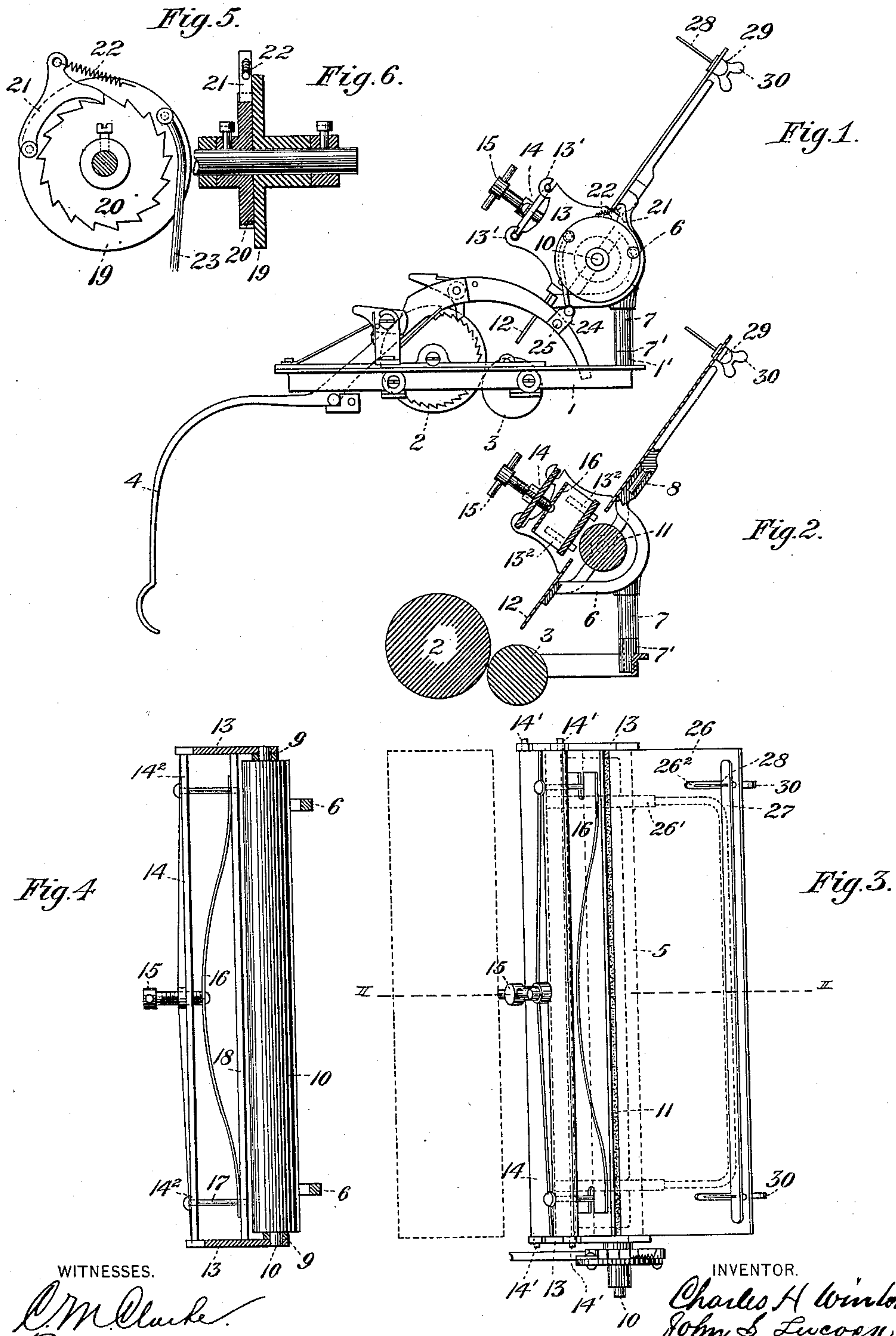


(No Model.)

C. H. WINTON & J. S. LUCOCK.  
PAPER FEED DEVICE FOR TYPE WRITING MACHINES.

No. 452,470.

Patented May 19, 1891.



WITNESSES.

