

No. 867,956.

PATENTED OCT. 15, 1907.

W. H. DOBLE.  
CARTON MARKING ATTACHMENT FOR CARTON SETTING UP MACHINES  
OR THE LIKE.

APPLICATION FILED APR. 5, 1906.

2 SHEETS—SHEET 1.

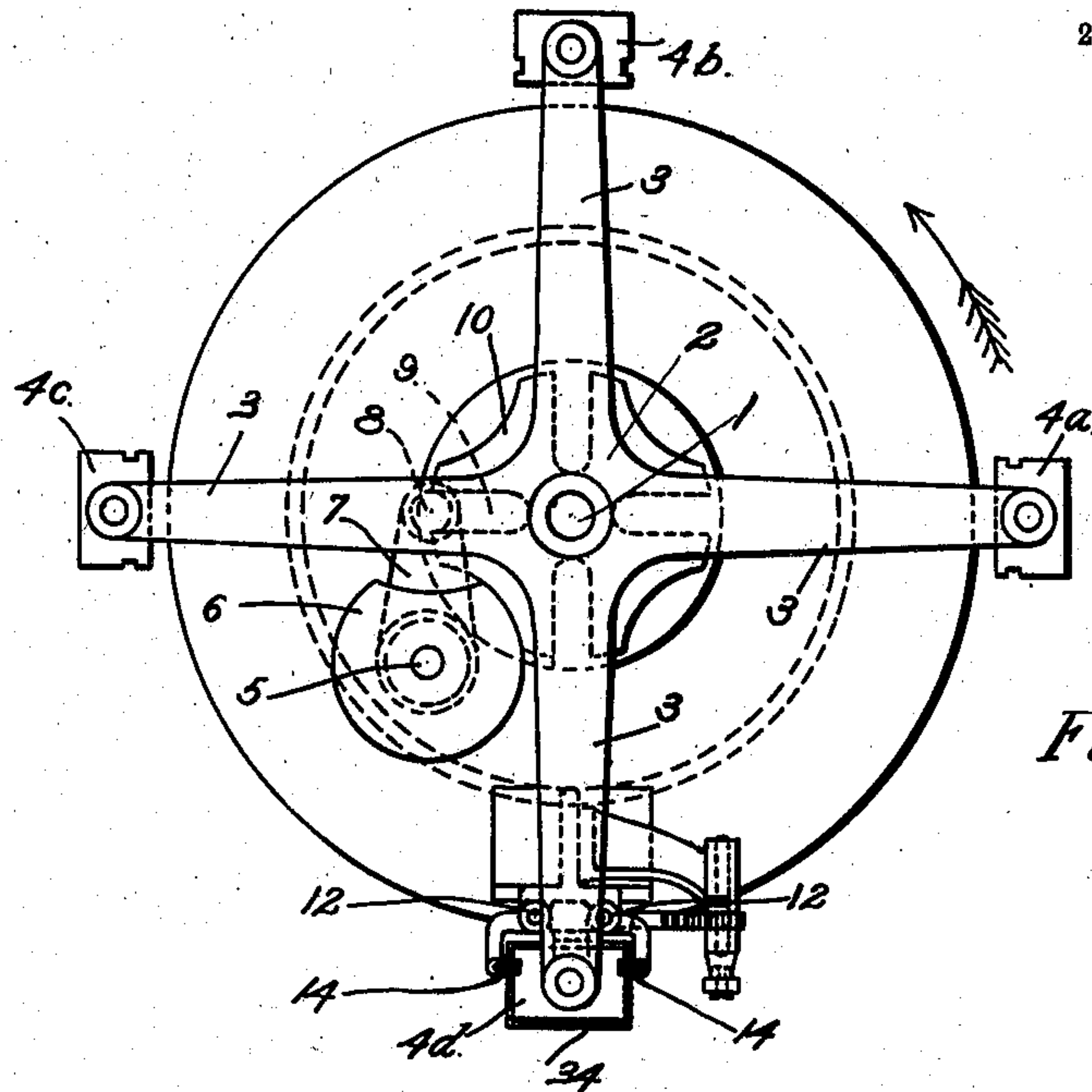


Fig. 1.

