

No. 736,622.

PATENTED AUG. 18, 1903.

F. W. OLIN.
SHELL HEAD FEEDING APPARATUS.

APPLICATION FILED SEPT. 29, 1902.

NO MODEL.

2 SHEETS—SHEET 1.

Fig. I.

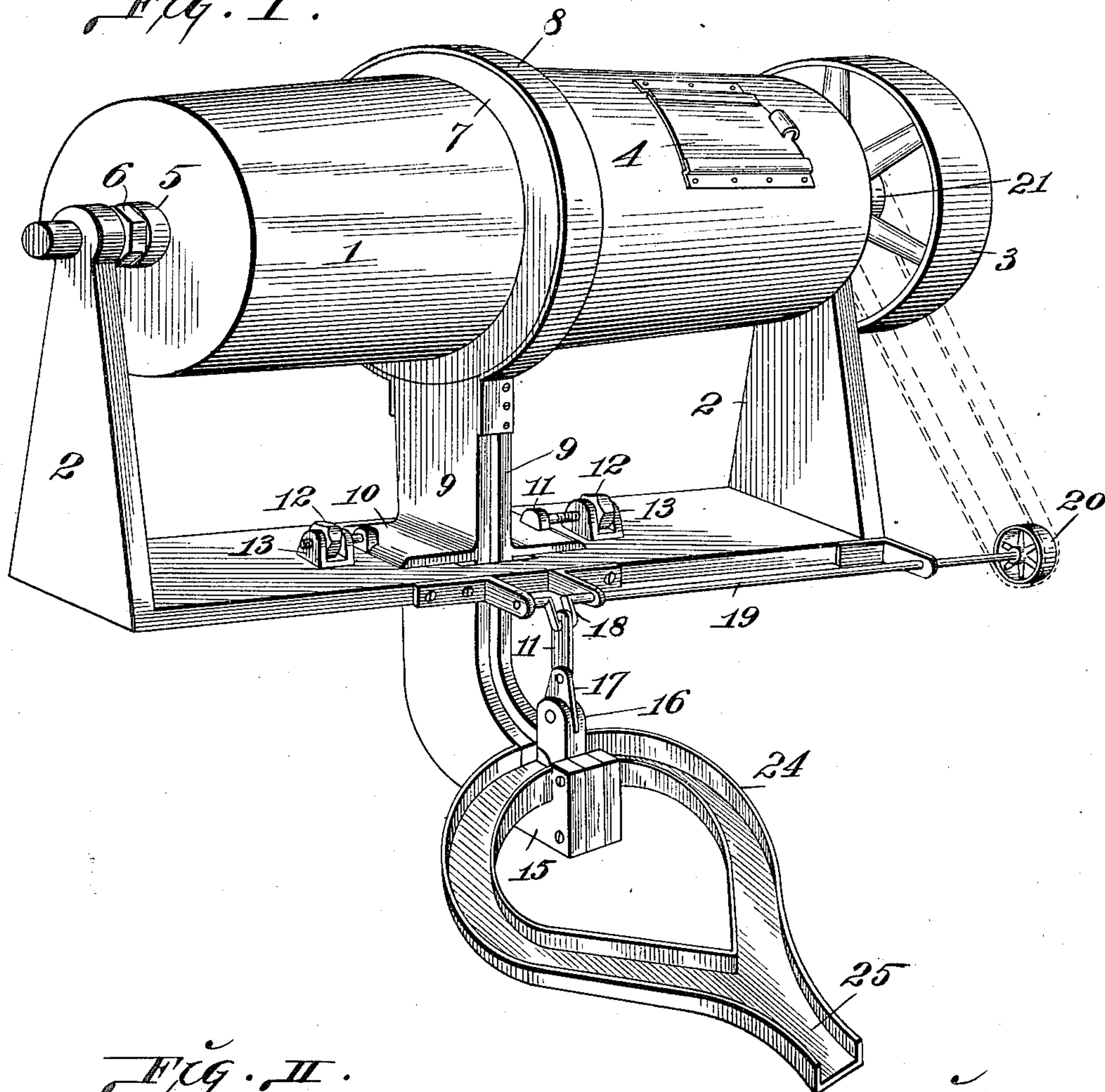


Fig. II.

