

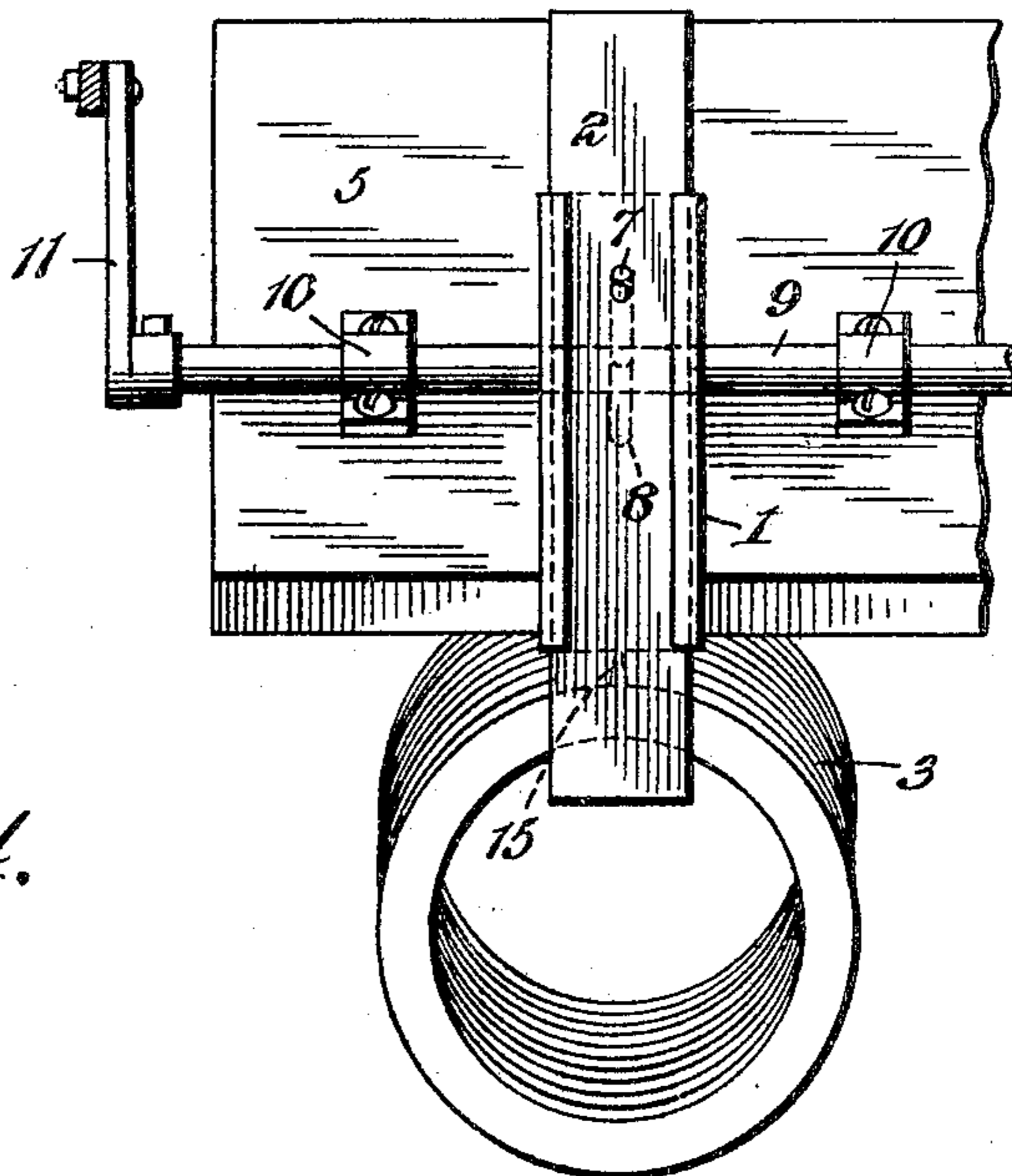
