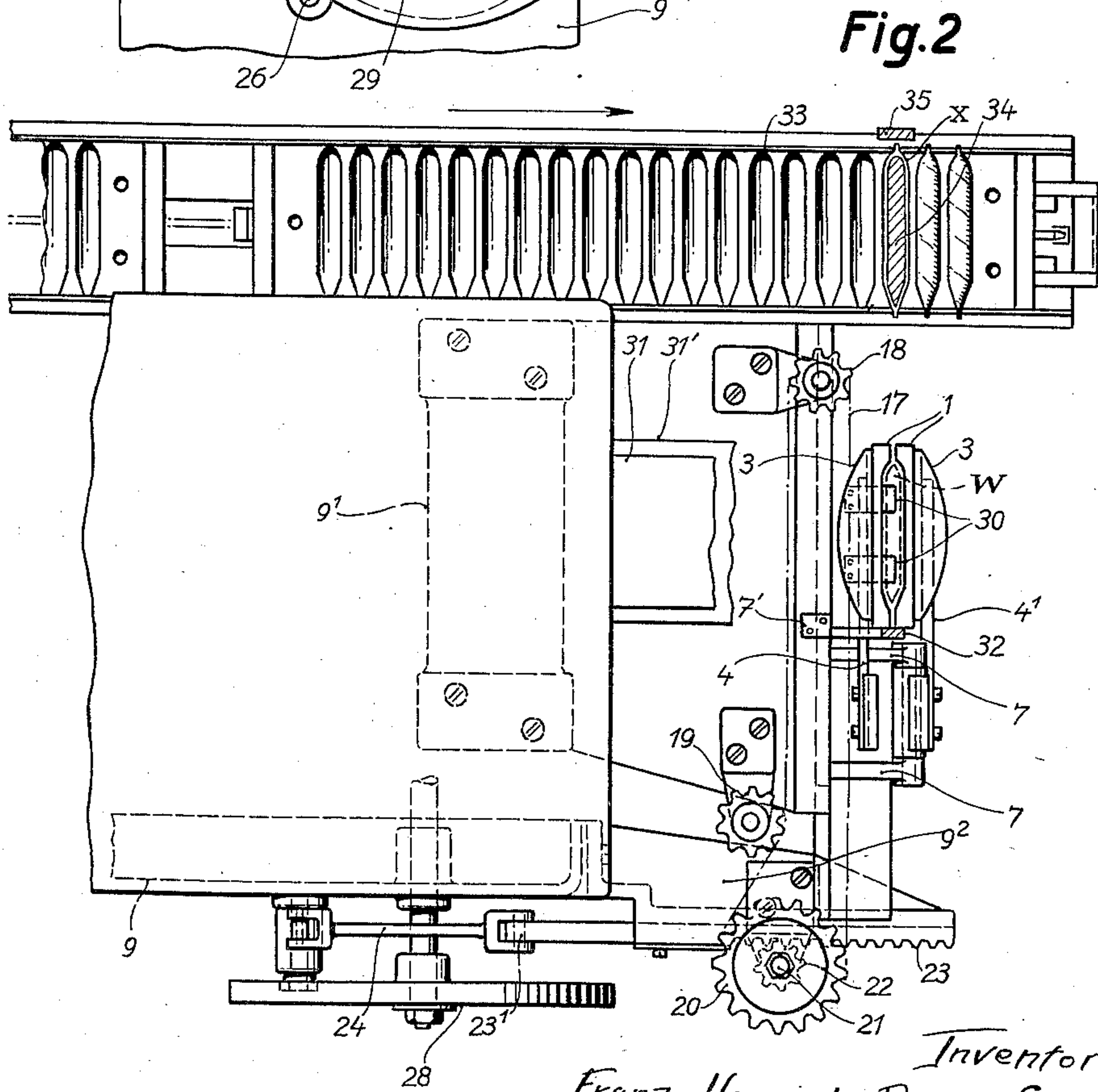