*C. M. Clarke*  
*Robt. O. Frazer*

INVENTOR.

*Charles H. Winton*  
*John S. Lucock*  
*their attorney*  
*A. M. Neper*



# UNITED STATES PATENT OFFICE.

CHARLES H. WINTON AND JOHN S. LUCOCK, OF ALLEGHENY, PENNSYLVANIA.

## PAPER-FEED DEVICE FOR TYPE-WRITING MACHINES.

SPECIFICATION forming part of Letters Patent No. 452,470, dated May 19, 1891.

Application filed May 5, 1890. Serial No. 350,553. (No model.)

*To all whom it may concern:*

Be it known that we, CHARLES H. WINTON, a citizen of the United States, and JOHN S. LUCOCK, a subject of the Queen of Great Britain, both residing at Allegheny, in the county of Allegheny, State of Pennsylvania, have jointly invented a new and useful Paper-Feeding Device for Type-Writing Machines, of which the following is a specification.

Our invention consists in an automatic paper-feed for type-writing machines, which moves with the paper-carrying device of said machines, and which is operated simultaneously with and by the same power and means which actuate the paper-feeding roll of said type-writing machines in such manner as to co-operate with the paper-feeding devices of said type-writing machines in bringing the paper used thereon into proper position to take the impression of the writing-types thereof.

The object of our invention is to provide the means to automatically feed and adjust paper to the paper-feeding devices of type-writing machines, so that the present invention co-operating therewith will adjust and feed the paper continuously to the proper position to receive the impression from the machine.

In the accompanying drawings, Figure 1 shows a side elevation of our invention attached to the paper-carriage of a type-writing machine. Fig. 2 is a central section of the same. Fig. 3 is a plan view of Fig. 1. Fig. 4 is a section of Fig. 3 on line II II. Fig. 5 is an end view of the feed-roll of the automatic paper-feed. Fig. 6 is a section of Fig. 5.

In Fig. 1, 1 is the frame of the carriage of a type-writing machine, in which are sockets 1', and which carries the paper-feeding rolls 2 and 3.

4 is the lever which operates the paper-feeding roll 2, which in the well-known manner causes roll 3 to revolve, and these rolls guide the paper into proper position to receive impressions from the machine.

Our automatic paper-feed is constructed as follows: A rectangular frame 5, Fig. 3, is made of metal or other convenient material and is provided with two or more curved braces 6 6, situate a short distance from the ends thereof. (See dotted lines, Fig. 3.) Each of these

braces has lugs 7, which have a shoulder at 7', and are made to fit snugly into sockets 1' of frame of the carriage 1. The frame 5 is also extended opposite the braces 7 and provided with sockets 8, whose use will be hereinafter explained. The ends of the frame 5 are provided with holes 9 for the reception of shaft 10, carrying roll 11. Plate 12, forming a table, over which the paper is pushed, is fastened to the front side of frame 5 of the feed and extends the full width of the same within a short distance of roll 11 on one side and such a distance in front of frame 5 as to properly support the paper fed to the feeding-rolls 2 and 3 of the type-writing machine.

To each end of frame 5 is attached a plate 13, having slotted lugs 13', and on the inside slots 13<sup>2</sup>, Fig. 2, the slots in 13' each having a slight offset. A ribbed plate 14 is made of a length to easily fit in between the end plates 13, and at each end is provided with lugs 14', which are of such size as to be insertible into the slots in 13' and be secured in the offsets thereof. Plate 14 is also provided with a thumb-screw 15, to which is fastened a curved spring 16, and also two holes 14<sup>2</sup>, through which guides 17 pass. The ends of spring 16 are slotted to provide for the movement of the same when different degrees of pressure are applied to the spring by means of screw 15. Guides 17 are put through holes 14<sup>2</sup> and fixed in plate 18, and may be a strip of any convenient material.

