

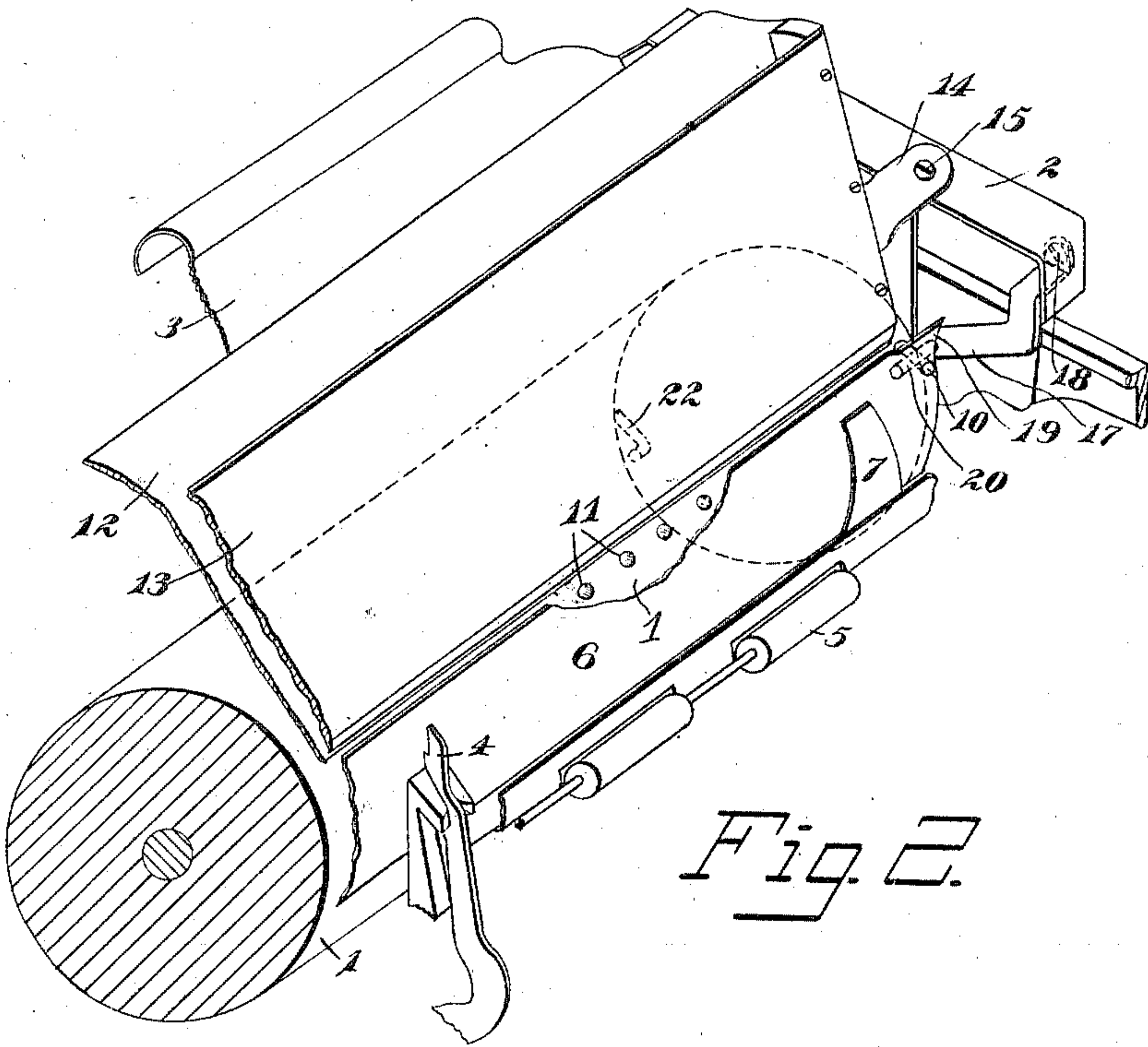
