

No. 806,689.

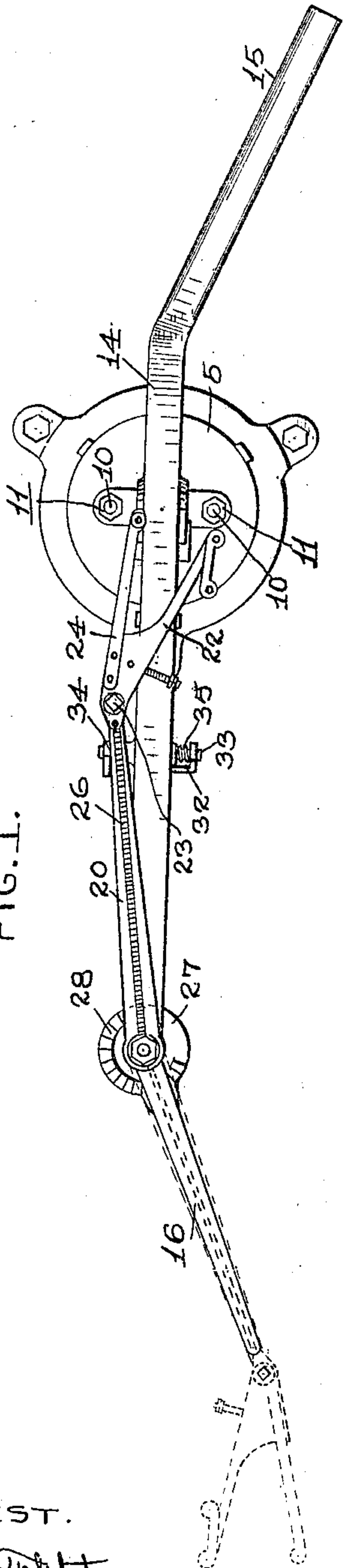
PATENTED DEC. 5, 1905.

T. MASEL.  
TARGET TRAP.

APPLICATION FILED OCT. 8, 1904. RENEWED OCT. 23, 1905.

2 SHEETS—SHEET 1.

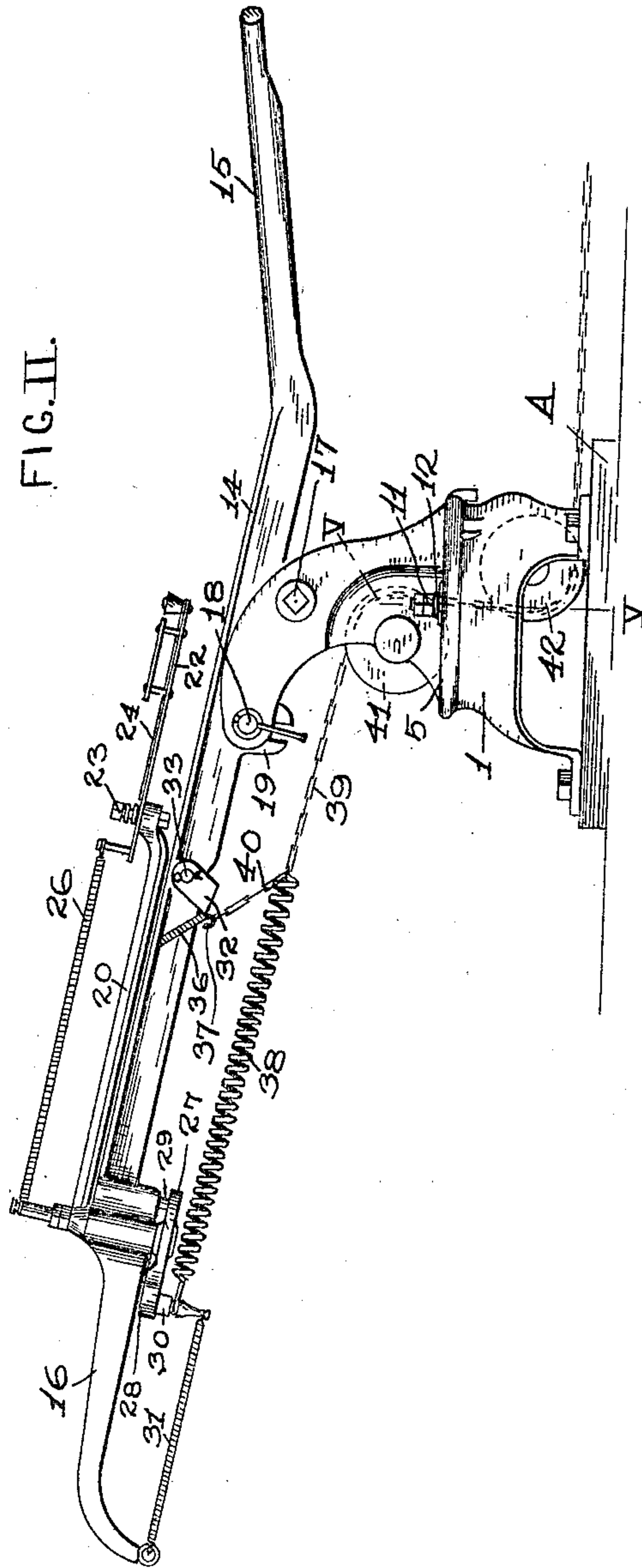
FIG. I.



