

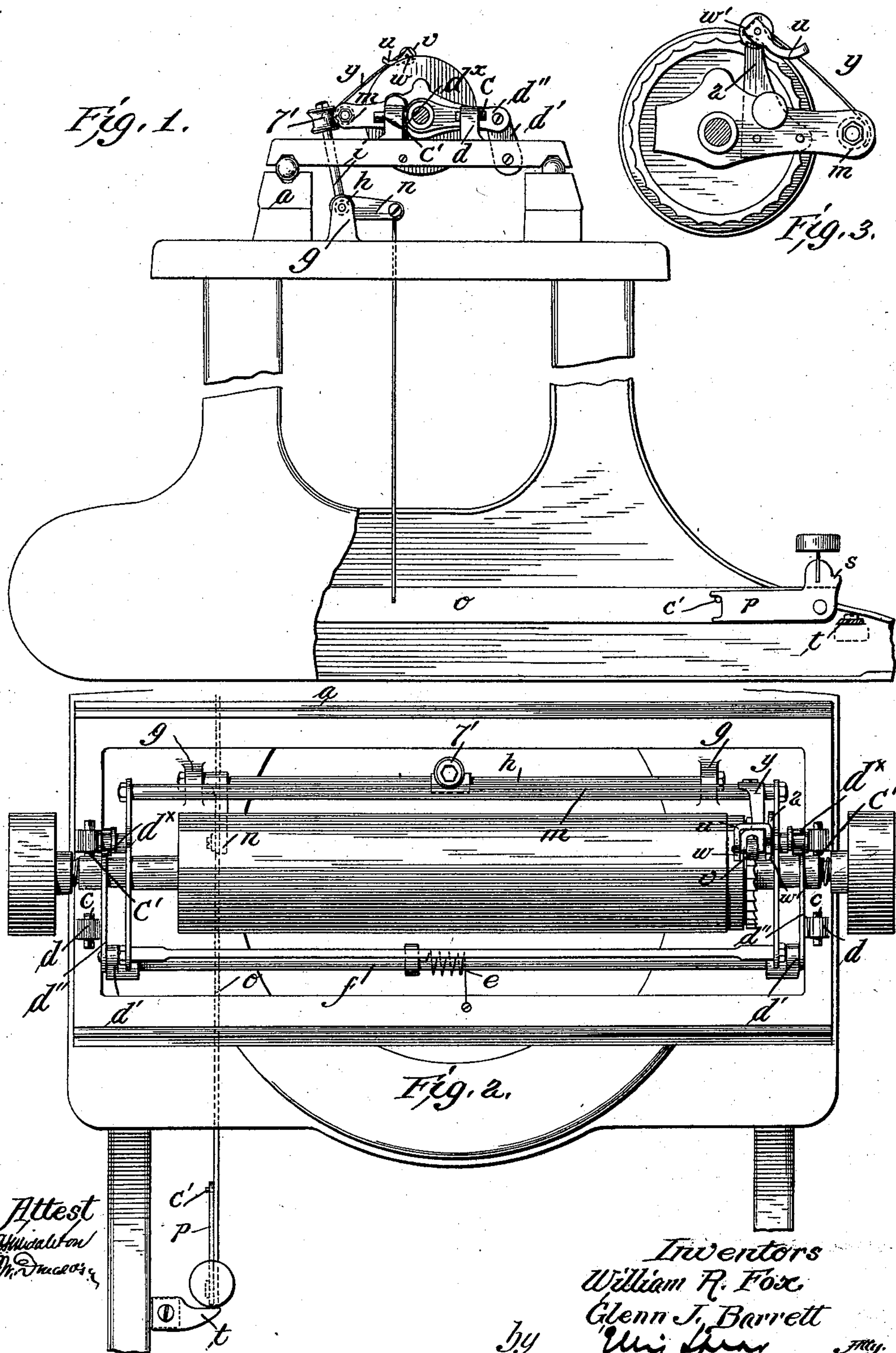
No. 670,477.

Patented Mar. 26, 1901.

W. R. FOX & G. J. BARRETT.
TYPE WRITING MACHINE.

(Application filed Dec. 9, 1899.)

(No Model.)



Attest
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UNITED STATES PATENT OFFICE.

WILLIAM R. FOX AND GLENN J. BARRETT, OF GRAND RAPIDS, MICHIGAN.

TYPE-WRITING MACHINE.

SPECIFICATION forming part of Letters Patent No. 670,477, dated March 26, 1901.

Application filed December 9, 1899. Serial No. 739,823. (No model.)

To all whom it may concern:

Be it known that we, WILLIAM R. FOX and GLENN J. BARRETT, citizens of the United States, residing at Grand Rapids, Michigan, have invented certain new and useful Improvements in Type-Writing Machines, of which the following is a specification.

Our invention relates to type-writing machines, and is confined to the structure and arrangement of the carriage-shifting and platen-feed mechanisms.

To this end the invention includes a device for throwing out of operation the usual platen-detent and applying a brake to the platen, so as to permit of a movement of the platen to a greater or less extent than is permitted by the relative arrangement of the ordinary detent and platen-ratchet, the brake holding the platen in position when moved.

