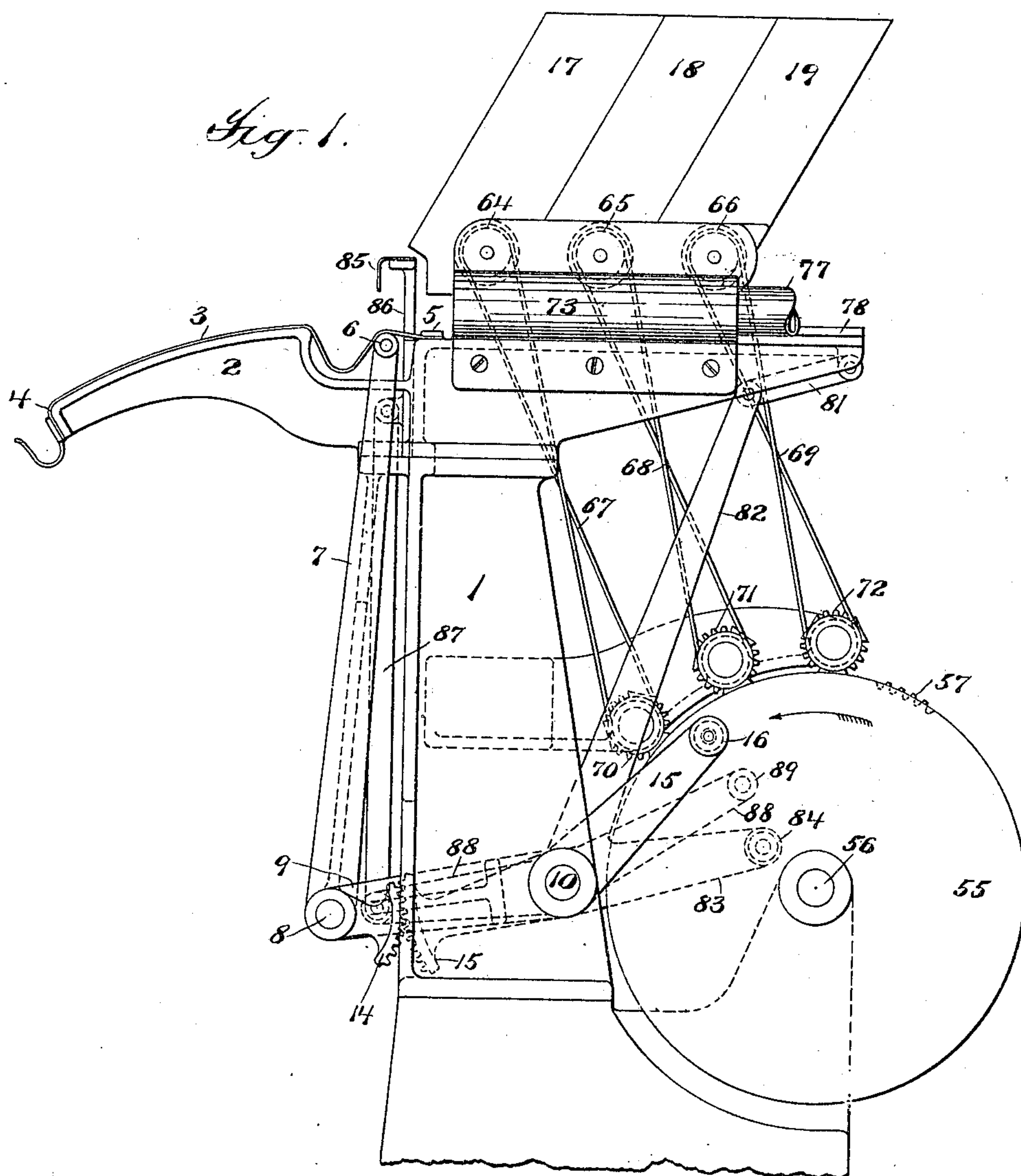


No. 812,220.

PATENTED FEB. 13, 1906.

W. S. LUCKETT.
FEEDING MECHANISM.
APPLICATION FILED MAY 28, 1904.

3 SHEETS—SHEET 1.



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3 SHEETS—SHEET 2.

Fig. 2.

