(No Model.)

C. F. STOCK.

BALL TRAP.

No. 293,814. Patented Feb. 19, 1884.

Fig. 4.

Fig. 1.

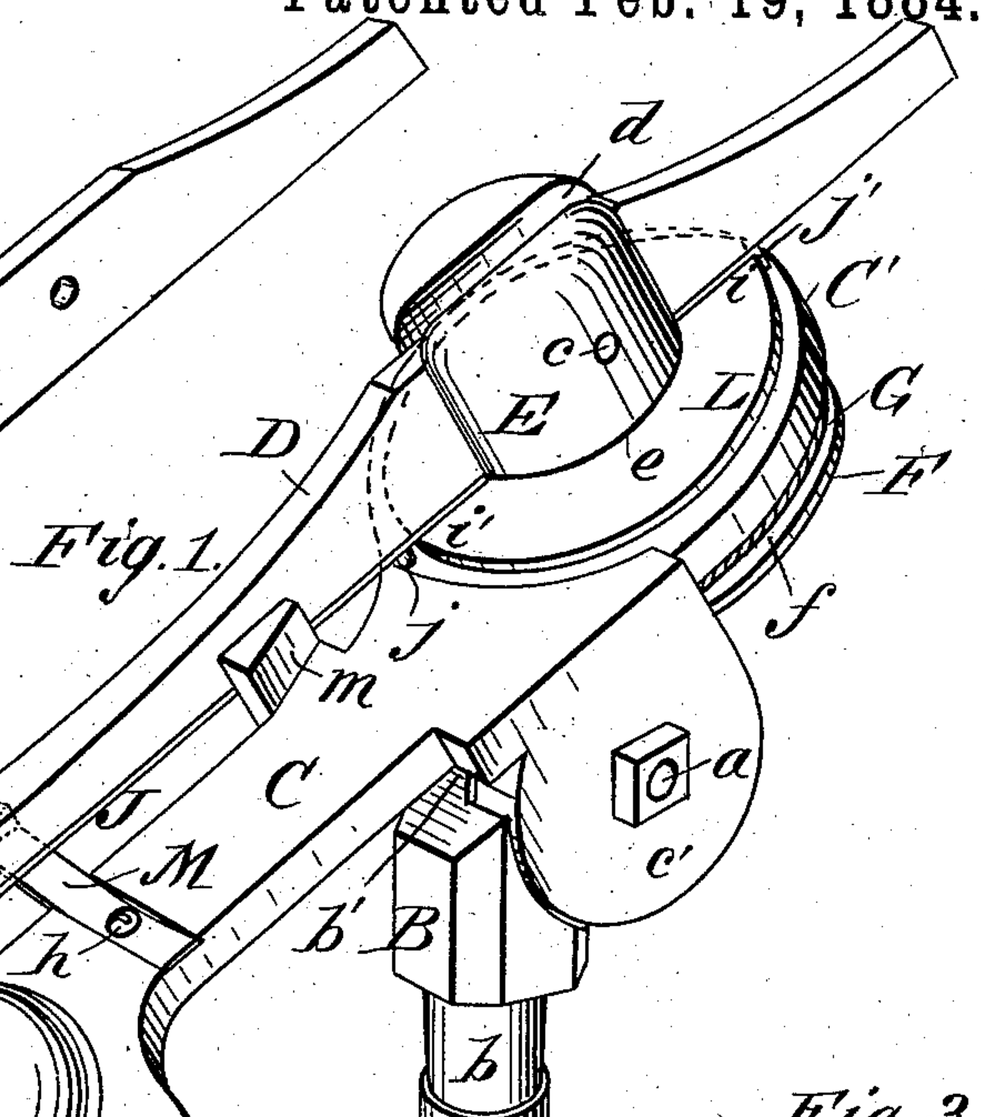


Fig. 3.

Fig. 5.

