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PATENTED MAY 21, 1907.

H. HOWELL & J. DUFF.
ASSORTING DEVICE.
APPLICATION FILED JULY 12, 1906.

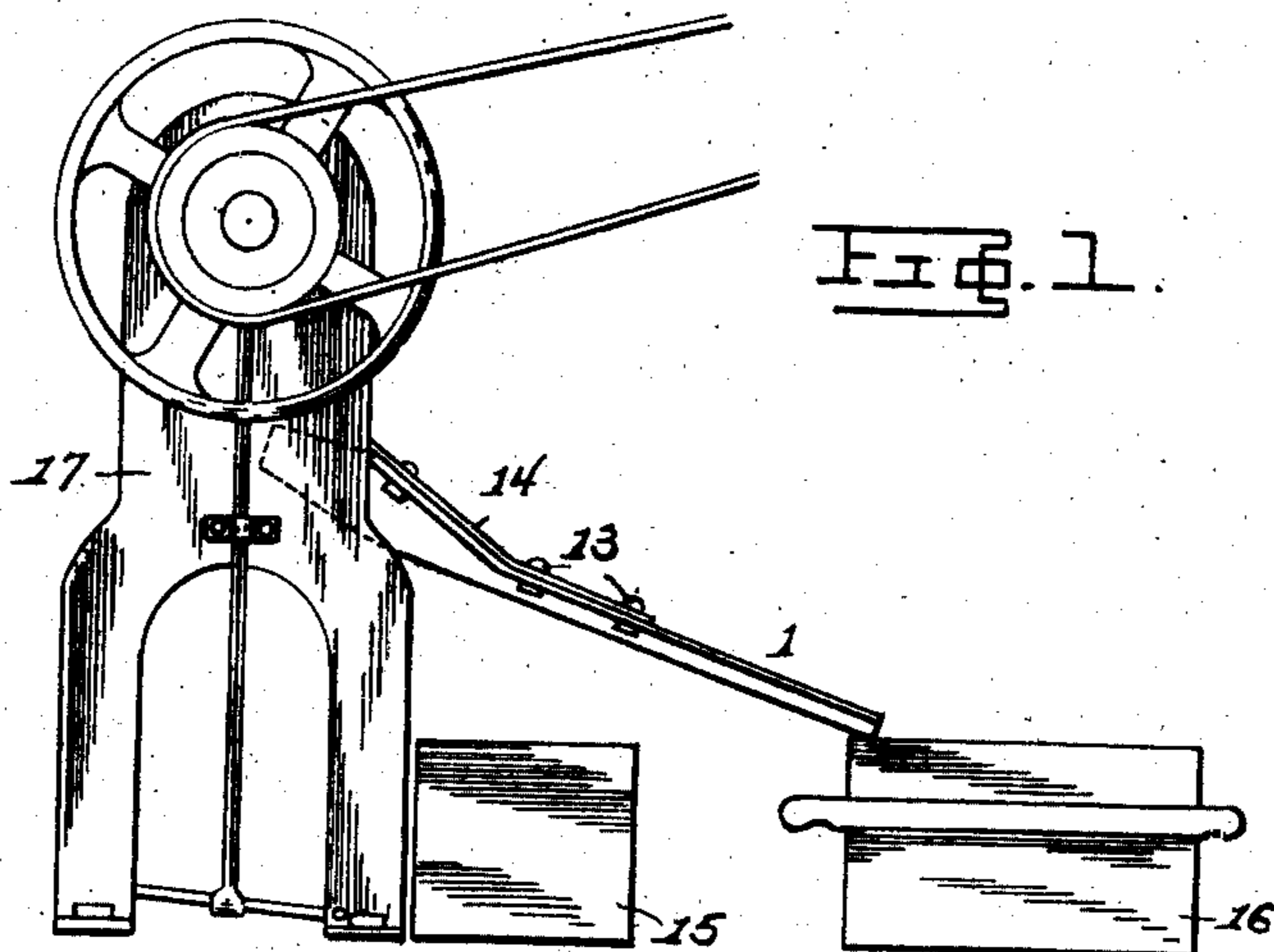


Fig. 1.

