J. H. STANFIELD & L. D. STOCKING.

FEED MECHANISM FOR TYPE WRITERS.

APPLICATION FILED SEPT. 5, 1911.

1,035,649. Patented Aug. 13, 1912.

4 SHEETS—SHEET 1.

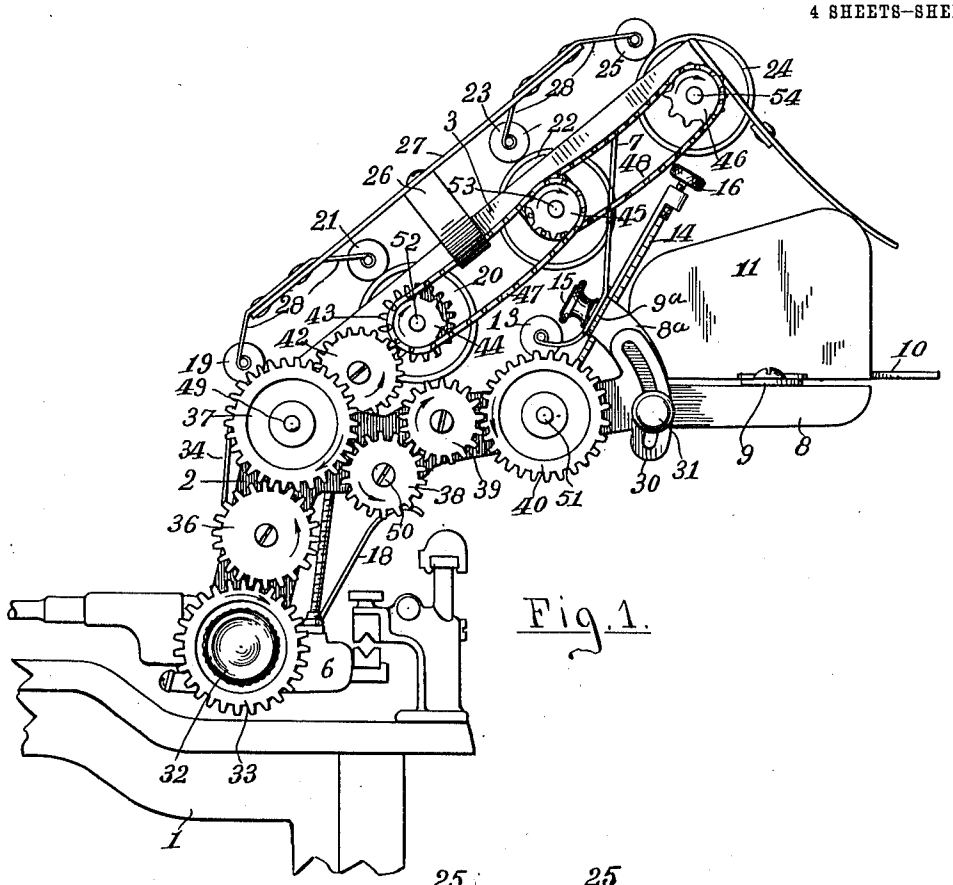

Fig. 1.