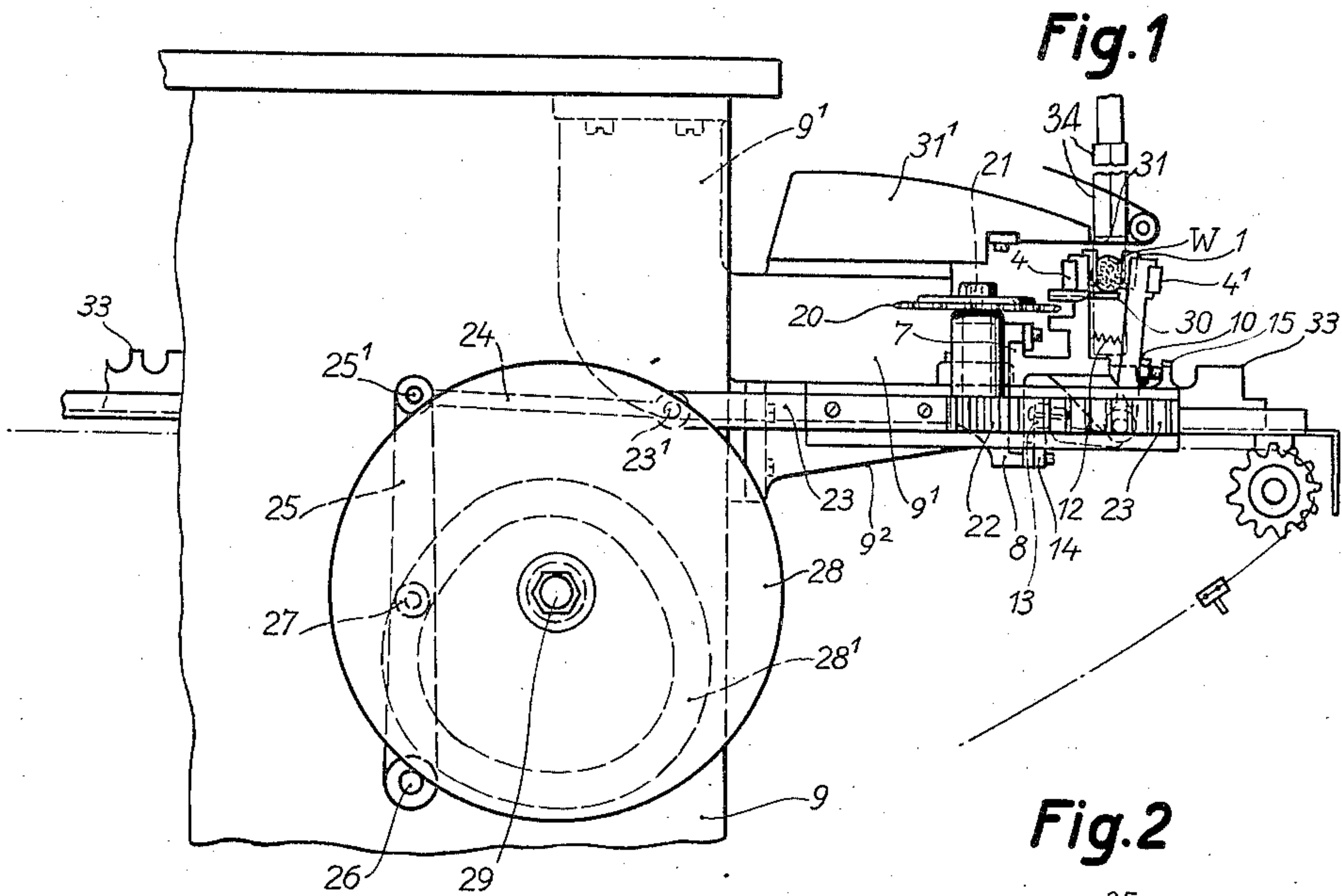