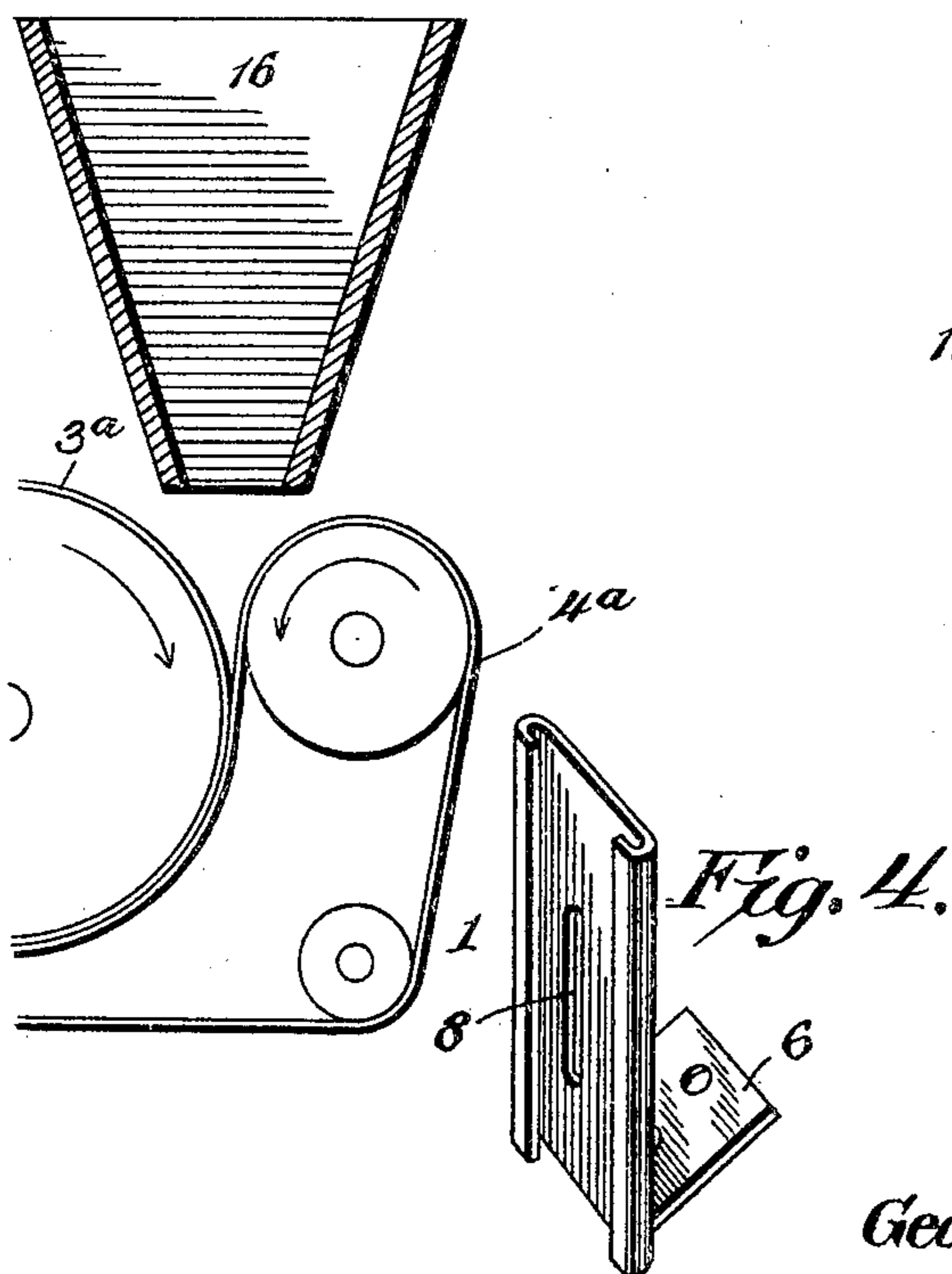
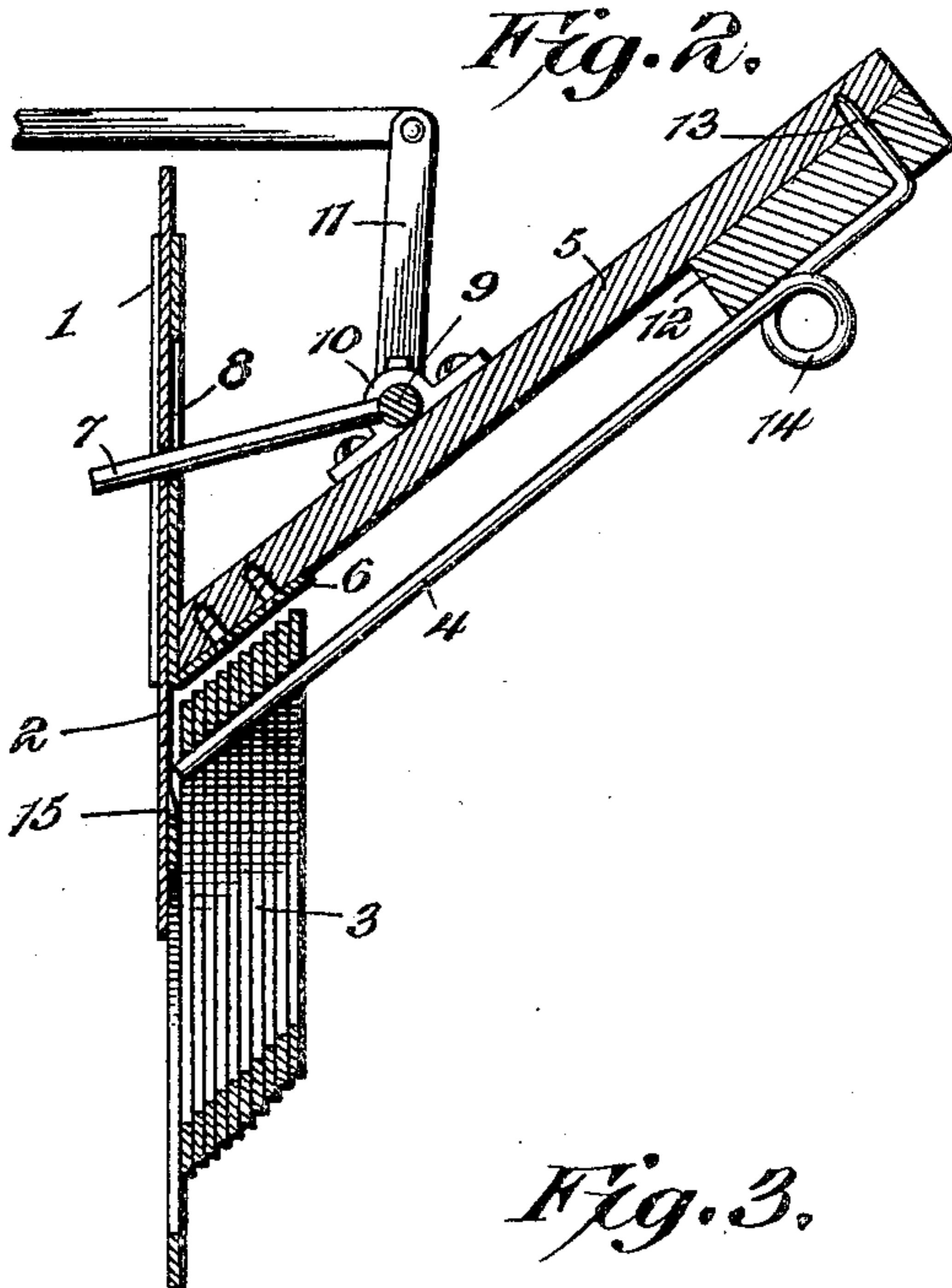