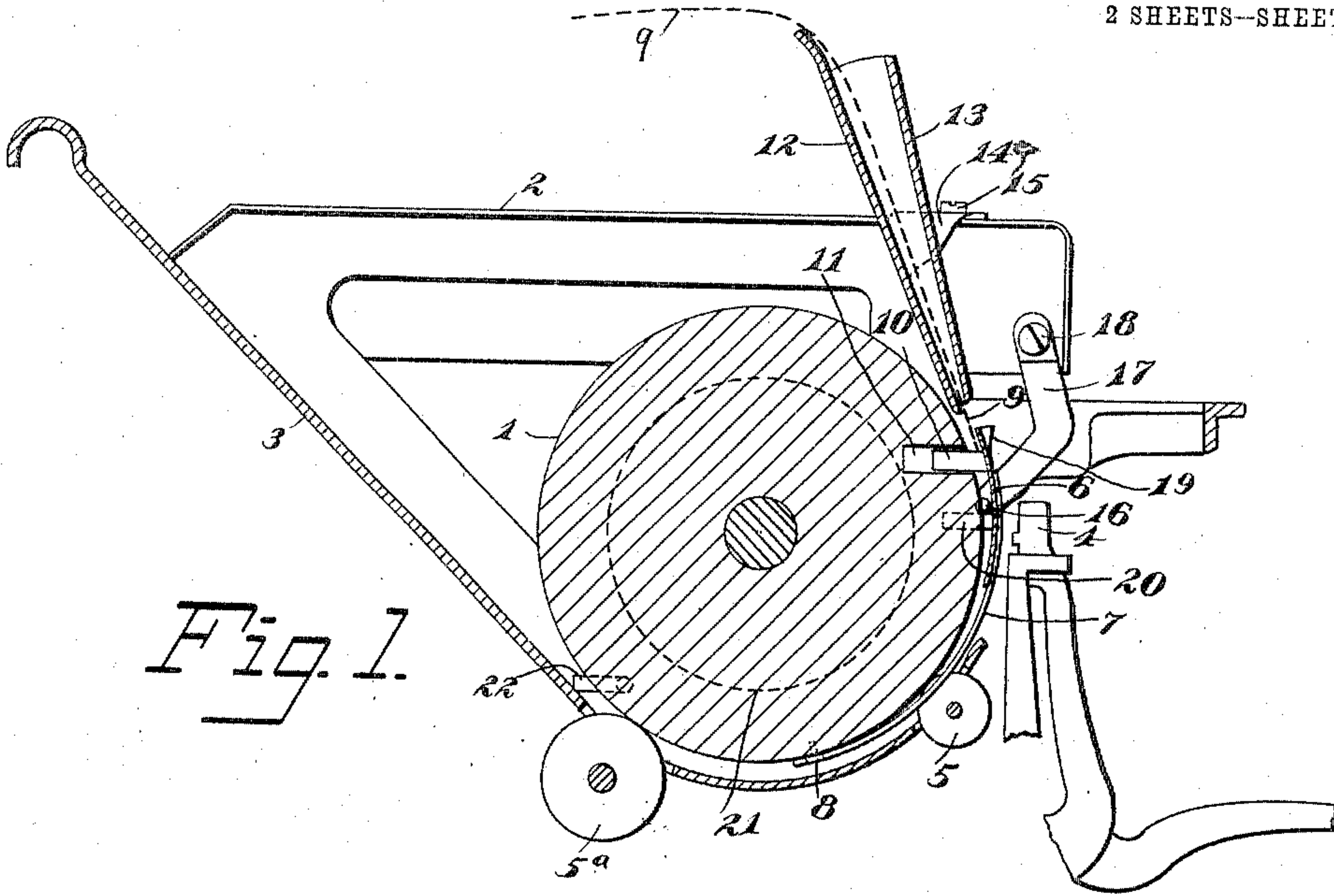
No. 816,919.

