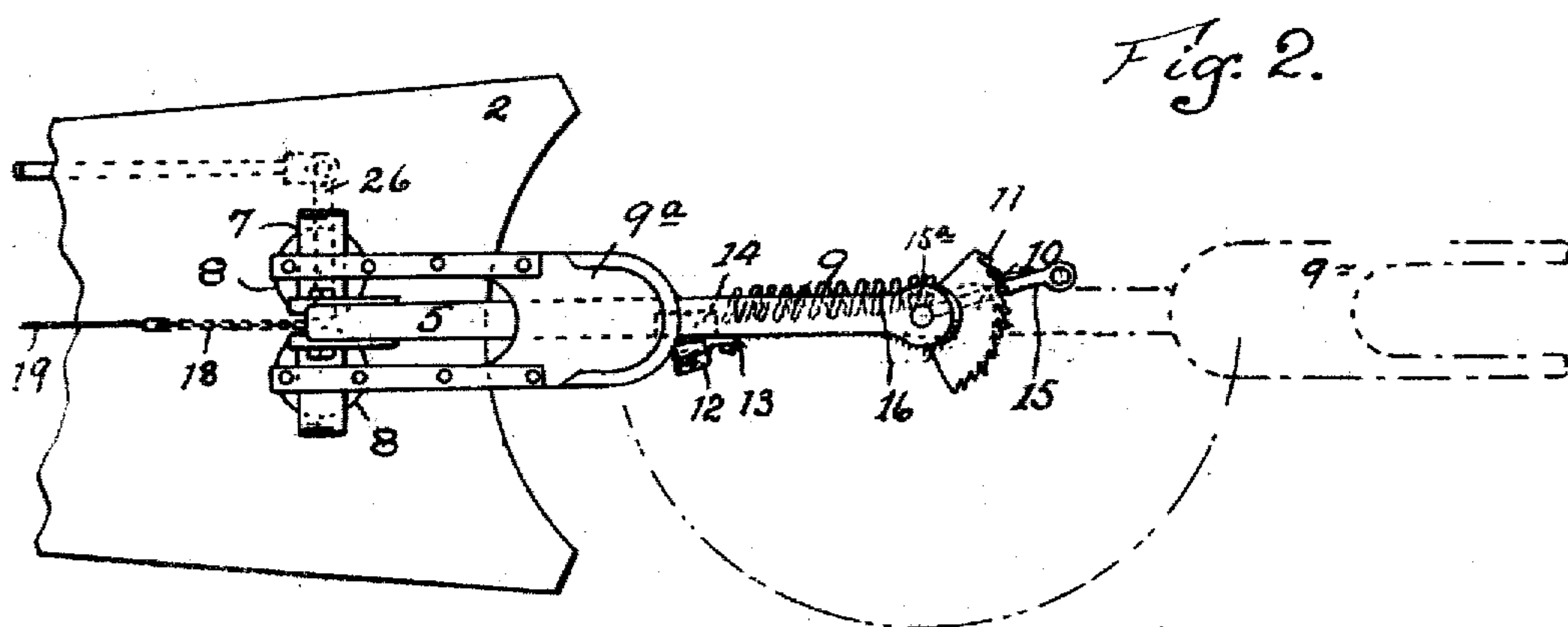
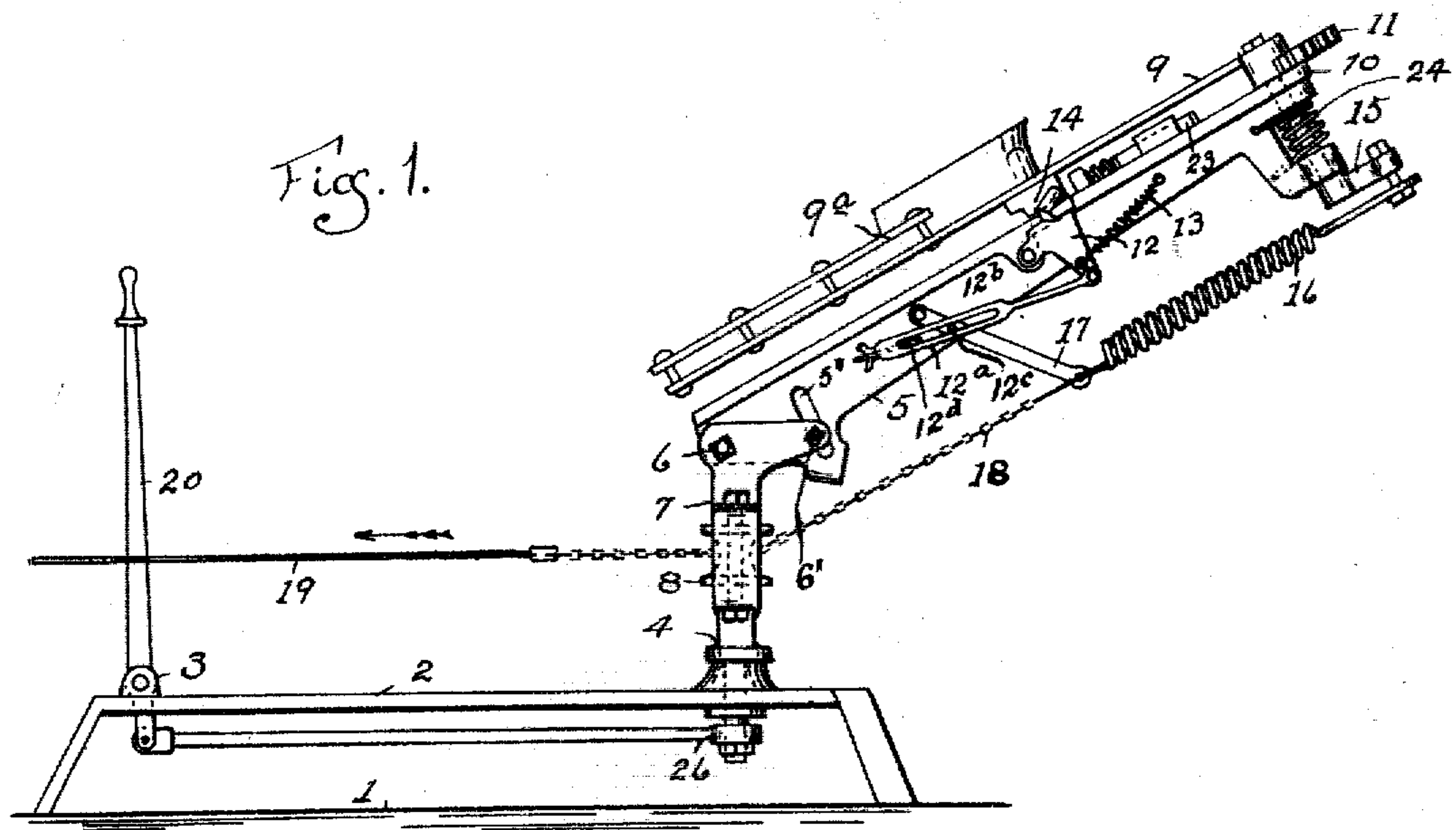