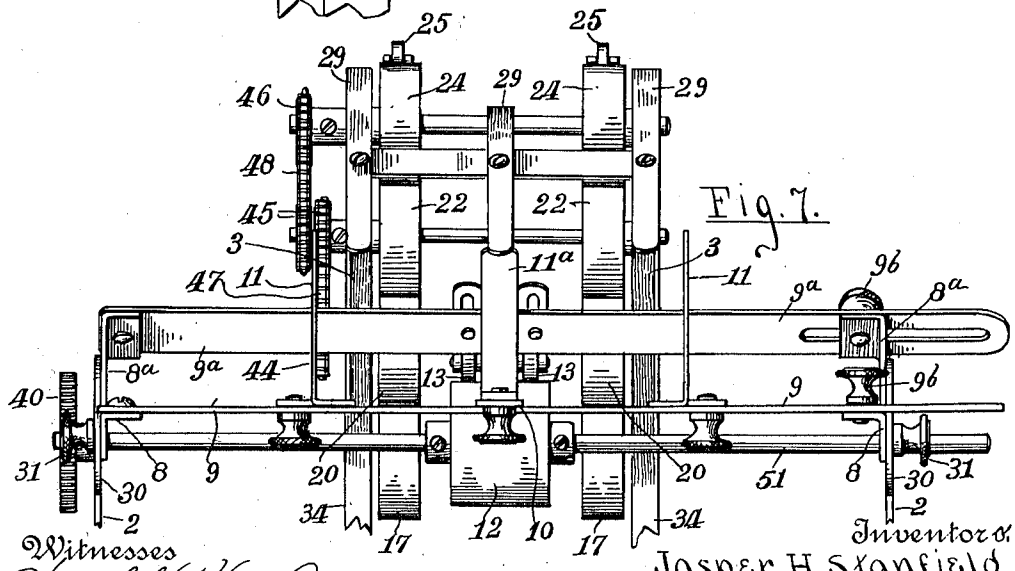

Fig. 7.

Witnesses

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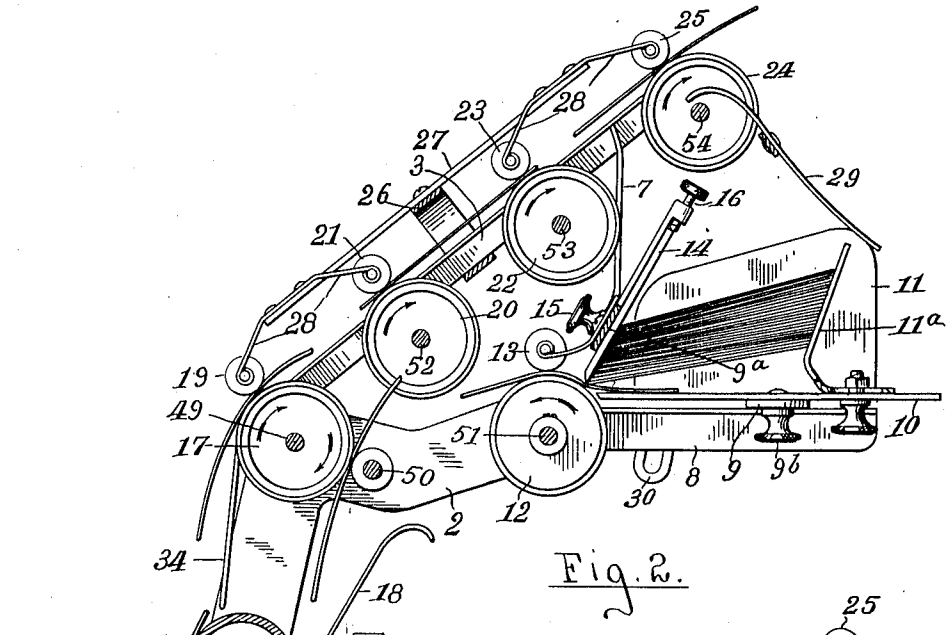

Fig. 2.