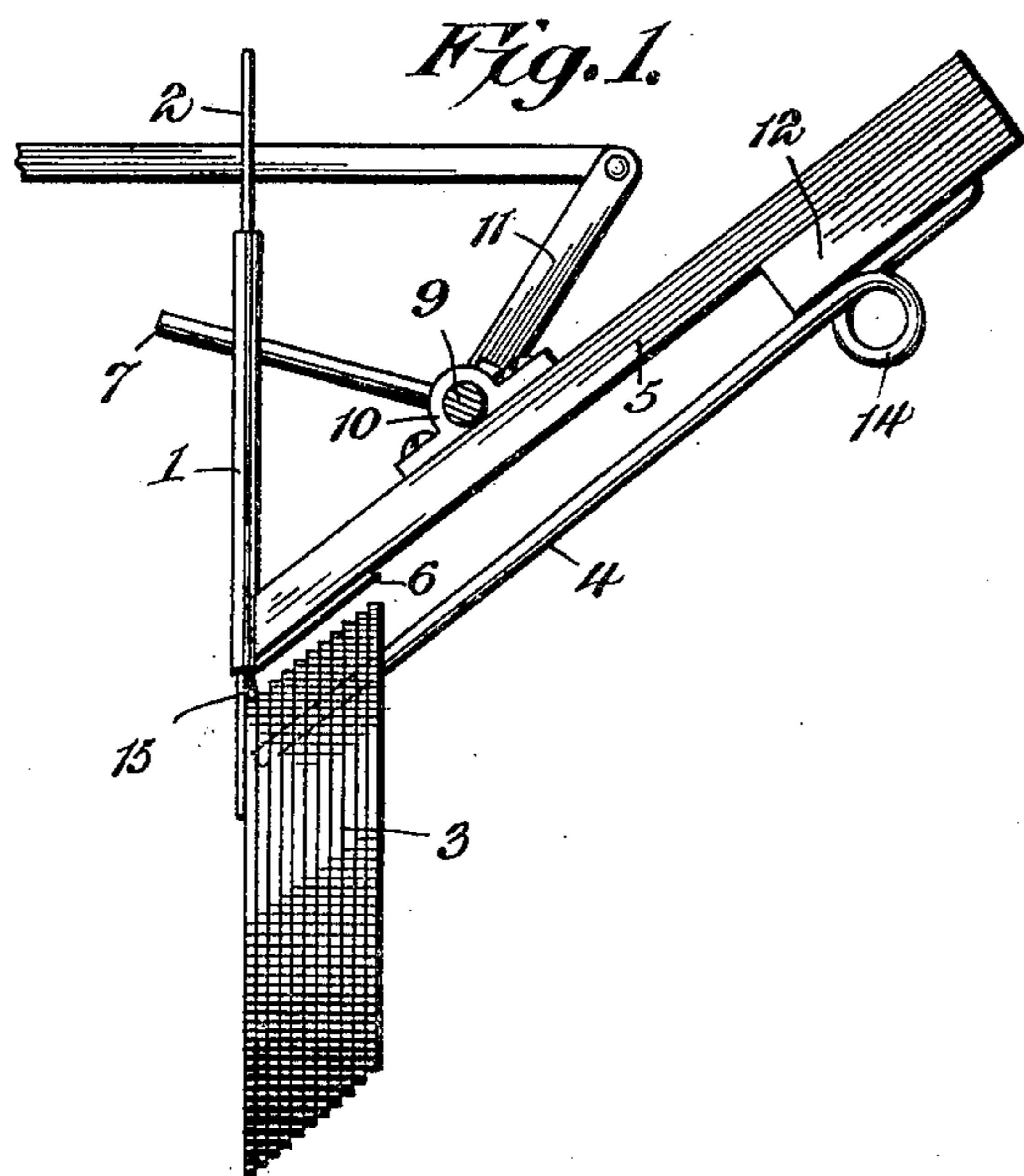
No. 804,100.