No. 827,413.

PATENTED JULY 31, 1906.

W. S. BOWERS.
TARGET TRAP.

APPLICATION FILED OCT. 31, 1905.



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TARGET-TRAP.

No. 827,413

Specification of Letters Patent.

Patented July 31, 1906.

Application filed October 31, 1905. Serial No. 285,238.

To all whom it may concern:

Be it known that I, WILSON S. BOWERS, a citizen of the United States, residing at Blandon, in the county of Berks and State of Pennsylvania, have invented new and useful Improvements in Target-Traps, of which the following is a specification.

This invention relates to improvements in target-traps; and the object of my device is to produce a trap of comparatively simple construction, one that will be positive in action, one that will set itself automatically, and in which a plurality of targets may be thrown with the same ease as a single target.

The invention consists of novel features of construction, which will be fully described in the following specification and clearly illustrated in the accompanying drawings, in which—

Figure 1 shows a side elevation of my trap closed and ready to be sprung. Fig. 2 shows a plan view of the same, showing in dotted lines the position assumed when at its full open position.

The numeral 1 designates any suitable foundation.

2 is the base of the machine and has a lug 3 joined thereon, in which the regulating or adjusting lever is pivoted.

4 designates an upright pivotally mounted on the base and capable of pivotal or oscillatory movement. This upright carries the entire operating mechanism, including the main arm 5, which is pivoted at 6 to the head-piece 7, said arm being provided with a slot 5', engaged by a clamping-bolt 6', that passes transversely through the head-piece and serves to secure the arm in position adjustably with relation to the head-piece. This head-piece has a pair of guide-pulleys 8 mounted thereon. This arm 5 has a supplemental arm 9 pivoted thereto at its outer extremity 10, and this arm 9 is formed with the target-carrier 9^a at one end and a ratchet 11 at the other end. The arm 5 has also a trigger device 12 secured thereto, held in position by a coiled spring 13, which trigger device engages the lug or lip 14 on the under side of the supplemental arm 9 and keeps it in position. The arm 9 has also a pivotal shaft 15^a, provided with a crank-arm 15, capable of rotary motion, secured pivotally at its outer end, and this arm is connected to a coiled spring 16. The other or inner end of the spring is secured to a bar 17, which bar is pivotally connected to the main arm 5 in an