PATENTED APR. 3, 1906.

E. F. KUNATH.  
TYPE WRITING MACHINE.

APPLICATION FILED MAY 31, 1905.

2 SHEETS--SHEET 1.



WITNESSES:-  
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Bertha Schmier

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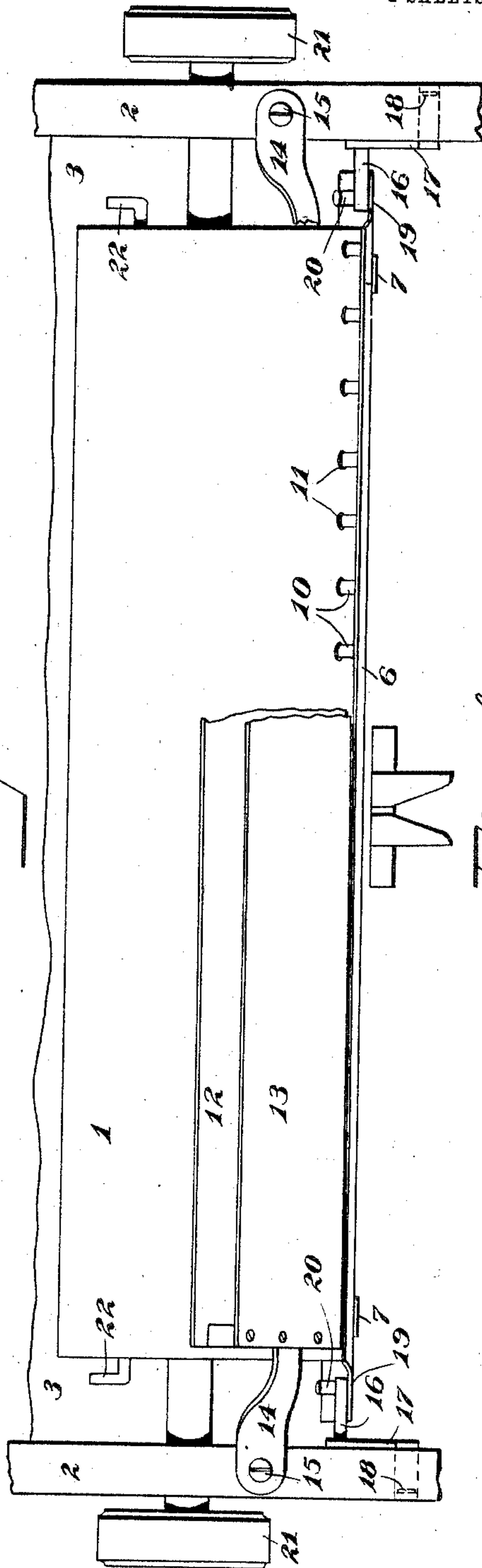
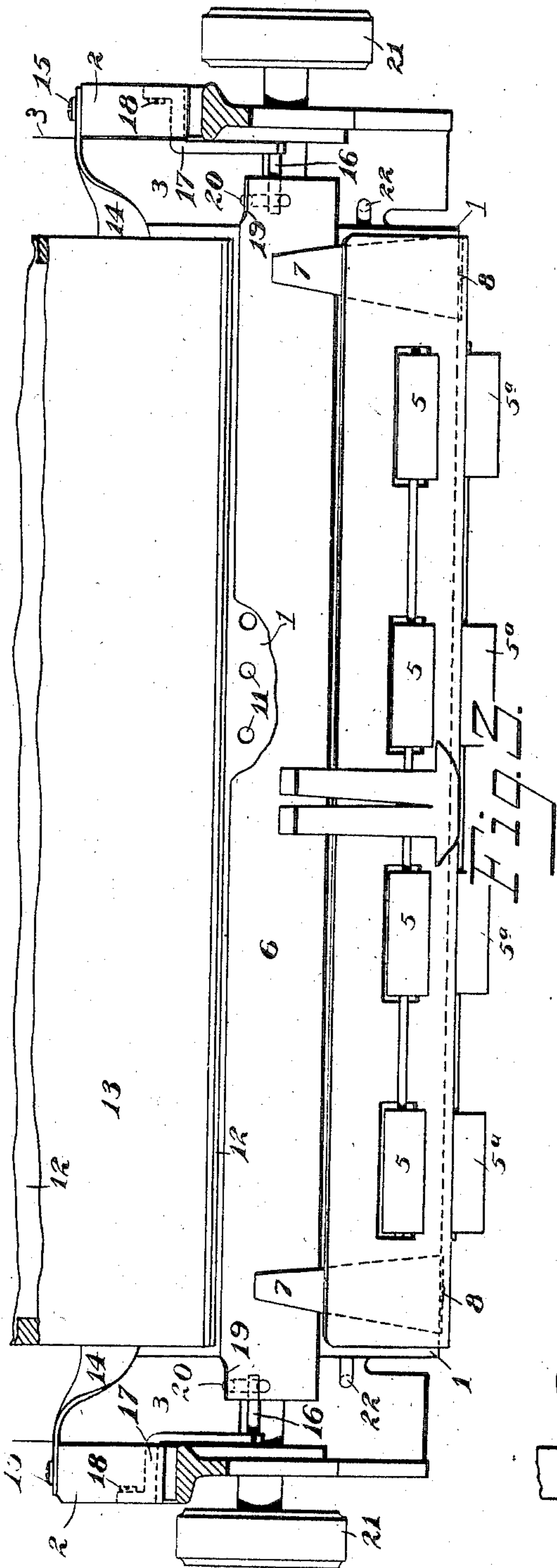


Fig. 4.

