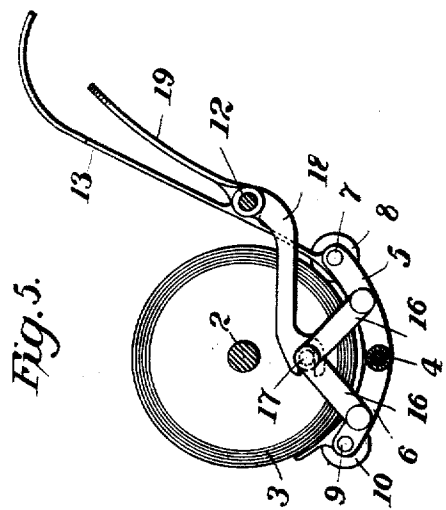
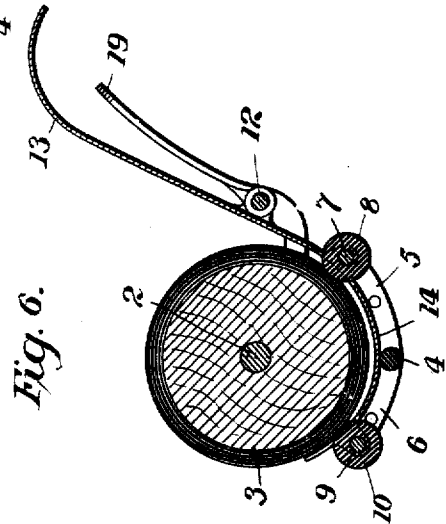
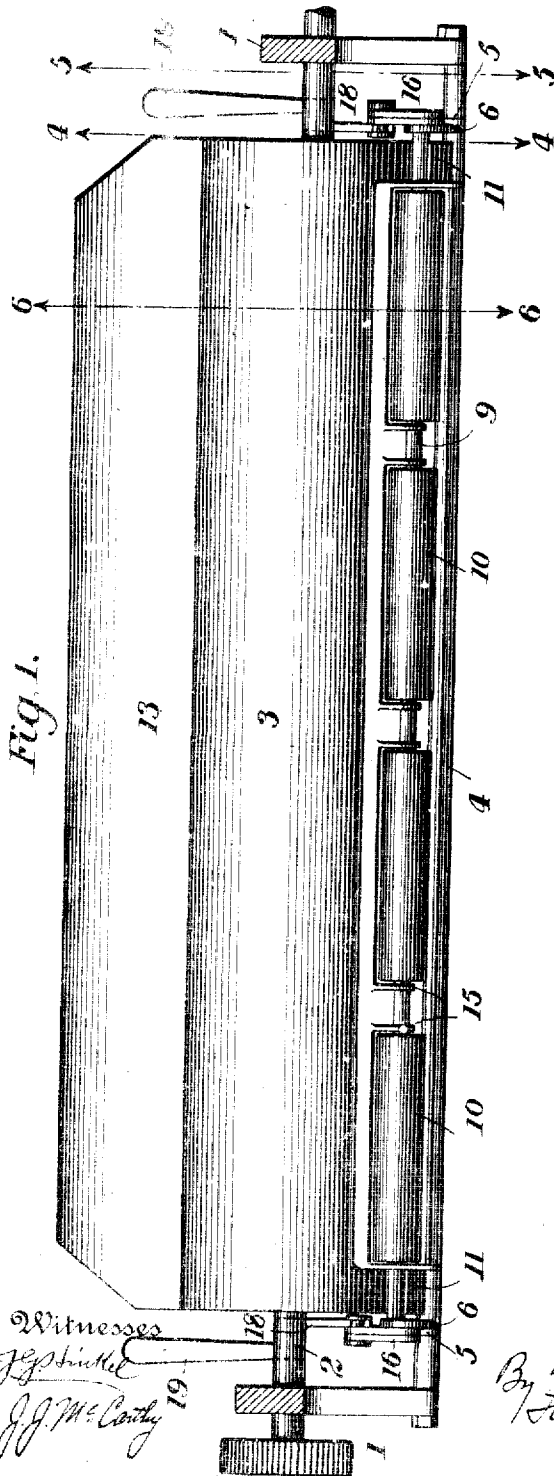


F. J. TANNER & I. E. JONES.
 PAPER FEEDING MECHANISM FOR TYPE WRITING MACHINES.
 APPLICATION FILED AUG. 12, 1907.

1,012,113.

Patented Dec. 19, 1911.
 2 SHEETS—SHEET 1.