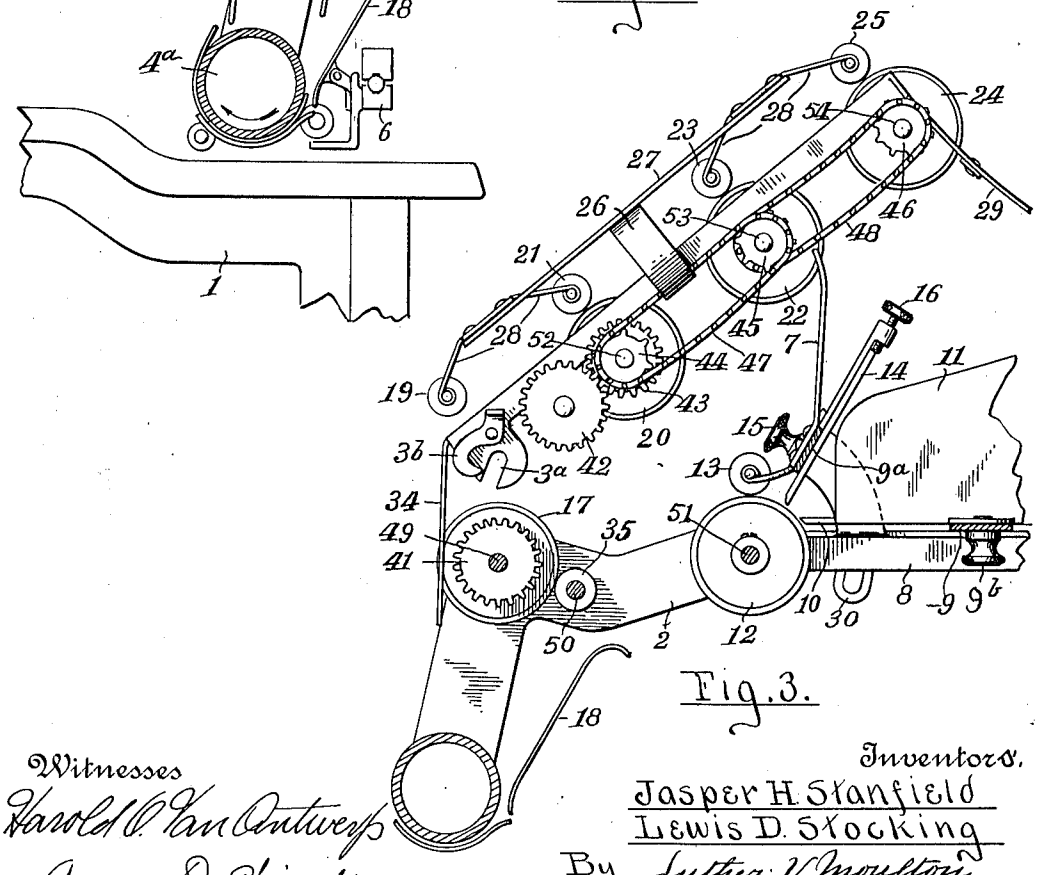

Fig. 3.

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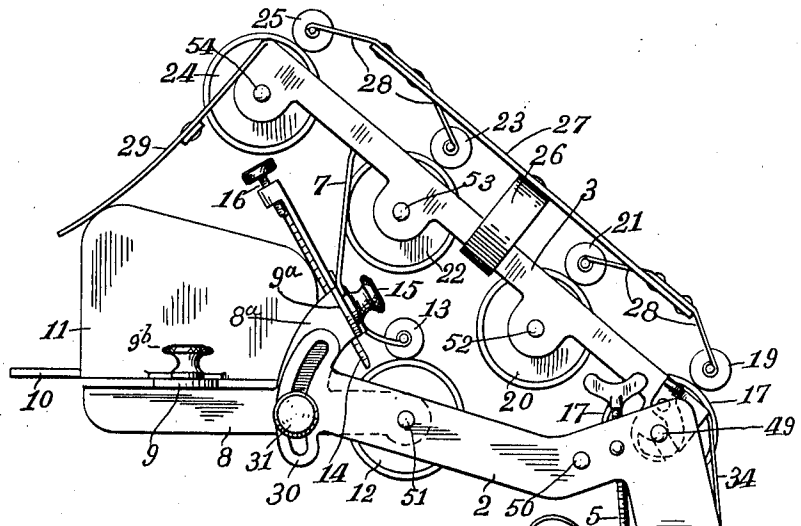

Fig. 4.

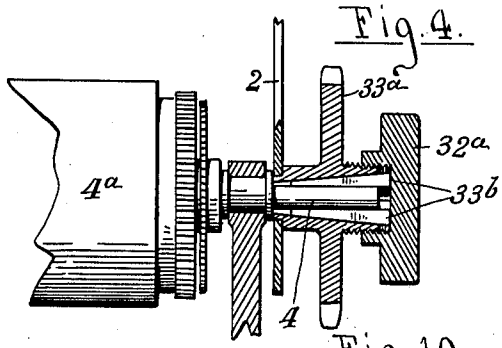

Fig. 10.

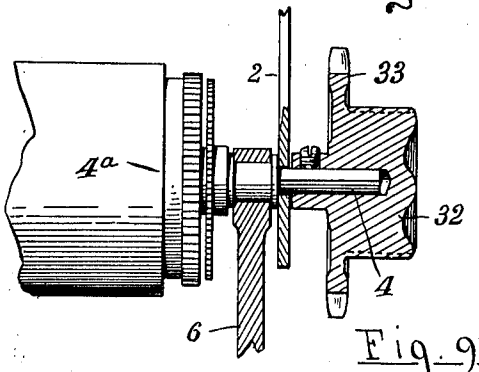

Fig. 9.

