

No. 847,428.

PATENTED MAR. 19, 1907.

H. S. McCORMACK.  
TYPE WRITING MACHINE.

APPLICATION FILED APR. 6, 1905.

3 SHEETS—SHEET 1.

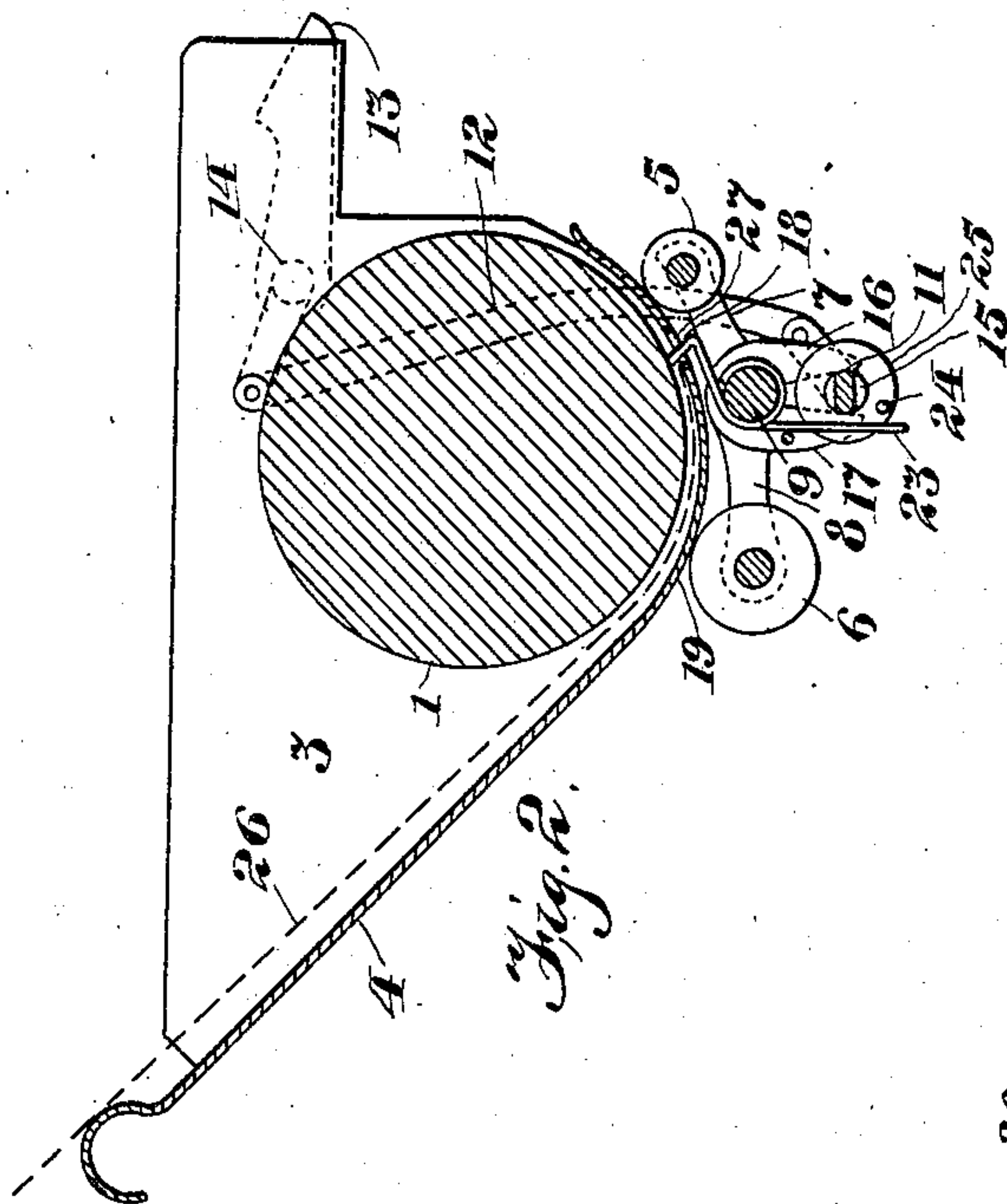


Fig. 2.