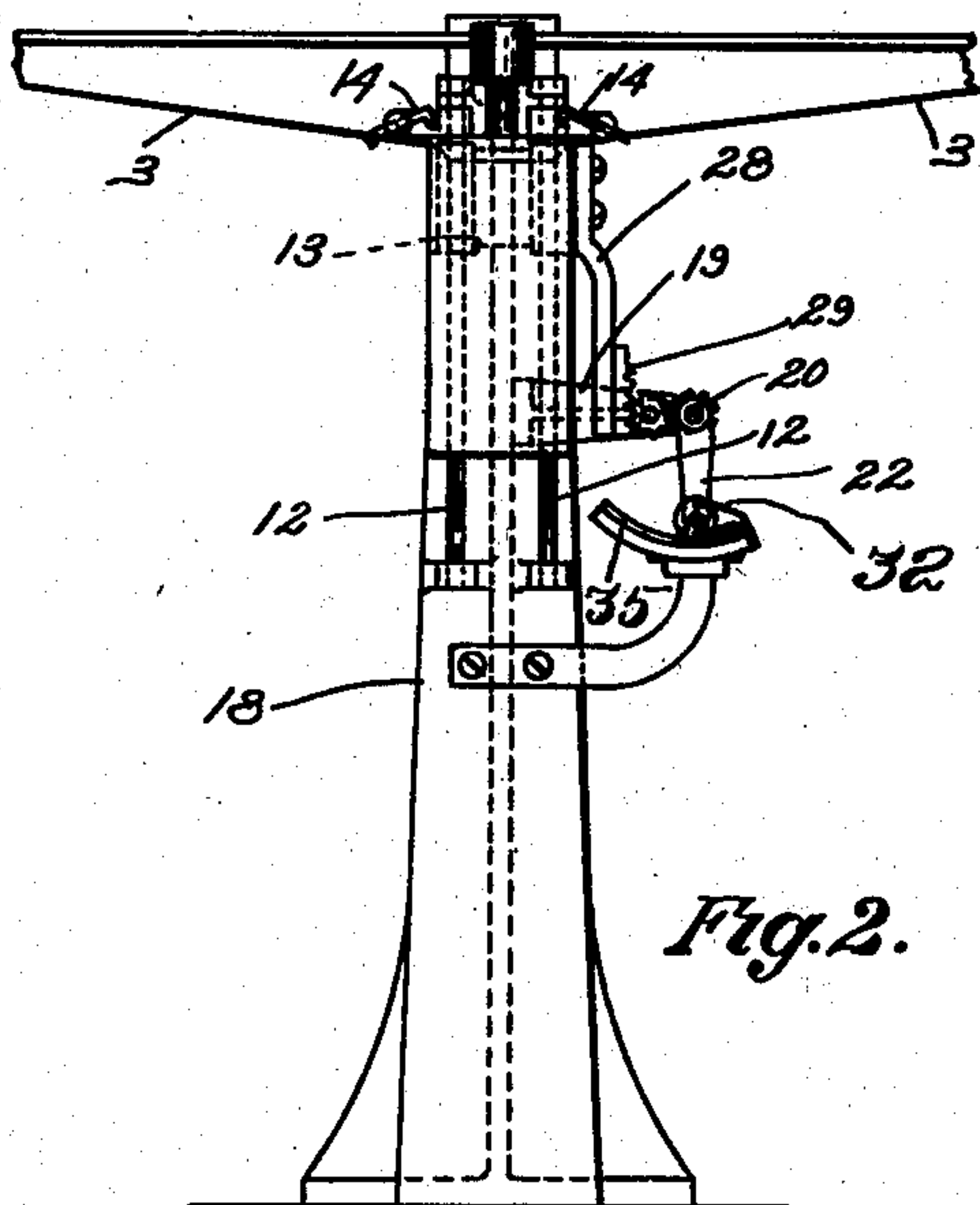


Fig. 2.