**Nov. 26, 1935.**

35. **F. H. B. STELZER** 2,  
APPARATUS FOR TRANSFERRING A CIGAR FILLER FROM THE  
ROLLING DEVICE INTO THE PRESSING MOLD  
Filed Jan. 13, 1933 2 Sheets.

**2,022,575**

2 Sheets-Sheet 1



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2 Sheets-Sheet 2

Fig.3

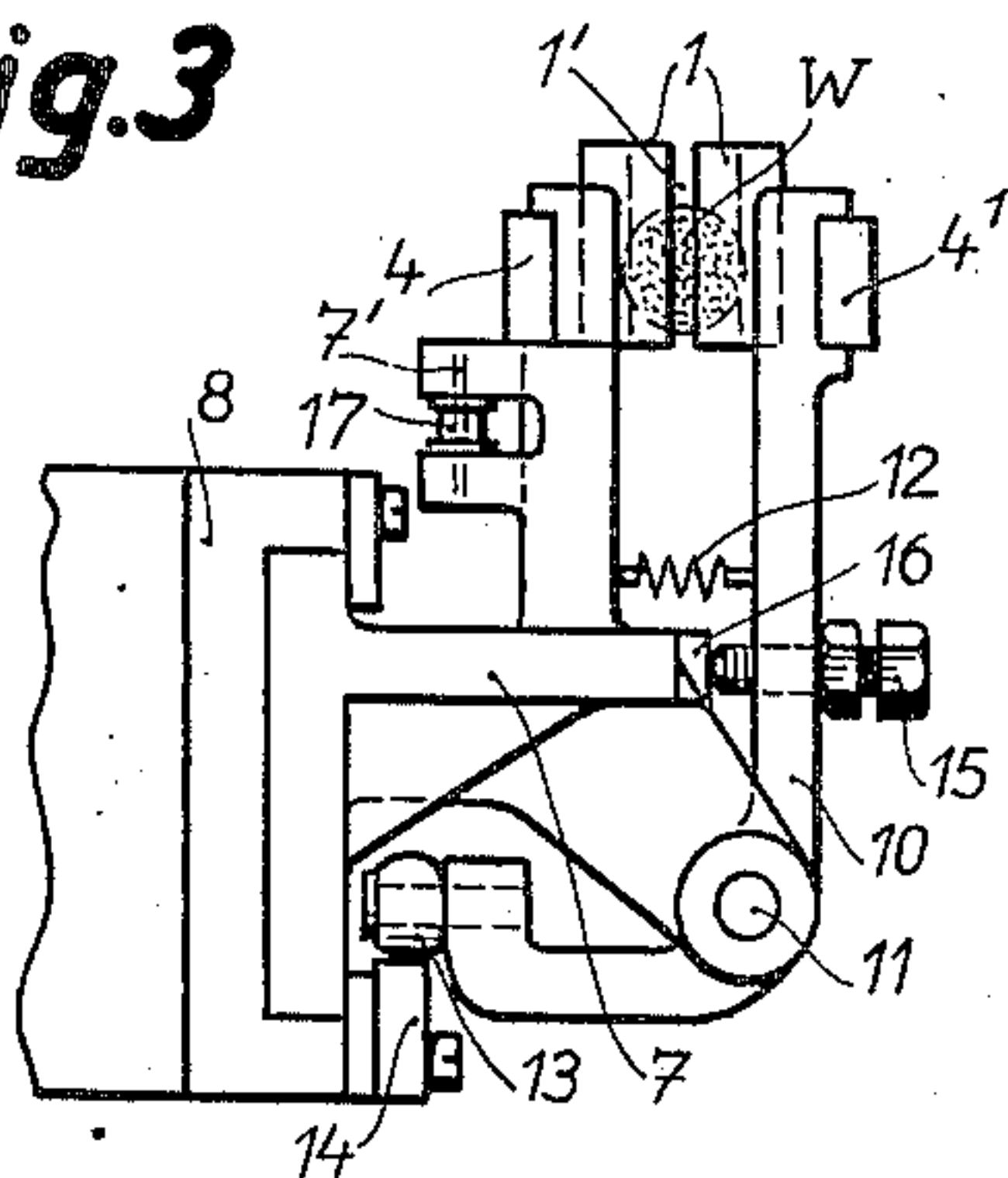


Fig.6

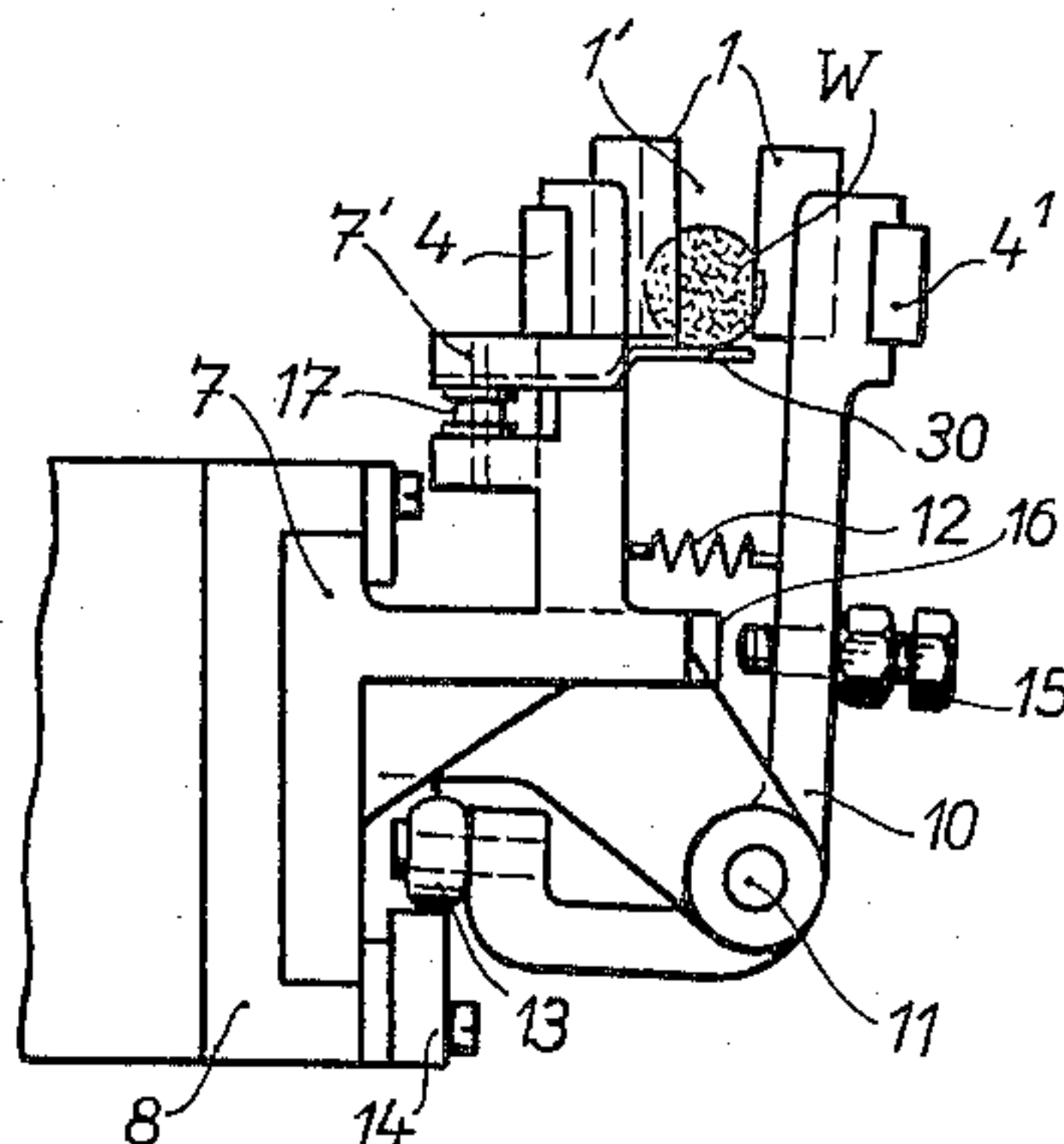


Fig.4

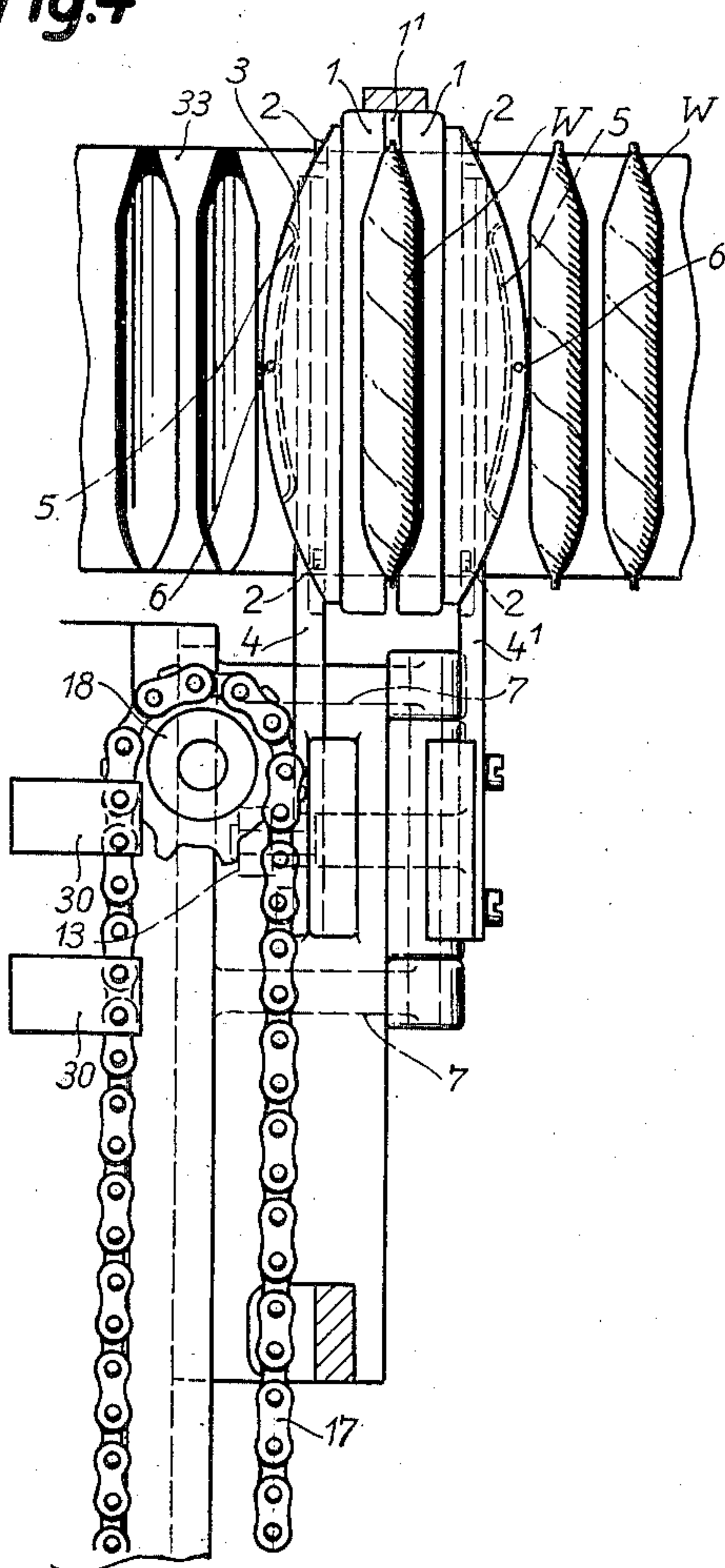


Fig.5

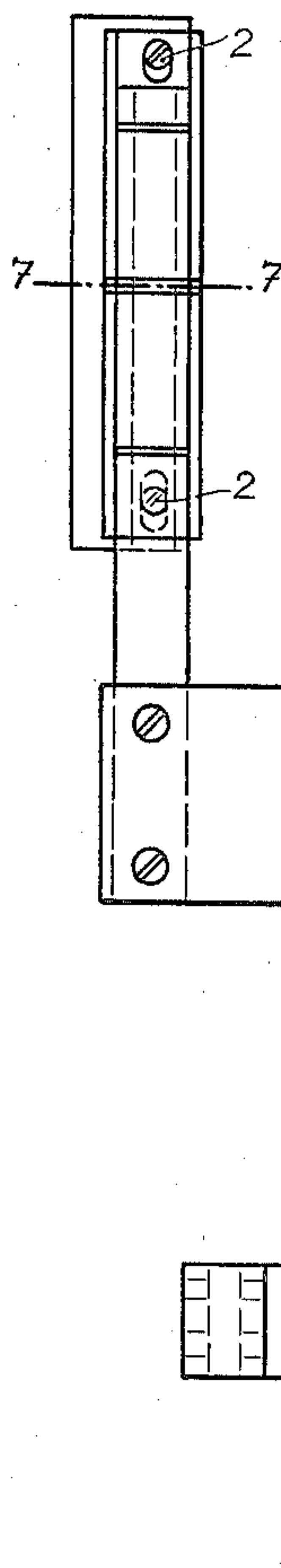
