

R. POOLE.

APPARATUS FOR SELECTING SHOT.

No. 182,328.

Patented Sept. 19, 1876.

Fig 1.

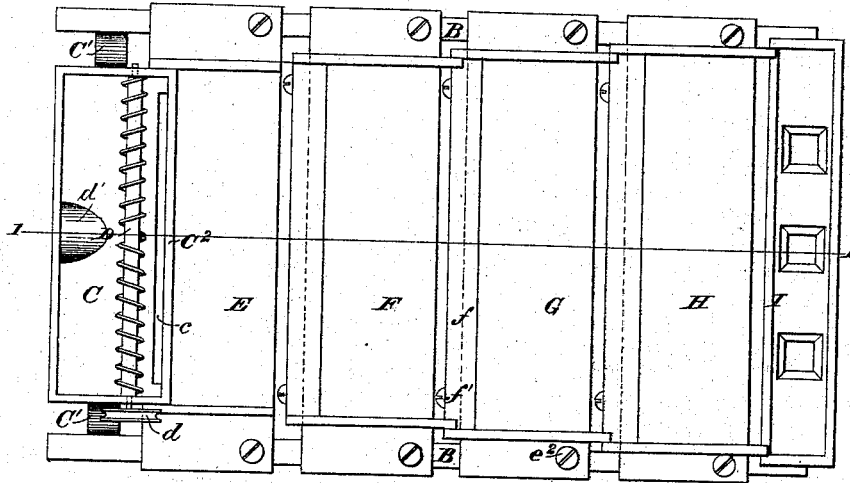
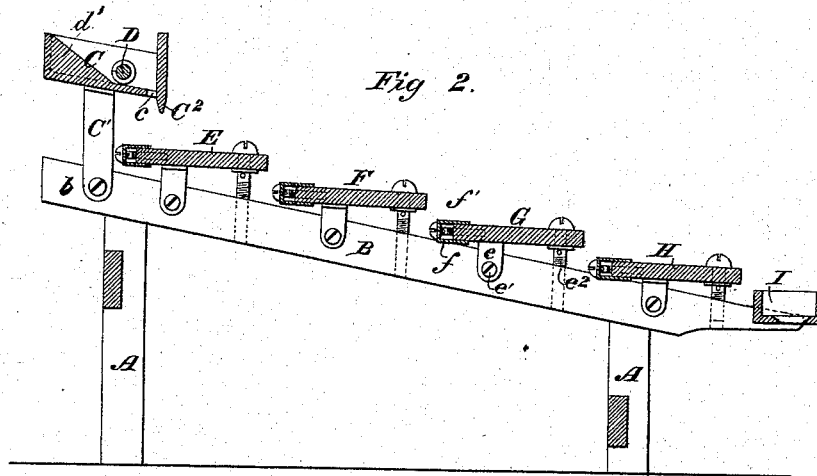


Fig 2.



WITNESSES

Wm A Skinkle
F. Stick

By his Attorney

INVENTOR,

Robert Poole

Wm. Baldwin

UNITED STATES PATENT OFFICE.

ROBERT POOLE, OF BALTIMORE, MARYLAND, ASSIGNOR TO POOLE & HUNT,
OF SAME PLACE.

IMPROVEMENT IN APPARATUS FOR SELECTING SHOT.

Specification forming part of Letters Patent No. 182,328, dated September 19, 1876; application filed August 7, 1876.

To all whom it may concern:

Be it known that I, ROBERT POOLE, of Baltimore city, in the State of Maryland, have invented certain new and useful Improvements in Apparatus for Selecting Shot, of which the following is a specification:

My invention relates to an apparatus for selecting or separating perfect from imperfect shot.

The object of the first part of my invention is to feed the shot in a stream of uniform thickness, from a hopper or receptacle, to separating tables or shelves; which end I attain by combining, with a hopper, a rotating conveyor or spreader shaft, which works near to the inclined bottom of the hopper on an axis transverse to the path of the shot, intercepts them on their way to escape from the hopper, and carries the shot both ways from the center, thus distributing them uniformly over the hopper.