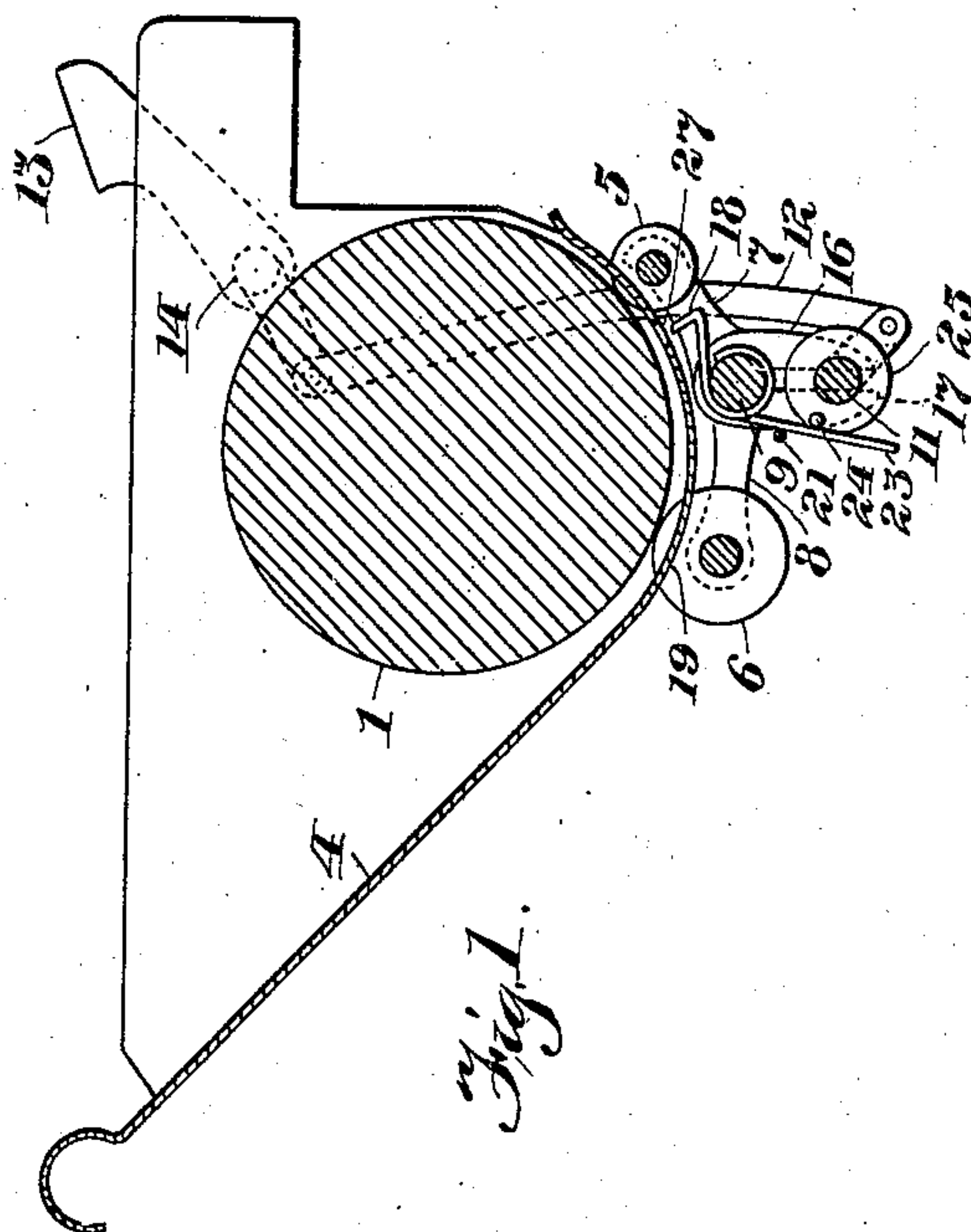


Fig. 1.

