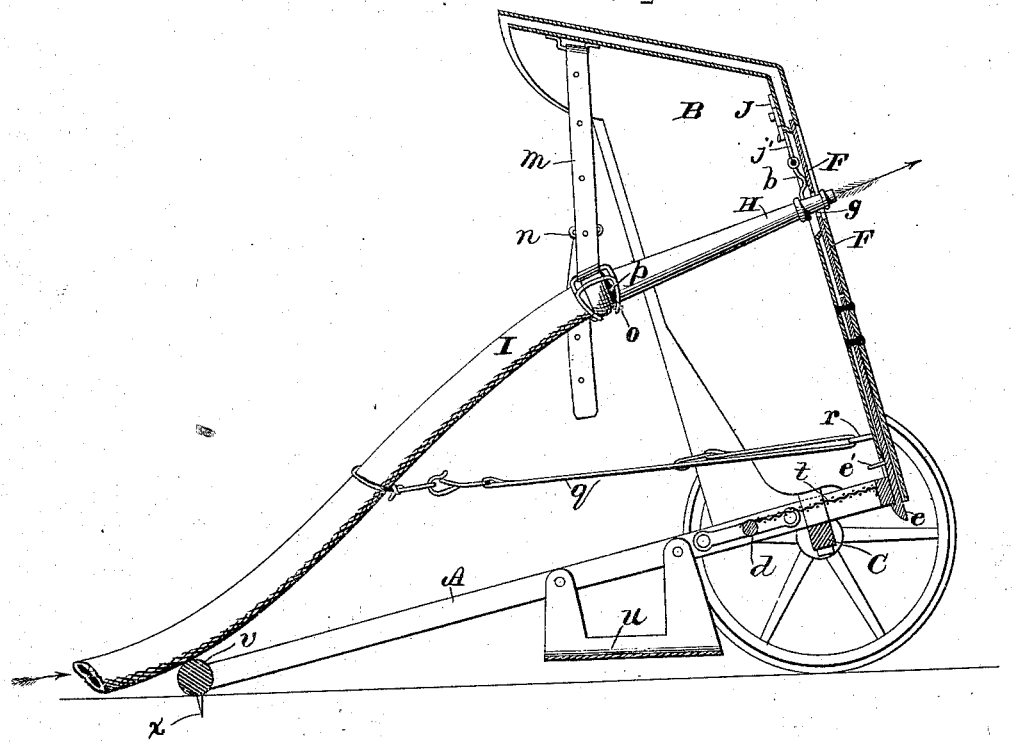


Fig. 3.



WITNESSES:

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UNITED STATES PATENT OFFICE.

SAMUEL McCARTY, OF AURORA, ILLINOIS.

IMPROVEMENT IN FIREMEN'S SHIELDS.

Specification forming part of Letters Patent No. **211,101**, dated January 7, 1879; application filed October 17, 1878.

To all whom it may concern:

Be it known that I, SAMUEL McCARTY, of Aurora, in the county of Kane and State of Illinois, have invented certain new and useful Improvements in Shields for the Protection of Firemen at Fires; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to letters of reference marked thereon, which form a part of this specification.

My invention belongs to that class of shield or guard whose object is to protect firemen in the discharge of their duties, and to enable them with safety and comfort to approach quite near a burning house or property, and, while behind the shield or guard, to manage and direct the hose-nozzle and to see through such protecting shield.

My improvements consist, mainly, in the manner of attaching the shield to the carriage, and whereby it may be raised and locked to place for use, or turned down out of use; in special devices for raising and lowering a slide which supports the tip of the nozzle; in a special arrangement of adjusting-straps, serving not only to support the nozzle and hose and relieve the fireman, but also to prevent the nozzle being pulled away from the port-hole in the shield, and at the same time permitting a free and easy manipulation of the nozzle; in combining therewith a seat of wire-netting or other open work of reticulated material to permit the ready escape of water through it; and in other details, hereinafter stated.

In the drawings, Figure 1 is a perspective view, Fig. 2 an elevation with the shield down, Fig. 3 a vertical section, of an apparatus embodying my invention; and the remaining figures are detail views of separate parts, enlarged.

A is a carriage-frame, and which may be supported either on two wheels, as shown, or upon four. B is a metallic shield, which at its lower part may be pivoted or centered either upon the frame or upon the axle C. In the drawings I have shown it as arranged to turn on centers *d*, and which admit of its being either turned down to a nearly horizontal position, when out of use, or of being turned up to a vertical position and locked to place automatically by a spring-catch, *e;* and this catch, by means of its projection *e'*, may be operated from the inside of the shield.

The shield is made double-walled, as shown, and the space between these walls may, if desired, be filled with any suitable non-conducting material; but I would state that I make no claim, broadly, to double walls, nor to an interposed non-conductor between such walls. The shield is provided with a vertically-adjustable slide, F, adapted to rise and fall in the space between the inner and outer walls, and in such slide is the port-hole *g* to receive the end of the nozzle H, and which I preferably attach to a short piece or section, I, of hose, so that it may always be in readiness in connection with the apparatus; and such section may then be readily coupled with the main hose in the usual manner of coupling, and without useless delay.

