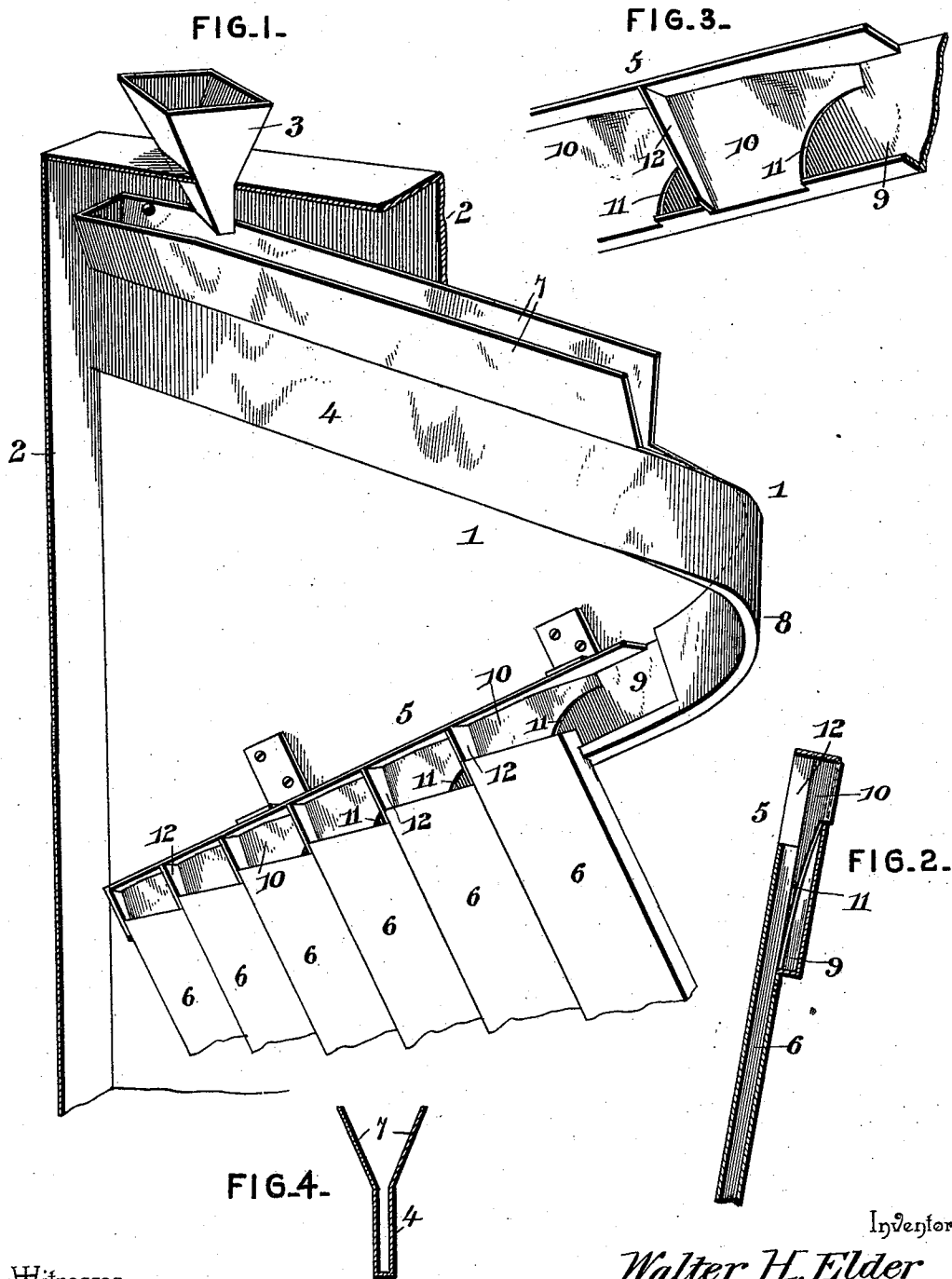


(No Model.)

W. H. & W. ELDER.
COIN SEPARATOR AND DISTRIBUTER.

No. 574,528.

Patented Jan. 5, 1897.



Witnesses
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UNITED STATES PATENT OFFICE.

WALTER H. ELDER AND WALTER ELDER, OF CLARION, IOWA.

COIN SEPARATOR AND DISTRIBUTER.

SPECIFICATION forming part of Letters Patent No. 574,528, dated January 5, 1897.

Application filed February 24, 1896. Serial No. 580,449. (No model.)

To all whom it may concern:

Be it known that we, WALTER H. ELDER and WALTER ELDER, citizens of the United States, residing at Clarion, in the county of Wright and State of Iowa, have invented a new and useful Coin Separator and Distributer, of which the following is a specification.

Our invention relates to coin separating and distributing devices, and has for its object to provide a simple construction and arrangement of parts for use in connection with change-makers, cash-drawers, chests, and the like, whereby coins of different denominations introduced in bulk will be arranged to occupy successive positions and will be fed into and distributed by tubes provided for that purpose.

Further objects and advantages of this invention will appear in the following description, and the novel features thereof will be particularly pointed out in the appended claim.