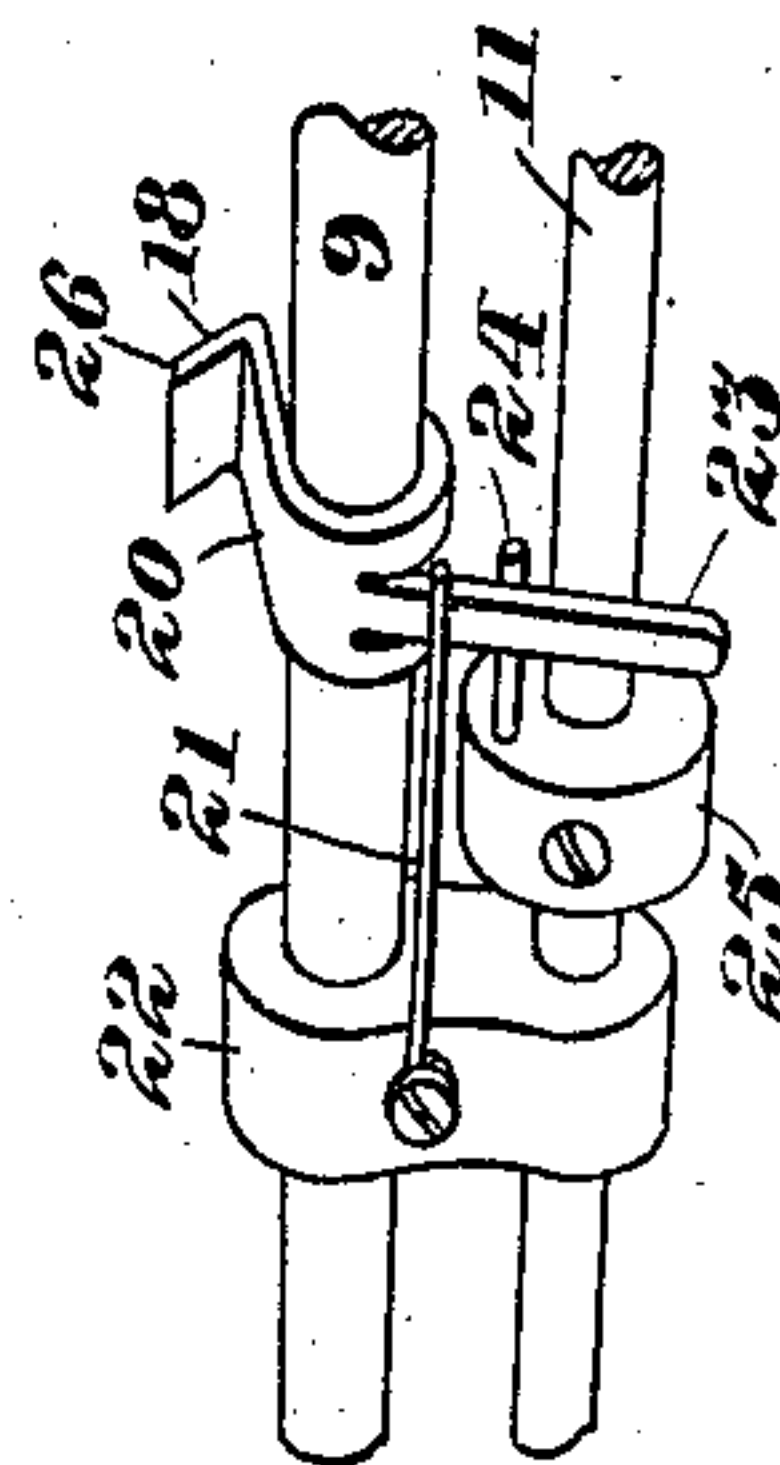


Fig. 3.

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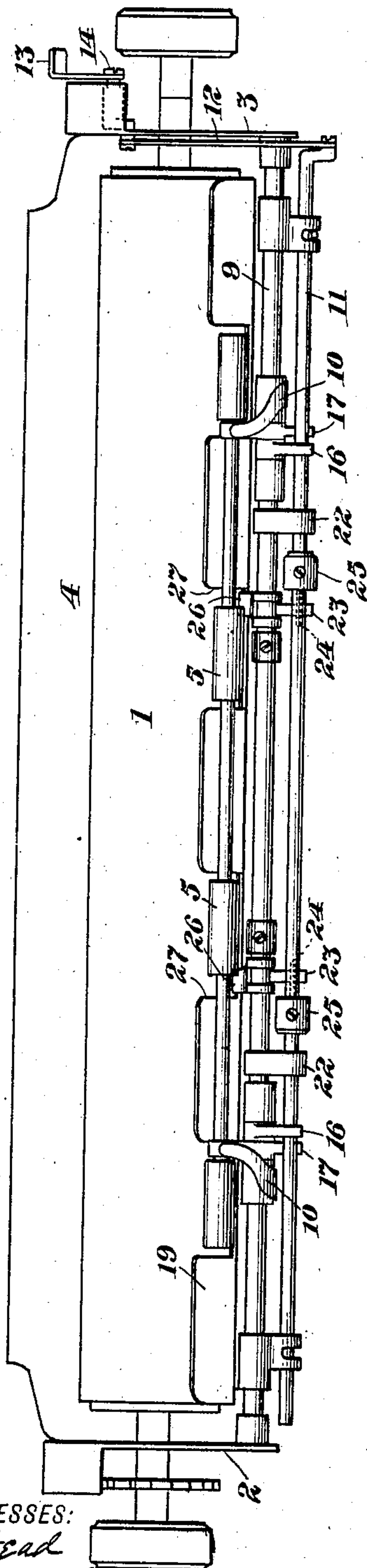
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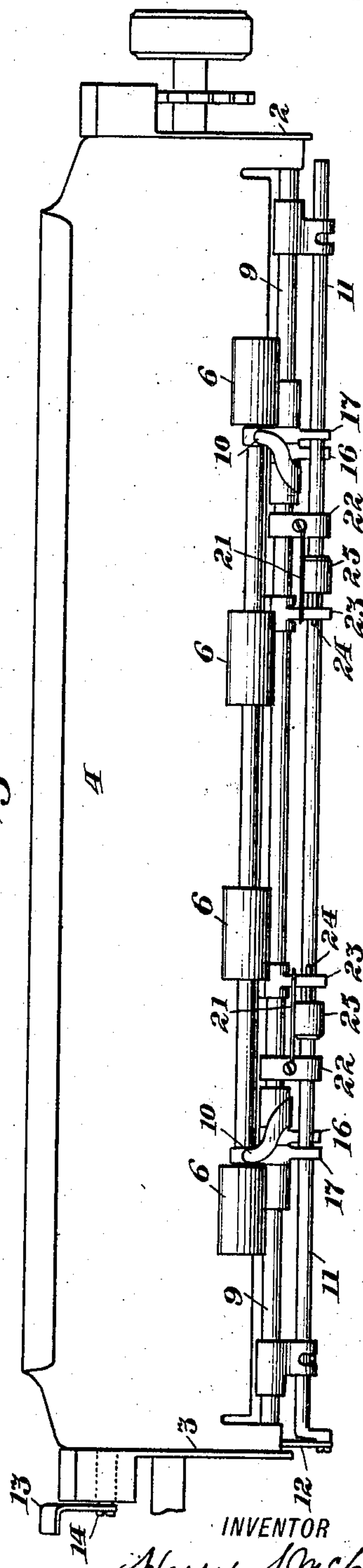
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3 SHEETS—SHEET 2.