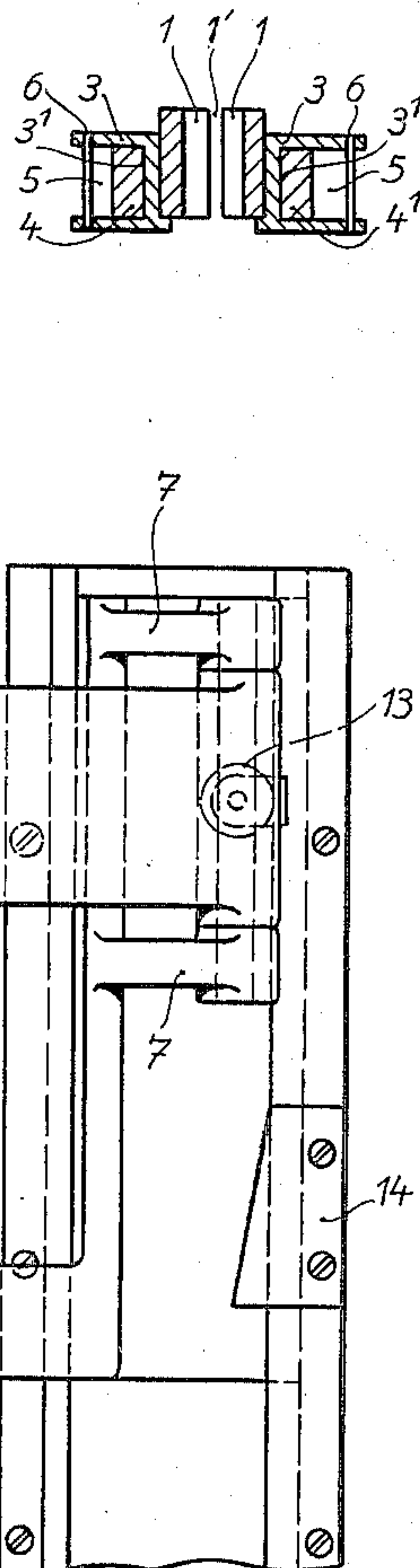


Fig.7



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## UNITED STATES PATENT OFFICE

2,022,575

APPARATUS FOR TRANSFERRING A CIGAR  
FILLER FROM THE ROLLING DEVICE  
INTO THE PRESSING MOLDFranz Heinrich Benno Stelzer, Dresden, Germany,  
assignor to "Universelle" Cigarettenmaschinen-  
Fabrik, J. C. Müller & Co., Dresden, GermanyApplication January 13, 1933, Serial No. 651,585  
In Germany April 13, 1932

23 Claims. (Cl. 131—9)

As is well known, cigar fillers are inserted in a pressing mold in which they remain a certain time before they receive further treatment, by being enclosed in a wrapper. In the manufacture of cigars by mechanical means the problem to be solved is to transfer a filler issuing from the rolling device into the pressing mold by mechanical means. In this operation it is important that the fillers should be exactly in the prescribed position when they are introduced into the known trough of the pressure mold.