PATENTED NOV. 7, 1905.

G. D. C. CODDINGTON.

FEED MECHANISM FOR MACHINES FOR COATING SEALING RINGS WITH WAX.

APPLICATION FILED DEC. 8, 1904.



George D. C. Coddington, Inventor,

By

E. J. Siggers

Attorney

Witnesses

Howard W. Carr

J. F. Piley

# UNITED STATES PATENT OFFICE.

GEORGE DAVID CULLUM CODDINGTON, OF HENO, OHIO, ASSIGNOR TO  
BALL BROTHERS GLASS MANUFACTURING COMPANY, OF MUNCIE,  
INDIANA.

FEED MECHANISM FOR MACHINES FOR COATING SEALING-RINGS WITH WAX.

No. 804,100.

Specification of Letters Patent.

Patented Nov. 7, 1905.

Application filed December 8, 1904. Serial No. 235,972.

*To all whom it may concern:*

Be it known that I, GEORGE DAVID CULLUM CODDINGTON, a citizen of the United States, residing at Heno, in the county of Butler and State of Ohio, have invented a new and useful Feed Mechanism for Machines for Coating Sealing-Rings with Wax, of which the following is a specification.

The invention relates to feed mechanism for machines for coating sealing-rings with wax.

The object of the present invention is to provide a simple, inexpensive, and efficient feed mechanism designed for feeding uncoated pasteboard rings to the machine for coating sealing-rings with wax, described and claimed in an application filed by me on or about the 10th day of February, 1904, Serial No. 192,185, and to enable the rings to be positively fed one at a time to the mechanism for carrying the rings through the sealing material.

A further object of the invention is to provide feed mechanism of this character adapted to hold a bunch of rings and capable when all the rings of a bunch have been fed to the coating-machine of enabling another bunch to be quickly applied to it.