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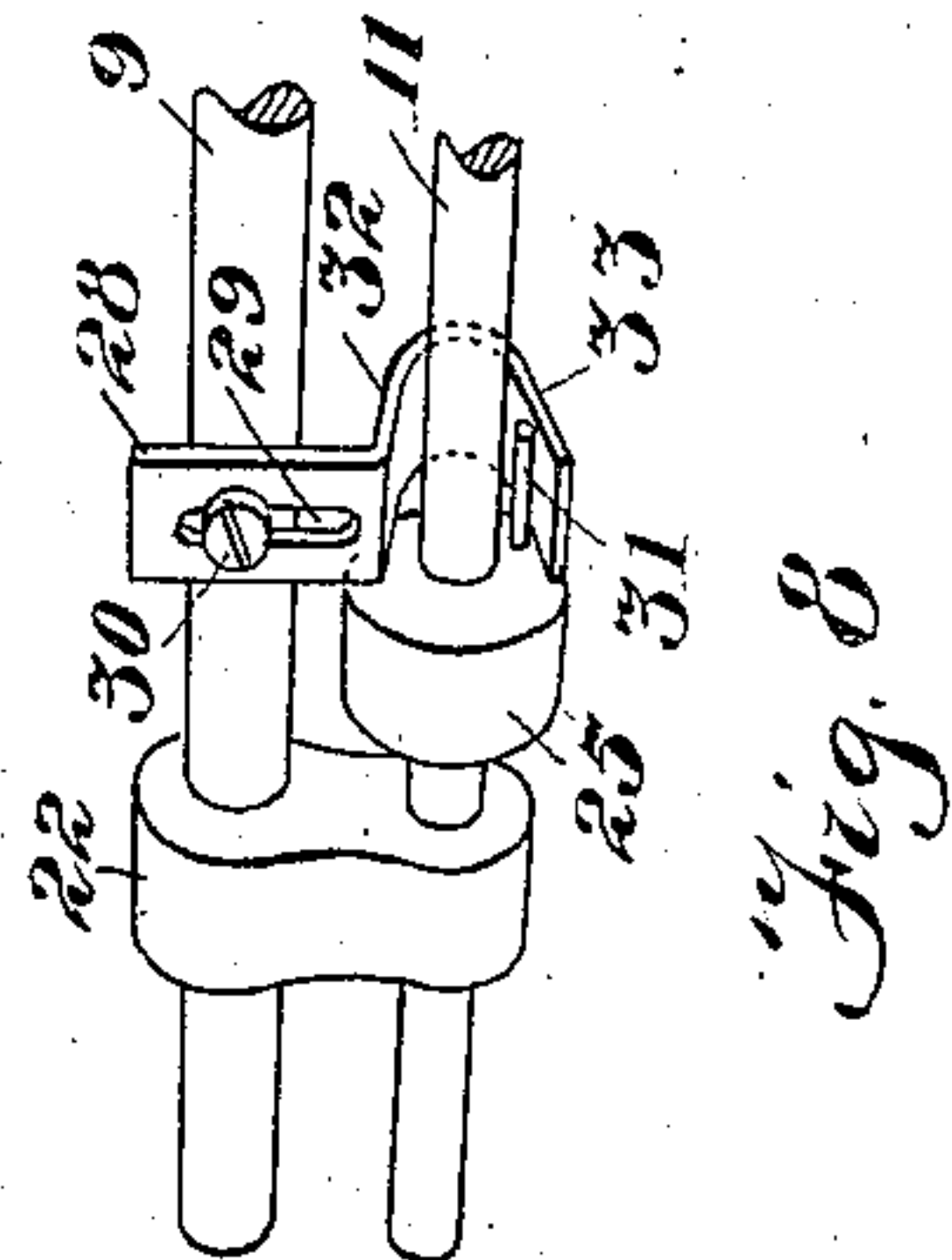
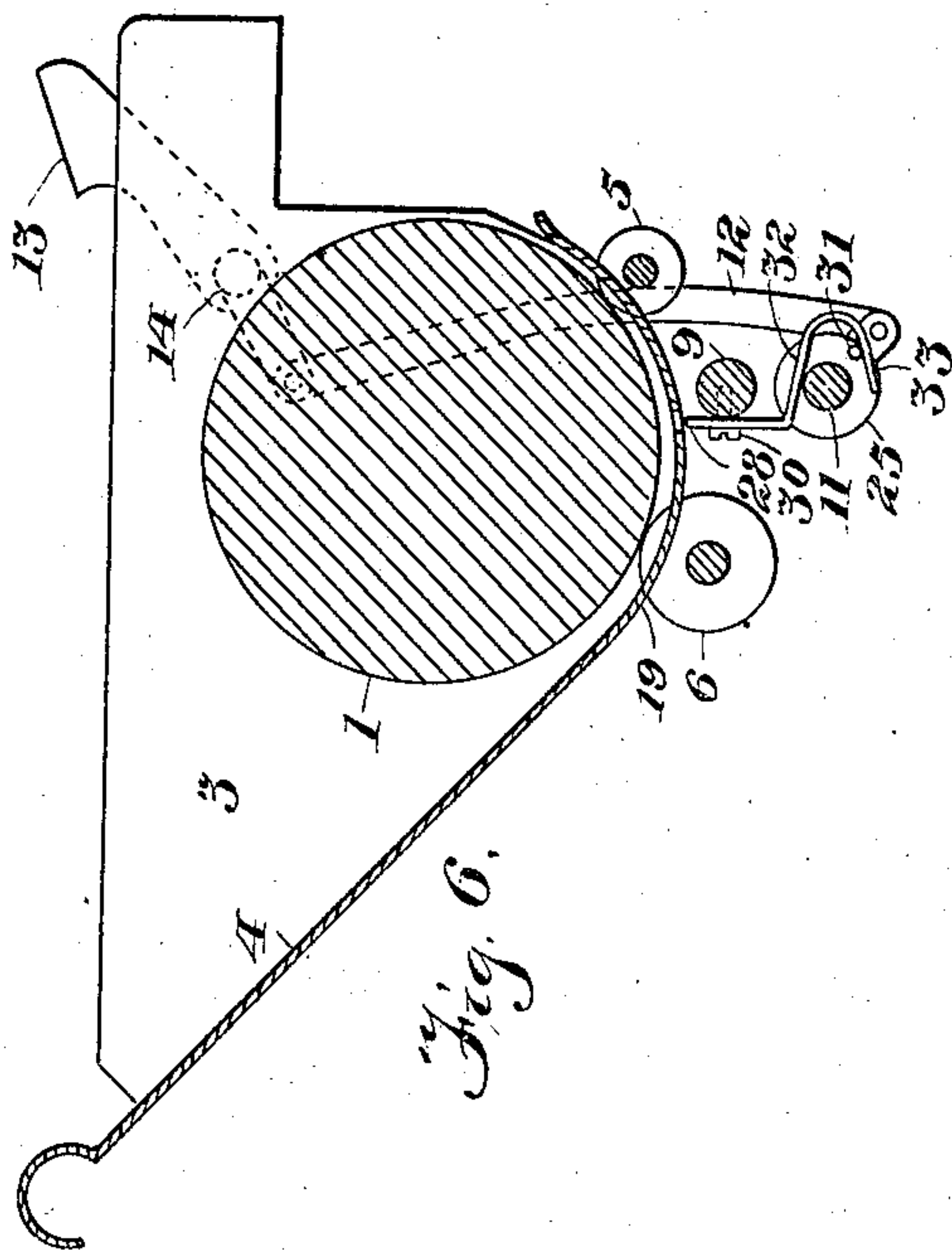