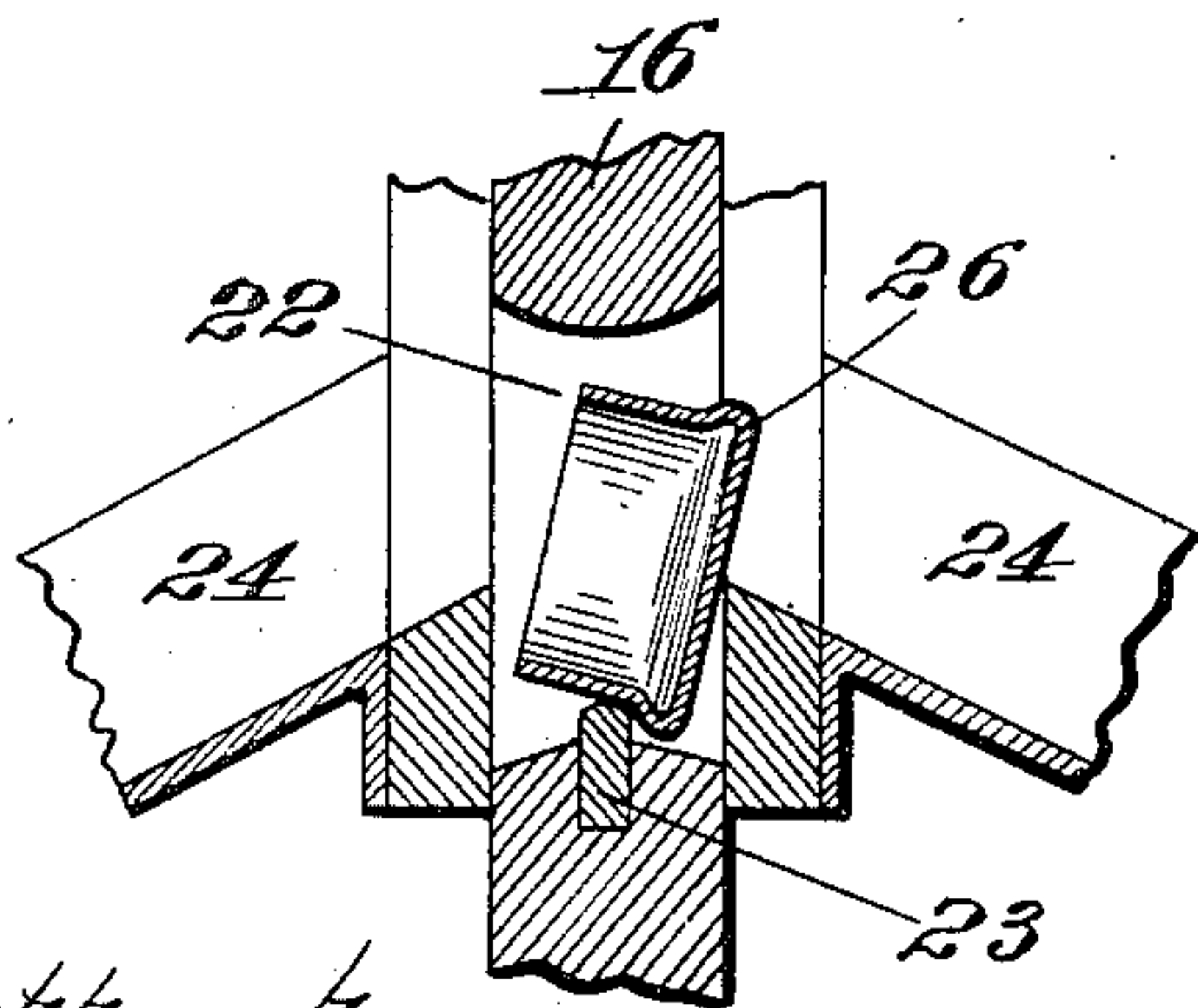
