

No. 704,266.

Patented July 8, 1902.

H. N. NORTON.

CAN HEAD DELIVERING APPARATUS.

(Application filed Oct. 22, 1900.)

(No Model.)

2 Sheets—Sheet 1.

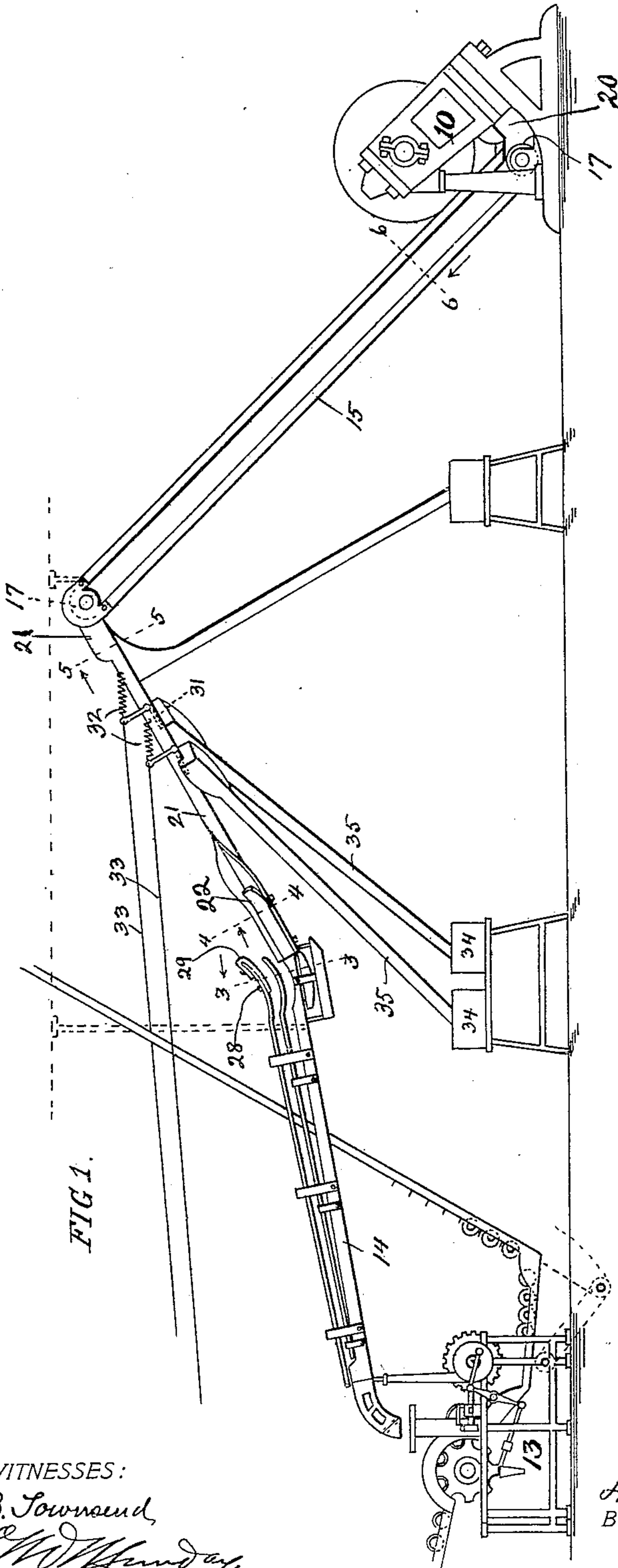


FIG. 1.

WITNESSES:  
F. B. Townsend,  
H. W. Munday.