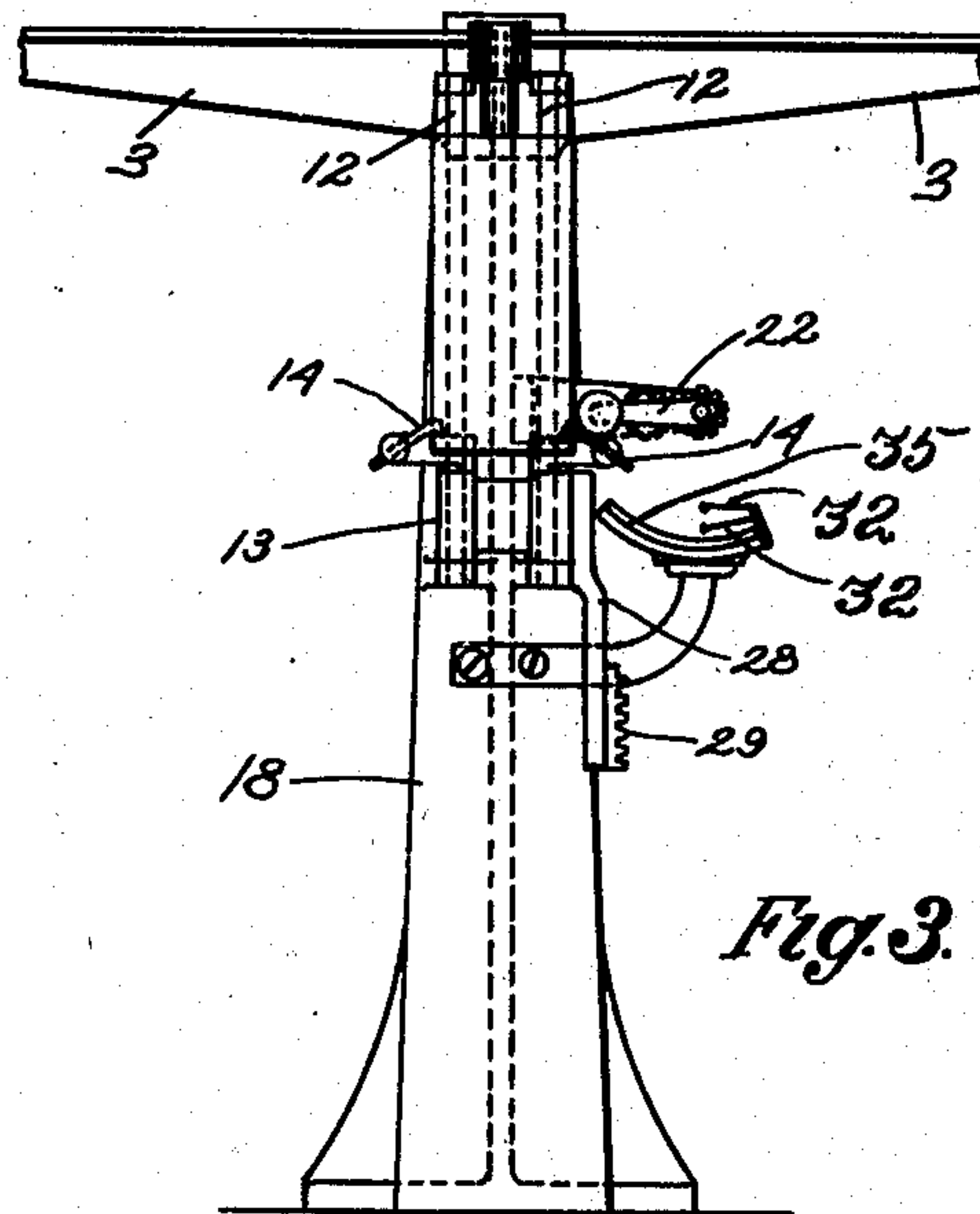
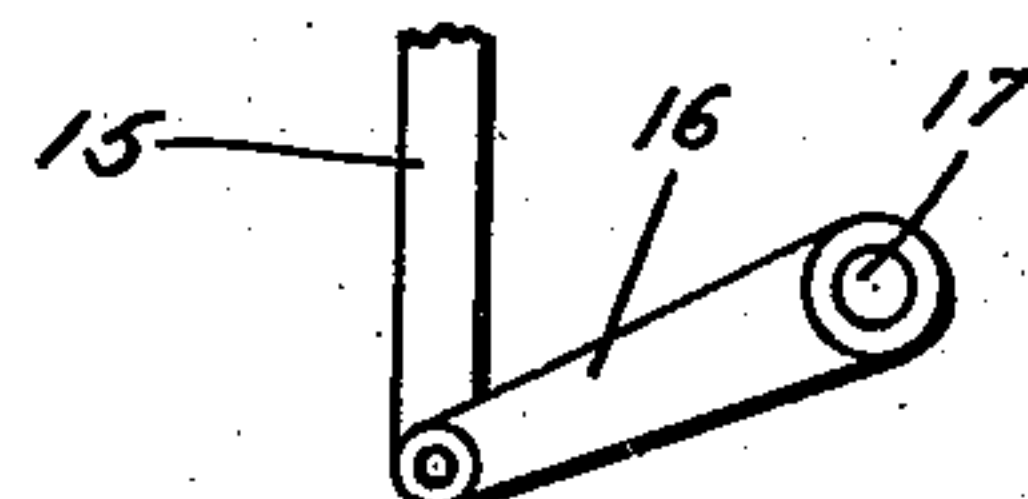
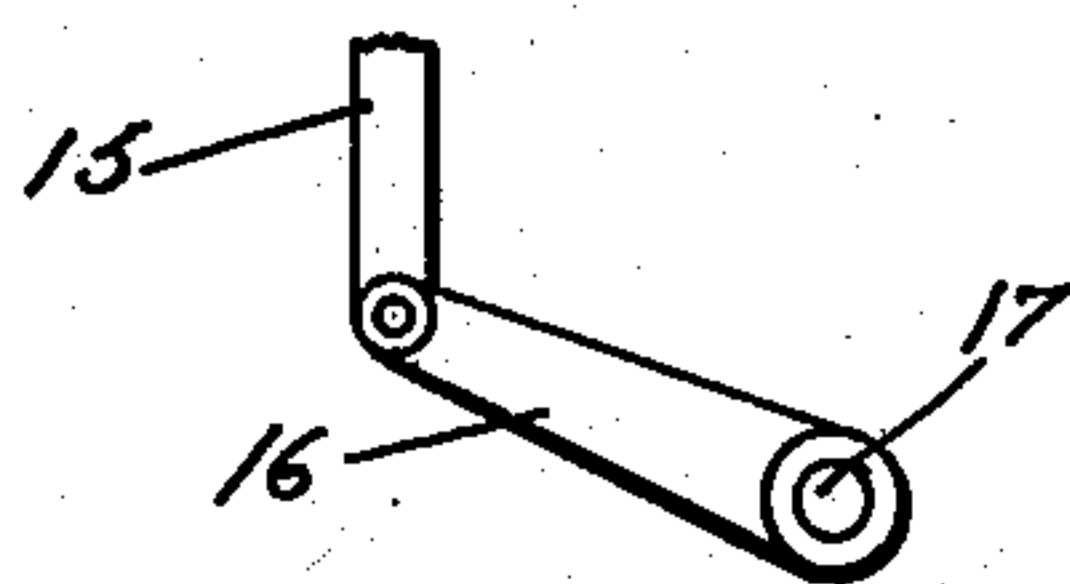


Fig. 3.