ATTEST.

H. G. Fletcher.  
E. J. Knight

FIG. II.



INVENTOR.

THEO. MASEL.

BY. Wright Bros

ATTY'S.

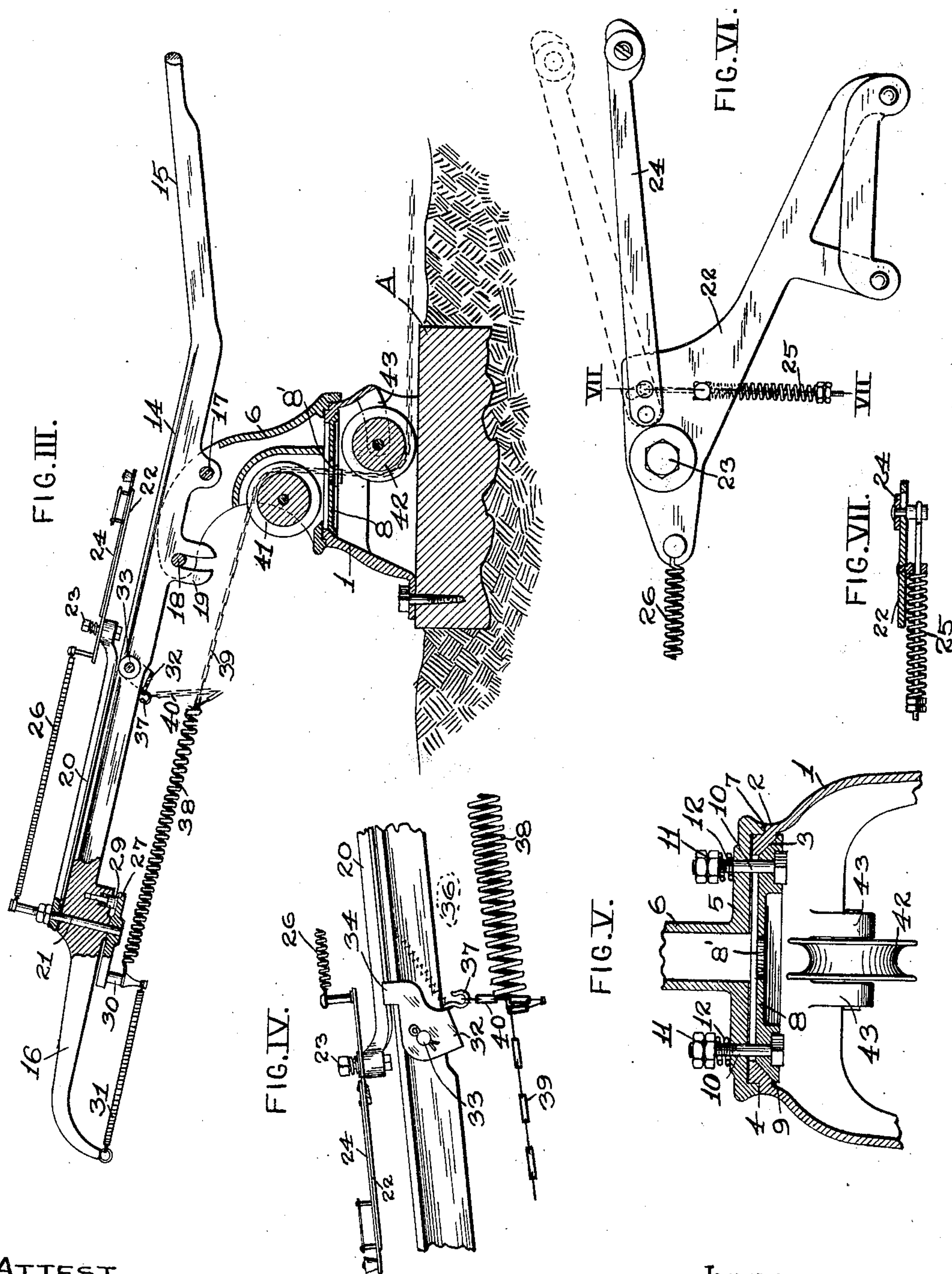
No. 806,689.