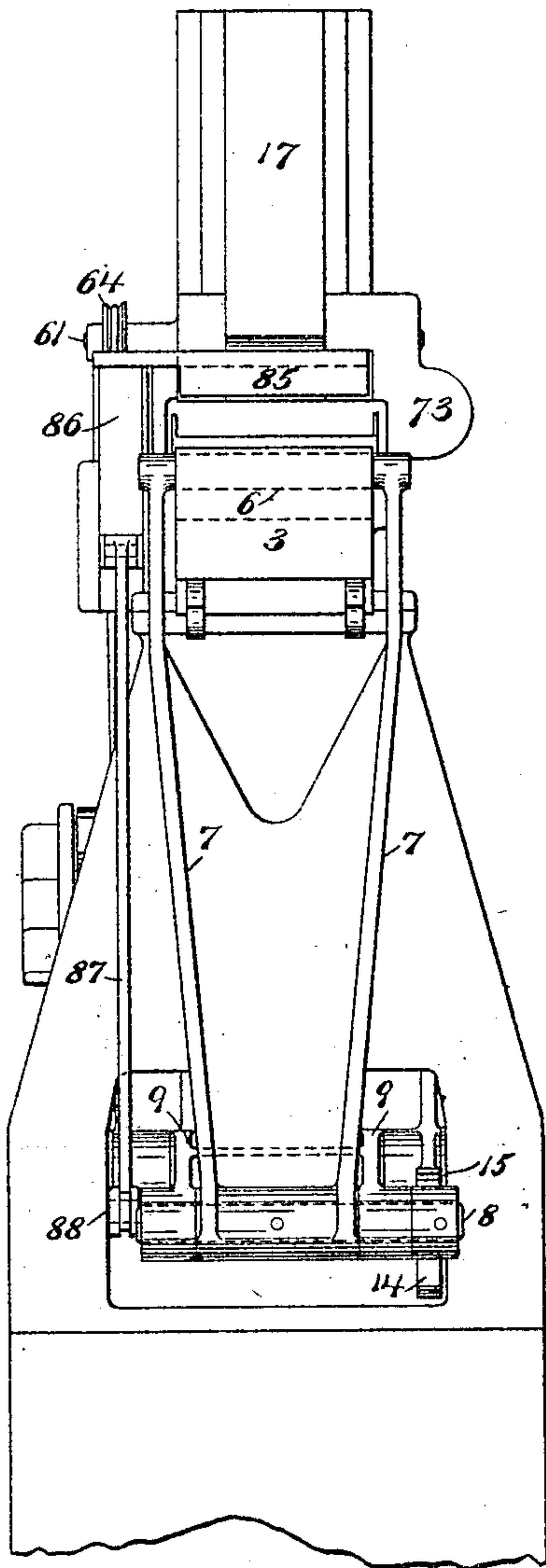
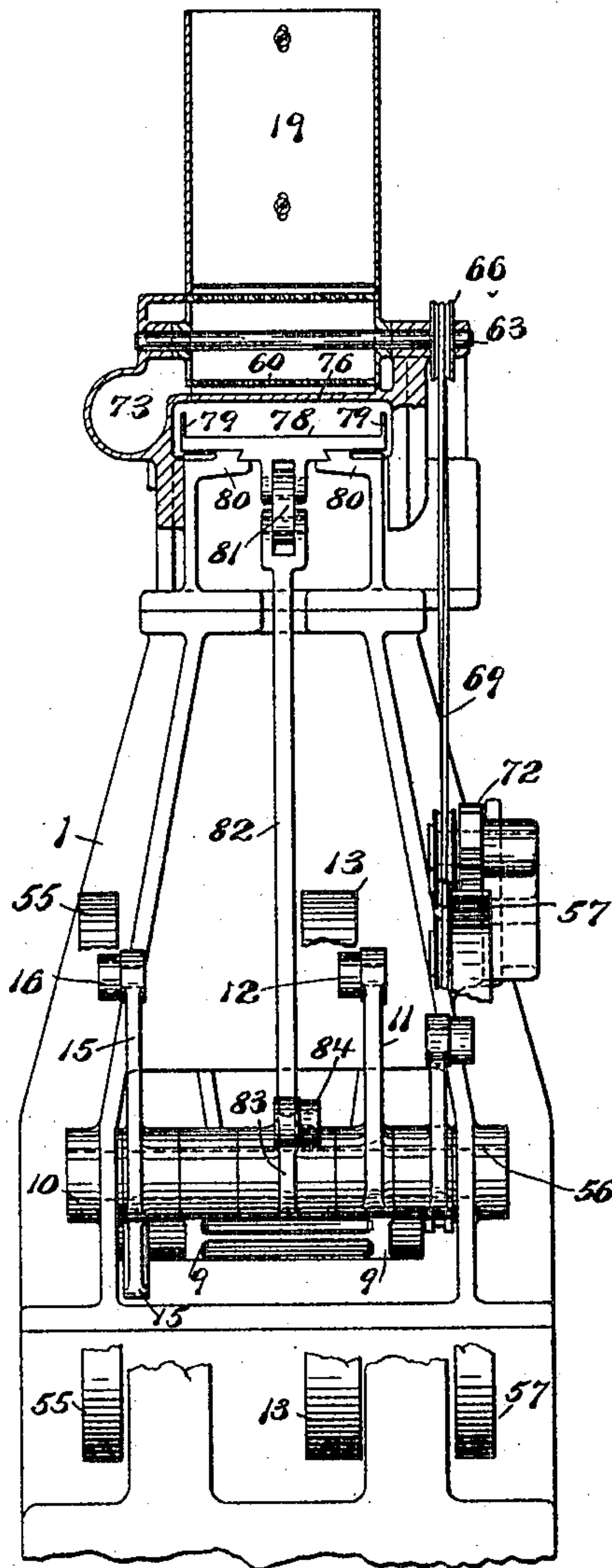


Fig. 3.