With these and other objects in view the invention consists in the construction and novel combination and arrangement of parts hereinafter fully described, illustrated in the accompanying drawings, and pointed out in the claims hereto appended, it being understood that various changes in the form, proportion, size, and minor details of construction within the scope of the claims may be resorted to without departing from the spirit or sacrificing any of the advantages of the invention.

In the drawings, Figure 1 is a side elevation, partly in section, of feed mechanism constructed in accordance with this invention. Fig. 2 is a longitudinal sectional view, the hopper being omitted. Fig. 3 is a front elevation. Fig. 4 is a detail view of the vertical guide.

Like numerals of reference designate corresponding parts in all the figures of the drawings.

1 designates a vertically-disposed guide designed to be constructed of sheet metal or other suitable material and provided at opposite sides with inwardly-extending flanges, forming ways for a vertically-movable ring-feeding slide or carrier 2, which is adapted to

successively feed the rings 3 of a bunch arranged on an inclined resilient holder 4. The guide, which extends vertically from the lower end of an inclined support 5, is provided at its lower end with an integral flange or attachment portion 6, arranged at an inclination and secured by screws or other suitable fastening devices to the lower face of the support 5. The support 5 may consist of any suitable framework, and in practice it will be extended entirely across the ring-coating machine, it being designed to provide feed mechanism for delivering the uncoated rings to each pair of the endless belts, which convey the rings to the sealing material. The slide, which extends above and below the guide, is provided with an aperture 8, through which passes an oscillatory arm or finger 7, which operates in the vertical aperture or slot 8 of the guide. The arm or finger extends from a transverse shaft 9, which is designed to be provided with a plurality of such arms or fingers for simultaneously operating a series of feeding devices. The shaft, which is mounted in suitable bearings 10, is provided at one end with an upwardly-extending arm 11, arranged at an angle to the arm or finger 7 and constituting with the same a bell-crank lever. The upwardly-extending arm 11 is designed to be connected with the ring-coating machine, and any suitable means may be employed for operating the feed mechanism and for timing the same to deliver the uncoated rings to the coating mechanism as rapidly as desired. Any other suitable means may be employed for reciprocating the vertically-movable slide or carrier.

The resilient holder 4, which consists of a straight inclined piece of spring wire or other suitable material, is spaced from the inclined support 5, being secured at its upper end to a spacing strip or piece 12. The upper end 13 of the holder is bent at an angle and is embedded in the spacing strip and in the adjacent portion of the support 5; but any other suitable means may be employed for securing the holder to the strip or bar 12, as will be readily understood. The holder is provided adjacent to its attached end with a spring-coil 14. The rings are arranged on the holder in a vertical position, as clearly shown in Figs. 1 and 2 of the drawings, and they are adapted to slide downward automatically to the lower

end of the holder by gravity. The tops of the rings are located in the space between the resilient holder and the inclined support, and the holder may be made of any desired length to accommodate the desired number of rings. The slide or carrier is located at the lower end of the holder and is adapted to retain the rings thereon. It is provided at its lower portion with a feed projection 15 of substantially triangular form, having a horizontal lower edge and an inclined side face. The rings are supported by the inclined holder at different elevations, and the feed projection extends from the slide or carrier a distance substantially the same as the thickness of the ring. The lower end or shoulder of the feed projection is adapted to engage the upper edge of the ring on the downward movement of the slide or carrier, and it is capable of forcing the rings one at a time off the resilient holder, which will yield sufficiently to permit the feed projection to deliver one of the rings to a hopper 16. On the upward movement of the slide or carrier the feed projection readily passes the lower end of the holder. When the slide or carrier reaches the limit of its upward movement, the feed projection is arranged above the upper edge of the lowermost ring on the holder.

When the slide or carrier is reciprocated, the rings will be fed one at a time to the hopper 16. When the holder is empty, it is swung downward away from the support for enabling another bunch of rings to be applied to it, and when released it will automatically return to its normal position with relation to the reciprocatory slide or carrier. Each ring is dropped in a perpendicular position into the hopper, which is provided with inclined sides and which is designed to be located directly above the contiguous flights or portions of the upper and lower endless belts 3<sup>a</sup> and 4<sup>a</sup>, and the latter are adapted to clamp the rings and positively carry the same through the sealing material.