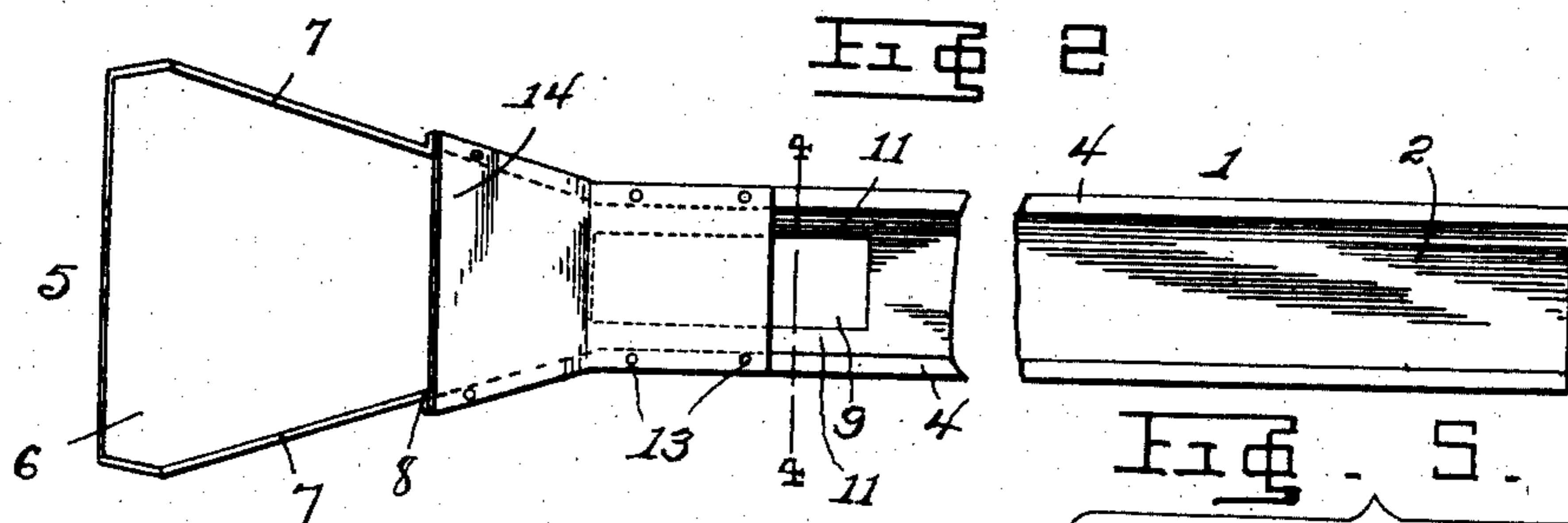


Fig. 2.

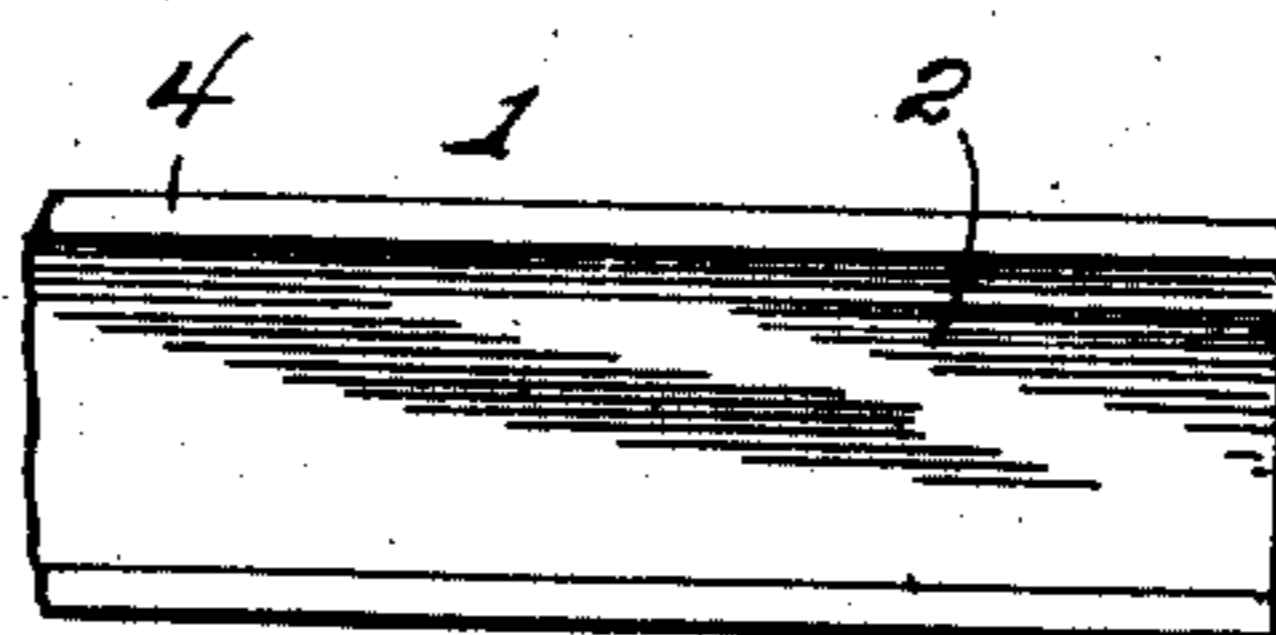


Fig. 3.