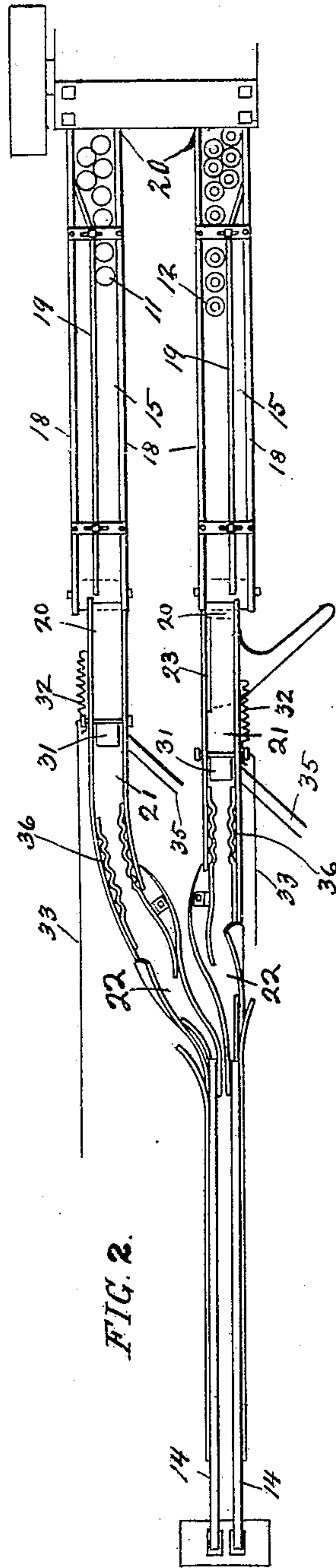


FIG. 2.

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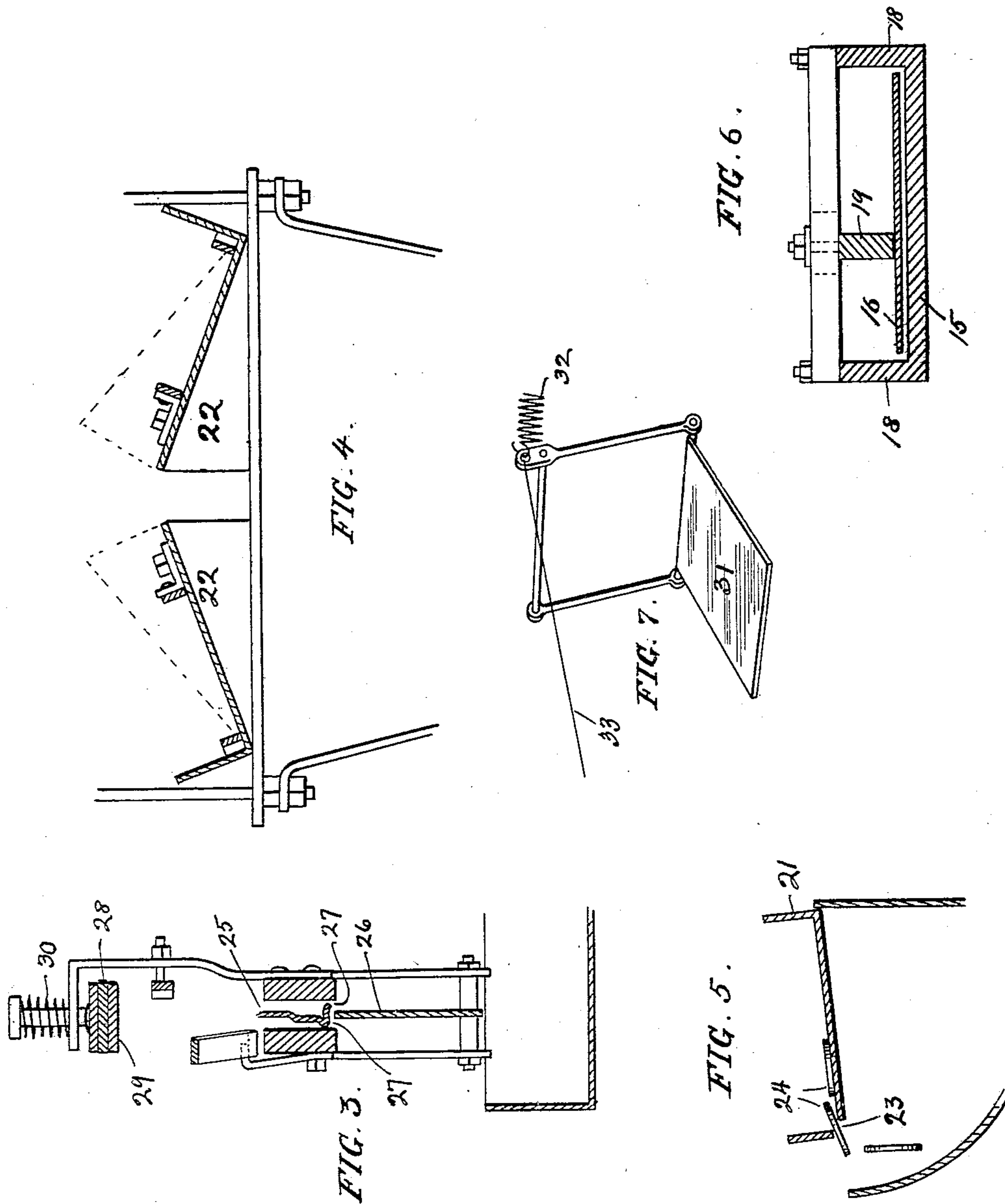
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INVENTOR.  
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# UNITED STATES PATENT OFFICE.