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J. F. Evans
G. Galiani

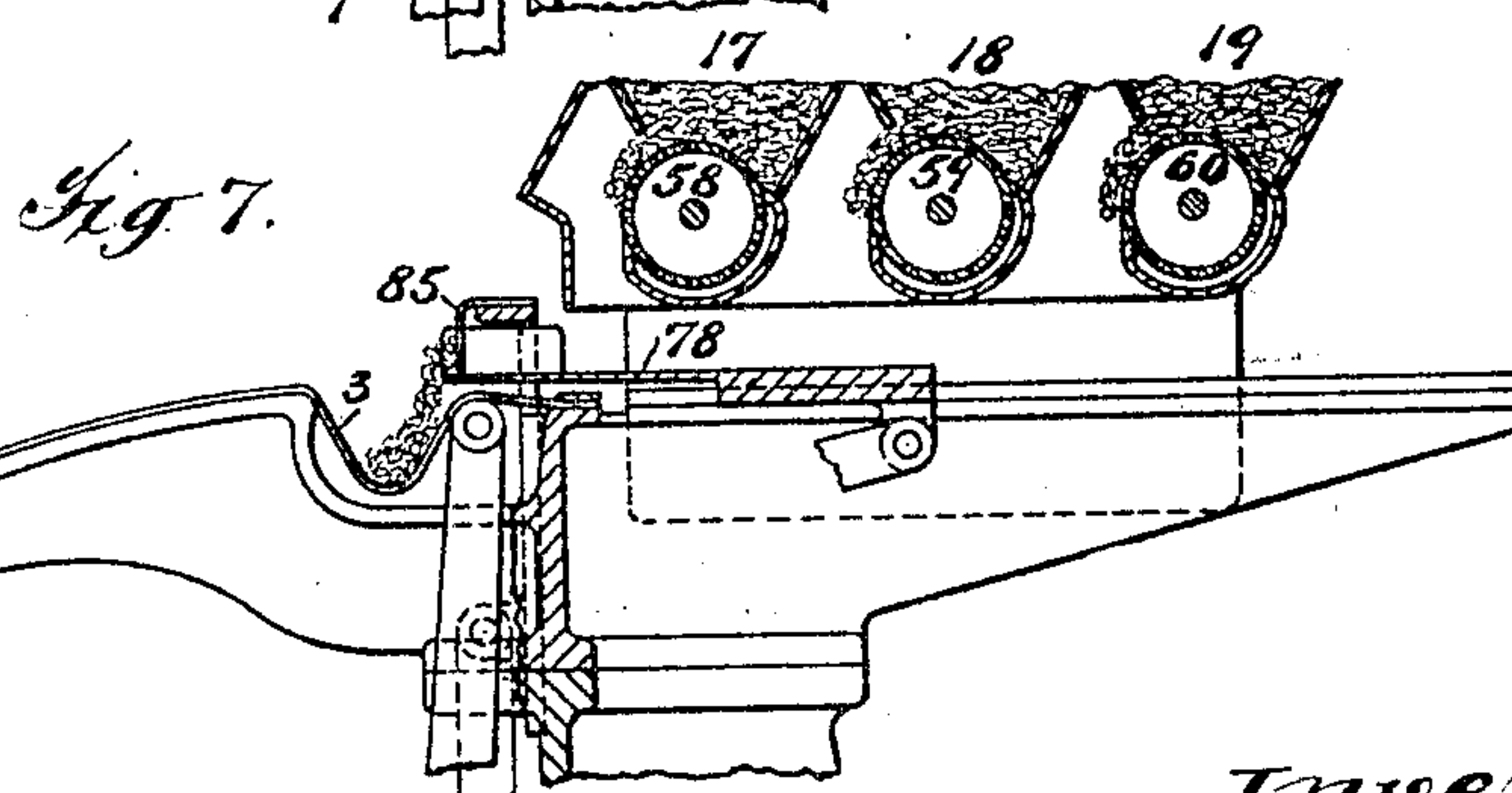