According to the present invention, an intermediate support, adapted to the shape of the fillers and formed for instance of two flexible clamping jaws, is provided and is reciprocated between the receiving and the delivery positions, and is fixed in the end positions by adjusting devices, for instance stops.

In this manner it is possible with simple constructional means for the filler to be caused to pass directly from the rolling device and to arrive in the correct position in the intermediate support, and to be delivered by this intermediate support into the trough of the pressure mold in an accurately determined position.

The intermediate support is preferably arranged on a sliding member or the like so as to be frictionally displaceable in longitudinal direction, and at both ends of the travel stops are provided in such manner that when the intermediate support comes into contact with the stops it is held in the correct position.

Accordingly, without the use of any special control member, the intermediate support is adjusted in its two end positions by a slight displacement on its sliding member.

The intermediate support formed of flexible clamping jaws or the like forms a channel open at the top and bottom and, at the delivery position, a suitably shaped plunger is adapted to enter the channel from above and to thrust the filler downwards into the opened pressure mold. Thus it is rendered possible for a plunger to pass the filler held by the intermediate support, directly into the trough of the pressure mold, because the channel formed by the intermediate support, in which channel the filler lies, is located in an exactly fixed position in relation to the plunger and the trough.

The intermediate support is preferably mounted on two parallel bars attached to a sliding member or the like so as to be displaceable in a longitudinal direction, each of these bars entering grooves formed on one side by guide surfaces of the intermediate support and on the other side

by leaf springs attached to the intermediate support. Further, in the case of longitudinally divided intermediate supports drawn together by springs, one guide bar is mounted on the sliding member so as to be capable of outward movement, and is displaced by a cam or the like in such manner that, in the receiving position, the two parts of the intermediate support are opened, and actuated fingers prevent the filler from falling through the opened intermediate support.

If the sliding member on which the intermediate support is mounted is arranged on an endless chain reciprocated over sprocket wheels in the direction of movement of the sliding member, the supporting fingers which prevent the filler from falling through the opened pair of clamping jaws of the intermediate support, may be simply attached to the same chain in such manner that when the chain is passed over one sprocket wheel they are removed from the path of the intermediate support when the support, while carrying the filler, moves to the delivery position.

One form of construction of the invention is illustrated in the annexed drawings, in which:—

Fig. 1 is a front view.

Fig. 2 is a plan.

Fig. 3 is a part of Fig. 1 on an enlarged scale.

Fig. 4 is a plan of Fig. 3.

Fig. 5 is a side view thereof.

Fig. 6 shows the part of the apparatus illustrated in Fig. 3, in another operative position.

Fig. 7 shows a cross section along the line 7—7 of Fig. 5.

The jaws 1 which serve for receiving the filler are shaped in such manner that they leave between them a vertical free space 1' which is open at the two opposite sides and conforms to the shape of the filler. Each of the jaws 1 is attached by screws 2 to intermediate supports 3 which are shaped in the manner shown in Fig. 7. With their U-shaped parts, the intermediate supports 3 embrace flat bars 4, 4', and guide surfaces 3' of the intermediate support 3 are pressed by leaf springs 5, which are attached by the bolts 6 to the intermediate supports 3 against the corresponding surfaces of the slide bars 4, 4' so that the intermediate supports 3 are mounted as sliding members and are longitudinally displaceable on the bars 4, 4'. The slide bar 4 is attached to the sliding member 7 which is mounted so as to be horizontally displaceable in the slideway 8. The slideway 8 is attached to the table-like projection 9' of the machine frame 9. The slide bar 4' is mounted on a bell crank lever 10, which at 11 is pivotally mounted on the slid-



ing member 7 and is subjected to the action of a spring 12. On the free arm of the bell crank lever 10 is mounted the roller 13, which co-operates with a cam track 14 which is fixed to the slideway 8 by screws. On the bell-crank lever 10 a screw 15 is provided which comes into contact with a stop 16 of the sliding member 7. The sliding member 7 is fixed at 7' to a chain 17 which is passed over the guide wheels 18, 19, 20. The guide wheel 20 is mounted on the axle 21 mounted on a bracket 9<sup>2</sup>, on which axle a spur wheel 22 is mounted. The latter co-operates with a rack 23 which is held on the bracket 9<sup>2</sup> so as to be capable of longitudinal displacement. At one end of the rack a link 24 is pivotally connected at 23', this link being articulated on the other side at 25' to the lever 25. The lever 25 is pivoted at 26 in the machine frame 9. A roller 27 mounted on this lever engages in the cam groove 28' of a cam disc 28 which is mounted on the driving shaft 29 of the apparatus.