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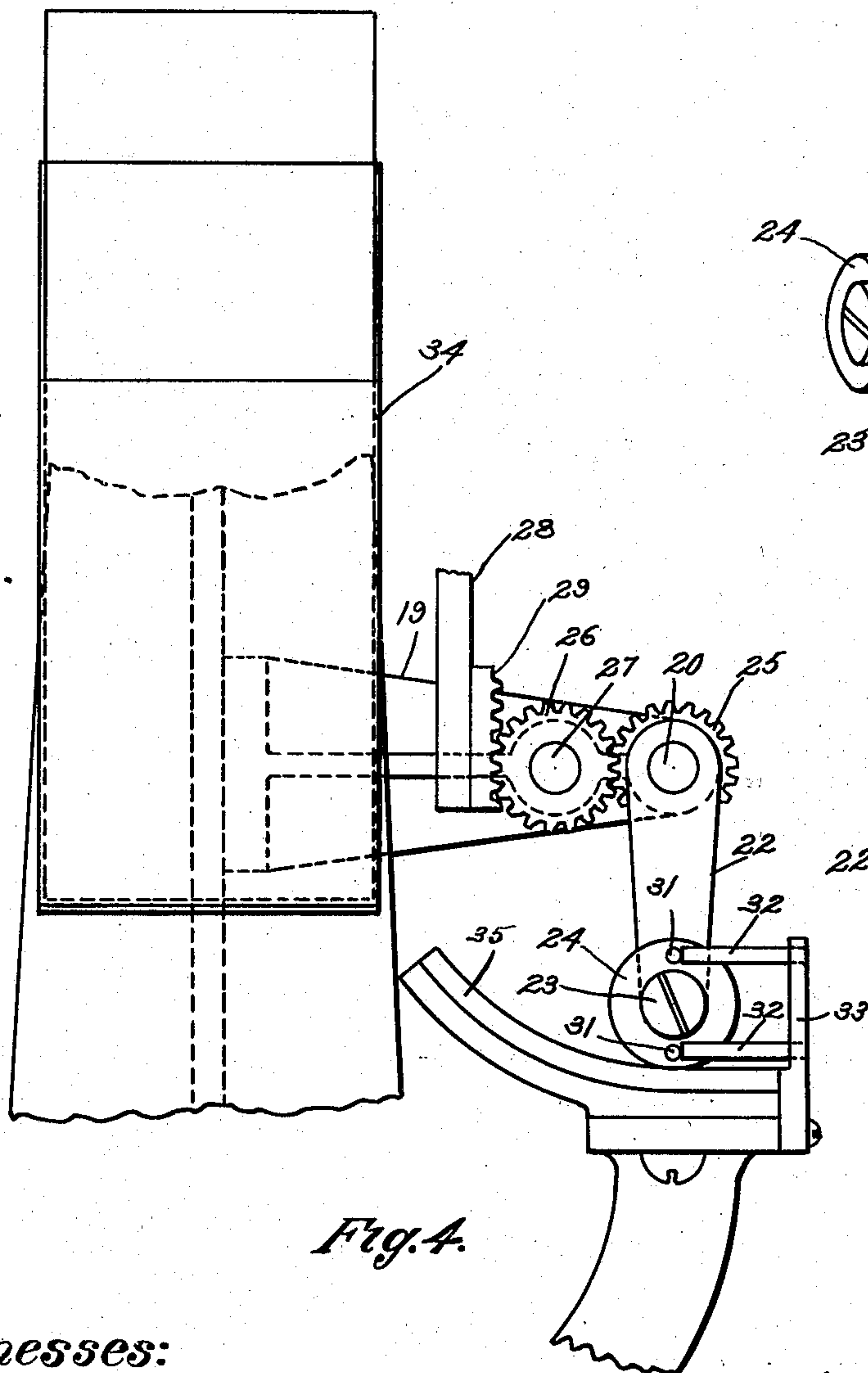


Fig. 4.