The invention further includes the mechanism for shifting the platen from lower to upper case, this mechanism comprising a roller having a detachable engagement with a rear bar on the platen-frame, with means for shifting said roller and for locking the shifting mechanism.

The invention also includes the details of construction to be hereinafter described, and particularly pointed out in the claims.

The invention is illustrated in the accompanying drawings, in which—

Figure 1 is a detail sectional elevation of sufficient of a machine to illustrate the invention. Fig. 2 is a plan view, and Fig. 3 is a detail view.

From each side of the top plate of the frame, forward of the track *a*, a stud *g* extends upwardly, in which a rock-shaft *h* is journaled, centrally of which a rod *i* is secured, extending upwardly and having a roller *7'* journaled to the end thereof, which is normally in engagement with the rear rod of the platen-frame. The platen-frame is of similar construction to that disclosed in our patent No. 614,943, granted November 29, 1898, and is similarly supported upon the front and rear links *d'* *d''*, so the platen may be rocked from front to rear.

From one end of the rock-shaft *h* a horizontal arm *n* extends, which is connected at its outer end to the shift-lever *o*. On the depression of the shift-key the roller through

this bell-crank arrangement is pressed against the rear rod of the platen-frame, and the platen is thus rocked forwardly. In the raising of the platen to inspect the work, as described in the before-mentioned patent, the rear rod *m* of the platen-frame is lowered and simply moves out of contact with the roller. The shift-key has a supplemental piece *p* pivoted to its forward end, which carries the finger-disk. The rear end of this piece is forked and is limited in its pivotal movement by the stop-pin *c'*, while the forward end thereof has a shoulder or projection, and by first depressing the key-lever through the supplemental piece by a direct downward action on the finger-key the shift of the platen will be effected, and then by tilting the supplemental piece by the forward movement of the key-disk the shoulder *s* will be pressed under the projecting ledge *t* on the machine-frame and the platen will be locked in its forward position.

For writing on lined paper the ordinary line-spacing mechanism will not space the paper to exactly correspond to the spacing of the lines. To provide for this in the construction of platen-operating mechanism disclosed in the before-mentioned patent, which provides a spring-arm carrying a roller-detent engaging the platen ratchet-wheel, a U-shaped frame *u* incloses the detent-roller *v*, having the legs *w* *w'* provided on the extended ends of the pivot of said roller. The frame when the roller-detent is in engagement with the platen-ratchet rests upon the spring-arm *y*, carrying said roller in a position parallel therewith. To disengage the roller, the frame is raised, which will bring the end of the leg *w* into engagement with the platen and force the roller upward against the tension of the spring-arm *y*, which tension serves to press the end of the arm *w* against the platen and provide a brake therefor. An arm *z* may be extended upwardly from the carriage-frame to provide a bearing and support for the end of the leg *w'* to prevent the twisting of the frame *u*. When the roller is disengaged, the operator may turn the platen the desired distance by means of the platen hand-wheel, and the brake will maintain the same in the position to which it is adjusted. When the platen is rocked forward by the de-

pression of the shift or upper-case key, its movement is arrested by the adjustable stops *c*, carried by the standard *d*, said stops contacting with the platen-shaft. A similar stop *c'* arrests the movement of the carriage to the rear. On the release of the shift-key the platen is returned by the spring *e*, secured at one end to the platen-frame and wound around the shaft *f* and secured at its opposite end in a collar fixed thereon. The links *d'*, to which the links *d''*, carried by the platen-shaft, are secured, are fixed to each end of this shaft *f*.

We claim as our invention—

1. The combination in a type-writing machine with a platen, a tilting platen-frame having a rear bar and movable supports for said frame to permit the latter to be shifted from lower to upper case, of a shift-key, an arm independent of said supports adapted to be tilted by the depression of said key, and a roller carried by said arm engaging the rear bar of said frame, substantially as described.

2. The combination in a type-writing machine with a platen, a tilting platen-frame having a rear bar and movable supports for said frame, of a shift-key, a bell-crank lever independent of the supporting means having a connection to the shift-key and a roller carried by one member of said lever engaging the rear bar of the platen-frame, said bar moving out of engagement with said roller when

the platen-frame is tilted, substantially as described.

3. The combination with the platen, the platen-frame, and a ratchet-wheel carried by the platen, of a flat spring-arm secured at one end to the platen-frame, a roller-detent carried at the other end of said arm, and a device carried by the spring-arm adapted when tilted to find a bearing directly on said platen and to lift said arm to disengage said detent, said bearing end providing a brake for said platen.

4. The combination with a platen, a platen-frame, and a ratchet-wheel secured to the platen, of a flat spring-arm secured to the frame at one end, a roller-detent secured to the opposite end of said spring, a U-shaped frame straddling said spring-arm and secured thereto said frame having one end adapted to find a bearing directly on said platen, and a fixed standard providing a bearing for the other end of the frame to prevent the twisting of said spring-arm, substantially as described.

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

WILLIAM R. FOX.
GLENN J. BARRETT.

Witnesses:

G. K. McMULLEN,
WILL. C. HOERTZ.