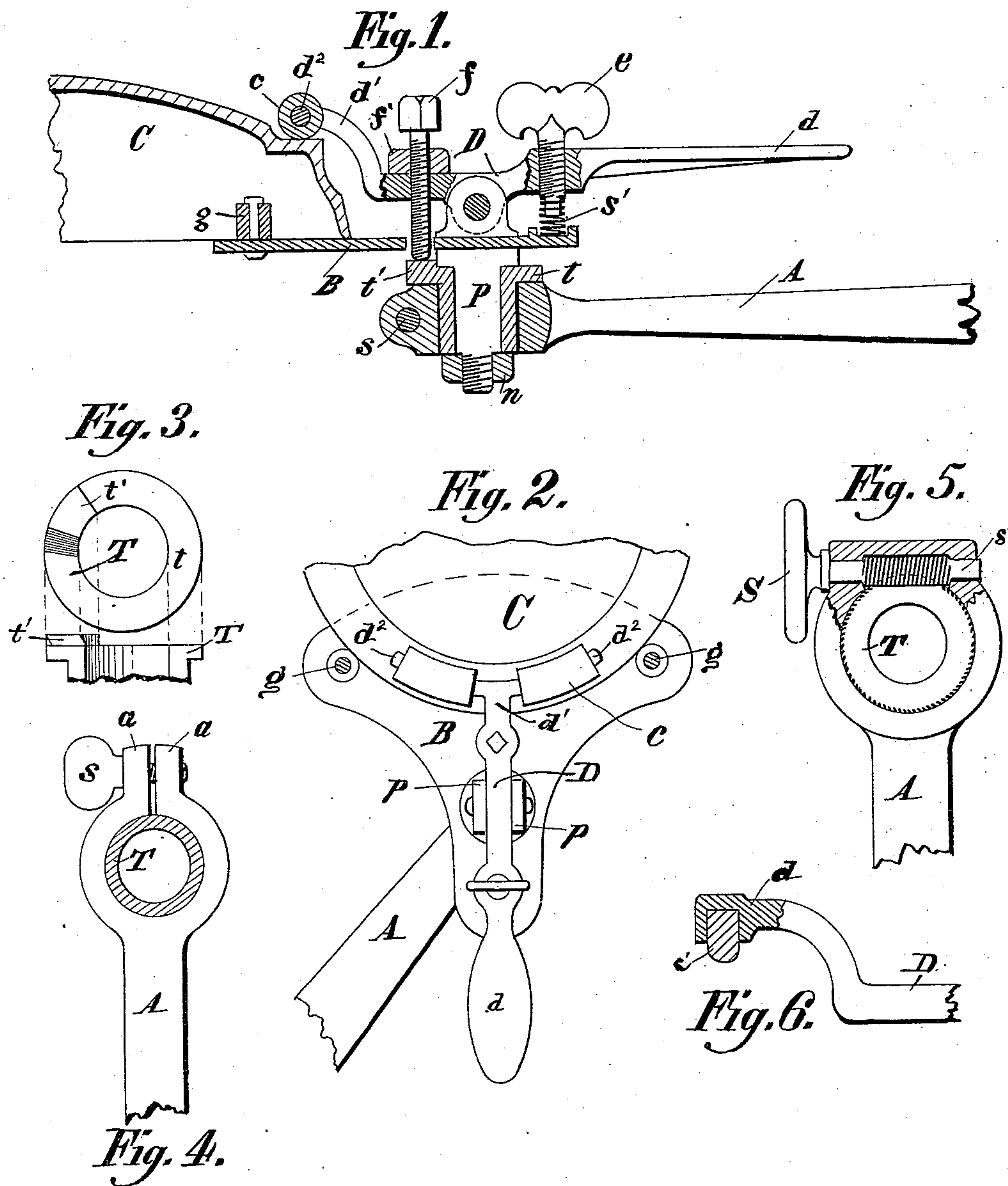


(No Model.)

P. MARQUA.
BALL TRAP.

No. 313,220.

Patented Mar. 3, 1885.



Attest.
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Att.

UNITED STATES PATENT OFFICE.

PHILIP MARQUA, OF CINCINNATI, OHIO, ASSIGNOR TO THE AMERICAN
CLAY BIRD COMPANY.

BALL-TRAP.

SPECIFICATION forming part of Letters Patent No. 313,220, dated March 3, 1885.

Application filed May 13, 1884. (No model.)

To all whom it may concern:

Be it known that I, PHILIP MARQUA, a citizen of the United States, residing at Cincinnati, Ohio, have invented new and useful Improvements in Traps for Projecting Flying Targets, of which the following is a specification.

My invention relates to sending apparatus or "traps" for projecting "flying targets," its object being to improve their construction and efficiency with reference more particularly to the sending of tongueless "clay pigeons;" and it consists in the devices hereinafter described, embodying a target-carrier pivoted to the main sending-arm and holding and releasing mechanism adapted to project the target by a sudden rotary impulse.

In the drawings herewith, showing a form of mechanism embodying my invention, Figure 1 is a vertical partly sectional elevation of the target-carrier and holding and releasing mechanism; Fig. 2, a plan view of the same; Fig. 3, a plan and edge view of the adjustable pivot-thimble; Fig. 4, a partial plan view of the main sending-arm, and Fig. 5 a similar view of a slight modification of the same, showing means of adjusting the thimble; Fig. 6, a slightly-modified construction of the target-holding lever.