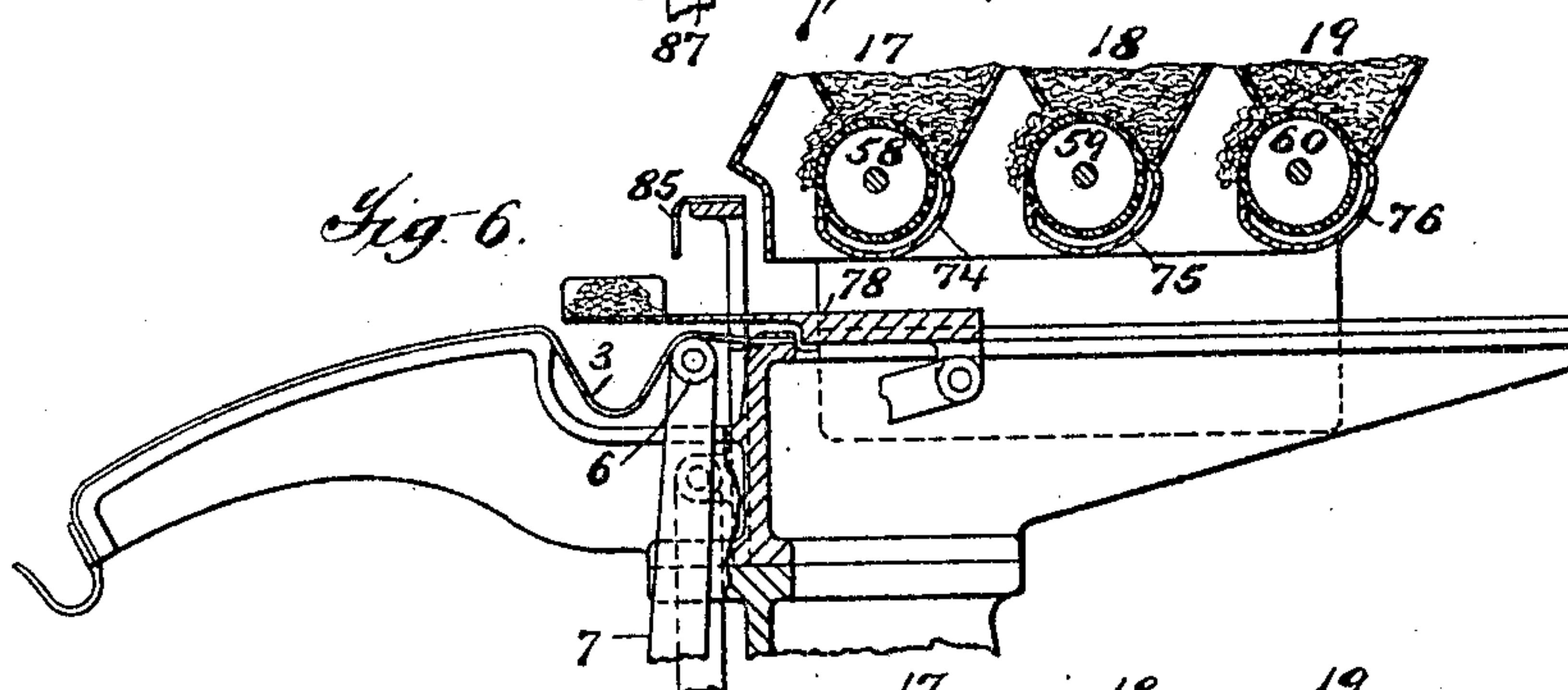
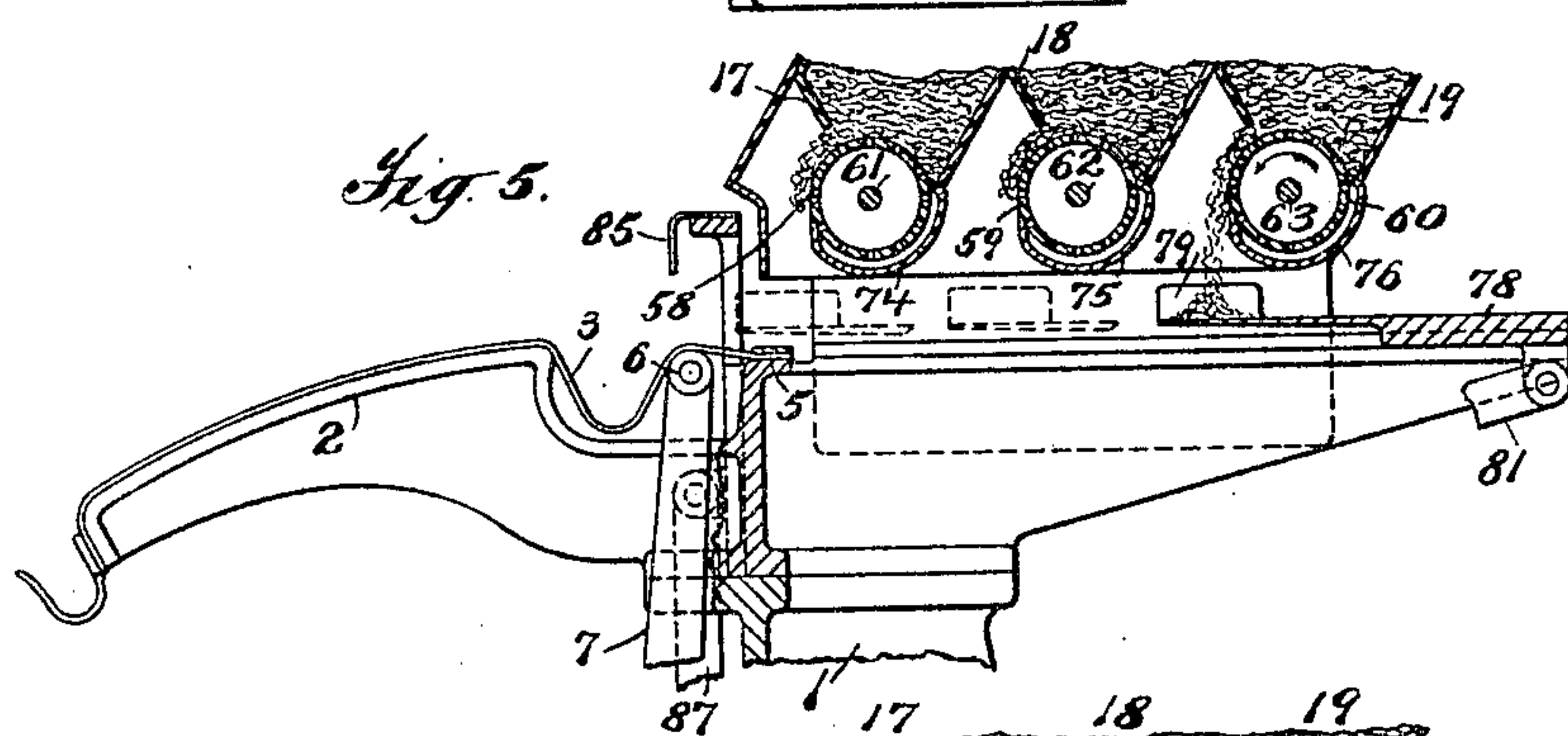