HORATIO N. NORTON, OF MAYWOOD, ILLINOIS, ASSIGNOR, BY MESNE ASSIGNMENTS, TO AMERICAN CAN COMPANY, OF JERSEY CITY, NEW JERSEY, A CORPORATION OF NEW JERSEY.

## CAN-HEAD-DELIVERING APPARATUS.

SPECIFICATION forming part of Letters Patent No. 704,266, dated July 8, 1902.

Application filed October 22, 1900. Serial No. 33,928. (No model.)

*To all whom it may concern:*

Be it known that I, HORATIO N. NORTON, a citizen of the United States, residing in Maywood, in the county of Cook and State of Illinois, have invented a new and useful Improvement in Can-Head-Delivering Apparatus, of which the following is a specification.

This invention relates to can-head feed and delivery devices. Its object is to provide a device or apparatus of a simple, efficient, and durable construction for automatically feeding and delivering top and bottom heads from the gang-die presses by which they are stamped up or formed to the can-heading machine, by which the heads are applied to the can-bodies.

The invention consists in the novel construction of parts and devices and in the novel combinations of parts and devices herein shown and described, and specified in the claims.

In the accompanying drawings, forming a part of this specification, Figure 1 is a side elevation of an apparatus embodying my invention. Fig. 2 is a plan view. Figs. 3, 4, 5, and 6 are detail cross-sections on lines 3-3, 4-4, 5-5, and 6-6 of Fig. 1. Fig. 7 is a detail perspective view of the discharge-gate for surplus heads when the presses produce the same too rapidly for the heading mechanism.

In the drawings, 10 represents a gang-die press of any well-known or suitable construction—such, for example, as that shown and described in the Hodgson patent, No. 361,286, of April 19, 1887, by which the bottom heads 11 and top heads 12 are stamped or formed a number at a time or at each stroke of the press, and 13 is a can-heading machine of any well-known or suitable construction for automatically applying the can-heads to the can-bodies and into the can-head-feed chutes 14 14, of which the can-heads are to be conveyed, fed, or delivered.

15 15 are can-head-conveyer troughs, each having a conveyer-belt 16 traveling on pulleys 17 and furnished with sides 18 18 and an adjustable side guide 19 to adapt the same to can-heads of different diameters. Spouts 20 deliver the can-heads into the elevators or