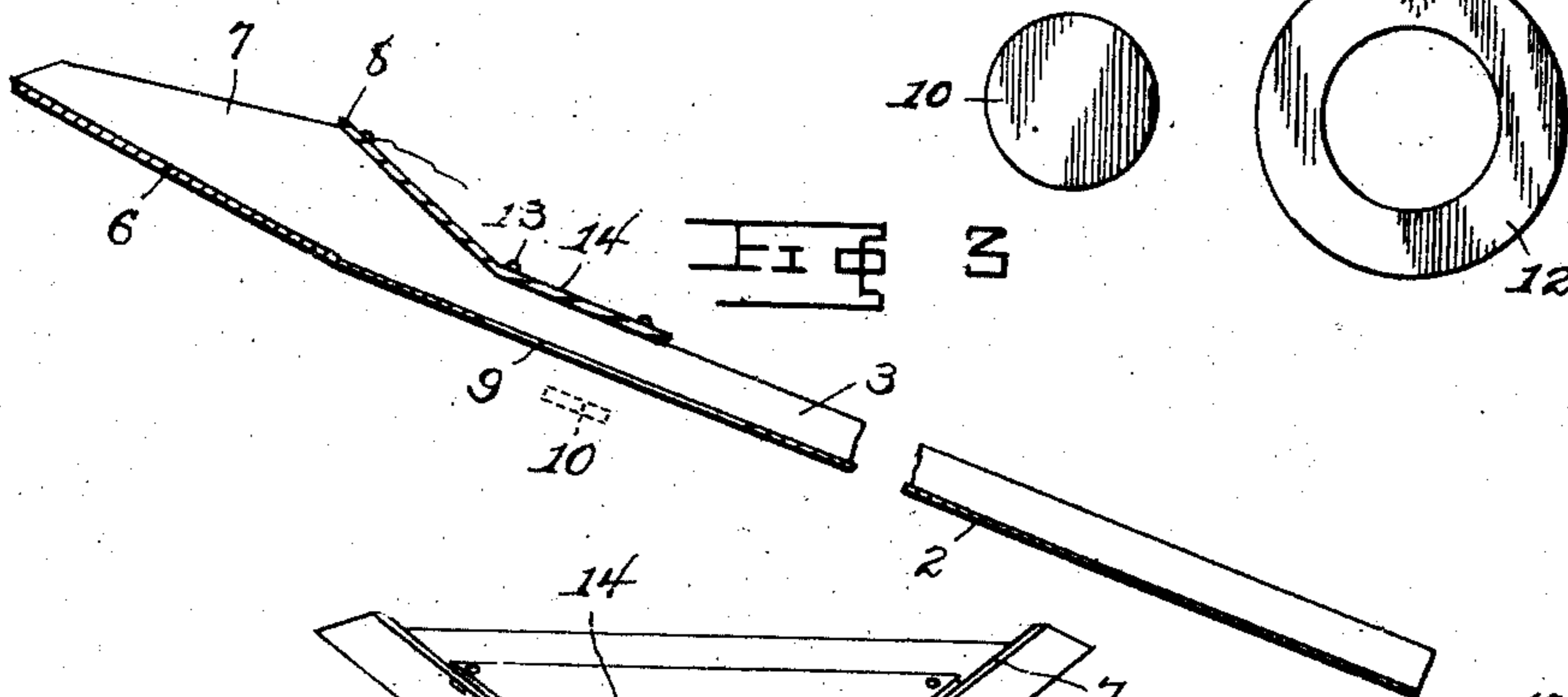


Fig. 4.

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Fig. 4.

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HARVEY HOWELL AND JOHN DUFF, OF WHEELING, WEST VIRGINIA.

ASSORTING DEVICE.

No. 854,356.

Specification of Letters Patent.

Patented May 21, 1907.

Application filed July 12, 1906. Serial No. 325,888.

To all whom it may concern:

Be it known that we, HARVEY HOWELL and JOHN DUFF, citizens of the United States of America, and residents of Wheeling, county of Ohio, and State of West Virginia, have invented certain new and useful Improvements in Assorting Devices, of which the following is a specification.

Our invention relates to certain new and useful improvements in assorting devices, and has for its object to provide a device for use in stamping works, candle factories, metal box factories and the like, whereby articles of different sizes are automatically assorted, as for instance the stamped or formed article is separated from the scrap.

A further object is to provide a device for assorting, can lids, box lids, washers and the like from the waste pieces or scrap which is left when said lids or washers are formed, and for respectively delivering said articles to the receptacles which are provided therefor.