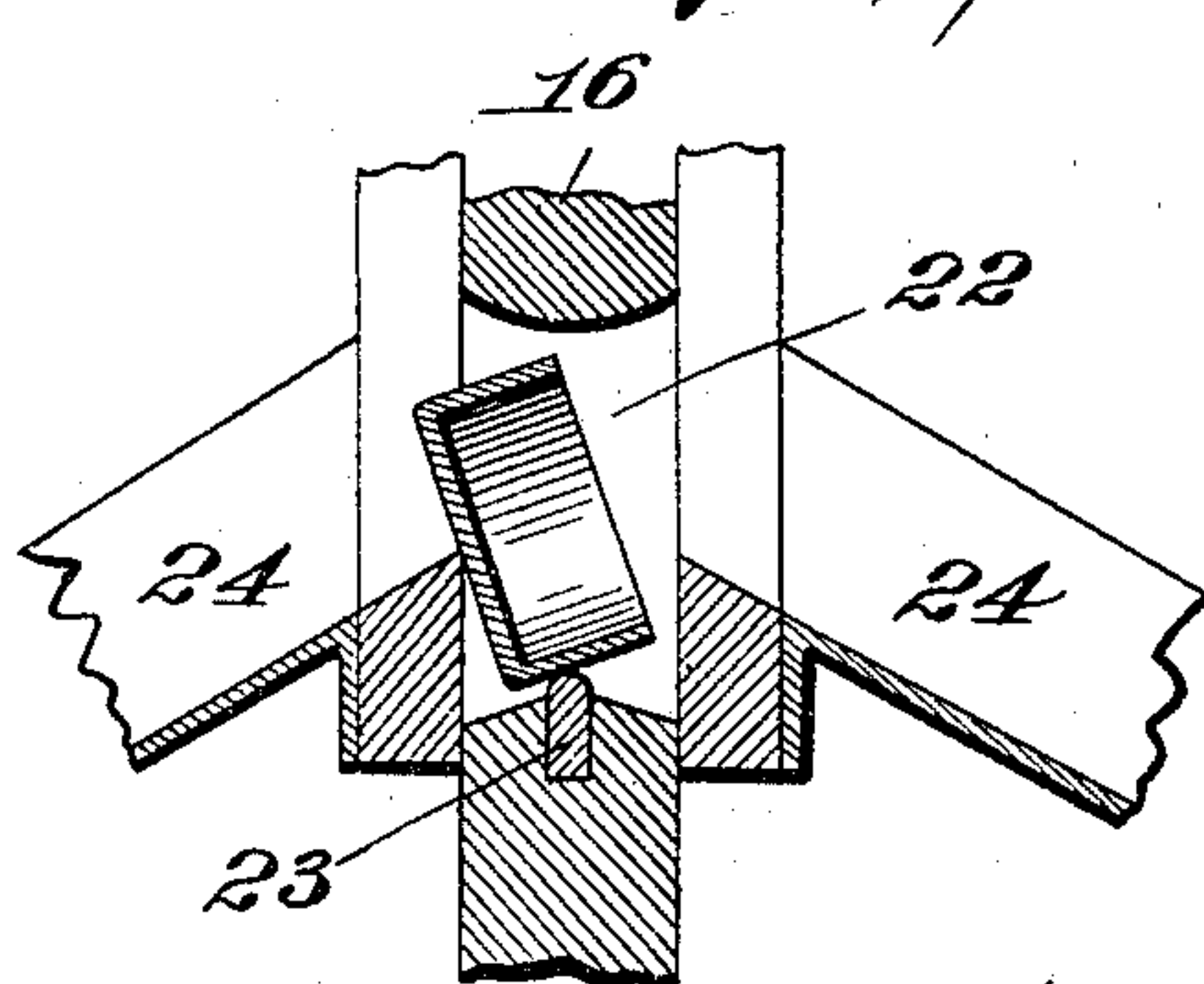