To the chain 17 are attached fingers for the fillers in the form of metal plates 30.

The mode of operation of the apparatus is as follows:

When the sliding member 7 moves into the position shown in Fig. 2, the roller 13 comes into contact with the cam member 14, whereby the lever 10 is swivelled so that the jaws 1 (Fig. 6) are transferred to the open position for receiving the filler W delivered by the rolling apron 31. The movement of the chain 17 is such that the jaws 1 are brought into contact with a stop 32 provided on the table 9', and are retained in a definite position by the said stop. The filler which falls down from the rolling table 31 thus falls between the open jaws 1, and the metal plates (fingers) 30 prevent the filler W from falling through. Now the sliding member 7 is moved by the chain 17 into the delivery position marked x. At this position is located the pressure mold 33, which is so arranged that an empty chamber is disposed under a vertically displaceable plunger 34 (the plunger is indicated in Fig. 2 by dotted lines). In the movement of the slide to the delivery position x, the cam 14 liberates the lever 10 so that owing to the tension of the spring 12 it assumes the position shown in Fig. 3, where the screw 15 rests against the stop. Thus the filler is clamped between the jaws 1. By the movement of the chain member over the sprocket wheel 18, the metal plates 30 are moved out of the range of the jaws 1. The chain movement in this case also is so arranged that before the slide 7 arrives in the end position, the jaws strike against a stop 35 associated with the guide of the plunger 34 and by this stop are held in the correct position in relation to the plunger 34, or the corresponding pressure chamber. As soon as the plunger 34 has moved downwards and has thereby thrust the filler W from the pair of jaws 1 into the pressure chamber, the plunger returns, whereupon the sliding member also returns to its initial position and the process is repeated, in that the jaws 1 again come into contact with the stop 32, and the filler formed on the rolling table 31' is moved from the rolling table 31 into the open pair of jaws.

In the above form of construction simple stops 32 or 35 are provided which retain the pair of jaws 1, 1 in the correct position. It is self-evident that instead of stops, bolts or the like may be provided which engage in suitable recesses in the jaws, or their support.

Having thus described the nature of the said

invention and the best means I know of carrying the same into practical effect, I claim:—

1. An apparatus for transferring a cigar filler from the rolling device into the pressing mold comprising a support, means for reciprocating said support between said rolling device and said pressing mold and an intermediate support for the cigar filler slidably mounted upon said first mentioned support.

2. An apparatus for transferring a cigar filler from the rolling device into the pressing mold comprising a support, means for reciprocating said support between said rolling device and said pressing mold and an intermediate support for the cigar filler slidably mounted upon said first mentioned support and having a shape substantially corresponding to the shape of the cigar filler.

3. An apparatus for transferring a cigar filler from the rolling device into the pressing mold comprising a reciprocating support reciprocating between said rolling device and said pressing mold and an intermediate support for the cigar filler slidably mounted upon said first mentioned support and extending upon both sides of the cigar filler for the entire length of the cigar filler.

4. An apparatus for transferring a cigar filler from the rolling device into the pressing mold comprising a support, means for reciprocating said support, between said rolling device and said pressing mold and a pair of clamping jaws of a length sufficient to extend the entire length of said cigar filler slidably mounted upon said first mentioned support.

5. An apparatus for transferring a cigar filler from the rolling device into the pressing mold comprising a support, means for reciprocating said support between said rolling device and said pressing mold and a pair of clamping jaws slidably mounted upon said first mentioned support.

6. An apparatus for transferring a cigar filler from the rolling device into the pressing mold comprising a support, means for reciprocating said support between said rolling device and said pressing mold, and a pair of clamping jaws resiliently urged together slidably mounted upon said first mentioned support.

7. An apparatus for transferring a cigar filler from the rolling device into the pressing mold comprising a support, means for reciprocating said support between said rolling device and said pressing mold, an intermediate support for the cigar filler slidably mounted upon said first mentioned support and stops cooperating with said intermediate support for accurately positioning said intermediate support before said rolling device and above said pressing mold.

8. An apparatus for transferring a cigar filler from the rolling device into the pressing mold comprising a support, means for reciprocating said support between said rolling device and said pressing mold, a pair of clamping jaws slidably mounted upon said support and stops cooperating with said clamping jaws for accurately positioning the same before the rolling device and above the pressing mold.