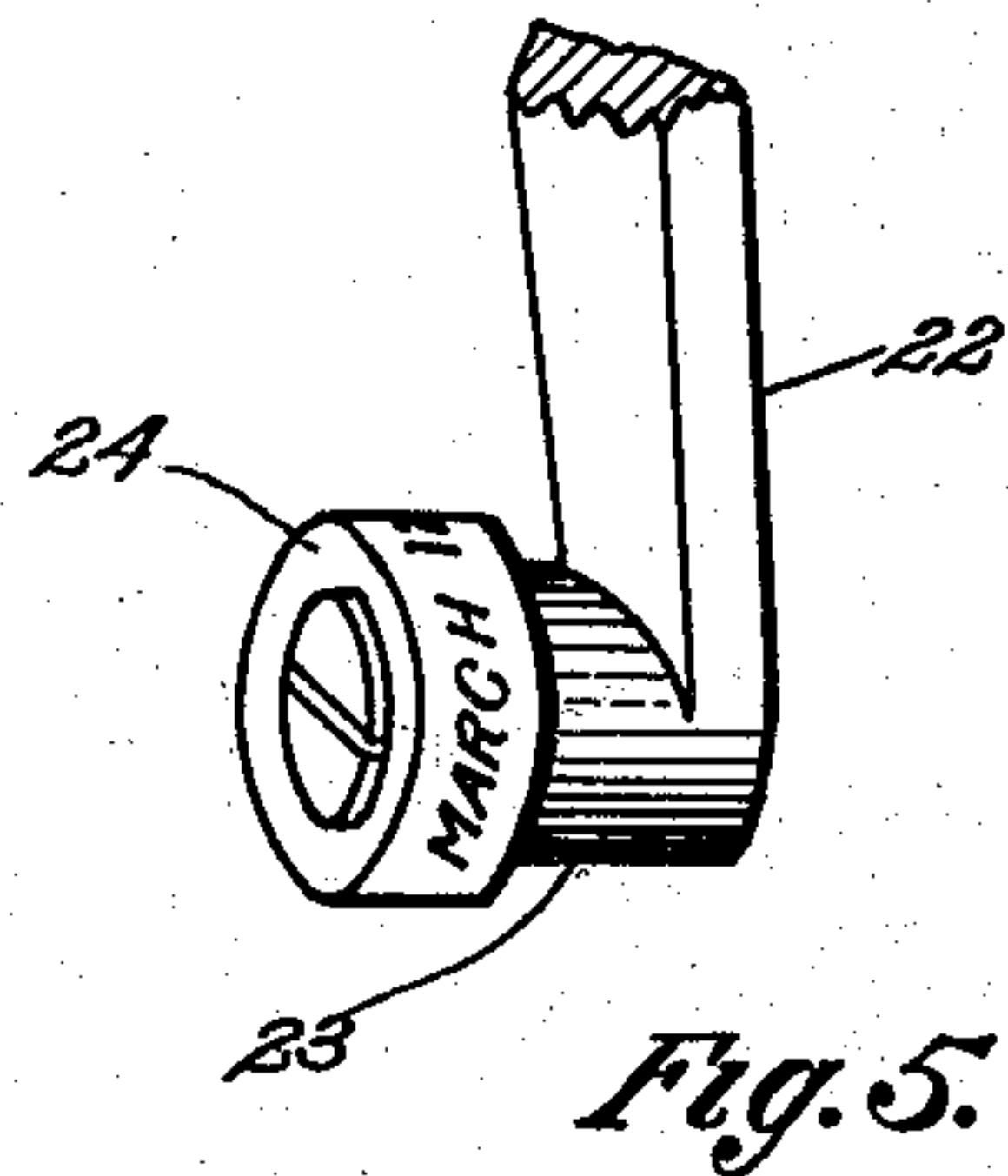


Fig. 5.