Fig. III.



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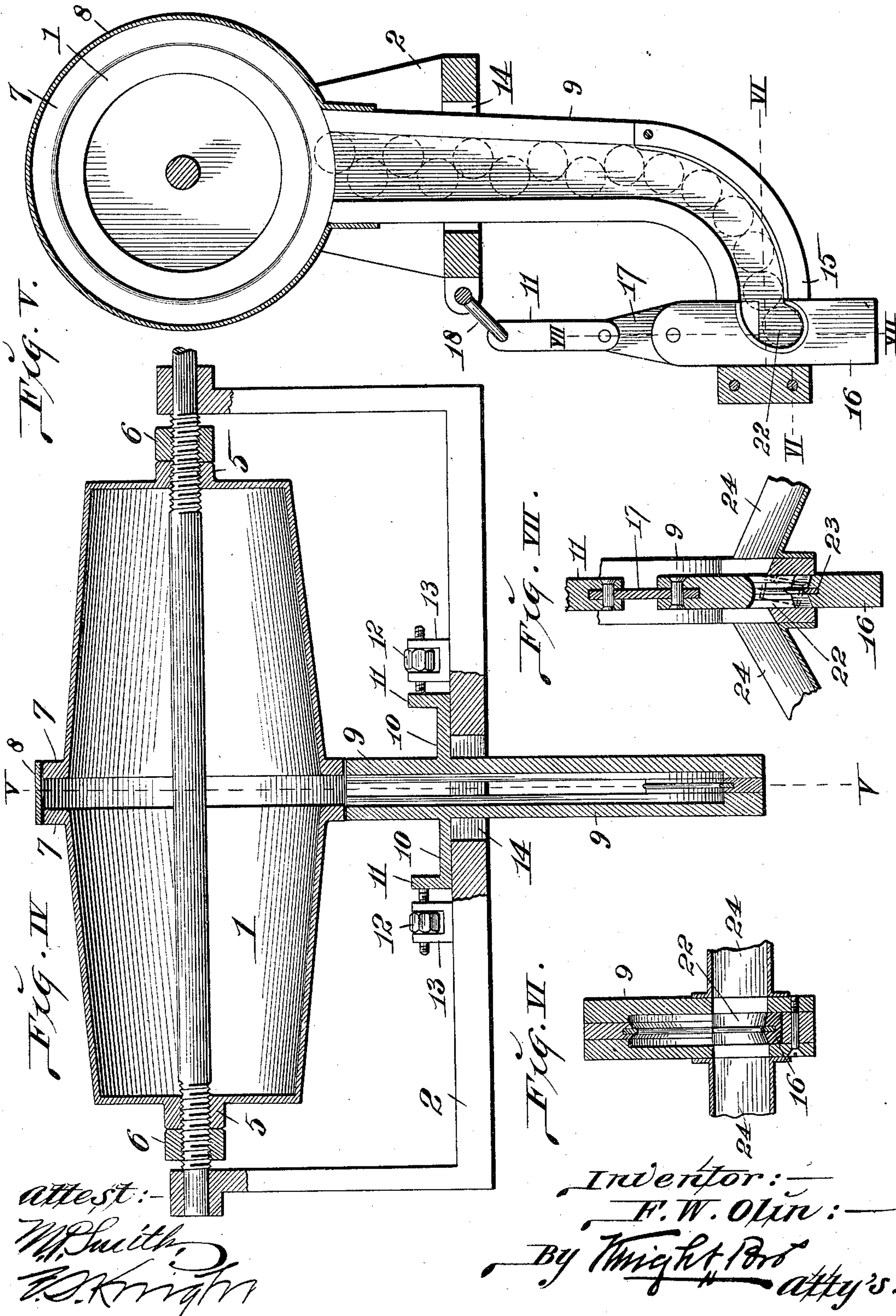
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2 SHEETS—SHEET 2.