conveyers. The can-heads as they slide down the spouts 20 rest flat thereon, and they also of course rest flat on the conveyer-belts 16; but when they enter the can-head chutes 14 14 of the can-heading machine they require to rest edgewise or stand in a vertical plane, and to turn them from their flat or horizontal position which they occupy when they leave that position which they occupy when they leave the hopper portion of the conveyer 16, the intermediate inclined chutes 21 21, down which they pass from the upper end of the conveyer or elevator to the upper end of the can-heading-machine chutes 14 14, are provided with a transversely curved or twisted section or portion 22, which operates to turn the can-heads onto their edges or into vertical or upright position. This twisted portion is preferably near the lower end of the intermediate chute 21, so that the can-head will acquire some velocity or momentum before coming to the twisted or turning section of the chute. In order to separate from the can-heads flat disks or pieces of sheet metal punched from the sheet in forming the can-heads and which would obstruct the operation of the heading-machine if they should enter the same, I provide the intermediate chute 21 near the beginning of its twisted portion with narrow slots 23 at the lower sides thereof, through which such punchings may escape, and to provide for the further escape and separation of flat disks or punchings 24 from the can-heads 25 the chutes 14, which receive the can-heads in an upright position, are each furnished with a thin blade or rail 26, serving as the bottom of the chute and having narrow slots or openings 27, through which flat disks or punchings may escape, while the can-heads roll along said blade or rail 26. The chutes 14 at the upper end thereof are each furnished with a curved spring, guide, or brake 28, having a leather or cushion face 29 and held in position by a light spring 30, which serves to arrest the motion of the can-heads after they pass the curved or twisted portion of the chute, and thus prevent their passage with too great velocity into the can-heading machine. Each



of the intermediate chutes 21 is provided with a movable gate 31, held in position by a spring 32, which the operator may open by a line 33 from time to time as may be required  
 5 to discharge surplus can-heads into the receptacle 34 through the discharge-chutes 35 when the can-head conveyer or elevator 16 delivers the can-heads too fast for the heading-machine. The intermediate chute  
 10 21 is further provided with waved or corrugated sides 36 near the twisted portion to retard and regulate the speed of the can-heads in descending the chute.

I claim—

15 1. The combination with a can-heading mechanism and a can-head-forming mechanism or press, of a can-head feed-chute along which the can-heads pass in an upright position, of a continuously-operating can-head  
 20 elevator upon which the can-heads rest in a flat position, and an intermediate curved or twisted connecting-chute operating to turn the can-heads onto their edge and deliver them into the can-head chute in this position,  
 25 substantially as specified.

2. The combination with a continuously-operating can-head elevator, of a can-head chute having a curved or twisted portion to turn the can-heads onto their edges and a  
 30 can-heading mechanism, substantially as specified.

3. The combination with a can-head-forming mechanism a can-head elevator, of a can-head chute having a curved or twisted portion to turn the can-heads onto their edges,  
 35 and provided with means for separation and escape of flat disks or punchings of sheet metal, substantially as specified.

4. The combination with a continuously-  
 40 operating can-head elevator, of a can-head chute having a curved or twisted portion to turn the can-heads onto their edges, and provided with a movable gate for the discharge

of surplus can-heads and a can-heading mechanism, substantially as specified. 45

5. The combination with a continuously-operating can-head elevator, of a can-head chute having a curved or twisted portion to turn the can-heads onto their edges, and provided with a movable gate and a discharge-  
 50 chute for the discharge of surplus can-heads and a can-heading mechanism, substantially as specified.

6. The can-head feed-chutes for conveying can-heads in an upright position, provided  
 55 with a narrow blade or rail at its bottom to permit escape of flat disks or punchings from the can-heads, substantially as specified.

7. The combination with the can-head feed-chute 14, of intermediate chute 21, having a  
 60 curved or twisted portion 22, said chute 14 having a curved brake-acting upper guide 28, substantially as specified.

8. The combination with a can-head-forming mechanism or press, of a can-heading  
 65 mechanism and means for automatically delivering the can-heads from the can-head-forming mechanism to the can-heading mechanism, said means having a device for separating flat disks or punchings from the can-  
 70 heads, substantially as specified.

9. The combination with a can-head-forming mechanism or press, of a can-heading mechanism, means for automatically and continuously delivering can-heads from the  
 75 can-head-forming mechanism, and a movable gate or device for discharging surplus can-heads interposed between said continuously-operating can-head-delivery means and the can-heading mechanism, substantially as  
 80 specified.

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Witnesses:

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 EDMUND ADCOCK.