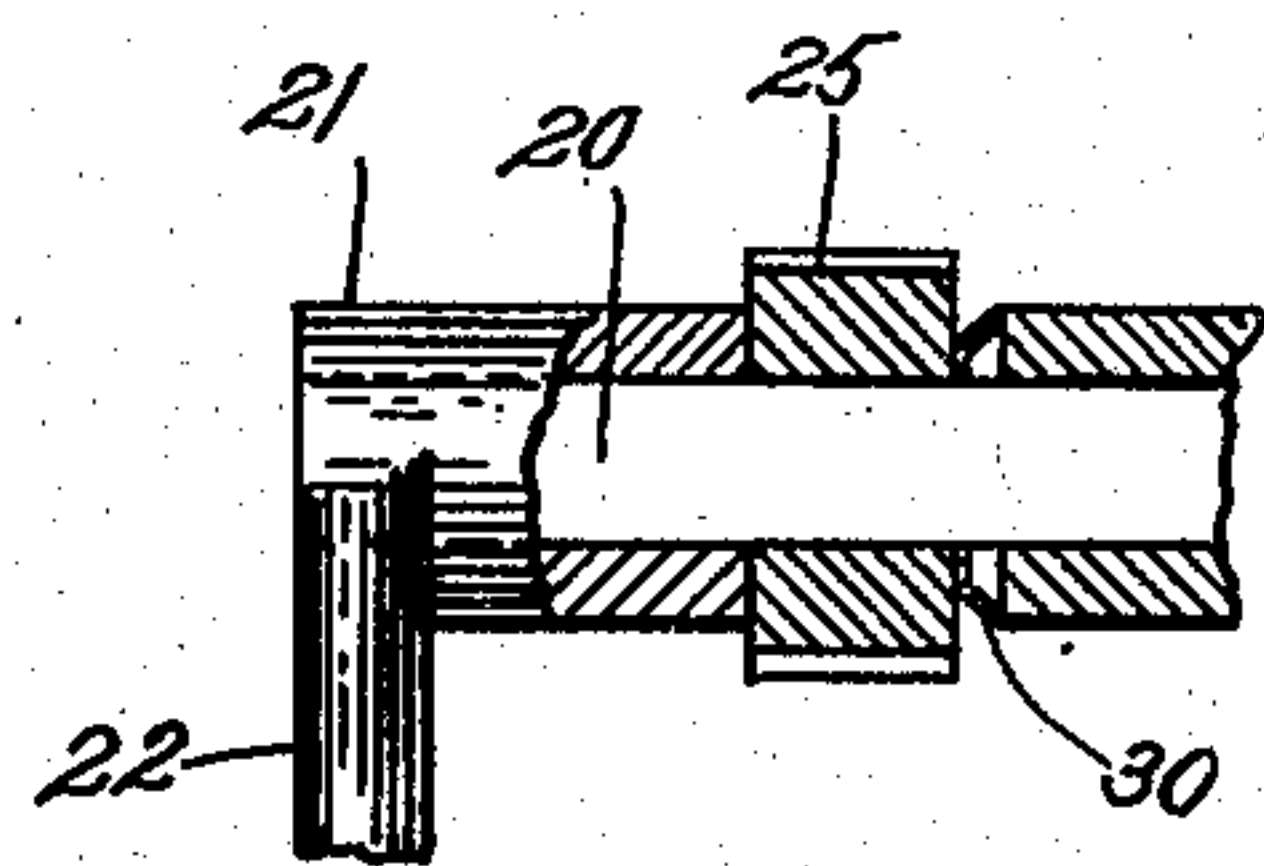


Fig. 6.

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# UNITED STATES PATENT OFFICE.

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## CARTON-MARKING ATTACHMENT FOR CARTON-SETTING-UP MACHINES OR THE LIKE.

No. 867,956.

Specification of Letters Patent.

Patented Oct. 15, 1907.

Application filed April 5, 1906. Serial No. 310,025.

*To all whom it may concern:*

Be it known that I, WILLIAM H. DOBLE, a citizen of the United States, residing at Quincy, in the county of Norfolk and Commonwealth of Massachusetts, have  
5 invented a certain new and useful Improvement in Carton-Marking Attachments for Carton-Setting-Up Machines or the Like, of which the following is a specification, reference being had therein to the accompanying drawings.

10 In the putting up of goods in cartons by machinery, the receptacles used are sometimes cans and sometimes cartons or other forms of boxes, and when cartons are used, they are frequently of the knock-down form so called, and require to be set up before being  
15 filled. Sometimes the cartons of this knock-down type are set up either by hand or on a machine independently of the filling machine, and are then transferred by hand to the filling machine, and sometimes the setting-up machine is connected with the filling  
20 machine in such a manner that the carton is formed, and its flaps glued and automatically transferred to the filling mechanism or connected with the same machine. Whichever form of receptacle is used, and whether the setting-up mechanism is connected with  
25 the filling mechanism or independent thereof, it in any event is desirable in putting up many kinds of goods to have some designating mark placed upon the receptacle, as for instance, the date on which the packages are filled, and in some cases it is desired to print  
30 some other designating mark on the package. I have described in another application an attachment for a filling machine by which such designating mark is controlled by the movement of the filling machine to mark the cartons or other receptacles. When, how-  
35 ever, the cartons are filled on the same day that they are set up, whether the setting-up mechanism is connected directly with the filling mechanism or is independent thereof, the designating mark may be applied just as properly to the carton before it is transferred  
40 to the filling mechanism.

The special object of the present invention is to provide means whereby the carton may be marked during the setting-up or gluing operation, the marking mechanism being controlled by the mechanism which  
45 actuates the setting-up or gluing mechanism. It is immaterial at just what stage in the operation the marking takes place.

50 In Patent No. 736,237, granted August 11, 1903, to the Pneumatic Scale Corporation on my application, there is shown and described one form of machine for setting-up cartons, and in Patent No. 767,395, granted August 16, 1904 to the Pneumatic Scale Corporation on my application, there is shown a carton setting-up machine combined with a filling machine, to either

of which my present invention could be applied. In  
55 Patent No. 767,445, granted August 16, 1904 to the Pneumatic Scale Corporation on the application of W. S. Scales, there is shown a slightly different form of carton setting-up machine, and in Patent No. 732,225,  
60 granted June 30, 1903, to Henrietta W. Doble on the application of W. S. Scales, there is shown a machine for gluing paper boxes, to both of which machines the invention might be adapted. In the drawings accompanying the present application, I have shown  
65 the device particularly as applied to a machine for setting-up cartons like that shown in Patent No. 767,445, above referred to, showing, however, only such portions of the machine as are deemed necessary to illustrate the invention, unnecessary details being  
70 omitted.

The invention will be fully understood from the following description taken in connection with the accompanying drawings, and the novel features are pointed out and clearly defined in the claims at the  
75 close of the specification.