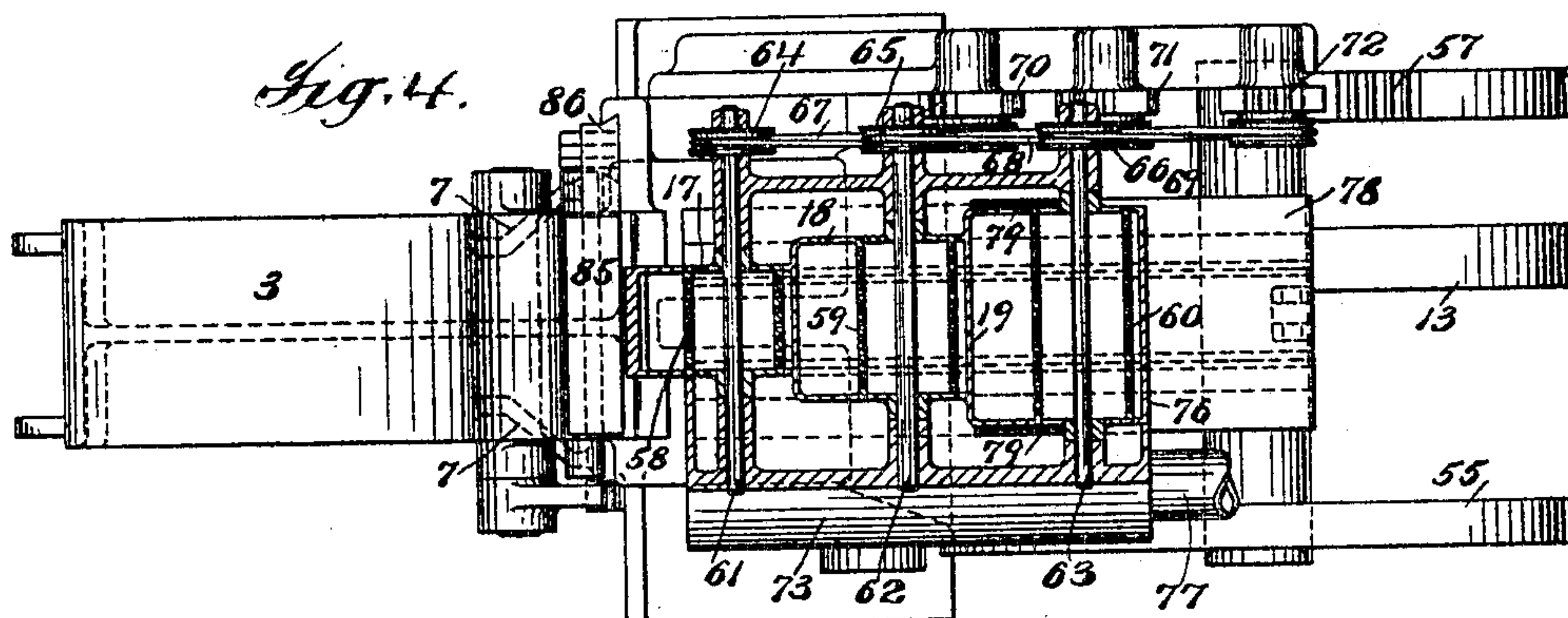
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PATENTED FEB. 13, 1906.