UNITED STATES PATENT OFFICE.

FRANKLIN W. OLIN, OF ALTON, ILLINOIS.

SHELL-HEAD-FEEDING APPARATUS.

SPECIFICATION forming part of Letters Patent No. 736,622, dated August 18, 1903.

Application filed September 29, 1902. Serial No. 125,171. (No model.)

To all whom it may concern:

Be it known that I, FRANKLIN W. OLIN, a citizen of the United States, residing at Alton, in the county of Madison and State of Illinois, have invented certain new and useful Improvements in Shell-Head-Feeding Apparatus, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, forming part of this specification.

My invention relates to a machine for feeding right end up the metallic heads of shells, the machine being so constructed that all of the heads will be fed open end up to the delivery-chute.

My invention consists in features of novelty hereinafter fully described, and pointed out in the claims.

Figure I is a perspective view of my improved machine. Fig. II is an enlarged detail section showing part of the slide and the upper end of the delivery-chute. Fig. III is a like view showing a head delivered to the other side of the chute from that shown in Fig. II. Fig. IV is a vertical section of the machine. Fig. V is a transverse section taken on line V V, Fig. IV. Fig. VI is a detail horizontal section taken on line VI VI, Fig. V. Fig. VII is a detail vertical section taken on line VII VII, Fig. V.

Referring to the drawings, 1 represents a cylinder suitably journaled in a frame 2 and the shaft of which is provided on one end with a driving-pulley 3. The cylinder has a feed-opening closed by a cover 4. The cylinder tapers from both ends toward the center, as shown in Fig. IV, and it is made in two sections capable of being adjusted toward and away from each other by means of its hubs 5, having threaded connection with its supporting-shaft.

6 represents jam-nuts to hold the sections of the cylinder to their adjustments. Each section of the cylinder has an inner flange 7, and the space between the inner ends of the two sections is closed by a band 8, the ends of which are made fast to one member of a sectional conduit 9, that extends from the under side of the cylinder to and beneath the horizontal part of the frame 2. The conduit is provided with lateral flanges 10, that rest upon the frame to support the conduit, the

outer ends of the flanges having upwardly-extending projections 11 to receive set-screws 12, that pass through brackets 13, resting upon and secured to the frame 2. The conduit passes through an opening 14 in the horizontal part of the frame 2, and by means of the set-screws 12 the width of the conduit can be changed to suit the width of the space between the inner ends of the two sections of the cylinder. The conduit terminates at its lower end in a horizontal extension 15, and in this part of the conduit is located a slide 16, connected, by means of links 17, to a crank 18 on a shaft 19, the outer end of the shaft being provided with a pulley 20, connected by a belt to a pulley 21, secured to the shaft of the cylinder 1. The slide has a horizontal opening 22, and fitted in the slide at the central part of the opening is a rib or raised portion 23.

24 represents a chute extending in both directions from the lower end of the conduit at the slide 16, the two branches of the chute terminating in a single discharge-spout 25.

The two sections of the cylinder and the two sections of the conduit are adjustable to make the width of the space between the two sections of the cylinder and the two sections of the conduit correspond with the width of the shell-heads, and a slide 16 of the proper thickness is of course used. The slide does not have to accurately fill the space in which it moves, so that by keeping on hand three or four slides of different thicknesses provision will be made for handling heads of all different widths that are used.