adjustable manner. This bar 17 is adjustably connected to the trigger device 12 by means of a link 12^a and is operated simultaneously therewith, said link having a slot 12^b, wherein moves a pin or stud 12^c, connected with the bar 17. Said link also has at its free end a set-screw 12^b, forming an adjustable abutment or contact member for the pin or stud 12^c, the position of said set-screw determining the point at which the link shall be actuated to operate the trigger and release the arm 9 under the impulse of the movable bar 17, having the pin 12^c. The lower or outer end of this bar 17 has connected thereto an operating chain or cord 18, which chain passes between the guide-pulleys in the upright head-piece and is connected to any suitable rod or bar 19, leading to the operator's station. The carrier is formed in a single piece with the supplemental arm above described and is so constructed that either one or two targets may be dropped into it, and when the trap is operated the double target will be thrown as easily and quickly as a single. The rod running through the upright or head-piece depends below the base 2, and to its lower end I have attached a pivotal bar 26, which is connected to the adjusting-lever 20. This lever when thrown forward or backward will set the trap and predetermine the angle at which the target is to be thrown. On the top of the main arm I have arranged a bolt 23, arranged in a housing and adapted to engage the ratchet-teeth on the front end of the carrier-arm when the trap is sprung. I arrange a coiled spring 24 at the front end of the main arm, and this spring is so arranged as to be placed under tension when the shaft 15^a, having the crank 15 and carrying the arm 9, is partly rotated under the impulse of the spring 16 and related parts, as will be presently more fully described. Said spring will thus operate to return the carrier to closed position.

The device is of course easily operated at any angle, as the chain will pass freely between the guide-pulleys on the head-piece no matter at what position the operator stands, and the targets can be thrown at any angle by means of an equally easily operated device. The device operates automatically and permits of adjustment in any manner that may be possibly necessary in a device of this class. The slotted main arm will permit the adjustment vertically, and the pivotal connection to the base will permit any

lateral movement, so that it is clearly seen that any angle at all may be attained. The operation of the device is simple and easy, all friction having been reduced to a minimum, and the construction is as simple as is consistent with the accomplishment of the purposes for which the device is intended.

The operation of the device is as follows: The target is placed in the carrier by merely dropping it into position. By pulling the operating-rod 19 and the chain 18 the pivoted bar 17 will be drawn back and the spring 16 will be extended and placed under tension, exerting stress upon the crank-arm 15, which would be operative to rock the shaft 15^a and to swing the arm 9 partly around but for the presence of the trigger 12, whereby the arm is held against such movement. At a predetermined point, however, which is governed by previous adjustment of the set-screw 12^d, said set-screw or contact member is engaged by the pin 12^c, connected with the bar 17, thus operating the link 12^a and the trigger 12, and thereby releasing the arm 9, which, now swings around under the impulse of the spring 16, thereby discharging the target at an angle which is determined by previous adjustment of the arm 5 and the standard or upright 4. When the arm 9 swings around under the impulse of the spring 16, the spring 24, connected with the pivotal shaft 15^a, is partly wound or placed under tension, and said spring will as soon as stress upon the spring 16 is released be operative to restore the arm 9 to its initial position. The arm 9, however, will not be thus restored until the locking-bolt 23 is disengaged from the ratchet-teeth 11, which it automatically engages when the arm swings around to a target-discharging position. The release of the locking-bolt may be effect-

ed manually or the locking mechanism formed by the bolt and the ratchet-teeth may be dispensed with, if desired. When under the impulse of the spring 24 the carrier is restored to its initial position, the trigger device will automatically engage the lug 14, and the carrier-arm will thus be held in position for a repetition of the operation. It will be seen that the force of the discharge may be governed by adjustment of the set-screw 12^d, the position of which governs the extent to which the spring 16 will be extended or strained previous to the discharge of the trap.

Having thus fully described my invention and its operation, what I claim, and desire to secure by Letters Patent, is—

A target-trap comprising a base, an oscillatory upright, an arm adjustably connected with the upright, a shaft journaled in said arm and having a crank at one end, a carrier-arm at the other end of said shaft, a spring-actuated trigger engaging the carrier-arm, a slotted link connected with the trigger and having an adjustable contact member, a pivoted arm having a contact-pin slidably engaging the slotted link, a spring connecting the pivoted arm with the crank-arm, a suitably-guided flexible pulling member connected with the pivoted arm, and a spring connected with the shaft carrying the crank-arm and adapted to be wound or placed under tension when the shaft is rotated under the impulse of the spring connected with the crank.

In testimony whereof I affix my signature in presence of two subscribing witnesses.

WILSON S. BOWERS.

Witnesses:

J. FRED BOWERS,
G. HENRY HEINLY.