To raise or lower the slide, in order to raise or lower the mouth of the nozzle, as may be needed, I connect it by appropriate rods, links J', or chains to hand-levers J J, hung, respectively, on pivots or centers *k k* on the inside of the shield. The slide is also furnished with a curved rod or wire, *l*, projecting inward from the slide, and adapted by its size and shape to receive the tip of the nozzle and to support it at a point somewhat to the rear of the port-hole and of the extreme end of the nozzle, and which thus forms a bearing upon which the nozzle may be turned or manipulated by the fireman as if upon a universal joint, so as to permit him to direct the stream of water to any point desired, the port-hole being made large enough relatively to the nozzle-mouth to permit this movement.

To avoid taxing the strength of the fireman too much, I relieve him from constantly upholding the nozzle, and also a considerable weight of hose, by providing a strap, *m*, suspended from the roof of the shield, and which, by means of holes in the strap and a buckle or a hook, *n*, allows of raising and sustaining the nozzle at any desired elevation. To this strap I apply a pair of stirrups, slides, or loops, *o o*, which are linked together by a joint, and

these span the nozzle toward its rear or larger diameter. These loops should preferably support the nozzle at the rear of its annular rib or swell *p*, and as the weight of the hose and nozzle tends to tighten the gripe of the loops upon the nozzle, the result is that the strap exerts a constant tendency to pull the nozzle forward and keep it to its place in the port-hole.

Another flexible strap, *q*, also adjustable as to its operative length, connects to an eye or loop, *r*, near the bottom of the shield, and it is also connected at any desired part of the hose, near the nozzle, by a cord, strap, or other device; and this strap being properly adjusted, it also serves to prevent the hose being pulled back out of its place in the shield—a contingency to which it would be constantly subjected at a fire unless provided against—and which would largely impair the usefulness of any fireman's shield, as the stream of water would not reach the fire, but be wasted and discharged within instead of through the shield, and upon the person and clothing of the fireman.

The peep-holes or windows *s s*, which enable the fireman to see the fire, I close with mica or toughened glass, or any equivalent translucent material which will stand the heat, and such material may be put in with an air-space between two pieces.

Instead of supporting the tip of the nozzle within the port-hole by the devices shown, it may be secured by means of a swivel, or by any appropriate adjustable clamp or fixture.

The seat *t* is preferably made of wire-netting or equivalent material, which will afford an escape for any water that may drip from the nozzle.

The step *u* is intended for the fireman to stand upon while on duty at a fire, or to rest his feet upon while sitting upon the seat *t*, while going to or from the fire, and it is placed at such an elevation as to afford him a dry standing-place, and thus away from any mud, water, snow, cinders, &c., that may be upon the ground.

The handle *v*, by which the machine may be drawn or pushed, is provided with rings *w w*, to which ropes may be attached, and upon its under side are spikes or spurs *x x*, which are intended to rest upon or in the ground and keep the shield steady when in use at a fire.

The machine may be drawn by itself, or behind a hose-cart or other vehicle.

The shield B may be constructed and applied so as to stand at any desired angle relatively to its frame, instead of at right angles, when in position for use.

The carriage may be made with or without springs, as preferred, and the machine may be made mainly of metal or not, as desired; and the shield may be adjustable or not upon the frame, or upon the axle, or upon the axles in case two axles be used with the carriage.

It will now be evident that, while the machine may be pushed close up to a fire and safely protect the fireman or firemen within it from the heat and from falling fire-brands or water, bricks, cinders, &c., yet the construction allows him to manipulate the hose with great facility, and with no needless expenditure and waste of strength, as the weight of the hose and nozzle is sustained by the straps, and they do not need to be continually pulled up by him to place, as well as upheld by main strength. He can thus perform duty twice as long and with greater efficiency than by any apparatus known to me; and when the nozzle is adjusted to throw a stream at a given point for any considerable time, or even for a few moments, he is perfectly free to sit down and rest until the direction of the stream is to be changed.

I claim—

1. In a wheeled fireman's shield, the combination, with the carriage, of a protecting wall or shield pivoted or jointed thereon, substantially as described, whereby it may be elevated and locked to its upright position, or turned down when out of use.

2. The combination, with a shield, B, of the vertically-adjustable slide F, provided with the port-hole and with mechanism for raising and lowering such slide, substantially as shown and described.

3. In combination, the protecting shield-strap *m*, with its hose-supporting loops and a bent rod or wire, *l*, substantially as shown and described.

4. The adjusting-straps *m* and *q*, in combination with the shield and with each other, as shown, and for the purposes described.

5. The carriage-frame provided with the open-mesh or wire-gauze seat and with the broad platform *u*, so applied to the frame as to be level when the shield is in use, and serving as an elevated standing-place, and also serving as a foot-rest when the fireman is seated.

SAMUEL McCARTY.

Witnesses:

SIMON W. THATCHER,

IRA H. FITCH.