In the drawings, Figure 1 is a perspective view of a coin separating and distributing device constructed in accordance with our invention. Fig. 2 is a transverse sectional view of the feed-chute contiguous to one of the delivery-tubes. Fig. 3 is a detail view in perspective of one of the deflectors and the contiguous parts of the feed-chute. Fig. 4 is a transverse vertical section of the portion of the feed-chute contiguous to the distributing-hopper.

Similar numerals of reference indicate corresponding parts in all the figures of the drawings.

1 designates a coin-separating device arranged in a casing 2 of suitable construction, in the top of which is arranged a distributing-hopper 3 to receive coins of different denominations in bulk, as by the handful, without reference to relative arrangement and without regard to independent introduction. This hopper is provided with a reduced cross-sectionally-elongated delivery-throat, which is disposed at an inclination or diagonally with relation to a feed-chute 4, which is inclined from its inlet toward its delivery or outlet end, as shown at 5, where it communicates with a series of delivery-tubes 6.

The upper or receiving portion of the feed-chute is provided with upwardly-flared side

walls 7 to cooperate with the distributing-hopper in arranging the coins in successive order and prevent the same from falling outside of the chute, and at 8 the chute is given a return-bend, whereby the apparatus is adapted to occupy the minimum space in the casing.

The lower portion of the feed-chute, as from the point 9, is inclined laterally, as shown clearly in Fig. 2, to cause the coins to lean against one side wall thereof, and arranged contiguous to each delivery-tube 6 and at an inclination or diagonally with relation to the feed-chute is a deflector 10, the front edge of which is arranged in contact with the lower side wall of the chute, or that wall toward which the chute is inclined laterally. Each deflector is cut away, as shown at 11, at its front edge, said cut-away portion terminating short of its upper edge to form a tongue and being designed to allow coins of smaller denominations than that which is intended to pass through the discharge-tube contiguous to which said deflector is arranged to continue their descent of the feed-chute for engagement with succeeding deflectors, while coins of a denomination for which said delivery-tube is intended are engaged at their upper sides by the tongue or portion of the deflector above the opening 11 and carried laterally into the delivery-tube. Obviously the openings 11 decrease in size successively toward the extremity of the feed-chute, whereby coins of successively smaller sizes are deflected into the delivery-tubes and conveyed to suitable receptacles. (Not shown.)

Thus the extremity of the tongue rests against the inclined wall of the chute to engage the upper edge of a coin of sufficient size descending the chute, and as the deflector extends to the bottom or floor of the chute it is obvious that a coin turned out of its course thereby will be moved laterally at its lower edge and thus bring it into position to drop vertically into the contiguous delivery-tube. The lower edge of the deflector, from its cut-away portion to its rear edge, is equal in length to the long diameter of the delivery-tube, whereby coins which pass through the cut-away portion are held from lateral displacement by the deflector, and are hence guided positively in their downward move-

ment through the chute. The rear edge of the deflector is turned laterally to form an inclined transverse stop 12, located in the plane of the rear wall of the delivery-tube, whereby when
 5 a coin, after lateral deflection by the tongue of a deflector, is checked by the stop it drops without interference into the delivery-tube. By constructing the lower edge of equal length with the long diameter of the delivery-tube
 10 coins which are not turned out of their course by a deflector are prevented from becoming turned or laterally displaced and thus choking the chute. Furthermore, by extending the deflector downwardly to the bottom or
 15 floor of the chute a coin which is engaged by the tongue at its upper edge is turned out of its course and positively guided both at its upper and lower edges, thus avoiding the tilting of a coin at its upper edge against the op-
 20 posite side wall of the chute and thereby obstructing the passage of succeeding coins.

An important advantage of the above-described construction resides in the fact that coins may be deposited in the distributing-
 25 hopper in quantities, as from a sack, or by the handful, without reference to their relative positions, thus obviating the necessity of dropping the coins successively into the hopper, as in the ordinary practice. The angular or di-
 30 agonal disposition of the elongated throat of the hopper, together with the flared side walls of the contiguous portion of the feed-chute, causes the arrangement of the coins in the desired series or succession which is necessary
 35 to their proper distribution when they reach the delivery-tubes.

Various changes in the form, proportion, and the minor details of construction may be resorted to without departing from the spirit or sacrificing any of the advantages of this in- 40
 vention.

Having described our invention, what we claim is—

In a coin separator and distributor, the combination of a feed-chute disposed at a lat- 45
 eral inclination, delivery-tubes for coins of different denominations arranged in series in communication with said chute, a series of de-
 flectors, one for each delivery-tube, arranged in inclined positions in the chute and extend- 50
 ing from the top to the bottom of the chute with their front edges cut away to form at their upper edges tongues arranged termi-
 nally in contact with the side wall of the chute and having lower edges of equal lengths, re- 55
 spectively, with the long diameters of the contiguous delivery-tubes, whereby coins pass-
 ing through the cut-away portions of the de-
 flectors are held from lateral displacement toward the delivery-tubes, and stops arranged 60
 at the rear edges, respectively, of the deflec-
 tors in the planes of the rear walls of the con-
 tiguous delivery-tubes, substantially as speci-
 fied.

In testimony that we claim the foregoing as 65
 our own we have hereto affixed our signatures in the presence of two witnesses.

WALTER H. ELDER.
 WALTER ELDER.

Witnesses:

B. C. CLARK,
 W. W. SHEPLEE.