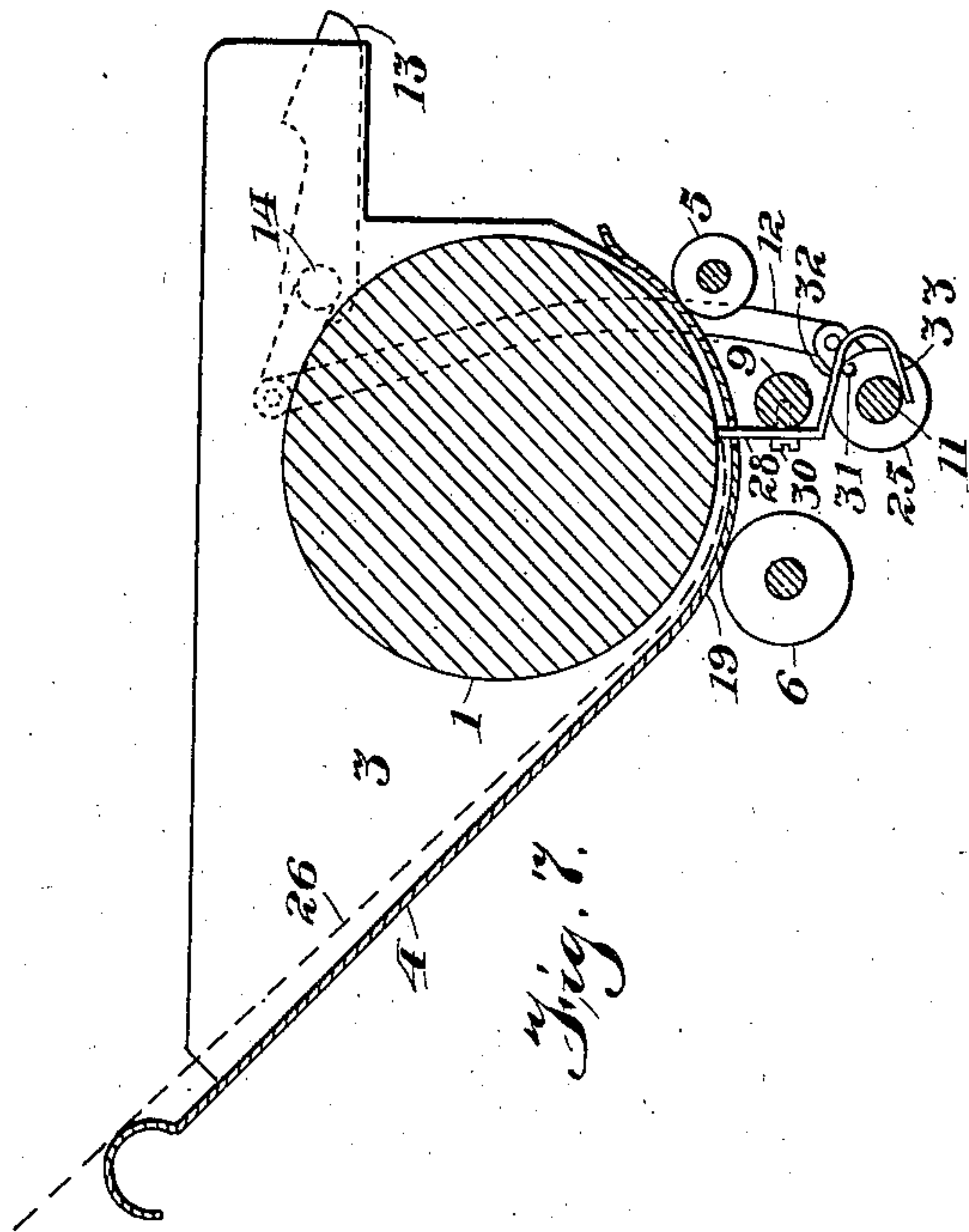
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3 SHEETS—SHEET 3.