W. S. LUCKETT.
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APPLICATION FILED MAY 28, 1904.

3 SHEETS—SHEET 3.



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UNITED STATES PATENT OFFICE.

WILLIAM S. LUCKETT, OF EAST ORANGE, NEW JERSEY, ASSIGNOR TO
INTERNATIONAL CIGAR MACHINERY COMPANY, OF NEW YORK, N. Y.,
A CORPORATION OF NEW JERSEY.

FEEDING MECHANISM.

No. 812,220.

Specification of Letters Patent.

Patented Feb. 13, 1906.

Application filed May 28, 1904. Serial No. 210,203.

To all whom it may concern:

Be it known that I, WILLIAM S. LUCKETT, a citizen of the United States, residing at East Orange, county of Essex, and State of New Jersey, have invented certain new and useful Improvements in Feeding Mechanisms, fully described and represented in the following specification and the accompanying drawings, forming a part of the same.

This invention relates to certain improvements in feeding mechanism, and has reference more particularly to feeding mechanisms intended for use with cigar-machines, although the mechanism may be used in other relations.

This invention has for one of its objects to produce an improved feeding mechanism which shall be simple in construction and effective in operation.

A further object of the invention is to produce an improved feeding mechanism by which a plurality of charges of tobacco or other analogous material may be removed from a receiver and delivered to a carrier, the carrier being thereafter moved to a delivery-point and having suitable delivery means co-operating therewith.

With these and other objects not specifically referred to in view the invention consists in certain constructions and in certain parts, improvements, and combinations, as will be hereinafter described and then specifically pointed out in the claims hereunto appended.

In the accompanying drawings, Figure 1 illustrates in side elevation so much of a cigar-machine having the improved feeding mechanism attached thereto as is necessary to an understanding of the invention. Fig. 2 is a front elevation of the construction shown in Fig. 1. Fig. 3 is a rear elevation of the construction shown in Fig. 2, certain parts being shown in section. Fig. 4 is a plan view, and Figs. 5, 6, and 7 are detail views.

In the machine which has been selected to illustrate the invention the improved feeding mechanism is shown in connection with a cigar-bunching machine to which the feeding mechanism supplies the material for the bunches. It may be here remarked, however, that the feeding mechanism is capable of use in relations other than the one illustrated.

The particular bunching mechanism illustrated is of the Chianti belt type, though when the improved feeding mechanism is used in connection with a cigar-bunching mechanism this bunching mechanism may be of any suitable type.

As shown, there is provided a standard 1, which supports the rolling-table 2, over which the rolling-belt 3 moves, this belt being secured at one end 4 to the table and at the other end 5 to a bracket forming a part of the standard. The rolling is effected by means of the usual roller 6, carried in arms 7, said arms being fast on a shaft 8, this shaft being mounted in bracket-arms 9, pivoted on a stationary shaft 10. Connected to these arms and extending in the construction shown rearwardly therefrom is an operating-lever 11, having a cam-roll 12, said roll engaging with a cam-groove (not shown) in the cam-drum 13. The purpose of this construction, as will be clearly understood by those skilled in the art, is to give the roll a slight vertical movement to enable it to clear the edge of the table 2 as it begins its operating or rolling movement. The swinging of the arms 7, by which the rolling of the bunch is effected, is in the construction shown accomplished by providing the shaft 8 with a segment-arm 14, the segment on said arm being engaged by a segment-arm 15, pivoted on the stationary shaft 10 before referred to, the rear end of said arm being provided with a roll 16, which engages a cam-groove (not shown) in the side of the cam-drum 55. These cam-drums 13 and 55 are mounted on a shaft 56, suitably supported in brackets in the frame, which shaft also supports a driving-gear 57. After the bunch has been deposited in the loop of the belt the arms are raised slightly and then given a swinging movement to roll the bunch, the bunch being rolled by the traveling loop of the belt in a manner well understood by those familiar with the art.

The parts so far described have no special relation to the invention, and are therefore illustrated more or less diagrammatically.

The tobacco or other material to be fed by the feeding mechanism to be hereinafter more specifically described is contained in a holder which may be varied widely in its form and construction. In the preferred form of the construction, however, the holder

will be provided with a plurality of compartments. In the drawings the holder is shown as having three compartments 17, 18, and 19.