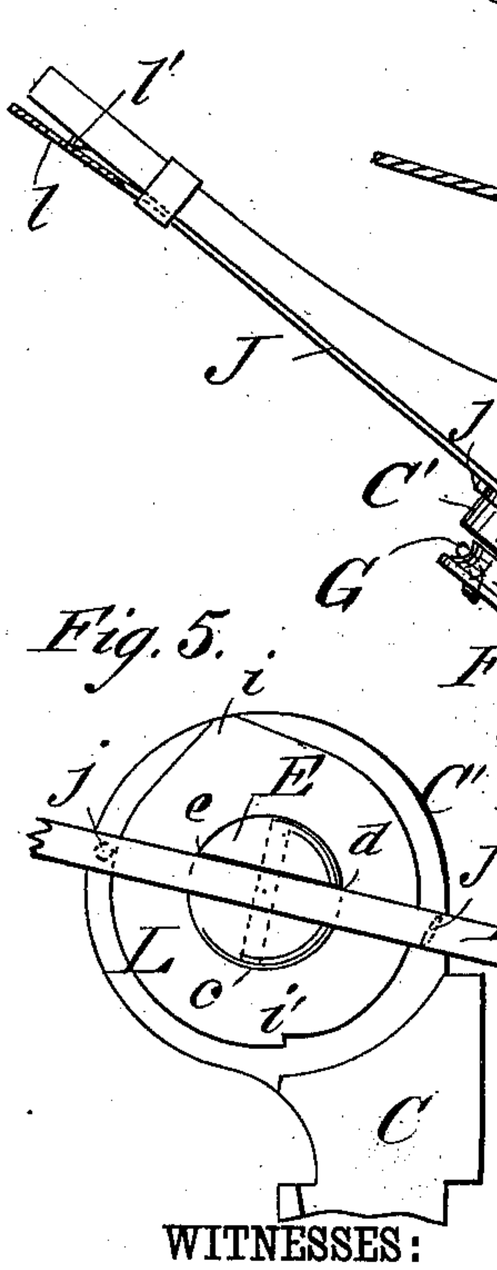
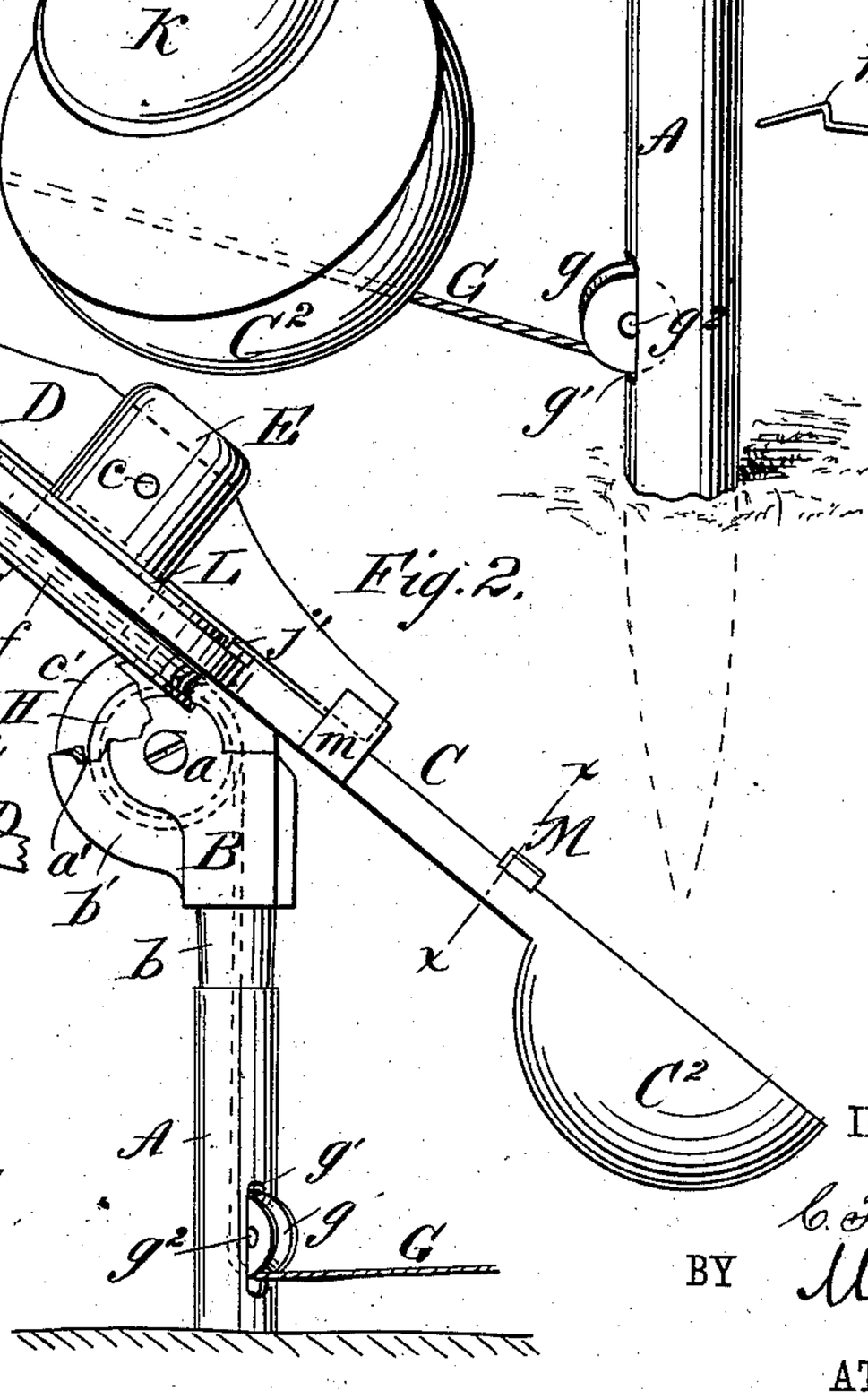


