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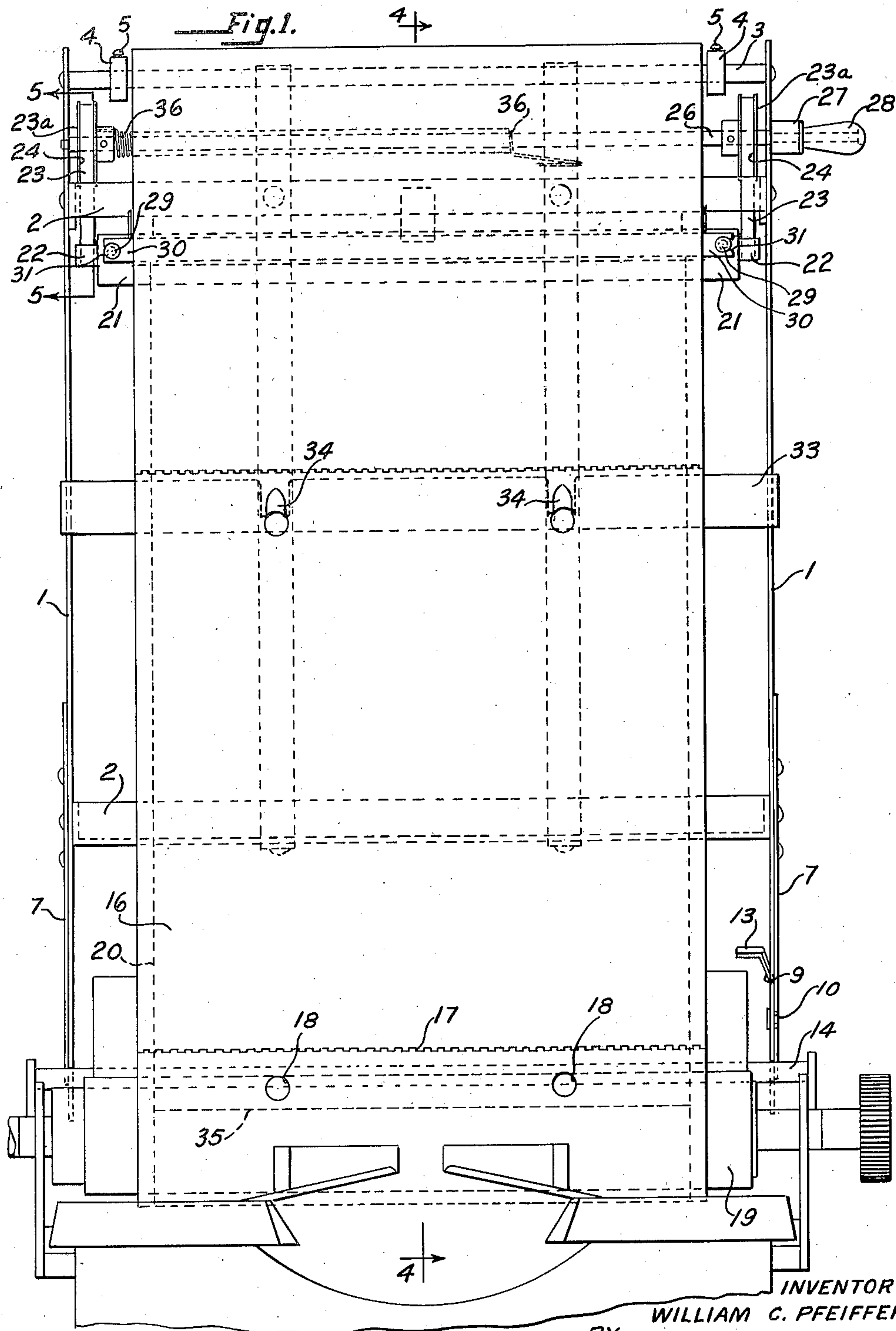
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2,011,825