The mechanism by which the tobacco is removed from the holder may be varied widely in construction. In its preferred form, however, it will embody suction devices which are brought into contact with the tobacco, the tobacco being caused to adhere to these devices by the action of the suction. In the construction shown the charge-removing means consists of three perforated suction-cylinders 58, 59, and 60, said cylinders cooperating with the compartments 17, 18, and 19, respectively. These cylinders are respectively mounted on shafts 61, 62, and 63, which are suitably journaled in the frame of the machine. Any suitable means may be employed for giving these cylinders their rotating movement. As shown, each of the shafts is provided on its end with a belt-pulley, these pulleys being marked 64, 65, and 66, and around these pulleys run belts 67, 68, and 69, which pass around pulleys secured to mutilated pinions 70, 71, and 72, supported on studs mounted in the frame, these pinions being in mesh with the driving-gear 57 before referred to, which is a mutilated gear. In the construction shown the parts are so proportioned as to give each pinion and its corresponding cylinder a third of a revolution. In the preferred construction the cylinders or other charge-removing means will be given varying operating areas, this being effected by means which may be of any suitable description. As shown, the cylinders are of different sizes, the cylinder 58 being the shortest and the cylinder 60 being the longest. The means by which suction is established in the cylinders may be of any desired character. As shown, however, there is provided a suction-box 73, which has laterally-extending wings 74, 75, and 76, these wings and the box being, as shown, formed from a casting which forms a part of the frame of the machine. These wings 74, 75, and 76 are curved, as shown, and underlying the cylinders 58, 59, and 60, respectively. A space is left between the main portion of these wings and the cylinders, and the ends of all the cylinders are in open communication with the box 73 before referred to. A pipe 77 leads from the box 73 to any suitable suction-producing mechanism. It is apparent that when the suction is established in the box and wings before referred to it will act through the perforations of the cylinders, and as the cylinders revolve they will remove an amount of tobacco from each compartment of the holder, the amount of which will depend upon the perforated surface area of the cylinders or the speed at which the cylinders are run, or both. In the present construction the cylinders are run at the same speed, and the varying amounts of tobacco

are obtained, as before indicated, by varying the surface area of the perforated cylinders.

Means are provided for removing the tobacco from the cylinders. While these means may be varied, in the construction shown the forward edge of each of the wings 74 75 76 is beveled off and caused to fit closely against the circumference of the cylinders, so that these beveled edges act as scrapers.

Means are provided for carrying away the tobacco removed from the receiver by the removing means. These means include a transferring device, which may be widely varied in its construction and operation. As shown, it consists of a plate 78, provided with side wings 79, said plate being arranged to move in guides 80, formed in the frame of the machine. The means for moving this transferring device may be of any desired character. As shown, the under side of the plate 78 has pivoted to it a link 81, said link being connected to one of the arms 82 of a bell-crank lever 82 83, which is mounted on the shaft 10 before referred to. The arm 83 has a bowl 84 thereon which runs in a suitably-formed cam-groove in the side of the cam-drum 13 before referred to. The cam is so shaped as to bring the transferring device 78 successively beneath the cylinders, the plate being brought to a stop underneath the cylinder and remaining there until the charge removed by each cylinder from its compartment has been deposited on the plate. It will of course be understood from the foregoing description that in the mechanism shown the cylinders are rotated successively. After the charge from the last cylinder has been deposited in the plate this transferring-plate is given a still further movement to bring it to the discharging-point, which in the construction shown is the loop in the belt 3.

Means are provided in the construction shown to cause the transferring device to deliver its charge. While these means may be of any desired description, in the construction shown there is provided a scraper 85, said scraper being mounted on a slide 86, which moves in suitable guides in the frame. This slide 86 has connected to it a link 87, said link being at its other end connected to a cam-lever 88, mounted on the shaft 10 before referred to. The other end of the lever is provided with a bowl 89, which runs in a suitably-formed cam-groove in the cam 57 before referred to.

While the plurality of suction-cylinders might run in a single holder, the delivery of the tobacco is more readily controlled and the construction is simplified by the employment of a holder which has a compartment for each cylinder. Furthermore, this construction enables different grades of tobacco to be used in the manufacture of cigars, if this should be found desirable.

The operation of the mechanism will be clear from the foregoing description, and a detailed statement thereof is therefore unnecessary.

5 Changes and variations may be made in the construction by which this invention is carried into effect. The invention is not, therefore, to be limited to the specific construction herein shown and described.

10 What is claimed is—

1. The combination with a holder comprising a plurality of compartments, of a suction charge-remover operating to move individual charges varying in volume from the
15 holder, and a transferring device on which the charges are deposited and by which they are carried to a common delivery-point, substantially as described.

2. The combination with a rolling mechanism, of a holder, a suction charge-remover operating to remove a plurality of charges varying in volume from the holder, and a transferring device on which the charges are deposited and by which they are carried to
25 the rolling mechanism, substantially as described.

3. The combination with a holder comprising a plurality of compartments, of suction charge-removing means cooperating
30 with each compartment, means for actuating said charge-removing means to remove charges from the compartments, and a transferring device for the charges, substantially as described.

4. The combination with a holder comprising a plurality of compartments, of suction charge-removing means cooperating with each compartment, means for actuating said charge-removing means to remove
40 charges from the compartments, said charge-removing means being constructed to remove charges of varying volume from the different compartments, and a transferring device for the charges, substantially as described.

5. The combination with a rolling mechanism, of a holder comprising a plurality of compartments, suction charge-removing means cooperating with each compartment, mechanism for actuating said charge-removing means to remove charges from the compartments, and a transferring device for conveying the charges to the rolling mechanism,
50 substantially as described.