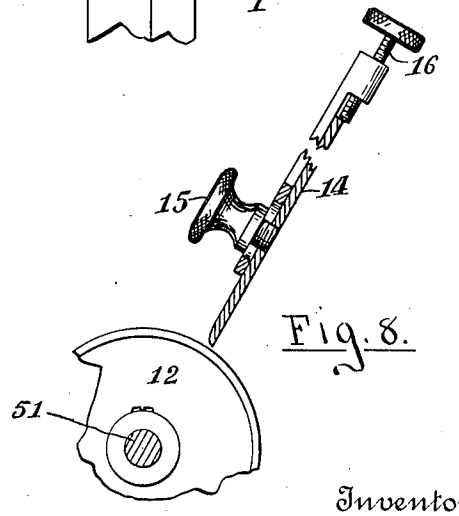

Fig. 8.

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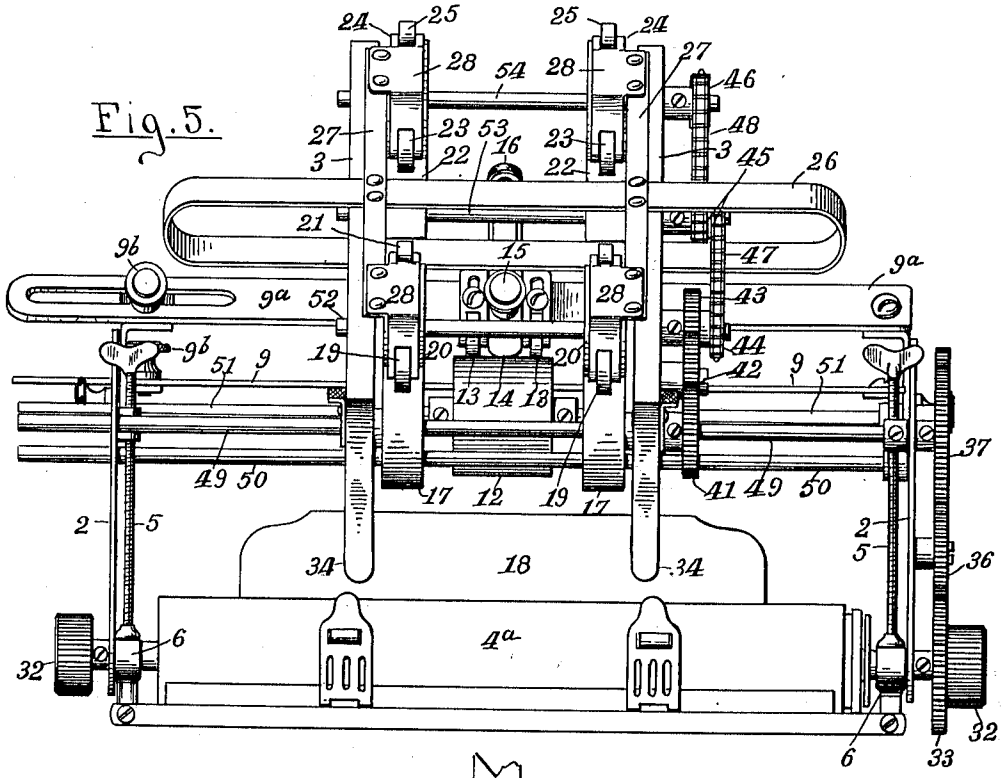
4 SHEETS—SHEET 4.

Fig. 5.