Fig. 2.



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CHARLES F. STOCK, OF PEORIA, ILLINOIS.

BALL-TRAP.

SPECIFICATION forming part of Letters Patent No. 293,814, dated February 19, 1884.

Application filed August 14, 1883. (No model.)

To all whom it may concern:

Be it known that I, CHARLES F. STOCK, of Peoria, in the county of Peoria and State of Illinois, have invented a new and Improved Target-Trap, of which the following is a full, clear, and exact description.

The object of this invention is to provide a positively-acting device for throwing into the air "clay pigeons," glass balls, and other objects for target practice.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar letters of reference indicate corresponding parts in all the figures.

Figure 1 is a perspective view of my new and improved target-trap arranged for throwing a clay-pigeon target. Fig. 2 is a broken side elevation of the trap as the parts appear just after throwing the target. Fig. 3 is a sectional elevation taken on the line *x x* of Fig. 2, showing the adjustable spring-catch. Fig. 4 is a perspective view of a throwing-arm provided with a ring at one end for throwing glass-ball targets; and Fig. 5 is a detailed plan view of a part of the support for the throwing-arm, showing the cam for operating the clamp-plate that holds the clay-pigeon target ready to be thrown.

A represents a hollow post, that is adapted to be driven into the ground, for supporting the operative parts of the target-trap; and B represents a head of wood or metal formed with the round and hollow shank *b*, that fits snugly in the upper end of the hollow post A, but not so snugly but that it may be turned for giving the target any desired direction.

To the head B is hinged, by means of the hinge pin or bolt *a*, the support C, for the throwing-arm D. The throwing-arm D is held by the pin *c* in the slot *d*, made in the hub E, which fits and is adapted to be turned in the hole *e*, made in the forward end, C′, of the support C.

To the lower end of the hub E is secured in horizontal position the pulley F, which is grooved at its edge, as shown at *f*, and to the edge of this pulley F is secured one end of the operating-cord G, which passes from its point of attachment to the pulley F, first over the pulley H, journaled upon the hinge-pin *a* in recess *a′*, formed between the corresponding plates, *b′* and *c′*, formed, respectively, upon the head B and support C; then down through the hollow shank *b* and post A, to and under a grooved pulley, *g*, journaled in slot *g′* upon pin g^2, and thence along the ground, twenty or more yards away, to where the sportsman who uses the trap is to stand.

There will be at least two interchangeable throwing-arms D. One of these will be provided with the inclined seat or ring *d′*, as shown in Fig. 4, for throwing glass balls. The other will be provided upon the under side with the clamp-plate J, for clamping and holding the projection *k* of the clay-pigeon target K between it (the plate J) and the under side of the arm D. Upon its under side the plate J is formed or provided, at and near its rear end, with the studs *j j′*, that straddle the cam L, formed upon the upper surface of the forward end C′ of the support C, and near its forward end the plate J is formed with the hole *l*. The cam L is formed with the projection *i* at the extreme forward end of the support C, and also with the opposite depression, *i′*, in which the stop *j′* may be carried, as the stop *j* rides up the projection *i*, so that as the throwing-arm D is swung from the position shown in Fig. 1 to that shown in Fig. 2, by pulling upon cord G, the cam L, acting on stud *j*, will slide the plate J forward, and when the arm D is carried back again to the position shown in Fig. 1, which must be done by hand, the said cam, acting upon the opposite side, *j′*, will draw the plate J back to its original position.