Witnesses
 J. J. McCarthy
 J. J. McCarthy

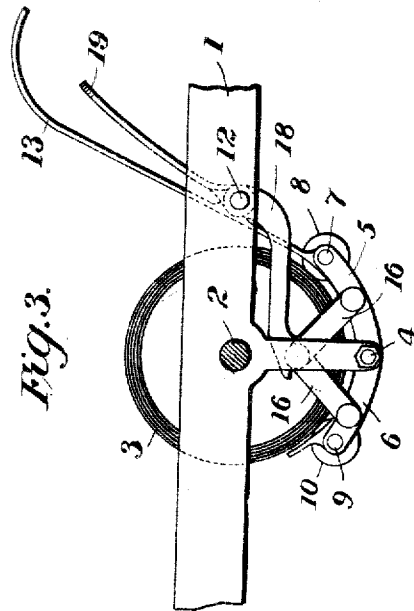
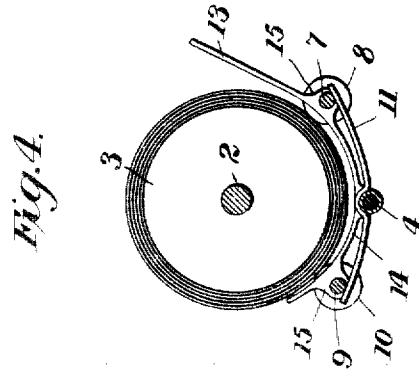
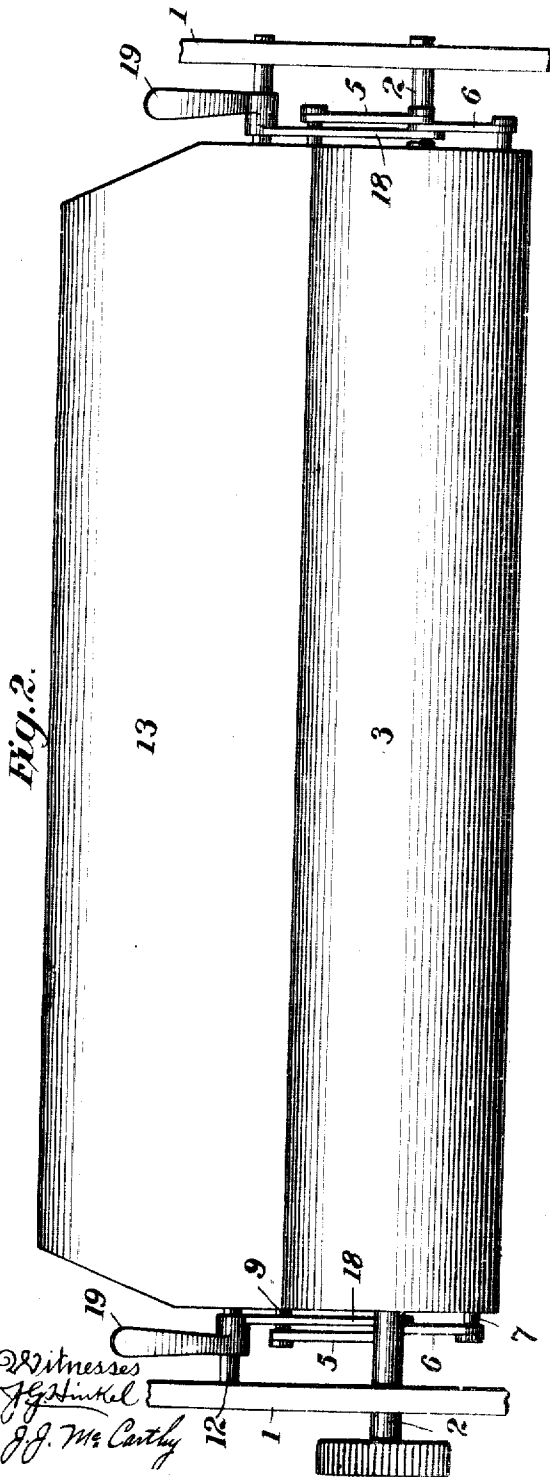
Inventors
 Frank J. Tanner
 Iwan E. Jones
 By Foster Freeman Watson
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2 SHEETS—SHEET 2



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UNITED STATES PATENT OFFICE.

FRANK J. TANNER AND IWAN E. JONES, OF SCRANTON, PENNSYLVANIA, ASSIGNORS
TO INTERNATIONAL TEXT BOOK COMPANY OF SCRANTON, PENNSYLVANIA, A COR-
PORATION OF PENNSYLVANIA.

PAPER-FEEDING MECHANISM FOR TYPE-WRITING MACHINES.

1,012,113.

Specification of Letters Patent.

Patented Dec. 19, 1911.

Application filed August 12, 1907. Serial No. 388,231.

To all whom it may concern:

Be it known that we, FRANK J. TANNER and IWAN E. JONES, citizens of the United States, and residents of Scranton, Lackawanna county, Pennsylvania, have invented certain new and useful Improvements in Paper-Feeding Mechanism for Type-Writing Machines, of which the following is a specification.

10 This invention relates more particularly to paper feeding mechanism for typewriting machines, and it consists in various improvements in details of construction, all of which will be described in connection with the accompanying drawings in which,—

15 Figure 1 is a front view of so much of the carriage of a typewriting machine as is necessary to illustrate the present invention; Fig. 2 is a plan view and Fig. 3 is a right end view of the same; Figs. 4, 5 and 6 are respectively sections on the lines 4—4, 5—5 and 6—6 of Fig. 1.