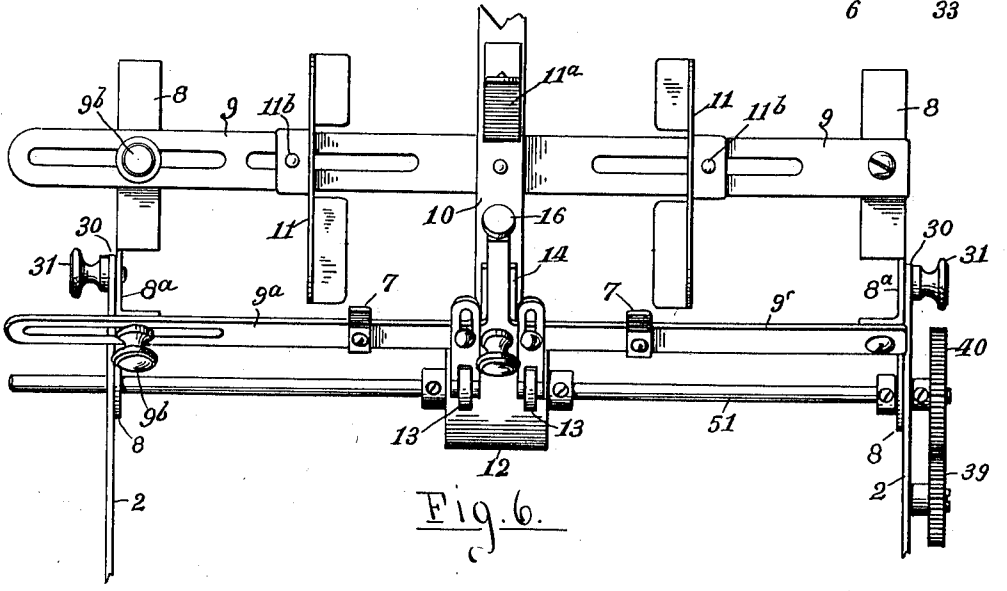


Fig. 6.

Witnesses

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UNITED STATES PATENT OFFICE.

JASPER H. STANFIELD AND LEWIS D. STOCKING, OF MUSKEGON, MICHIGAN; SAID STANFIELD ASSIGNOR TO SAID STOCKING.

FEED MECHANISM FOR TYPE-WRITERS.

1,035,649. Specification of Letters Patent. Patented Aug. 13, 1912.

Application filed September 5, 1911. Serial No. 647,564.

To all whom it may concern:

Be it known that we, JASPER H. STANFIELD and LEWIS D. STOCKING, citizens of the United States of America, residing at Muskegon, in the county of Muskegon and State of Michigan, have invented certain new and useful Improvements in Feed Mechanisms for Type-Writers; and we do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

Our invention relates to improvements in feed mechanisms for typewriters and its object is to provide a device that will automatically feed cards, envelops and the like, to a typewriting machine whenever the platen is rotated and discharge the same when the writing has been applied thereto and to provide the device with various new and useful features hereinafter more fully described and particularly pointed out in the claims, reference being had to the accompanying drawings, in which:—

Figure 1 is a side elevation of a device embodying our invention as it appears when in position for use; Fig. 2 is a side elevation with the driving mechanism and one side of the frame removed; Fig. 3 a side elevation with portions removed to show the construction, and with the upper part detached and raised; Fig. 4 a side elevation of the side opposite to Fig. 1; Fig. 5 a front elevation of the device; Fig. 6 a plan view of a portion at the rear of the main frame; Fig. 7 a rear elevation of the upper part of the machine; Fig. 8 an enlarged detail partially in section of the feed roller and gate; and Fig. 9 an enlarged view partially in section of one end of the platen and a part of the main frame; and Fig. 10 a detail showing a modification to adapt the device to various sizes of platen shafts of typewriters.

Like numbers refer to like parts in all of the figures.

1 represents a portion of a typewriting machine.

2 is the main frame of our device.

3 the upper frame of the same detachably mounted on the main frame by means of a slot 3^a in the upper frame to engage the shaft 49 and secured in place by a detachable hook 3^b, as shown in Fig. 3. The rear of the upper frame is supported by props 7 extending upward from the cross bar 9^a on the main frame. By releasing the hook 3^b the upper frame may be lifted off for filling the machine with cards or other material to be written on as shown in Fig. 2.

4 is the shaft of the platen 4^a of the typewriting machine on which shaft is mounted the main frame 2 the rear of said frame being supported by a screw 5 resting on the carriage 6 of the typewriting machine, whereby the whole of the device is supported on the said carriage and carried to and fro thereby. At the rear of the main frame is pivoted at the axis of the shaft 51 a rear extension comprising rearwardly extended arms 8 vertically adjustable at the rear, and held adjusted by means of a slotted segment 30 on the main frame and a binding screw 31 therein whereby the arms 8 can be inclined more or less, to properly cause the cards to feed.

9 and 9^a are cross bars of the main frame slotted at one end whereby the frame may be adjusted for width to fit various sizes of typewriters, being held in adjustment by binding screws 9^b. The bar 9 connects the arms 8 and the bar 9^a connects upwardly extended curved arms 8^a on the said arms 8. Mounted on the bar 9 are side guides 11 and a middle strip 10 is supported on the bar 9, on which strip is mounted a rear guide 11^a adjustable to fit various sizes of cards.

12 is a feed roller about the axis of which the arms 8 are adjustable, above the feed roller are spring pressed rollers 13 supported by the bar 9^a.

14 is an adjustable gate against which the cards are held by gravity and the inclined rear guide 11^a, this gate is adjusted by a screw 16 with its lower edge spaced apart from the rollers 12 to permit but one card at a time to pass between the same and the said roller. This gate is held adjusted by a screw 15.