To the end of shaft 10, Fig. 5, is fixed a disk 19, to which is fastened a ratchet-wheel 20 and a pawl 21, having a retracting-spring 22. To disk 19 is also connected a movable link 23, having at its free end coupling 24, Fig. 1, which is fixed to the line-space lever 4 of the type-writing machine and fixed in position by set-screw 25. The size of ratchet 20 and the number and size of its teeth, the length of link 23 and the point of its connection with lever 4 must be so proportioned that the paper will be fed from the automatic feed at the same rate that the feed-rolls of the type-writing machine feed it into said machine. Plate 26 is made of any material, preferably light metal, having a brace 26' on its under side whose ends are formed into lugs to fit sockets 8 of frame 5. It is provided with slots 26<sup>2</sup>.



27 is a strip of metal to which are fixed two upright pins 28 and on the other side two screws 29, on which thumb-screws 30 are placed to hold and adjust strip 27 in any desired position in slots 26<sup>2</sup>. The length of plate 26 may vary to accommodate different sizes of paper.

To use our invention the paper to be used on the type-writing machine is punched with two holes, which are to be the same distance from each other as the pins 28. The paper is then placed on pins 28 and the plate 26 placed on the frame of the carriage by placing lugs 26' in sockets 8 thereof, plates 14 and 18 having been previously removed, and so that the paper shall rest on roll 11 and extend to plate 12. Plate 18 is then placed between end pieces 13 and on top of the paper and plate 14 slipped into the slots of said end pieces, when the pressure between the bottom sheet of paper and roll 11 can be regulated by spring 16. The connection between lever 4 and ratchet 20 having been made in the manner hereinbefore described the paper will by reason of the friction between the bottom sheet and the roll 11, caused by the pressure of spring 16, be drawn off of pins 28, they cutting through the same, and be fed sheet by sheet and adjusted automatically for the type-writing machine to carry it into proper position to take the impressions from the type of the machine.

The advantages claimed for our invention are the saving of time and securing a proper adjustment of each sheet of paper fed into the type-writing machine. These advantages are peculiarly serviceable in the telegraphic business, where it is now impossible to receive commercial messages using the type-writer because of the delay occasioned by manually feeding and adjusting each sheet of paper used. This delay is obviated by the use of our present invention.

We have here shown our invention applied to a well-known class of type-writing machines, but do not wish to be confined strictly to the devices here shown and described to show the principle of our invention, the invention being as hereinbefore described and applicable to many other classes of type-writing machines by the devices here shown or their equivalents.

What we claim as our invention, and desire to secure by Letters Patent, is—

1. The combination of a type-writing-ma-

chine carriage with a paper-feed having a paper-feed roll mounted thereon, and the means whereby the roll of said feed is operated by and simultaneously with the paper roll of said type-writing machine, substantially as and for the purposes described.

2. The combination of the paper-feed roll of a type-writing machine, the lever to operate the same with the paper-feed roll of a paper-feeding device, and the connections between said rolls to operate them co-operatively, substantially as described.

3. A paper-feeding device for a type-writing machine, attachable to the carriage of said machine and having a paper-feed roll, in combination with the paper-feed roll of the type-writing machine, the releasing and shifting lever of said roll, and connections between the lever and the roll of the feed device, substantially as described.

4. A paper-feeding device for type-writing machines, having a frame adapted to be mounted on the carriage of said machine, a paper-feed roll mounted on said frame, the shifting-lever of said carriage of the type-writing machine, and the connections between said roll and said lever, substantially as described.

5. A paper-feeding device for type-writing machines, having a frame adapted to be mounted on the carriage of said machine, a paper-feed roll mounted on said frame, the shifting-lever of said carriage, combined with the connections between said lever and roll, and an adjustable spring adjusted to press upon said roll, substantially as described.

6. A paper-feeding device for type-writing machines, having a frame adapted to be mounted on the carriage of said machine and having sockets, and a frame or plate having lugs insertible in said sockets in combination therewith, substantially as and for the purposes described.

7. A paper-feeding device for type-writing machines, having a frame adapted to be mounted on the carriage thereof and provided with sockets, in combination with a frame or plate having lugs insertible in said sockets for its support, and adjustable pins mounted thereon, substantially as and for the purposes described.

CHARLES H. WINTON.  
JOHN S. LUCOCK.

Witnesses:

GEO. B. MOTHERAL,  
A. M. NEEPER.