Referring to the drawings, A designates the main sending-arm of the trap; B, the pivotal target-carrier; C, the "target," a saucer-shaped shell of fragile material, usually of clay; and D, the holding and releasing arm.

The trap proper (not shown in the drawings) may be of any approved construction, provided with a sending-arm, A, arranged to be forcibly swung upon a central pivot by springs or otherwise. To this arm I attach a plate, B, independently pivoted to the outer end of the arm A, forming an extension of the same when in its extreme position, and swinging in the same plane. The carrier or plate B is preferably an approximately triangular piece of sheet metal, mounted at its apex upon a pivot, P, by which it is secured upon the main sending-arm A and permitted to rotate. The pivot extends above the plate B in two lugs, *p p*, between which, centrally above the plate, is pivoted the holding and releasing arm D. The latter is extended rearward into a manipulating-handle, *d*, for a purpose hereinafter de-

scribed, and forward into an arm, *d'*, bent upward to rest upon the edge of the target, (when the latter is placed upon the carrier, as shown,) and is preferably bifurcated into curved extremities *d'' d''*, corresponding with the arc of the target. These extremities are provided with rubber coverings *c c*, which preserve the target from breakage, and form a secure holding for the same; but the bifurcation may be omitted and the end of the arm *d'* be provided with a rubber pad, *c'*, as shown in Fig. 6.

The pivot P rotates within a thimble, T, terminating above in a lateral flange, *t*, having at one side upon its surface a raised tripping-block, *t'*, the thimble T being adjustable in its holding-socket within the arm A to bring the tripping-block *t'* to any desired point, as hereinafter explained. The pivot P extends below the thimble, and is provided with a nut, *n*, securing the parts together. The arm A is bifurcated beyond the pivot-socket, and furnished with a thumb-screw, *s*, by which the ends *a a* may be drawn together, and the thimble T thus clamped and held securely in its ultimate positions. Instead of the latter construction, however, the bifurcation of the arm may be omitted and a worm-screw, S, inserted through the end of the arm in such relation to the external periphery of the thimble as to engage it by the usual ratchet-teeth, and thus form a holding and rotating device at the same time, as shown in Fig. 5.

The holding and releasing arm D is provided at the rear of its pivot with a spring, *s'*, resting beneath it in a suitable holding-socket upon the plate B, and acting upon the arm above through a set-screw, *e*, by which its tension is regulated, thereby adjusting the pressure of the opposite extremity, *d'*, of the arm D upon the target.

Immediately in front of the pivot P another set-screw, *f*, is inserted through the arm D, preferably provided with a clamp-nut, *f'*, and extends downward through an aperture in the plate B, and forms the abutment or finger, which in the rotation of the carrier strikes the tripping-block *t'* and raises the forward end of the holding-arm D, releasing the target.

The operation is as follows: The target C being placed in position upon the carrier B, (stops *g g* being preferably provided upon the

plate for the purpose,) is admitted under the holding-rubbers *c* or *c'* by depressing the rear end of the handle *d* against the force of the spring *s'*. The carrier is then preferably reversed in relation to the main sending-arm. The sending-arm A being set off, the carrier will be independently rotated by centrifugal force into a position extending the main arm longitudinally, and in thus rotating the tripping-screw *f* is brought in contact with the tripping-block *t'* and the target released. The relative moment of release will depend, of course, upon the adjustment of the thimble P, and may easily be determined by experiment.

15 I claim and desire to secure by Letters Patent—

1. In a trap or sending apparatus for flying targets, in combination with a main pivoted sending-arm, a supplemental pivoted target-carrier, B, provided with a pivoted holding and releasing arm, D, the latter provided with an adjustable spring, *s'*, and a tripping-finger, *f*, constructed and arranged substantially as and for the purpose set forth.

25 2. In a target-sending apparatus, in combination with a supplemental pivoted carrier and spring-actuated holding-arm provided with a tripping-finger, an adjustable thimble, T, having a tripping-block, *t'*, which by means of such

adjustment is brought into proper relation with the carrier, as and for the purpose set forth. 30

3. In a target-sending apparatus employing a main spring-impelled sending-arm, a supplemental target-carrier, B, pivoted thereto, in combination with a pivoted arm, D, constructed with a front extension, *d'*, arranged to rest upon and hold the target to the carrier by pressure, and a rear extension, *d*, forming a manipulating-handle for elevating the catch to adjust the target in position, and means, substantially as described, for the automatic release of the catch in the movement of the main sending-arm, substantially as set forth. 35 40

4. In a target-sending apparatus, in combination with the sending-arm A, and the supplemental pivoted carrier B, a spring-catch or holding-arm D, provided with a rubber pad, *c*, arranged to rest upon the target and retain the same upon the carrier, substantially as and for the purpose set forth. 45 50

In testimony whereof I have hereunto set my hand and seal in the presence of two subscribing witnesses.

PHILIP MARQUA. [L. s.]

Witnesses:

L. M. HOSEA,
C. SHAPPELL.