APPARATUS FOR FEEDING PAPER AND CARBON SHEETS

Filed Jan. 25, 1932

3 Sheets-Sheet 1



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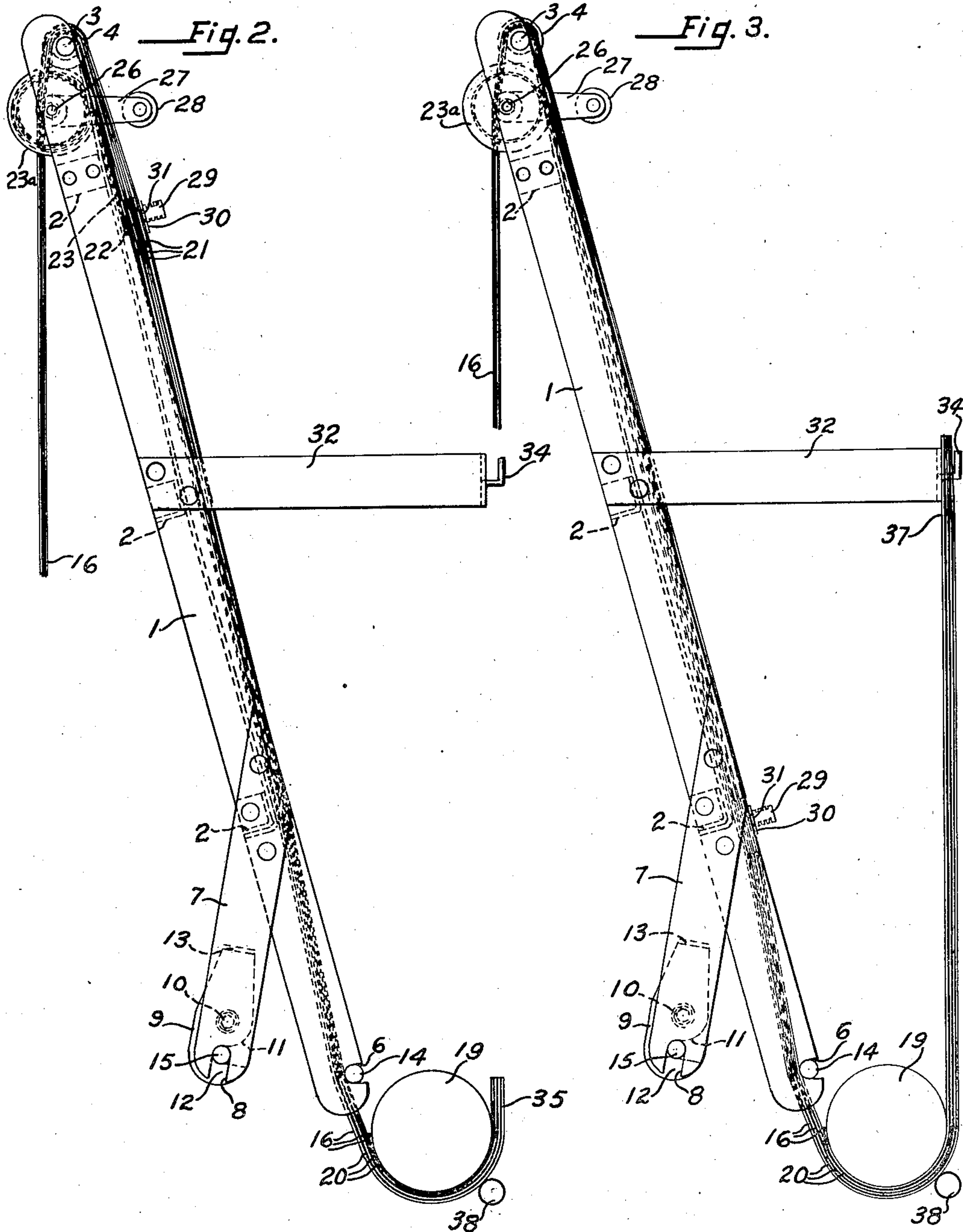
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3 Sheets-Sheet 2