In describing the invention in detail, reference is had to the accompanying drawings forming a part of this specification wherein like characters of reference designate similar parts throughout the several views:—

Figure 1, is a side elevation of the invention, mounted in position for assorting and delivering articles as formed in a press, Fig. 2, is a top plan view of the invention enlarged, Fig. 3, is a longitudinal sectional view of the same, Fig. 4, is an enlarged cross-section on the line 4—4 of Fig. 2, and Fig. 5, is a plan view of a washer and also of the waste or scrap piece cut therefrom in forming said washer.

In said drawings, 1, indicates a longitudinal trough or chute formed of one piece of sheet metal and consisting of a plane flat bottom 2, vertical side walls 3, and lateral flanges 4, at the upper edge of said side walls. An inclined hopper or receiving mouth 5, is formed integral with said trough at one end thereof. Said hopper comprises a hopper 6, inclined upward at an angle to the bottom 2, of the trough and gradually widened outward as shown in Fig. 2; vertical side walls 7, which gradually increase in height from the end of the trough to a point 8, substantially midway between the ends of the hopper, and then gradually decrease in height to the outer end; and flanges carried by said side walls 7, said flanges extending from the front end of the trough to the point 8, as shown.

In the bottom 2, of the trough 1, begin-

ning directly in front of its juncture with the hopper 5, and extending centrally along said bottom for a suitable distance, is a longitudinal slot 9, the width of which is slightly greater than the diameter of the piece 10, which is intended shall drop through the slot. Lateral ledges 11, between said slot and the side walls 3, are adapted to be engaged by the opposite sides or edges of the piece 12, to be carried over said slot.

Secured over the top of the lower end of the hopper and the adjacent end of the trough by means of rivets 13, projected through the flanges 4, is a plate or guard 14, which is adapted to prevent the pieces 10, and 12, from sliding from the trough in any other manner than flat side up.

In operation the end of the hopper 5, is set upon the bed of the press 17, in position to receive the stamped articles and scrap pieces as they drop therefrom, and the trough is supported in an inclined position in any suitable manner. The smaller of the pieces whether it be the stamped article or the scrap, according to what manner of article is being formed slides forward and drops through the slot 9, to a suitably located receptacle 15, which is provided therefor. The other of said pieces which is of greater diameter or width than the width of the slot 9, passes over said slot with its sides sliding upon the ledges 11, and is conveyed to a receptacle 16, provided therefor.

Having thus fully described our invention, what we claim as new and desire to secure by Letters Patent is:—

1. An assorting device comprising a longitudinal trough having a plane flat bottom provided with a central longitudinal slot therein, vertical side-walls terminating in lateral flanges, a receiving end consisting of a hopper having a bottom formed integral with and inclined upward at an angle to the trough-bottom and gradually widened outward from said trough-bottom, vertical side-walls integral with said hopper-bottom, the last-mentioned side-walls being gradually increased in height from the end of the trough to a point substantially midway between the ends of said hopper and terminating in lateral flanges which are integral with and form a continuation of the flanges of the trough, and a guard mounted over the lower end of the hopper and the adjacent end of the trough, said guard having its lateral edges attached to said flanges.

2. An assorting device of the character described, consisting of a trough having a plane bottom, provided with a slot therein at a suitable point, in the rear of its discharge
5 end, vertical side walls, a lateral flange carried by each side wall, a hopper with a flaring mouth formed integral with said trough at the receiving end thereof, said hopper being
10 ing side-walls which gradually increase in height from the end of the trough to a point substantially midway between the ends thereof, and a plate or guard secured over
15 said hopper and trough whereby, without retarding the progress of articles delivered to the hopper, said articles are directed into the trough in a flatwise position.

3. An assorting device comprising a longitudinal trough having a plane flat bottom
20 provided with a central longitudinal slot therein, vertical side-walls formed integral with said bottom and terminating in lateral flanges, said receiving end consisting of a hopper whose bottom is formed integral with

and is inclined upward at an angle to the
trough-bottom and is gradually widened
from the trough-bottom, vertical side-walls
formed integral with said hopper-bottom,
the last-mentioned side-walls being gradually
increased in height from the adjacent end of
30 the trough to a point substantially midway
between the ends of said hopper and terminating in lateral flanges which are integral
with and form a continuation of the flanges
of the trough, and a guard mounted over the
35 lower end of the hopper and the adjacent end
of the trough, said guard having its lateral
edges attached to said flanges, and said
guard being adapted for directing articles
delivered to the hopper into the trough in a
40 flatwise position.

Signed by us in presence of two subscribing witnesses.

HARVEY HOWELL.
JOHN DUFF.

Witnesses:

H. E. DUNLAP,
ROBT. F. DILWORTH.