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# UNITED STATES PATENT OFFICE.

EDWARD F. KUNATH, OF JERSEY CITY, NEW JERSEY, ASSIGNOR TO  
UNDERWOOD TYPEWRITER COMPANY, OF NEW YORK, N. Y., A COR-  
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## TYPE-WRITING MACHINE.

No. 816,919.

Specification of Letters Patent.

Patented April 3, 1906.

Application filed May 31, 1905. Serial No. 263,119.

*To all whom it may concern:*

Be it known that I, EDWARD F. KUNATH, a citizen of the United States, residing in Jersey City, in the county of Hudson and State of New Jersey, have invented certain new and useful Improvements in Type-Writing Machines, of which the following is a specification.

This invention relates to paper-feeding devices of type-writing machines.

The object of the invention is to enable sheets, particularly short ones, and cards, envelopes, and the like to be inserted quickly into the machines and brought instantly and accurately to the proper position to begin the first line of writing thereon and also to effect ready release of the sheet after writing. To these ends I provide means upon the platen for receiving and gripping the bottom edge of the paper, which is inserted backwardly at the front of the revoluble platen. This paper-gripping means is in the form of a clip which is mounted directly upon the platen and is opened automatically to receive the paper and is closed automatically when the platen is rotated. I also provide a stop for arresting the platen in the proper position for beginning the first line of writing upon the paper. Thus it is necessary only to drop the sheet or card in at the front of the platen and then rotate the platen back as far as it can go and then begin the writing. When the writing is finished, the platen is rotated forwardly until arrested by suitable means, whereupon the paper is automatically released and may be taken out and a fresh sheet inserted. I also provide improved means upon the platen-frame for directing the sheet downwardly into the open clip upon the platen.

In the accompanying drawings, Figure 1 is a sectional elevation of a front-strike "Underwood" type-writing machine, showing my improvements applied thereto. Fig. 2 is a sectional perspective view; Fig. 3, a front elevation; and Fig. 4 a plan of the same.

The platen 1 is journaled in the usual frame, comprising ends 2 and a back plate or paper-shelf 3. Types 4 strike in front of the platen, and rolls 5 and 5<sup>a</sup> press the paper against the platen. Upon the platen-frame I mount a clip, comprising a long strip 6, fitting the platen and extending longitudinally

thereof and fixed upon the top ends of a pair of spring-arms 7. The lower or rear ends of the latter are secured by pins or screws 8 upon the end portions of the platen outside of the usual pressure-rolls 5 and 5<sup>a</sup>, so that the latter never run upon said fingers. The latter normally hold the clip firmly against the platen, so that the sheet of paper 9 is firmly held during the rotation thereof. Upon the clip I provide a series of gage-pins 10, which are received in recesses 11, formed in the platen. Fig. 1 shows the position of the parts when the sheet is inserted, the clip standing open to receive the lower edge of the sheet, which is guided downwardly between a paper-shelf 12 and a transparent celluloid shield 13, which together form a directrix or guide for the paper, the plate 13 being secured upon the shelf 12 and the latter extending upwardly and rearwardly from the front side of the platen and being secured by arms 14 and screws 15 upon the ends 2 of the platen-frame.

The clip or plate 6 is held open to receive the paper by means of a pin 16, projecting from an arm 17, secured by a screw 18 upon the platen-frame. The end of the plate 6 at its top edge is bent or flared out at 19 to form an incline or cam. During the forward revolution of the platen said pin 16 catches behind said bent portion 19 and cams the clip open, the platen being immediately arrested by a stop 20, which is intercepted by the pin 16.