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# UNITED STATES PATENT OFFICE.

HARRY S. McCORMACK, OF PROVIDENCE, RHODE ISLAND, ASSIGNOR TO  
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RATION OF NEW JERSEY.

## TYPE-WRITING MACHINE.

No. 847,428.

Specification of Letters Patent.

Patented March 19, 1907.

Application filed April 6, 1906. Serial No. 254 183.

*To all whom it may concern:*

Be it known that I, HARRY S. McCORMACK, a citizen of the United States, residing in Providence, in the county of Providence and State of Rhode Island, have invented certain new and useful Improvements in Type-Writing Machines, of which the following is a specification.

This invention relates principally to means for squaring the leading edge of the paper with reference to the printing-line on the platen of a type-writing machine.

Heretofore it has been the practice to insert the sheet of paper behind the platen and to turn the platen so as to bring the sheet into view at the printing-point and then adjust the paper so that it is square with the printing-line. This operation is slow and unsatisfactory. Moreover, in the operation known as "condensed billing" it is customary after completing a bill to rotate the platen back, insert a fresh bill, and then rotate the platen forward to bring the first line or space on the bill to the printing-point. The necessary adjustment or squaring of the bill relatively to the printing-line is difficult, owing to the presence in the machine of the usual recording and carbon sheets. Moreover, it is found in practice that the bill sometimes gets out of proper register with the recording-sheet—that is, the first line of writing falls in the wrong space upon either the bill or the recording-sheet, or both, particularly where mechanical means are employed to determine the extent of the backward and forward revolutions of the platen.