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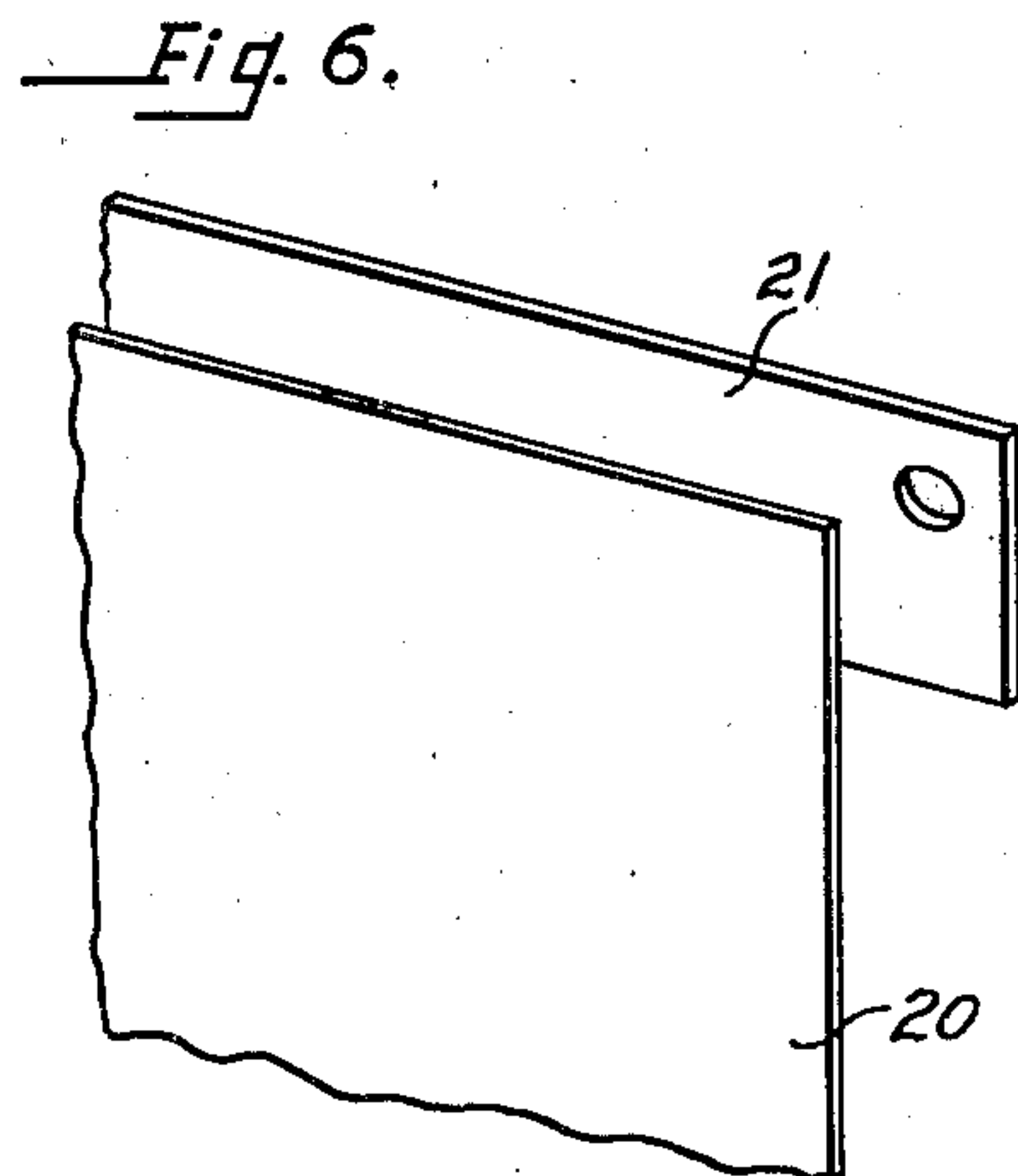