It is a simple matter to drop the sheet down between the guide-plates 12 and 13 until it enters the clip, which is just beneath the bottom of said plates, until the bottom edge of the sheet rests upon the gage-pins 10, whereupon the platen is rotated backwardly by a hand-wheel 21 until the paper is in proper position for writing the first line. The platen may be provided with a stop 22, to be intercepted by the pin 16 during the backward revolution of the platen at the point for beginning the writing of said first line.

The guide-plates 12 and 13 may reach nearly to the printing-line on the platen, so that the paper sheet 9 is not carried down far enough to escape from said guide-plates before the platen is arrested by the stop 22.

In operation the platen is turned forwardly as far as it will go, and then the sheet 9 is dropped into the directrix and down upon the



pins 10. Then the platen is turned back as far as it will go, and the first line is written upon the paper. The writing proceeds in the usual manner, the platen being advanced line by line until the writing is finished. Then the platen is rotated forwardly as far as it will go, the sheet withdrawn, and a new sheet inserted.

Variations may be resorted to within the scope of my invention, and portions of the improvements may be used without others—as, for instance, the guide-plates 12 13 may be used without the paper-clip, or vice versa.

Having thus described my invention, I claim—

1. In a type-writing machine, the combination with a revoluble platen, of a spring-pressed clip mounted upon the platen to clasp the bottom edge of the paper; said clip revoluble with the platen, and having a gage for the bottom edge of the paper; and means for causing the clip to release the paper.

2. In a type-writing machine, the combination with a revoluble platen, of a spring-pressed clip mounted upon the platen to receive and gage the bottom edge of the paper, said clip revoluble with said platen; and means rendered effective by the forward revolution of the platen for opening said clip at a predetermined point in the revolution of the platen.

3. In a type-writing machine, the combination with a revoluble platen, of a clip mounted upon the platen to receive the bottom edge of the paper, means rendered effective by the forward revolution of the platen for opening said clip, and means for arresting the forward revolution of the platen immediately upon the clip being opened.

4. In a type-writing machine, the combination with a revoluble platen, and a platen-frame, of a spring-clip mounted upon the platen to receive the bottom edge of the paper, means rendered effective by the forward revolution of the platen for opening said clip at a predetermined point in the revolution of the platen; means for arresting the forward revolution of the platen immediately upon the clip being so opened; and means for guiding the paper bottom end foremost into said clip at such stopping-point.

5. In a type-writing machine, the combination with a revoluble platen and a platen-frame, of a clip mounted upon the platen to receive the bottom edge of the paper, means for opening said clip at a predetermined point in the forward revolution of the platen; and means upon the platen-frame for guiding the

paper bottom end foremost into said clip; said guiding means comprising a paper-shelf erected upon the platen-frame at the front side of the platen and extending upwardly and rearwardly therefrom.

6. In a type-writing machine, the combination with a revoluble platen and a platen-frame, of a clip mounted upon the platen to receive the bottom edge of the paper, means for opening said clip, and means for guiding paper bottom end foremost into said clip; said guiding means comprising a paper-shelf erected upon the platen-frame and extending from the front side of the platen upwardly and rearwardly, and also including a transparent celluloid shield in front of said paper-shelf and separated therefrom so as to form a passage for the paper.

7. In a type-writing machine, the combination with a revoluble platen and a platen-frame, of a paper-clip mounted upon the platen to receive and gage the bottom edge of the paper, means rendered effective by the forward revolution of the platen for opening said clip, and means mounted upon the platen-frame for guiding the paper bottom edge first into said clip.

8. In a type-writing machine, the combination with a revoluble platen, and a platen-frame, of a clip mounted upon the platen to receive the bottom edge of the paper, and means rendered effective by the forward revolution of the platen for opening said clip at a predetermined point, means for limiting the forward revolution of the platen as soon as the clip is opened, and means for limiting the forward stroke of the platen.

9. In a type-writing machine, the combination with a revoluble platen, of a clip mounted upon the platen to receive the bottom edge of the paper; said clip comprising a plate fitted to the platen and extending longitudinally thereof and spring-arms attached at one end to the plate and curving around the platen and attached to the latter, and pressure-rolls bearing upon said platen between said spring-arms.

10. In a type-writing machine, the combination with a revoluble platen of a clip mounted upon the platen to receive the bottom edge of the paper, a series of gage-pins fixed to the clip, the platen having perforations to receive said pins, and means for opening the clip.

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Witnesses:

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