It will be seen that the inclined resilient holder is adapted to support the rings in a vertical position and at different elevations, that the feed projection which projects from the slide or carrier a distance substantially equal to the thickness of a ring is capable of engaging only one of the rings, and that by this construction the rings are positively fed one at a time. Also it will be clear that the reciprocating slide or carrier coöperates with the resilient holder for retaining the rings thereon and that it effectually prevents more than one ring being discharged at a time.

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

1. In a device of the class described, the combination of a holder adapted to receive a plurality of rings, said holder being in the form of a rod supported at one end and having its

other end free to permit the rings to be strung on it, and means for feeding the rings from the latter end of the rod.

2. In a device of the class described, the combination of a holder arranged to receive and extend through a plurality of rings, and means for feeding the rings from the holder, said holder being in the form of a resilient rod.

3. In a device of the class described, the combination of an inclined holder arranged to receive and extend through a plurality of rings and adapted to support the same at different elevations, said holder being supported at its upper end and having its lower end free to permit the rings to be strung thereon toward its upper end, and means for feeding the rings from the lower end of the holder.

4. In a device of the class described, the combination of a holder consisting of a rod arranged to receive and extend through a plurality of rings, said holder being inclined for supporting the rings at different elevations and for causing them to slide downward on it, and means located at the lower end of the holder for feeding the rings.

5. In a device of the class described, the combination of a resilient holder arranged to receive and extend through a plurality of rings and adapted to be flexed or bent away from its normal position to permit the rings to be placed on it, and means for feeding the rings.

6. In a device of the class described, the combination of an inclined resilient holder arranged to receive and extend through a plurality of rings for supporting the same at different elevations and in a vertical position, and means for feeding the rings.

7. In a device of the class described, the combination of an inclined support, an inclined holder constructed of resilient material and arranged beneath and spaced from the support to receive a plurality of rings, said holder being adapted to extend through the rings for supporting the same in a vertical position, and a vertical reciprocating slide or carrier located at the lower end of the holder and coöperating with the same and provided with means for engaging the rings.

8. In a device of the class described, the combination of an inclined support, an inclined holder constructed of resilient material and connected at its upper end with the support, said holder being also provided at its upper portion with a spring-coil, and means located at the lower end of the holder and coöperating with the same for feeding the rings.

9. In a device of the class described, the combination with a holder for supporting a plurality of rings in a vertical position said holder being fixed at its rear end, the front end being free to permit the rings to be strung thereon, of a vertically-reciprocating slide or carrier provided with means for engaging the rings successively.

10. In a device of the class described, the

combination with means for supporting a plurality of rings in a vertical position, of a vertically-reciprocating slide or carrier provided with means for engaging the rings, and a hopper arranged to guide the rings to the carrying mechanism of a coating-machine.

11. In a device of the class described, the combination with means for holding a plurality of rings, of a vertical guide, and a vertically-reciprocating slide or carrier provided with a lateral feed projection for engaging the rings.

12. In a device of the class described, the combination with means for yieldably supporting a plurality of rings in a vertical position and at different elevations, of a vertically-movable slide or carrier having a feed projection located at a point between the ends of the slide or carrier for engaging the rings.

13. In a device of the class described, the combination with means for yieldably supporting a plurality of rings in a vertical position and at different elevations, of a vertically-movable slide or carrier having a substantially triangular feed projection of a length to engage but one of the rings, whereby the latter will successively discharge from the holder when the slide or carrier is reciprocated.

14. In a device of the class described, the combination of a vertically-disposed guide having a slot or opening, a vertically-movable

slide or carrier mounted in the guide and provided with means for engaging a ring, means for supporting the rings in position to be engaged by the slide or carrier, and means for operating the oscillatory arm, whereby the slide or carrier is reciprocated.

15. In a device of the class described, the combination of an inclined support, a vertical guide provided at its bottom with a projecting flange or portion secured to the support, a holder located beneath the support and adapted to receive a plurality of rings, a vertically-movable slide or carrier operating in the guide and provided with means for engaging the rings, a shaft also mounted on the support and provided with an arm operating the slide or carrier, and means for rocking the shaft.

16. In a device of the class described, the combination of means for supporting a plurality of rings in a vertical position and at different elevations, and a reciprocating slide provided with a lateral projection for feeding the rings successively.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in the presence of two witnesses.

GEO. DAVID CULLUM CODDINGTON.

Witnesses:

I. E. LINK,  
E. E. SAUL.