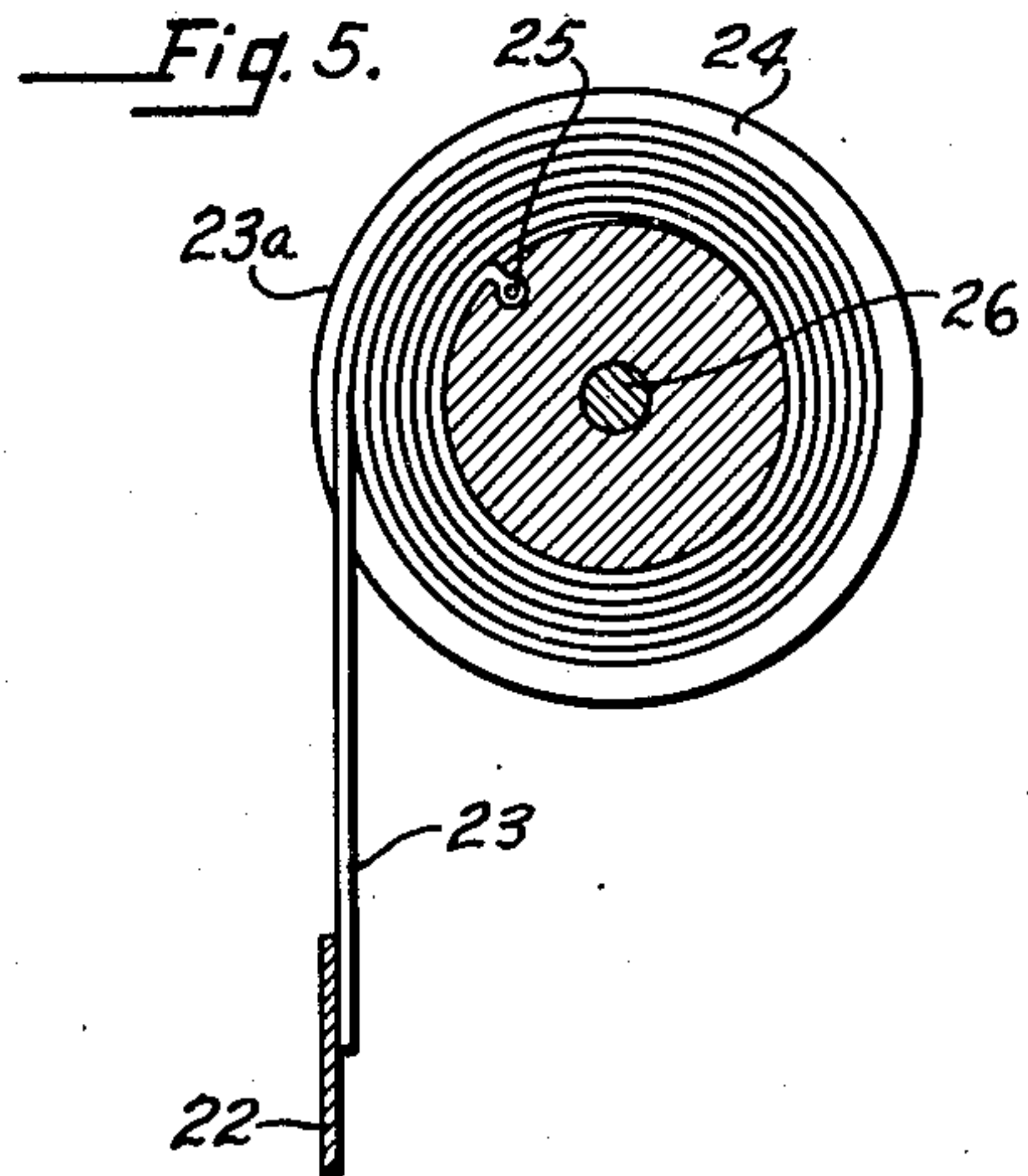
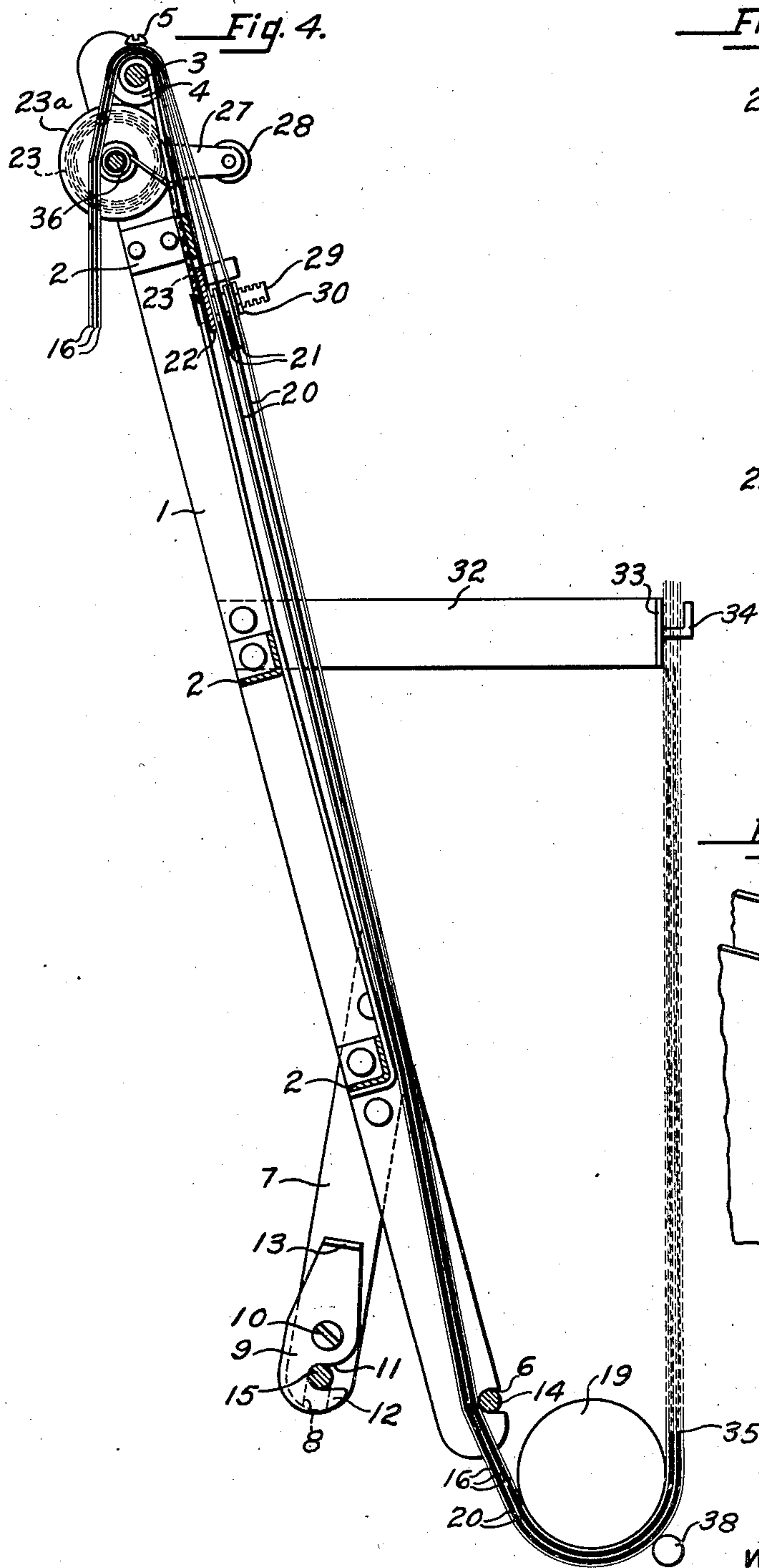
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APPARATUS FOR FEEDING PAPER AND CARBON SHEETS