PATENTED DEC. 5, 1905.

T. MASEL.  
TARGET TRAP.

APPLICATION FILED OCT. 8, 1904. RENEWED OCT. 23, 1905.

2 SHEETS—SHEET 2.



ATTEST.

H. G. Fletcher.  
E. J. Knight

INVENTOR.

THEO. MASEL.

By Wright 1878

ATTY'S.



# UNITED STATES PATENT OFFICE.

THEODORE MASEL, OF ALTON, ILLINOIS, ASSIGNOR TO HOYT METAL COMPANY, OF ST. LOUIS, MISSOURI, A CORPORATION.

## TARGET-TRAP.

No. 806,689.

Specification of Letters Patent.

Patented Dec. 5, 1905.

Application filed October 8, 1904. Renewed October 23, 1905. Serial No. 284,037.

*To all whom it may concern:*

Be it known that I, THEODORE MASEL, a citizen of the United States, residing at Alton, in the county of Madison and State of Illinois, have invented certain new and useful Improvements in Target-Traps, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, forming part of this specification.

My invention relates to improvements in that class of traps used for throwing disk targets or "clay pigeons," the improvements including a mainspring having in combination therewith a flexible pull member for use in placing said spring under tension and a flexible connection between said spring and pull member leading to the latch that controls the throw-arm of the trap.

The improvements also include a novel construction of turn-table and means for retaining said table in set positions.

The improvements also include a novel construction of latch for the trap throw-arm.

The invention also relates to novel means for overcoming rebound of the throw-arm after a target has been discharged therefrom.

Figure I is a top or plan view of my target-trap. Fig. II is a side elevation of the trap. Fig. III is a vertical longitudinal section of the trap with parts shown in side elevation. Fig. IV is an enlarged side elevation of portions of the trap at the location of the throw-arm latch. Fig. V is an enlarged vertical cross-section taken on line V V, Fig. II. Fig. VI is a top or plan view of the target-carrier. Fig. VII is a cross-section taken on line VII VII, Fig. VI.

1 designates the base of my trap, which is adapted to be secured to a suitable foundation A, on which it is mounted, as seen in Figs. II and III. This base is open at the top, and beneath its top rim 2 is a tapering annular seat 3. At the exterior of the rim 2 is an annular seat 4.

5 designates a turn-table having a tubular neck 6. This turn-table surmounts the base 1 and is provided with an annular depending flange 7, that occupies the exterior seat 4 of said base.

8 is a friction-disk having an annular tapering perimeter 9, that rests against the interior tapering seat of the base-rim 2. (See

Figs. III and V.) This friction-disk is upheld by bolts 10, which pass through the disk and the turn-table 5 and are provided with nuts 11, which confine springs 12, surrounding the bolts.

