(No Model.)

B. TEIPEL.

ARM FOR TARGET THROWING TRAPS.

No. 305,116. Patented Sept. 16, 1884.

Fig. 1.

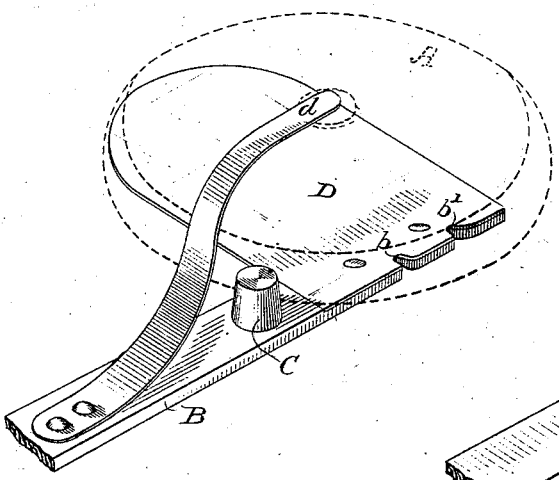


Fig. 2.

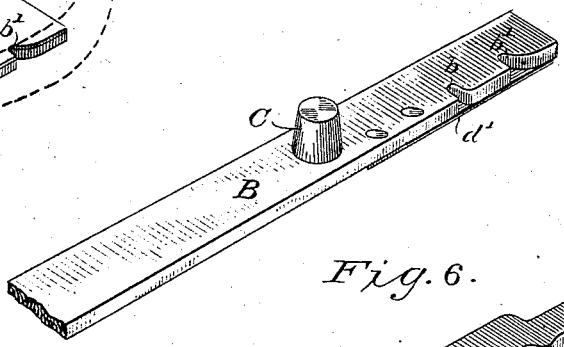


Fig. 6.

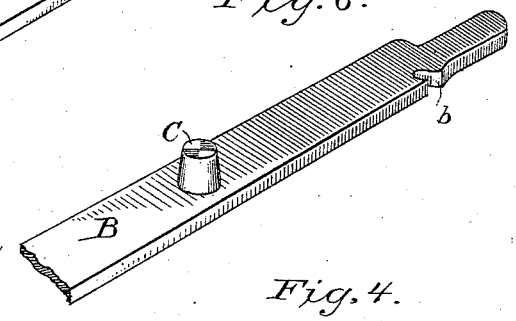


Fig. 3.

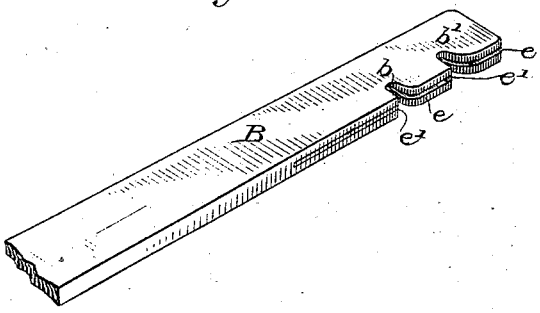


Fig. 4.

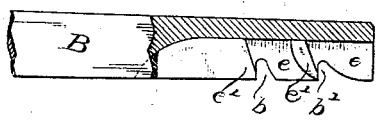
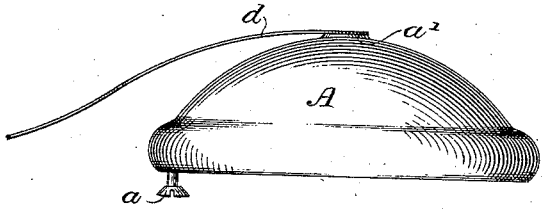


Fig. 5.



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UNITED STATES PATENT OFFICE.

BENJAMIN TEIPEL, OF COVINGTON, KENTUCKY.

ARM FOR TARGET-THROWING TRAPS.

SPECIFICATION forming part of Letters Patent No. 305,116, dated September 16, 1884.

Application filed May 10, 1884. (No model.)

To all whom it may concern:

Be it known that I, BENJAMIN TEIPEL, of Covington, in the county of Kenton and State of Kentucky, have invented certain new and useful Improvements in Traps for Throwing Flying Targets, of which the following is a specification.

My invention concerns more particularly the throwing-arm, and is especially applicable to such traps as those manufactured, used, and sold by the Ligowsky Clay Pigeon Company, of Cincinnati, Ohio, and to similar traps where the throwing-arm is given a radial sweep in a horizontal or inclined plane.

In the drawings, Figures 1, 2, 3, and 6 represent target-levers or throwing-arms embodying my invention under varying conditions. Fig. 4 is a plan, partly in section, of the end of the arm shown in the preceding numbered figure; and Fig. 5 shows in perspective a flying target designed for use in connection with the first-indicated form of said invention, and to which reference will be made in explaining the principle and mode of operation of said forms.

In throwing flying targets or pigeons heretofore the main difficulty has always been found to consist in the method of attachment to and disengagement from the lever-arm. This has been most successfully accomplished hitherto by means of a tongue attached to and projecting outwardly from the periphery of the pigeon, which tongue was grasped forcibly by a clamp upon the trap-lever, and when thrown was dragged or prized out from said grasp, thus detracting from the effective impulse imparted to the pigeon, and also by its lateral projection affording an obstacle to the whirling movement. In my present invention I dispense with the clamp, which has heretofore constituted the sole means of connecting the pigeon to the trap, and has therefore necessarily held its tongue in a very firm and forcible grasp, and provide means whereby the pigeon is lightly but securely held, and is ejected from the throwing-arm without any appreciable wrench. Collaterally to said invention, I have introduced certain changes and improvements into the pigeon, as more fully described in an application for Letters Patent therefor, filed by me concurrently herewith, but for convenience of illustration herein may be briefly explained by reference to Fig. 5 as consisting of a dished shell, A, of any of the ordinary forms, provided at a single point at or near its circumference with a pivot-pin, *a*, depending beneath it, instead of with the radial tongue heretofore used.