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3 Sheets-Sheet 3



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2,011,825

APPARATUS FOR FEEDING PAPER AND
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Application January 25, 1932, Serial No. 588,649

8 Claims. (Cl. 197—126)

This invention relates to improvements in apparatus for feeding paper and carbon sheets, and the method of handling them, and is in the nature of an attachment adapted to be used with any standard typewriter, and has for its object to provide means for feeding a plurality of superimposed strips of paper into a typewriter with sheets of carbon paper inserted between the strips of paper, and adapted to be fed with the paper and withdrawn longitudinally of the strips of paper for a second feeding with the paper.

It is also an object of this invention to provide, in connection with a plurality of superimposed strips of paper, means for supporting between two adjacent strips of paper a sheet of carbon paper so that the carbon sheet may be fed with the strips of paper, and after being used for writing purposes, withdrawn to its original non-feeding position for further use in connection with a second feeding of the strips of paper.

It is particularly the object of this invention to provide, in connection with means for delivering superimposed strips of paper, means to support between the strips of paper sheets of carbon so that the assembly may be moved together for typewriting purposes and the sheets withdrawn to another section of the strips for a further use in connection with those strips for typewriting purposes.

These and other advantages will appear from the following description taken in connection with the drawings.

Referring to the drawings:

Figure 1 is a front elevation of the apparatus showing a part of the typewriter to which it is attached.

Figure 2 is a side elevation of the apparatus showing the platen of a typewriter with the strips of paper and the sheets of carbon in position for writing.

Figure 3 is a view similar to Figure 2, but showing the strips of paper and the carbon sheets in a supported position after the writing has been produced on the strips of paper. In this figure the carbon sheets are in a position to be withdrawn and the strips of paper torn off for further writing.

Figure 4 is a section on the line 4—4 of Figure 1.

Figure 5 is a section on the line 5—5 of Figure 1.

Figure 6 is a view showing a carbon sheet with supporting cardboard on one end thereof.

This attachment has a rectangular supporting frame composed of side bars 1 and transverse cross bars 2 attached at their ends to the side bars so there is formed a substantially rigid rectangu-

lar frame. These cross bars are located intermediate the ends of the side bars.

Connecting one end of each side bar is an end rod 3, which has on each end, adjacent the side bar, a paper guide 4, adjustably affixed to the rod by means of a screw 5. There are two of these paper guides, one at each end of the rod 3, and they are adjusted on the rod so that the strips of paper will feed in between them and slide over the end rod 3, as shown in Figure 1. On the lower end of each side bar and to one side thereof is a notch 6, adapted to receive a suitable rod on a typewriter.

Extending rearwardly and downwardly from each side is a leg 7, the upper end of which is suitably attached to the side bars. In the lower end of each leg is a longitudinally extending notch 8. This notch is provided for receiving another bar or rod located on the typewriter. For the purpose of holding the legs upon the cross rod 15 a latch 9 is pivoted at the point 10 to one of the legs. This latch has on one side a notch 11, thereby forming on the lower end of the latch a hook 12 to engage behind the rod 15 for holding the frame in a rigid position, supported as shown in Figures 1 and 2.

When this latch 9 is in proper position the frame is fairly rigidly held in position on the typewriter. In manipulating the latch there is provided a handle 13, as shown in Figure 1. The rod on the typewriter fitting in the notch 6 is indicated by the numeral 14, while that fitting within the notch 8 is indicated by the numeral 15.