By the described construction the turn-table 5 is movably held to the base 1 to permit of its being rotated on the base-rim, the frictional engagement of the disk 8 against the interior seat of the base-rim being made sufficient, due to the tightening of the nuts on the bolts 10, to prevent accidental movement of the turn-table, but insufficient to prohibit rotation of the turn-table when force is applied to rotate it. The springs 12 assist in the accomplishment of the results mentioned. In the center of the friction-disk 8 is an aperture 8', that coincides with the opening in the turn-table neck 6.

14 designates a beam that supports the carrier throw-arm of the trap. This beam has at its rear end a handle-arm 15 and at its forward end an arm 16. The beam 14 is pivoted at 17 to the turn-table neck 6, so that it may be oscillated vertically, and the beam is held in a fixed position by a clamp-bolt 18, passing through the turn-table neck, and a fork 19 depending from said beam. Provision is thereby made for vertical adjustment of the throw-arm-supporting beam to vary its inclination in order that the targets discharged from the trap may be thrown in inclinations of varying degrees.

20 designates the throw-arm of the trap, which is carried by a shaft 21, that passes vertically through the beam 14 and projects both beneath said beam and above said throw-arm. The carrier which receives the targets and is fitted to the free end of the throw-arm 20 consists of a main jaw 22, connected to the throw-arm by a pivot-bolt 23, and a movable jaw 24, that is pivoted to the main jaw and controlled by a spring 25. The carrier is yieldingly held to limit the degree of its oscillation on the pivot-bolt 23 by a spring 26, which is connected to the main jaw of the carrier and the upper end of the vertical shaft 21, by which the throw-arm is carried.

No invention *per se* is herein claimed for the target-carrier.

27 designates a disk fixed to the lower end of the vertical shaft 21 and provided at its upper side with teeth 28. (See Fig. I.) The



teeth of this disk are engaged by a spring-bolt 29, seated in the beam 14 adjacent to the disk, as seen in Fig. III.

30 is a stud carried by the toothed disk 27 and positioned eccentric to the axis of said disk, as seen in Figs. II and III. This stud is connected to the outer end of the arm 16 by a light spring 31.

32 designates a latch by which the throw-arm 20 is retained from movement previous to its being thrown, this latch being of U shape and having its arms arranged to straddle the beam 14, to which they are pivotally connected by a bolt 33, passing transversely through said beam. One of the arms of the latch is provided with a finger 34, (see Figs. I and IV,) that is adapted to project upwardly beyond the upper face of the beam 14 to serve as a stop for the throw-arm 20. The latch swings beneath the beam 14, and its length is greater than the width of said beam in order that said latch may partake of longitudinal movement when the throw-arm 20 strikes against the stop-finger 34. To prevent jar under the sudden impact of the throw-arm against said stop-finger, I place on the pivot-bolt 33 of the latch a cushion-spring 35, located at the side of the beam 14 opposite to that at which the stop-finger 34 is located. The stop-finger of the latch 32 is normally upheld above the plane of the beam 14 by a spring 36, that connects said latch to said beam. (See Figs. II and IV.) Depending from the latch 32 at its forward side is a hook 37.

38 designates the mainspring of my trap, the forward end of which is connected to the stud 30 of the toothed disk 27. This mainspring has connected to its rear end a pull-chain 39, the chain being united to the spring at a point remote from its foremost end to provide a terminal series of chain-links 40 beyond the point of connection of the chain to the mainspring. These terminal links are connected to the latch 32 by slipping one of them onto the hook 37 of said latch in a manner to permit of slack being present in said series of terminal links when the mainspring is devoid of tension.

41 is a sheave journaled in the turn-table neck 6, and 42 is a sheave journaled in bracket-arms 43, located interior of the base 1, on which the turn-table 5 rests. The pull-chain 39 passes over the sheave 41 and downwardly through the central opening 8' in the friction-disk 8, thence beneath the sheave 42, from which it extends to any desirable point and to which power is to be applied, either manually or otherwise, to place the mainspring 38 under tension and store power therein, due to the expansion of the spring by drawing upon said pull-chain.