In order to overcome these difficulties, I provide at the platen, between the receiving side thereof and the printing-point, a gage. This gage stands normally below the platen and out of use; but means are provided whereby at the will of the operator the gage may be moved up against the platen. This is done by means of a key mounted upon the platen-frame.

One of the features of my invention resides in employing for this purpose the same key that upon the "Underwood" type-writing machine is used for releasing the pressure-rollers, so that when said pressure-rollers are released the gage is simultaneously thrown against the platen. Thus the paper may be slipped in freely at the rear of the platen until

the leading edge thereof strikes the gage and is squared or trued thereby. Thereupon said key is returned to normal position, withdrawing the gage from the platen and restoring the pressure-rollers. Said gage is in advance of one of the pressure-rollers, so that the latter at once grips the adjusted paper, and the latter is fed true to the printing-line. Moreover, in condensed billing the adjustment of each freshly-inserted bill is rendered exactly the same as that of all other bills, and hence the first line of writing appears upon each bill in the exact position required, and the carbon copy falls in the proper position upon the recording-sheet.

In the accompanying drawings, Figure 1 is a transverse sectional elevation of the platen-frame of an Underwood type-writing machine with my improvements applied thereto, the parts being shown in normal position. Fig. 2 is a view similar to Fig. 1, but showing the roller-releasing key depressed, the pressure-rollers thrown off, the gage moved up against the platen, and a sheet inserted against said gage. Fig. 3 is a perspective view of a portion of the gage mechanism in normal position. Fig. 4 is a front view of the parts seen at Fig. 1. Fig. 5 is a rear view of the same. Fig. 6 shows another form of the gage, the parts being seen in normal position. Fig. 7 is a similar view with the gage in working position. Fig. 8 is a perspective view of part of the gage mechanism seen at Figs. 6 and 7.

The Underwood machine usually comprises a revoluble platen 1, journaled in ends 2 3 of the platen-frame, which also comprises a rear plate or paper-shelf 4. Below the platen are forward and rear pressure-rollers 5 6, mounted, respectively, upon arms 7 8, pivoted upon a rod 9, which is fixed at its ends in said platen-frame ends 2 3. Springs 10 press the rollers against the platen. A rock-shaft 11, which is connected by a link 12 to a finger-piece 13, pivoted at 14 upon the platen-frame end 3, is used to release said rollers, being for this purpose provided with recesses 15, which normally receive arms 16 17, that are rigid with the arms 8 7, respectively, as seen at Fig. 1. Upon depressing said key, as at Fig. 2, said rock-shaft 11 is turned, and the arms 16 17 are cammed outwardly thereby, throwing down the pressure-rollers 5 6, as at Fig. 2. The key is mechanically detained



in this depressed position, since said arms now ride upon the periphery of said rock-shaft, and hence have no tendency to turn the same back. This leaves both hands of the operator free to handle the paper. The mechanism so far specifically described is in common use upon said Underwood machine.

My novel gage may be made in many ways and should be of sufficient distance from tip to tip along the platen to enable the leading edge of the sheet to be readily squared. Preferably I form the gage in two similar parts, which are sufficiently separated for the purpose just mentioned. Each part comprises a lip or gage proper 18, standing normally below the platen and beneath the usual deflector 19, which curves beneath the platen, said lip being formed upon the forward edge of a strip or arm 20, which is curved round the fixed rod 9, so as to form a pivot, whereby the gage is enabled to swing up and down. A spring 21, projecting from a fixture 22, bears against a rigid tongue 23, which depends from the arm 20, said spring giving said gage a constant tendency to turn upon the fixed rod 9 in a direction to carry the gage 18 up against the platen. Each gage member is, however, normally held away from the platen by means of a pin 24, which projects laterally from a collar 25, fixed upon said rock-shaft 11, as seen at Figs. 1 and 3. When the rock-shaft is turned by means of the key 13, the pins 24 ride down the fingers 23, which are in the nature of cams, and permit the springs 21 to vibrate the gage members 18 up against the platen, as at Fig. 3. The gage members stay at this point as long as the key 13 remains depressed, and the sheet or sheets of paper 26 may now be inserted and squared by bringing the leading edge thereof against the gage members, which, as aforesaid, are sufficiently far apart to give a broad bearing for truing the sheet. The upper edge of each gage member is beveled, as at 26, to fit the platen, as seen at Fig. 2, so that the edge of the paper cannot work in between the gage and the platen. During the final portion of the initial movement of the key the pin 24 is idle, or, in other words, the downward movement of the key may continue after the springs 21 have pressed the gage members against the platen, one of said pins 24 being shown at Fig. 2 as moved away from the arm 23. Thus it is insured that each gage member shall fit against the platen, while a further downward movement of the key is permitted in order to enable the proper locking action to occur between the rock-shaft 11 and the roller-releasing arms 16 17. The release-key 13 is now lifted, and the pins 24 by riding up along the tongues 23 cam the gage members 18 away from the platen simultaneously to the Fig. 1 position, and at the same time the pressure-rollers are caused to bear against the platen. It will be seen that

the gage is in advance of the pressure-roller 6, so that the latter upon assuming normal position bears against the adjusted sheet or sheets 26, and hence the latter is caused to feed accurately and squarely to the printing-point, and in condensed billing the forward movement of the platen brings the bill to the exact position required for printing the first line thereon. The gage members are adapted to project up through openings 27 in the deflector-plate.