The purpose of this frame is to provide an attachment for supporting a plurality of superimposed strips of paper 16. These strips of paper may be fed from a roll or from a pile into which the strips are folded. Each strip of paper has cross serrations 17, along which it may be torn for removing sections, and adjacent each serration is a plurality of file holes 18. These file holes are adjacent the serrations, as shown in Figure 1. The platen of the typewriter is indicated by the numeral 19, and is used for feeding the strips of paper, with the interposed sheets of carbon. The sheets of carbon paper are indicated by the numeral 20, one of which is illustrated in Figure 6, and each of which has on one end a cardboard supporting strip 21, which extends laterally behind the edges of the sheet of carbon.

For supporting the sheets of carbon by means of the cardboard strips a metal strip 22 is provided, which has attached to each end one end of a metal tape 23, the other end of which metal

tape being attached to a drum 23^a in a groove 24 located in the periphery of the drum. In the bottom of the groove there is a pocket 25 into which one end of the metal tape fits, for holding the tape on the drum. These drums, two in number, one at each side of the frame, are supported by an operating shaft 26, which has on one end, without the frame, a crank 27 with a handle 28 thereon. This crank and handle are for the purpose of rotating the drums to take up the metal tapes. Adjacent each end of the metal strip 22 is a pin 29 adapted to pass through a hole in the end of the cardboard strip 21.

When the desired number of strips are assembled, between each adjacent strip is placed a sheet of carbon with a cardboard strip on one end. The cardboard strips are located on top of the metal strip 22, with the pins 29 in the holes in the ends of the cardboard strips. When the strips of paper have been properly positioned and fed into the typewriter, in the manner shown in Figure 2, the interwoven sheets of carbon are supported between the strips of paper from their cardboard strips, and extend to a point around the platen almost to the file holes 18, as shown in Figure 1. By means of these cardboard strips the sheets of carbon are supported from the drums by the metal tapes.

For the purpose of holding the strips of paper and the sheets of carbon in a compact condition with relation to each other, there is provided a clamp strip 30, which has in each end a notch 31. After the paper has been assembled this strip is bowed so that each end will receive in its notch a pin 29. When the pins are properly seated in the notches the clamp strip will lie against the face of the outside strip of paper. Extending from each side bar is a horizontally disposed bracket 32. These brackets are connected at their free ends by means of a cross bar 33, which has thereon forwardly extending pins 34, as shown in Figure 1.

When a certain length of the strips of paper has been used the strips are supported by means of the pins 34 passing through the file holes 18, in the manner shown in Figure 3. At this time it is desired to withdraw the sheets of carbon so they will be ready for use in connection with another section of the strips of paper. In order to withdraw the sheets of carbon, drums are rotated by means of the handle 28. By rotating the handle the strips of carbon are withdrawn to the position shown in Figure 2.

After the sheets of carbon have been withdrawn the free ends of the strips of paper may be torn off along the serrated lines. When the strips are torn off the carbon will extend around the platen not quite to the file holes 18, and to a point 35, as indicated in Figure 1. The strips of paper above the serrations 17, shown in the lower end of Figure 1, are torn off. When the strips are thus torn off the paper is in the condition shown in Figure 2 and is ready to be used for typewriting purposes. After the desired amount of typewriting has been done the strips of paper, with the interwoven sheets of carbon therebetween, are in the position shown in Figure 3.

In connection with the shaft 26 and the drums 23^a there is provided a coil spring 36 around the shaft, attached at one end to some suitable part of one of the drums or to the shaft, while the other end is attached to some part of the frame. This spring may be used as a counterbalance spring to hold the carbon sheets in a tense condition while they, together with the strips, are

being fed around the typewriter platen. It also aids in the withdrawal of the strips after the typewriting has been finished on a certain section of the strips of paper. The point to which the sheets of carbon extend in Figure 3 is indicated by the numeral 37. From this figure it is apparent that when the ends of the strips are supported by the pins 34 the carbon sheets are free to be withdrawn.

Associated with the platen for holding the assembled strips of paper in close contact with each other against the periphery of the platen for writing purposes, a feed roller 38 is provided. When it is desired to withdraw the sheets of carbon this roller is removed from contact with the strips so that the carbon sheets may be easily withdrawn for further use in connection with another section of the strips of paper.