In the drawings,—Figure 1 is a plan of a machine embodying the present invention, the carton setting-up mechanism being like that shown in said Patent No. 767,445. Fig. 2 is a front elevation, partly broken  
80 away, showing the marking mechanism attachment in its normal position. Fig. 3 is a front elevation showing the marking disk in engagement with the carton. Fig. 4 is a side elevation in detail on an enlarged scale of the marking mechanism and immediately connected parts. Fig. 5 is a detail of the marking disk.  
85 Fig. 6 is a side elevation, partly in section, showing the crank arm which carries the marking disk and the shaft and pinion on the crank shaft and showing a friction disk which engages the pinion on the crank shaft.  
90

Referring to the drawings,—1 is an intermittently rotating shaft on which is mounted a spider head 2, having a series of radiating arms 3 which carry the forming blocks 4<sup>a</sup>, 4<sup>b</sup>, 4<sup>c</sup>, 4<sup>d</sup>. The shaft 1 has an intermittent motion, turning at each period of movement  
95 through an arc sufficient to bring the blocks in successive rotation into position for one of the blocks to receive a carton which is to be formed and to have its flaps folded and glued at successive stages.

The particular mechanism for giving the intermittent  
100 rotation to the shaft 3 forms no part of the present invention. One form of mechanism for doing this, which is shown in the drawings, is briefly as follows: Mounted on shaft 1 beneath the spider 2 is a slotted disk 10 formed with radial slots 9. Mounted on shaft 5 is a  
105 locking disk 6, having an arm or spur 7 which carries a pin 8 which is adapted to engage successively with the slots 9 in said disk 10. At each revolution of the



shaft 5, the shaft 1 and spider 2 which carries the forming-blocks are rotated through a quarter turn or through a portion of a turn depending on the number of slots in the disk 10.

5 The cartons are subjected to the various folding and gluing operations in passing from the station occupied by the block 4<sup>a</sup> to the position of block 4<sup>b</sup>, thence to block 4<sup>c</sup>, thence to the station of block 4<sup>d</sup>, at which point, in the form of machine represented in the drawings, the carton is stripped from the forming block.

10 Mounted on guide rods 12, 12, is a vertically sliding block 13 to which are attached throw-off fingers 14 which project into the path of the carton on each side far enough to engage the upper ends of the side panels

15 of the carton when the slide block descends and strip the carton from the forming block. A rod 15 is pivoted at one end to the slide block 13, the other end of said rod being pivoted to one end of lever 16, the other end of said lever 16 being fast to a rocker shaft 17, said

20 rocker shaft being actuated by suitable mechanism to vertically reciprocate the rod 15. Suitable mechanism for actuating the rocker shaft 17, so as to reciprocate the rod 15 and slide block 13 at proper times, is shown and fully described in said Patent No. 767,445 above

25 mentioned. Secured to standard 18 and projecting laterally therefrom is a bracket 19. Journaled at one end in said bracket 19 is a short shaft 20 and fast to the other end of said shaft 20 is a sleeve 21 from which projects downwardly a crank arm 22 and from the lower end

30 of said arm 22 there projects laterally an arm 23 to which is journaled a marking disk 24. Fast to said shaft 20 is a pinion 25 which meshes with a pinion 26 which is journaled on shaft 27 projecting from said bracket 19.

35 Secured to said slide block 13 is a bar 28 on which is a rack 29 which moves vertically with the slide block and is adapted to engage with the pinion 26. When the rack 29, in its movement up or down, engages with the pinion 26, it causes the same to rotate and thereby rotates the pinion 25 which also turns the crank 22.

40 When the slide block 13 moves downward, the attached stripping fingers 14 carry the carton downward from the forming block, and the bar 28 and rack 29 will also move downward, and by means of the pinions 26 and 25 will turn the crank 22 up into the position shown in

45 Fig. 3, bringing the marking disk into engagement with the side of the carton 34. The continued descent of the slide block after the rack portion of the bar 28 has moved down past the pinion will, by reason of the frictional engagement of the rotary marking disk with the

50 carton, cause the marking disk to rotate and print the designating character which it contains upon the side of the carton. In order that the lever 22 and marking disk may not fall back of their own weight after the rack 29 has passed down out of engagement with the disk 26,

55 I provide a friction washer 30 on the shaft 20 which engages the end of the pinion 25 and binds it sufficiently so that it cannot fall of its own weight, but at the same time allows it to be moved by some positive force.

When the slide block is carried up again by the rocking of the shaft 17 in the opposite direction to that which carries the slide block down, the rack 29 will engage the pinion 26, and thereby turn the crank 22 down again and bring the marking disk back to its normal position.

60 In order to properly set the marking disk 24 if it be-

comes turned too far on its axis during the movement for the type to engage the carton to make the proper imprint, there are provided two oppositely disposed pins 31 in its face which respectively engage the stop pins 32 in its descent, thereby always bringing the disk back to the right position for a new start. If it should be turned too far around on its axis one way or the other when it returns, one of the pins 31 would strike the stop pin 32 before the other one and cause the disk to turn until the other pin 31 strikes its stop pin 32. These stop pins, as shown, are fixed to a plate 33 secured to the frame. An arc-shaped inking pad 35 is provided on which the marking disk 24 rolls in its movement to and from the carton.