6. The combination with a rolling mechanism, of a holder comprising a plurality of compartments, suction charge-removing means cooperating with each compartment, said charge-removing means being constructed to remove charges of different volume from each of the compartments, means
60 for actuating said charge-removing means, and a transferring device which receives the charges from the removing means and carries them to the rolling mechanism, substantially as described.

7. The combination with a holder for granular material, of a rotating suction-cylinder operating in the holder and acting to remove charges therefrom, substantially as described.

8. The combination with a holder for granular material, of a charge-remover comprising a plurality of rotary suction-cylinders operating in the holder and acting to remove charges therefrom, and operating means for
70 the cylinders, substantially as described.

9. The combination with a holder comprising a plurality of compartments, of a charge-remover including a rotary suction-cylinder for each compartment, and means
75 for operating the cylinders, substantially as described.

10. The combination with a holder, of a charge-remover comprising a plurality of rotary suction-cylinders having varying operating areas, and means for operating the cylinders, substantially as described.

11. The combination with a holder having a plurality of compartments, of a charge-remover comprising a plurality of rotary suction-cylinders, one for each compartment, said cylinders having varying operating areas, and means for operating the cylinders, substantially as described.

12. The combination with a rolling mechanism, of a holder, a charge-remover comprising a plurality of rotary suction-cylinders, operating means for the cylinders, and a transferring device for receiving the charges from the cylinders and delivering them to the
95 rolling mechanism, substantially as described.

13. The combination with a rolling mechanism, of a holder comprising a plurality of compartments, of a charge-remover including a rotary suction-cylinder for each compartment, means for operating the cylinders, and a transferring device for receiving the charges from the cylinders and delivering them to the rolling mechanism, substantially as described.

14. The combination with a rolling mechanism, of a holder, a charge-remover comprising a plurality of rotary suction-cylinders having varying operating areas, means for operating the cylinders, and a transferring
100 device for receiving the charges from the cylinders and delivering them to the rolling mechanism, substantially as described.

15. The combination with a rolling mechanism, of a holder having a plurality of compartments, of a charge-remover comprising a plurality of rotary suction-cylinders, one for each compartment, said cylinders having varying operating areas, means for operating the cylinders, and a transferring device for
105 receiving the charges from the cylinders and delivering them to the rolling mechanism, substantially as described.

16. The combination with a holder, of a charge-remover comprising a plurality of ro-
110

tary suction-cylinders, a carrier, and means for reciprocating the carrier beneath the cylinders to receive the charges successively therefrom, substantially as described.

5 17. The combination with a holder, of a charge-remover comprising a plurality of rotary suction-cylinders having varying operating areas, a carrier, and means for reciprocating the carrier beneath the cylinders to receive the charges successively therefrom, substantially as described.

15 18. The combination with a rolling mechanism, of a holder, a charge-remover comprising a plurality of rotary suction-cylinders having varying operating areas, a carrier, and means for reciprocating the carrier beneath the cylinders to receive the charges successively therefrom and carry them to the rolling mechanism, substantially as described.

20 19. The combination with a rolling mechanism, of a carrier, means for causing successive charges of varying volume to be deposited on the carrier, means for moving the carrier with respect to the rolling mechanism, and delivery means, substantially as described.

25 20. The combination with a rolling mechanism, of a carrier, means for depositing charges of tobacco varying in volume on the carrier, means for moving the carrier into cooperative relation with the rolling mechanism, and delivery means, substantially as described.

30 21. The combination with a rolling mechanism, of a carrier, means for depositing charges of tobacco varying in volume on the carrier, means for moving the carrier into cooperative relation with the rolling mechanism, and a scraper for removing the charges from the carrier, substantially as described.

22. The combination with a rolling mechanism, of a holder, a suction operating charge-remover operating to remove charges of varying volume from the holder, a carrier on which charges are successively deposited, means for moving the holder into cooperative relation with the rolling mechanism, and delivery means, substantially as described.

23. The combination with a rolling mechanism, of a holder, charge-removing means comprising a plurality of rotary suction-cylinders having operating-surfaces of varying areas, whereby they remove charges of varying volume, a carrier, means for moving the carrier beneath the cylinders whereby the charges are successively deposited on the carrier, and for moving the carrier into cooperative relation with the rolling mechanism, and delivery means, substantially as described.

24. The combination with a rolling mechanism, of a holder, charge-removing means comprising a plurality of rotary suction-cylinders having operating-surfaces of varying areas, whereby they remove charges of varying volume, a carrier, means for moving the carrier beneath the cylinders whereby the charges are successively deposited on the carrier and for moving the carrier into cooperative relation with the rolling mechanism, and a scraper for removing the charges from the carrier, substantially as described.

In testimony whereof I have hereunto set my hand in the presence of two subscribing witnesses.

WILLIAM S. LUCKETT.

Witnesses:

E. W. STUART,
N. H. GLASSFORD.