The tip of each gage member at 26 is parallel with or fitted to the platen. Each gage member by reason of being pivoted in rear of and considerably below the point of contact with the platen moves not only downwardly, but also forwardly and away from the leading edge of the paper, when the key 13 is raised, or, in other words, each gage member recedes from the paper, and hence has no liability to turn the edges of the paper or to disturb the adjustment thereof. The turning of the edge of the paper would be an objection, as it would interfere with the paper entering the bite of the forward feed-rollers.

If it is desired to depress the release-key 13 at any time when the paper is in position for printing, this may be done, and the gage members will rise and ride lightly in contact with the paper without, however, being liable to tear the same and not interfering with the adjustment of the paper. At this time the gage members will be merely held against the paper by the light springs 21, which will accommodate any thickness of paper that may be inserted in the machine, so that the gages can do no damage at any time. It will be observed that the device is not only simple and durable, but also easily attached to the machine.

In the modification shown at Figs. 6, 7, and 8 each gage 28 is in the form of a vertical slide 29, where it slides up and down on the shoulder of a screw 30, fixed to the rod 9. The upward movement of each gage is effected by a pin 31, projecting from a collar 25, fixed upon the rock-shaft 11. When the rock-shaft is turned, the pin strikes the upper portion 32 of a bent member or hook formed upon the gage 28, and thereby lifts the gage. Said bent member also includes a lower part 33, which the pin 31 may strike upon its return movement, so as to insure a withdrawal of the gage from the platen, as at Fig. 6.

Other variations may be resorted to within the scope of my invention, and portions of my improvements may be used without others.

Having thus described my invention, I claim—

1. In a type-writing machine, the combination with a revoluble platen, of forward and rear pressure-rollers bearing against the under side of the platen, a gage between said rollers below the platen and normally separated from the latter, a key, means connect-



ed to said key for releasing said rollers simultaneously, and means for enabling the releasing movement of said key to cause an upward movement of said gage to the platen.

5 2. In a type-writing machine, the combination with a platen, of a pressure-roller, a key for effecting the release of the pressure-roller, means being provided whereby the key is detained in working position, a gage  
10 normally in a position of disuse, for squaring the leading edge of the paper relatively to the printing-point, and means for enabling said key by its roller-releasing movement to cause the movement of said gage to the  
15 platen; provision being made for further movement of the key after said gage reaches the platen.

3. In a type-writing machine, the combination with a revoluble platen, of a roller for  
20 pressing paper against the platen, a key, means controlled by said key for camming said roller away from the platen, said camming means being constructed to detain said  
25 key in working position, a gage for squaring the leading edge of the paper relatively to the printing-line, yielding means tending constantly to move said gage to the platen, and a cam device normally holding said gage  
30 away from the platen, and including provision for further movement of the key idly after the gage reaches the platen.

4. In a type-writing machine, the combination with a revoluble platen, of a rod extending along the platen, a gage journaled  
35 upon the rod for squaring the leading edge of the paper relatively to the printing-line, a key, a rock-shaft to which said key is connected, said rock-shaft having means for camming said gage away from the platen,  
40 and constructed to permit the movement of said gage to the platen during the initial

stroke of said key, a pressure-roller bearing against the under side of the platen, an arm supporting said pressure-roller and journaled upon said rod, and means controlled by said  
45 rock-shaft for causing the initial movement of said key to release said roller.

5. In a type-writing machine, the combination with a platen, a gage normally in a position of disuse, for squaring the leading edge  
50 of the paper relatively to the printing-point, a key, and means for enabling said key to cause the movement of said gage to the platen; provision being made for further movement of the key after said gage reaches  
55 the platen.

6. In a type-writing machine, the combination with a revoluble platen, of a gage for squaring the leading edge of the paper relatively to the printing-line, yielding means  
60 tending constantly to move said gage to the platen, a key, and a cam device controlled by said key and normally holding said gage away from the platen, and including provision for further movement of the key after  
65 the gage reaches the platen.

7. In a type-writing machine, the combination with a revoluble platen, of a rod extending along the platen, a gage journaled upon the rod for squaring the leading edge of  
70 the paper relatively to the printing-line, a key, and a rock-shaft to which said key is connected, said rock-shaft having means for camming said gage away from the platen, and constructed to permit the movement of  
75 said gage to the platen during the initial stroke of said key.

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Witnesses:

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