Referring now to the present improvement, and more particularly to the form shown in Fig. 1, B represents the throwing arm or lever, which is attached to the trap and operated in the usual way, and is of ordinary construction, with the exceptions hereinafter pointed out. Notches *b b'* are cut in the forward edge of the arm near its end, or in a plate attached thereto, one or the other of which notches receives the pivot-pin of the target.

C is a stop or projection set on the upper surface of the arm, between its axis and the notches, as a guide, and against which the target or pigeon, when placed in position, comes in peripheral contact; and D is a plate projecting rearwardly from the arm in the plane of its sweep, and of sufficient extent to afford a supporting-surface to the pigeon. The notches *b b'* are cut in the side of the arm facing that direction in which the arm is swung by the spring. It will be seen that the sides of the two notches vary somewhat in angle from the line of the direction of the lever-arm, which is also the line of projection of the target. The notch nearest the end of the arm, which is used when the spring is set with less force, is found to throw the target or pigeon with greater accuracy when the sides form an angle of, say, more than one hundred and fifty degrees than when the angle is more acute. Most accurate throwing from the second notch, which is used when the spring is set with its greatest force, is attained when the sides are at a somewhat less obtuse angle—say one hundred and thirty-five degrees. The number of notches is material only so far as nicety of action and perfect control are concerned, and therefore they may range from one to a series.

The stop or projection upon the arm affords a convenient guide for enabling an attendant readily and accurately to place a target in the right position to be thrown, and prevents the

pigeon from leaving that position, and holds it in such relation to the notch that it is given an axial whirl or rotation by the movement of the arm. This relation, it will be observed, varies according to the distance of the notch employed from said shoulder, and consequently the effect on the target varies; therefore, as the converse of employing a series of notches, this stop may be made adjustable with respect to a single notch.

When using the just-described form, a light leaf or wire-spring keeper, *d*, may be bent up from a seat upon the throwing-arm to come over the center of the supporting-plate D and rest with slight pressure upon a boss, *a'*, rising from the crown of the target in its axial line, so as just to prevent this target slipping under certain angular adjustments of the arm, and without coming in frictional contact with any part of the body of said target as the boss passes out from beneath in the throwing action. In the second form, or that shown in Fig. 2, the supporting-plate is omitted, but the notches and stop are retained. The end of the arm where the notches are cut will be flat and of regular thickness—say about the eighth of an inch—and will be snugly but not tightly embraced by two buttons or disks upon the pivot-pin of the target, which will serve to keep the latter supported in the plane in which the arm is adjusted to sweep.

As additional security against slipping, a spring-keeper, *d'*, like that mentioned above, may be arranged upon the under side of the arm to press upon the lower disk or button of the pivot with just sufficient force to prevent accidental slipping of the target.

The third construction (shown in Figs. 3 and 4) is similar to both of the foregoing in the employment of notches; but both the supporting-plate and projecting stop are omitted, and instead the outer end of the arm is made of sufficient thickness to permit its forward edge to be longitudinally channeled, as at *e*, transversely to the notches, and behind each notch this channel is closed to form a shoulder or stop, *e'*, against which the inwardly-bent end of the pivot-pin on the target comes, dispensing with the stop upon the upper side of the arm used in the other described combinations. By lengthening the throwing-arm beyond the further notch, as in Fig. 6, so that the outer edge of the target may rest upon the extended portion, the target will, when its headed pivot-pin has been inserted in one of the notches and its inner edge or periphery brought against the gage-stop, be supported sufficiently well to allow of the spring-keeper and carrying-plate being both omitted. This form is the simplest and cheapest of those enumerated.

I do not limit myself to the use of the notched arm with the specified auxiliary means, considering that various other devices than those named may be employed to support the pigeon or target in relation to the notch or notches, and obtain the advantage of the free throw afforded by this feature of my invention.

In operation the target should be placed upon the trap-lever in such position or under such adjustment of the parts that when resting against the stop a diameter drawn through the body from the pivot-pin will form a salient angle with the arm, greater or less according to the notch used, or else will rest against the stop somewhere along its first inner quarter from said pivot, so that when the lever is released by the trip-latch of said trap and in its throwing movement reaches the point where it is checked in its sweep it may tend to impart to said target as it delivers it the axial rotation or whirl which has been found so essential to swift, unwavering, and long flight.

I claim—

1. As an improvement in target-traps, a throwing arm or lever having a notch or notches cut therein in the forward edge, at its free or outer end, to receive a depending pin from the target, substantially as described.

2. The combination, in a target-trap, of a throwing arm or lever having a notch or notches in its forward outer edge to receive a depending pin from the target, and a spring-keeper arranged to exert slight pressure to prevent the target from slipping, substantially as set forth.

3. The combination, in a target-trap, of a lever-arm having a notch in its forward edge to receive a pivot-pin from the target, and a stop upon said arm, against which the periphery of said target is set.

4. The combination, in a target-trap, of a lever-arm, a series of notches formed in the forward edge of said arm, into any one of which a pivot-pin from the target may take, and a stop upon the arm between its axis and said series of notches, against which the periphery of the target is set.

5. The combination, in a target-trap, of a lever-arm having a notch or notches in its forward edge, and a supporting-plate extending back from the rear edge of said arm in the plane of its sweep, as and for the purpose described.

6. The combination, in a target-trap, of the notched throwing arm or lever, the rearwardly-extending supporting-plate, and the stop or shoulder, substantially as set forth.

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