Placed in the forward end of the arm D, in its under side, is the inclined stud *l′*. This is so placed relative to the hole *l*, made in plate J, and to the position of the plate J, when drawn back by the action of cam L on stud *j*, that it coincides with the hole when the plate is so drawn back, thus permitting the plate J to come flat against the under side of the arm D—the position the plate must occupy for grasping the projection *k* of the target K. When the plate J is forced forward by the cam L acting upon stud *j*, this inclined stud *l′* serves to force downward the forward end of the plate J to the position shown in Fig. 2 for releasing the target K, and this releasing of the target K will take place, owing to the position of the projection *i* of the cam L, just at the time the throwing-arm D reaches the

it of its forward swing movement, thus sing the target to be properly thrown. e forward swinging movement of the arm s limited by the projection *m*, formed upon support C, against which projection the r end of the arm D is adapted to strike, as strated in Fig. 2.

I represents the spring attached to the sup- t C, for holding the throwing-arm D back position ready for throwing the target, as own in Fig. 1. This spring M is held in ce upon the support C by the screw *h*, and upper surface of the support C is concaved, shown at *h'*, beneath the spring M, so that turning the screw *h* in or out the outer bent l of the spring M may be raised or lowered, that the notch *m'* thereof will hold the owing-arm D with greater or less force, as sired, which will regulate the pull of the p and the force with which the target will projected into the air. The rear end of e support C is weighted, as shown at C^2, so t the striking of the rear end of the throw- r-arm D against the stud *m* in operating the p will not materially turn or move the pport C.

In use the arm D will be carried back over e notch *m'* of the spring M, and the target put place either in the ring *d'* or placed between e plate J and arm D. The turning of the hub due to the carrying back of the arm D, will rn the pulley F, which will draw the cord forward, the cord lying in the groove *f* of e pulley F, as shown clearly in Fig. 1. All ing now ready, the sportsman will grasp d draw back upon the cord G, which will use the arm D to suddenly detach itself from e spring M, and to be swung rapidly for- rd, carrying the target until the rear end of m D strikes the stud *m*, which will suddenly op the arm D and cause the target to be pro- cted into the air. If the arm D, having the ate J, is used, it will be understood that at e time, or a little before, the rear end of the arm D strikes the stud *m*, the plate J will be forced forward by the projection *i* of the cam L, which will release the target, as above described.

By turning the support C upon the hinge-pin *a*, the target may be ranged high or low, as desired, and by turning the head B in the hollow post A, which may be easily done by using the support C as a lever, the direction in which the targets will be thrown may be varied as desired.

Having thus described my invention, I claim as new and desire to secure by Letters Patent—

1. The combination, with the casting-arm, of the hollow post A, carrying the grooved pulley *g* in a slot, the head B, having hollow shank *b*, fitting into said post, the support C, hinged to said head at *a*, and having hole *e*, in its end C', the hub E, turning in said hole, and having slot *d*, the edge-grooved pulley F, placed horizontally in the lower end of the hub, the pulley H on hinge-pin *a*, and the plates *b' c'*, forming recess *a'*, and respectively attached to head B and support C, with the cord G attached to the edge of pulley F, and passing between the plates and over pulleys H *g*, as shown and described.

2. The combination, with a throwing-arm, D, having the inclined stud *l'* near one end, a supporting-standard, and suitable operative mechanism, of the under clamp-plate, J, having the front hole, *l*, and rear studs, *j j'*, the support C, having cam L, fitting between said studs and provided with the opposite projection and depression, *i i'*, whereby a clay pigeon may be thrown, as described.

3. The combination, with the throwing-arm D, of the support C, weighted at the end C^2, and provided with a stud, *m*, arranged to be struck by said arm, as described.

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Witnesses:
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