It will be understood that I desire to comprehend within my invention such modifications as come within the scope of my claims and my invention.

Having thus fully described my invention, what I claim as new and desire to secure by Letters Patent, is:

1. In a paper supporting attachment, means to support a plurality of superimposed strips of paper and means to support between the strips and to move longitudinally thereof sheets of carbon paper, said last-named means including a shaft, a plate engaging one face of the strips and having pins on opposite edges of the strips connected to the carbon sheets, a second plate supported by the pins on the other face of the strips, and means operatively connecting the plates to the shaft whereby rotation of the shaft will move the carbon sheets independent of the strips.

2. In a paper supporting attachment, means to support a plurality of superimposed strips of paper and means to support between the strips and to move longitudinally thereof sheets of carbon paper, said last-named means including a shaft, a plate engaging one face of the strips and having pins on opposite edges of the strips connected to the carbon sheets, a spring plate engaging the other face of the strip and having notches in its ends to receive the pins, and means to connect the first-named plate to the shaft whereby rotation of the shaft will move the carbon sheets.

3. In a paper supporting attachment for typewriters, a frame adapted to support a plurality of superimposed strips of paper, said frame having at one end notches to receive a part of the typewriter, means on the frame adjacent the notched end thereof to grip another part of the typewriter, and a pair of drums on the other end of the frame to support and move independent of the strips sheets of carbon paper inserted between the strips.

4. In a paper supporting attachment for typewriters, a support member adapted to be attached to the typewriter adjacent the platen thereof and adapted to support a plurality of superimposed strips of paper to be fed around the platen, means including a metal strip having a pair of pins thereon to support independent of the strips sheets of carbon paper inserted between the strips, means on the support member to hold the ends of the strips after they and the carbon sheets have been fed around the platen for writing purposes, and means connected to the metal strip to draw the carbon sheets back while the strips are thus held.

5. In a paper-supporting attachment for writing machines, a frame, means on said frame for

supporting a plurality of superimposed strips of paper, means to support between the strips and to move longitudinally relatively thereto sheets of carbon paper, means on said frame to retract the carbon sheets after the termination of the writing operation, and a forwardly-extending holder mounted on said frame and adapted to hold the paper strips in full-length position before the operator on the delivery side of the writing machine during the retraction of said carbon sheets.

6. In a paper-supporting attachment for writing machines, a frame, means on said frame for supporting a plurality of superimposed strips of paper, means to support between the strips and to move longitudinally relatively thereto sheets of carbon paper, means to releasably urge said paper strips and said carbon sheets into relatively immovable engagement with one another, means on said frame to retract the carbon sheets after the termination of the writing operation, and a forwardly-extending holder mounted on said frame and adapted to hold the paper strips in full-length position before the operator on the delivery side of the writing machine during the retraction of said carbon sheets.

7. In a paper-supporting attachment for writing machines, a frame, means on said frame for

supporting a plurality of superimposed strips of paper, means to support between the strips and to move longitudinally relatively thereto sheets of carbon paper, means on said frame to retract the carbon sheets after the termination of the writing operation, and a forwardly-extending holder mounted on said frame and adapted to hold the paper strips in full-length position before the operator on the delivery side of the writing machine during the retraction of said carbon sheets, said retracting means comprising a shaft having a drum and a flexible connector joining said drum and said carbon-supporting means.

8. In a paper-supporting attachment for writing machines, a frame, means on said frame for supporting a plurality of superimposed strips of paper, means to support between the strips and to move longitudinally relatively thereto sheets of carbon paper, means on said frame to retract the carbon sheets after the termination of the writing operation, and a forwardly-extending holder mounted on said frame and adapted to hold the paper strips in full-length position before the operator on the delivery side of the writing machine during the retraction of said carbon sheets, said paper holder having forwardly-extending pins arranged to penetrate correspondingly-disposed apertures in the paper strips.

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