When in the practical use of my trap a target is to be thrown, the throw-arm 20 occupies the position illustrated in full lines, Figs. I to IV, inclusive, and the mainspring 38 is in

relaxed condition. At this time the throw-arm is prevented from swinging in a forward direction, due to the presence of the stop-finger 34 of the latch 32 alongside of the throw-arm. A target having been placed in the throw-arm carrier, the operator who manipulates the pull-chain 39 exerts strain thereupon to expand the mainspring 38, and the pull upon the chain is continued until the slack terminal links 40 of the chain are drawn taut and exert a pull upon the latch 32 to swing the stop-finger 34 downwardly away from the throw-arm. The mainspring being now under tension and the throw-arm released, the spring draws upon the stud 30 and rotates the toothed disk 27, with the result that the throw-arm is swung into the target-discharging position and the target thrown. Immediately upon the throw-arm reaching its discharging position the spring-bolt 29 engages the tooth 28 of the disk 27 nearest to it to prevent rebound of the throw-arm, and as a consequence said arm will remain in its outstretched condition until the mainspring is relaxed by slackening the pull-chain 39. As soon as the mainspring is relaxed the spring 31 acts to exert strain upon the stud 30 of the disk 27 and draw said stud forwardly to its normal position, with the result that the throw-arm is carried around to complete its rotation and again become stationary alongside of the latch-finger 34, which has been elevated, due to the action of the spring 36 on the latch.

I lay particular stress upon the use of a pull-chain instead of any other flexible pull member for the mainspring 38 of my trap, for the reason that a chain may be readily attached to the mainspring at any desired point by slipping one of its links onto the loop at the end of the spring to afford a greater or diminished length of the series of slack terminal links 40, connected to the throw-arm latch, or the amount of slack in the series of terminal links may be altered by connecting any desired link thereof to the latch. It is therefore made possible to readily provide for a considerable expansion of the mainspring before the latch is released, and thereby secure a stronger throw of the throw-arm, or, inversely, the degree of expansion of the spring sufficient to release the latch may be lessened by shortening the connection between the latch and the pull-chain, so that the throw-arm will be operated with less force.

I claim as my invention—

1. In a target-trap, the combination of a swingingly-mounted throw-arm, a support for said arm, a mainspring for imparting movement to said throw-arm, a latch with which said throw-arm engages, and a pull-chain having connection with said spring, said chain having a series of terminal links extending therefrom into direct connection with said latch, substantially as set forth.

2. In a target-trap, the combination of a



swinging throw-arm, a support for said throw-arm, a shaft by which said throw-arm is carried, a toothed disk fixed to said shaft, a spring-bolt seated in said throw-arm support for engagement with said toothed disk, a mainspring connected to said toothed disk for imparting target-throwing movement thereto, and a second spring having connection with said disk for imparting continued movement to said throw-arm after said mainspring is relaxed, substantially as set forth.

3. In a target-trap, the combination of a base, a turn-table surmounting said base, a friction-disk within said base beneath said turn-table adapted to bear against said base, and bolts connecting said turn-table and friction-disk, substantially as set forth.

4. In a target-trap, the combination of a base having a tapering seat interior thereof, a turn-table rotatably mounted on said base, a disk located within said base and having a

tapering perimeter seating against said tapering seat, bolts passing vertically through said disk and turn-table and provided with nuts, and springs surrounding said bolts, substantially as set forth.

5. In a target-trap, the combination of a throw-arm support, a swingingly-mounted throw-arm journaled to said support, means for operating said throw-arm, a U-shaped latch straddling said throw-arm support to be engaged by said throw-arm, a pivot-bolt passing through the arms of said latch and said support, and a cushion-spring surrounding said pivot-bolt and positioned between one of the latch-arms and said support, substantially as set forth.

THEODORE MASEL.

In presence of—

NELLIE V. ALEXANDER,  
BLANCHE HOGAN.