While I have described the marking device as applied to a carton setting-up or gluing machine as shown, the invention is not limited to application to that form of machine, and it is not intended that the claims shall be limited to combination with that form of machine. It is obvious that the marking mechanism can be actuated by a reciprocating member carrying a carton in such manner as to cause the marking mechanism to engage the carton whether the carton is carried by a setting-up machine or gluing machine or for other use.

The word "carton" has been used in describing the application of the invention as it is especially intended for use in machines for handling cartons, but it is intended that the word "carton" shall include packages of any description which are adapted to be marked by mechanism of the character described.

What I claim is:

1. A device for marking packages comprising a reciprocating member which moves the packages in one direction, marking mechanism, and intermediate mechanism between said marking mechanism and said reciprocating member whereby the movement of said reciprocating member in one direction moves the marking mechanism into engagement with the package and the movement of said reciprocating member in the reverse direction returns said marking mechanism to its normal position.

2. A device for marking packages comprising mechanism for moving the packages, a rocking lever having pivoted to its swinging end a rotary marking disk and intermediate mechanism between said rocking lever and said package moving mechanism whereby the package moving mechanism actuates said rocking lever to bring the marking disk into engagement with the moving package and an inking pad having a concave inking surface which is concentric with the axis of the rocking lever and which is engaged by the marking disk at each reciprocating movement.

3. A device for marking packages, comprising a vertically reciprocating member which moves the cartons in one direction, a rack carried by said reciprocating member, a rocking lever carrying at one end a rocking lever fulcrumed at one end and carrying at the other end marking mechanism and intermediate gearing between said rocking lever and said rack whereby the movement of said reciprocating member in the direction which moves the package will turn said rocking lever into the position where the marking mechanism will engage the moving package and the reverse movement of the reciprocating member will return the rocking lever and marking mechanism to their normal position.

4. A device for marking packages, comprising a reciprocating member which moves the packages in one direction, a rocking lever pivoted at one end to a fixed support and having pivoted to its free end a rotary marking disk and intermediate mechanism between said rocking lever and said reciprocating member, whereby the reciprocating member, when it moves in the direction which moves the package, actuates the said rocking lever to turn on its



fulcrum and bring the marking disk into engagement with the moving package.

5. A device for marking packages, comprising a reciprocating member which moves the packages in one direction, a rocking lever pivoted at one end to a fixed support and having pivoted to its free end a rotary marking disk and intermediate mechanism between said rocking lever and said reciprocating member, whereby the reciprocating member, when it moves in the direction which moves the package, actuates the said rocking lever to turn on its fulcrum and bring the marking disk into engagement with the moving package, and an inking pad having a concave inking surface which is concentric with the axis of the rocking lever and which is engaged by the marking disk at each reciprocating movement.

6. A device for marking packages, comprising a reciprocating member which moves the packages in one direction, a rocking lever pivoted at one end to a fixed support and having pivoted to its free end a rotary marking disk and intermediate mechanism between said rocking lever and said reciprocating member, whereby the reciprocating member, when it moves in the direction which moves the package, actuates the said rocking lever to turn on its fulcrum and bring the marking disk into engagement with the moving package, and means which engage the marking disk at the end of each return movement whereby the disk at the end of each movement will be left with its printing face in the same position.

7. In combination with a machine for handling cartons, a rotary member having a plurality of carton holding blocks on which the cartons are held in a squared out form, a reciprocating member having means for engaging each one of said cartons at a certain point in the path of movement of said carton carrying blocks, and removing the cartons from said blocks, and marking mechanism which is actuated by the movement of said reciprocating

member and thereby moved into engagement with the carton.

8. In a machine for setting up or gluing cartons having an intermittently rotating head carrying a series of carton holding blocks, mechanism for rotating said head, a reciprocating member having means which engage the carton on the holding block at one of the points in its path of movement, and intermediate mechanism timed with relation to the mechanism which controls the movement of the head to actuate said reciprocating member during the intervals between the movements of the head, and marking mechanism actuated by the reciprocating member when it moves in a direction to strip the carton from the reciprocating member to bring the marking mechanism into engagement with the carton.

9. In a machine for setting up and gluing cartons, a rotary head having a plurality of radiating arms, each provided with a depending holding block, means for intermittently rotating said head, a vertically reciprocating member having means for engaging the carton on the holding block at one of the stages of rest in its rotation, means for actuating said reciprocating member, means for controlling the mechanism which actuates the rotating head whereby the reciprocating member is moved in a direction to strip the carton from the holding block during one of the periods of rest of the rotary head, and marking mechanism actuated by said reciprocating member during its stripping movement to bring the marking mechanism into engagement with the carton.

In testimony whereof I affix my signature, in presence of two witnesses.

WILLIAM H. DOBLE:

Witnesses:

WILLIAM A. COPELAND,  
ALINE TARR.