The operation of the machine is as follows: The heads are placed in the cylinder and the latter made to revolve or rock by moving the shaft through means of the pulley 3 or otherwise, and owing to the taper of the cylinder the heads are fed to the conduit, down which they move, as shown by dotted lines in Fig. V, and are delivered one at a time to the slide 16. As the cylinder is moved there is imparted to the slide a vertical reciprocation, and each time the slide is moved upwardly a head is carried thereby and discharged into one or the other branch of the chute 24, down which the heads move by gravity to the discharge-spout 25. The closed ends of the heads being heavier than the open ends

causes the heads to be delivered closed ends down onto the chute, inasmuch as the heads will tip on the supporting-rib 23 in the direction of their closed ends, as illustrated in Figs. II and III, and this automatic tipping of the heads occurs whether they are made with beads 26 on their closed ends, as shown in Fig. II, or made without beads, as shown in Fig. III.

10 The machine is automatic throughout its operation and requires no attention other than to keep the cylinder supplied with heads.

While I have described the machine as being used for feeding shell-heads, it is evident that it may be used for feeding any kind of caps of less width than diameter—such, for instance, as the caps or covers of metallic boxes or cans where it is desired to have them delivered from the machine closed end down.

20 I claim as my invention—

1. In a machine of the class described, the combination of a cylinder having a discharge-outlet, a conduit communicating with the outlet of the cylinder, a chute communicating with the conduit, and a slide having an opening provided with a raised central portion and which transfers the articles from the conduit to the chute, substantially as set forth.

2. In a machine of the class described, the combination of a cylinder composed of two tapering sections arranged with their adjacent ends a distance apart, a conduit communicating with said cylinder, a chute communicating with said conduit, and a slide having an opening with a raised central portion, and which is adapted to transfer the articles from the conduit to the chute, substantially as set forth.

3. In a machine of the class described, the combination of a cylinder having a discharge-opening, a vertical conduit communicating with the cylinder which terminates in a horizontal extension at its lower end, a chute communicating with the conduit, and a slide fitting in the outer end of the conduit and provided with an opening having a raised central portion and which is adapted to transfer the articles from the conduit to the chute, substantially as set forth.

4. In a machine of the class described, the combination of a cylinder having a discharge-opening and made in sections adjustable to and from each other, a conduit communicating with the outlet of the cylinder and made

in sections adjustable to and from each other, a chute communicating with the conduit, and a slide having an opening provided with a raised central portion and which transfers the articles from the conduit to the chute, substantially as set forth.

5. In a machine of the class described, the combination of a cylinder consisting of two tapering sections, means for adjusting the sections to and from each other, a conduit communicating with the outlet of the cylinder and made in two sections, means for adjusting the sections of the conduit toward and away from each other, a chute communicating with the conduit, and a slide having an opening provided with a raised central portion and which transfers the articles from the conduit to the chute, substantially as set forth.

6. In a machine of the class described, the combination of a cylinder having an outlet, means for moving the cylinder, a conduit communicating with the outlet of the cylinder, a chute communicating with the conduit, and a slide for transferring the articles from the conduit to the chute, and which is provided with means to effect the tilting of the article, substantially as set forth.

7. In a machine of the class described, the combination of a cylinder having a discharge-opening, means for moving the cylinder, a conduit communicating with the cylinder, a chute having branches communicating with both sides of the conduit, and a slide for transferring the articles from the conduit to the chute, and which is provided with means to effect the tilting of the article, substantially as set forth.

8. In a machine of the class described, the combination of a cylinder, a conduit communicating with the cylinder, a chute communicating with the conduit, a slide fitting in the chute and having an opening with a raised central portion, and means for moving the slide to transfer the articles from the conduit to the chute; said means consisting of a rock-shaft to which said slide is connected and which is belted to the cylinder-shaft of the machine, substantially as set forth.

In testimony whereof I have hereunto set my hand this 19th day of September, 1902.

FRANKLIN W. OLIN.

In presence of—

E. S. KNIGHT,

N. V. ALEXANDER.