Referring to the drawing, 1 indicates a portion of the frame of the carriage of a typewriter, which frame may be of any structure suitable for the particular machine to which the invention is applied. On the frame is mounted a platen shaft 2 carrying a platen 3. In a part of the frame 1 is also mounted a fixed rod 4 arranged below the platen and upon this rod at each end of the platen are pivotally mounted two arms 5, 6. In the free ends of the arms 5 a shaft 7 is mounted, which shaft carries a series of paper feed rolls 8, and in the free ends of the arms 6, a second shaft 9 is mounted, upon which shaft are a series of paper feed rolls 10. A pair of springs 11, one at each end of the platen, normally press the shafts 7 and 9 upward and hold the pressure rolls against the platen. These springs may be of any suitable design, but they are preferably of the form shown in Figs. 1 and 4, in which the middle portion of the spring rests on the rod 4, while the free ends press upwardly on the shafts 7 and 9. In the frame 1 is also mounted a rock shaft 12 in the rear of the platen, and suitably connected with this shaft is a paper table 13 of thin sheet metal. The sheet forming the paper table is preferably contained below the rod and around the platen over the feed roll shafts 7 and 9 to form a paper guide. 14. This paper guide is preferably pro-

vided with lugs 15 at its ends, through 55 which the shafts 7 and 9 pass to hold the paper guide in fixed relation to the feed rolls.

It is necessary to provide means for moving the paper feed rolls away from the platen to facilitate the insertion and removal of paper, and it is desirable that the rolls should be free to move to a slight extent independently so that either of them will hold one or more sheets of paper when the other is idle, or so that they will operate on different thicknesses of paper at the same time. We provide for moving the paper feed rolls away from the platen by connecting the arms 5, 6 at each end of the platen with a pair of toggle levers 16, the ends of the toggle levers being connected by pivots 17, and provide means for spreading the toggle levers to force the feed rolls away from the platen. As shown, arms 18 are rigidly mounted on the rock shaft 12 and are provided with slotted jaws which engage the pivots 17. Each of the arms 18 is provided with a handle 19 conveniently located at the end of the paper table. The slots or notches in the arms 18 are substantially horizontal and permit of slight movement of the pivots 17 of the toggle levers, whereby the arms 5, 6 carrying the paper feed rolls may move slightly to permit the paper feed rolls to adjust themselves independently to the platen. When either of the thumb levers 19 is moved forward, the arms 18 are depressed, which results in spreading the toggle levers 16 and throwing both sets of paper feed rolls away from the platen. On releasing the lever 19, the springs 11 reengage the feed rolls with the platen.

It will be evident that the paper feed mechanism above described is effective in operation, simple in construction and economical of manufacture. It will also be evident that various changes in the details of construction and arrangement of the parts may be made without departing from the spirit and scope of the invention.

Having described the invention what we claim and desire to secure by Letters Patent is:

1. In a typewriting machine, the combination with a platen and the supporting frame therefor, of a rod extending longi-

5 tudinally beneath the platen, arms pivotally mounted on and extending in opposite directions from said shaft, paper feed rolls supported by said arms, a leaf spring having an intermediate deflected section extending over and engaging said shaft and its ends acting to hold both sets of paper feed rolls against the platen, and means for rocking the roll carrying arms against the action of the spring to move the rolls from the platen.

10 2. In a typewriting machine, the combination with a platen and the supporting frame therefor, of two arms extending in opposite directions from a common pivotal axis beneath the platen, paper feed rolls supported by said arms, means acting to hold said feed rolls against the platen, a toggle having its members pivotally connected to said arms, and a lever fulcrumed on the platen supporting frame and having one arm provided with a recess into which the upper end of the toggle extends.

15 3. In a typewriting machine, the combination with a platen and the supporting frame therefor, of a rod extending beneath the platen, a plurality of sets of arms mounted on and extending in opposite directions from

said shaft, paper feed rolls supported by said arms, means acting to hold the feed rolls against the platen, a toggle having its members pivotally connected with a set of roll supporting arms at one end of the platen, and a lever fulcrumed on the platen supporting frame in rear of the platen and having one arm extending forwardly over and in position to actuate the toggle.

4. In a typewriting machine, the combination with a platen and the supporting frame therefor, of two sets of paper feed rolls arranged to rock about an intermediate axis, means acting to hold said rolls against the platen, a paper guide mounted to rock about a horizontal axis and having slots through which the paper feed rolls project, and means movable about the axis of the paper guide for moving the feed rolls away from the platen.

In testimony whereof we affix our signatures in presence of two witnesses.

FRANK J. TANNER.
IWAN E. JONES.

Witnesses:

NELSON H. PROUTY,
ARTHUR J. PHILLIPS.