My invention further consists in constructing a hopper with a slot or opening at the front end, through which the shot escape, a spreading-strip, against which the shot strike before passing through the slot, and a spreader-shaft or distributor, which spreads the shot evenly in the hopper.

The object of the next part of my invention is to adapt the apparatus to the manipulation of shot of different sizes and conditions; to which end my invention consists in certain novel constructions and combinations of parts hereinafter specifically designated.

In the accompanying drawings, which represent all my improvements as embodied in one machine in the best way now known to me, Figure 1 represents a plan or top view of so much of the apparatus as is necessary to illustrate the subject-matter herein claimed; and Fig. 2 a vertical central longitudinal section therethrough on the line 1 1 of Fig. 1.

A stout frame, A, with inclined side bars B, supports a hopper, C, mounted upon arms C', pivoted at *b* to the frame, so that it may be adjusted and held in any desired relation to the separating-shelves by suitable well-known means. The shot to be selected or assorted are poured into this hopper, and escape through a longitudinal slot, *c*, near the back edge of

the bottom thereof. The back edge of the hopper is provided with a separating-strip, C², which may be rendered adjustable by sliding in grooves in the hopper, or in other well-known ways, so as to vary the area of the slot *c* to suit shot of different sizes. The shot fall upon a scattering cone, *d'*, which disperses them laterally. A shaft, D, rotating in the hopper, extends from side to side thereof transversely to the path of the shot flowing down its bottom, and is driven, by a pulley, *d*, from any suitable prime mover, and, provided with screw-threads running in opposite directions from each end of the shaft toward the center thereof, serves still further to distribute the shot uniformly in the hopper for their escape through its slot. To accommodate different sizes of shot the bearings of the shaft are made adjustable in usual well-known ways. After escaping from the hopper the shot roll down a series of separating-shelves, E F G H, in the usual manner, into a trough, I, or other suitable receptacle. During their descent the round or perfect shot bound from shelf to shelf, and are deposited in a hopper, while the imperfect or irregular-shaped ones roll off to one side, and drop through the spaces between the shelves, as is well understood.

As the shelves are all alike a description of one will be sufficient to show the construction of the others. The shelves are connected to the side bars by arms *e*, turning on pivots *e*¹, and controlled by set-screws *e*² at their rear edges, or that farthest from the hopper, so as to vary their angle of inclination, thus regulating the velocity of the shot.

In selecting or assorting shot of different sizes it is necessary to vary the distance between the shelves; but in the shelves heretofore employed, which consist, simply, of plain boards, the adjustment of one shelf necessarily involves the adjustment of the whole series, as one could not be adjusted separately without disturbing its relation to the others. To obviate this objection I construct the shelves with a sliding section, *f*, controlled by set-screws *f'*, by which means the width of the shelf can be increased or diminished to compensate for the horizontal adjustment, and also to regulate the width of the opening between

two adjacent shelves without disturbing the relation of the others, which device, in practice, I have found of great utility.

I claim as my invention—

1. A shot-distributing hopper, constructed substantially as hereinbefore set forth, with an inclined slotted bottom, and a rotating spreader-shaft, which acts on the shot on their way to escape, and distributes them uniformly to the slot.

2. The combination, substantially as hereinbefore set forth, of the slotted hopper, the spreading-shaft, and the spreading-strip.

3. The combination, substantially as hereinbefore set forth, of the hopper, the scattering-cone, and the spreader shaft.

4. The series of shot-separating shelves, constructed substantially as described, each independent of the others, and having their upper

edges provided with a sliding section, adjustable by set-screws, for the purpose specified.

5. The combination, substantially as hereinbefore set forth, of the series of shelves, their side bars, the pivoted arms supporting the shelves, and the adjusting-screws.

6. The shot-selecting apparatus hereinbefore set forth, consisting of a series of step-like shelves, independently adjustable both as to width and inclination, and the adjustable pivoted hopper for supplying shot to the first of the series of shelves.

In testimony whereof I have hereunto subscribed my name.

ROBERT POOLE.

Witnesses:

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