9. An apparatus for transferring a cigar filler from the rolling device into the pressing mold comprising a support, means for moving said support between said rolling device and said pressing mold, means for holding a cigar filler upon said support and means for adjusting said holding means with relation to said support to secure



exact registration between said holding means and said pressing mold.

10. An apparatus for transferring a cigar filler from the rolling device into the pressing mold comprising a support, means for moving said support between said rolling device and said pressing mold, means for holding a cigar filler upon said support and means for adjusting said rolling device with relation to said support to secure exact registration between said holding means and said rolling device.

11. An apparatus for transferring a cigar filler from the rolling device into the pressing mold comprising a support, means for moving said support between said rolling device and said pressing mold, means for holding the cigar filler upon said support and means for adjusting said holding means with relation to said support to secure exact registration between said holding means and said pressing mold and also between said holding means and said rolling device to secure exact registration between said holding means and said rolling device.

12. An apparatus for transferring a cigar filler from the rolling device into the pressing mold comprising a support, means for moving said support between said rolling device and said pressing mold, a pair of clamping jaws mounted upon said support and means for adjusting said clamping jaws with relation to said support to secure exact registration between said clamping jaws and said pressing mold and between said clamping jaws and said rolling device.

13. An apparatus for transferring a cigar filler from the rolling device into the pressing mold comprising a support, means for moving said support between said rolling device and said pressing mold, a pair of clamping jaws slidably mounted upon said support and means for adjusting said clamping jaws with relation to said support to secure exact registration between said clamping jaws and the pressing mold and rolling device.

14. An apparatus for transferring a cigar filler from the rolling device into the pressing mold comprising a support, means for moving said support between said rolling device and said pressing mold, a pair of parallel bars mounted upon said support and an intermediate support slidably mounted upon said bars.

15. An apparatus for transferring a cigar filler from the rolling device into the pressing mold comprising a support, means for moving said support between said rolling device and said pressing mold, a pair of parallel bars mounted upon said support and a pair of clamping jaws slidably mounted upon said bars.

16. An apparatus for transferring a cigar filler from the rolling device into the pressing mold comprising a support, means for moving said support between said rolling device and said pressing mold, a pair of parallel bars carried by said support, frictionally held clamping jaws mounted upon said bars and means cooperating with said jaws for adjusting said jaws with relation to said bars to secure exact registration between said jaws and said pressing mold and rolling device.

17. An apparatus for transferring a cigar filler from the rolling device into the pressing mold comprising a support, means for reciprocating said support between said rolling device and said

pressing mold, a pair of parallel bars carried by said support, clamping jaws slidably mounted upon said bars and stops cooperating with said clamping jaws to secure an exact registration between said clamping jaws and said pressing mold and said rolling device.

18. An apparatus for transferring a cigar filler from the rolling device into the pressing mold comprising a support, means for reciprocating said support between said rolling device and said pressing mold, flexible clamping jaws mounted upon said support extending the entire length of the cigar filler and having a channel there-through open at the top and the bottom, means for accurately positioning said clamping jaws with relation to said pressing mold and a reciprocating plunger adapted to pass through said channel to displace the filler downwardly into the pressing mold.

19. An apparatus for transferring a cigar filler from the rolling device into the pressing mold comprising a support, means for moving said support between said rolling device and said pressing mold, a pair of parallel bars carried by said support, U-shaped intermediate supports mounted upon said parallel bars, resilient means for maintaining said intermediate support frictionally upon said bars and clamping jaws carried by said intermediate support.

20. An apparatus for transferring a cigar filler from the rolling device into the pressing mold comprising a support, means for moving said support between said rolling device and said pressing mold, said moving means including an endless chain, a pair of clamping jaws forming a channel mounted upon said support and means for closing one end of said channel at predetermined periods.

21. An apparatus for transferring a cigar filler from the rolling device into the pressing mold comprising a support, means for moving said support between said rolling device and said pressing mold, said moving means including an endless chain, a pair of clamping jaws forming a channel mounted upon said support and means upon said chain for closing one end of said channel at predetermined periods.

22. An apparatus for transferring a cigar filler from the rolling device into the pressing mold comprising a support, means for moving said support between said rolling device and said pressing mold, said moving means including an endless chain, a pair of clamping jaws forming a channel therethrough mounted upon said support, fingers carried by said chain closing one end of said channel at predetermined periods and means for removing said fingers from that end of said channel prior to the positioning of said clamping jaws adjacent said pressing mold.

23. An apparatus for transferring a cigar filler from the rolling device into the pressing mold comprising a support, means for moving said support between said rolling device and said pressing mold, said moving means including an endless chain, a pair of clamping jaws forming an opening slidably mounted upon said support and means associated with said chain for closing at predetermined periods the opening between said clamping jaws.

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