17 is a second feed roller above the platen between the rear of which and rollers 35 the cards then pass and are delivered and guided by the guide plate 18 of the typewriting machine into proper place upon the platen of the said machine where they can be written upon in the usual way. They then pass upward directed by the guide arms 34 to the forward side of the rollers 17 between which and spring pressed rollers 19 they are carried upward and in succession along the upper frame by means of a

series of rollers 20, 22 and 24 each provided with spring pressed rollers 21, 23 and 25, the card being discharged over the rear rollers 24 upon downwardly inclined guides 29 being discharged from the rear of the machine by gravity. The series of rollers 19, 21, 23 and 25 are supported in a yieldable frame consisting of a flexible loop 26 attached to the frame 3 and supporting bars 27 on which bars are mounted spring arms 28.

32 are the knobs by which the platen 4^a of the typewriting machine is rotated in the usual manner. One of these knobs is provided with a gear 33 which meshes with an idler 36 which in turn engages a gear 37 which gear through idlers 38 and 39 rotates a gear 40. The gear 37 is mounted on a shaft 49, and the gear 40 on the shaft 51. The shaft 49 also carries a pinion 41 which engages with an idler 42 which idler drives a gear 43 on the shaft 52 on which shaft are mounted the rollers 20. Two other shafts 53 and 54 carry the rollers 23 and 24 respectively and these latter shafts are driven in the same direction as the shaft 52 by means of sprokcet wheels 44, 45 and 46 engaged by chains 47 and 48. On the shaft 50 are mounted the rollers 35 and on the shaft 51 is fixed the rollers 12. One side of the main frame is adjustable longitudinally of the shafts 49 and 50 and the bars 9 and 9^a to adapt the device to fit typewriting machines of various widths.

Fig. 10 shows a device adapted to apply to shafts of various sizes in which the wheel 33^a is separate from the knob 32^a and provided with a hub having tapered keys 33^b, adjusted by the knob 32^a having a hub or bars screw threaded upon the hub of the wheel 33^a to engage and force the keys 33^b inward to clamp the shaft 4.

It will be noted that the side guides 11 are adjustable on the bar 9 (see Fig. 6) and the loop 26 laterally extended beyond the frame 3, also that the driving mechanism of this upper series of rollers is all below the plane traversed by the cards. Thus various sizes of cards or envelops will pass through the machine by merely adjusting the guides 11 and 11^a to fit the same.

What we claim is:—

1. A frame adapted to be mounted on the carriage of a typewriter, a feed roller journaled at the front of the frame, a feed roller journaled at the rear of the frame, a rear extension to the frame pivoted at the front at the axis of the rear roller and vertically adjustable at the rear, an adjustable gate, adjustable guides carried on the extension and gearing connecting the platen of the typewriter and the rollers.

2. In combination with a typewriting machine, frame members mounted on the platen shaft and having segmental slots at the rear, extensions pivoted to said members, binding screws in the slots to hold the extensions in adjusted position, upwardly projecting arms on the extensions, a slotted bar connecting the arms, a slotted bar connecting the extensions, binding screws in the slots of the bars, adjustable guides and an adjustable gate mounted on the bars, shafts journaled in the frame members, one of said frame members being adjustable longitudinally of said shafts, feed rollers on the shafts and gearing connecting the platen and shafts.

3. In combination with a typewriting machine, frame members mounted on the carriage of the machine, a front shaft and a rear shaft journaled in said members on which shafts one of said members is adjustable longitudinally thereof, feed rollers on said shafts, gearing connecting said shafts and the platen of the machine, rear extensions pivoted at the front at the axis of the rear shaft and vertically adjustable at the rear, upwardly extended arms on said extensions, a cross bar adjustably connected to said extensions, side guides and a rear guide adjustably mounted on said cross bar, a cross bar adjustably connected to said arms, and an adjustable gate mounted on said last-named bar.

4. In combination with a typewriting machine, a frame pivotally mounted on the platen shaft of the machine, adjusting and supporting screws in the frame engaging the carriage of said machine, rear extensions pivoted to the frame, means for holding said extension in vertically adjusted position, upwardly extended arms on the extensions, a cross bar connecting said arms, an adjustable gate mounted on said bar, a cross bar connecting the extensions, a middle strip and adjustable side guards mounted on the last named cross bar, a rear guide mounted on said strip, a front shaft and a rear shaft journaled in the frame, feed rollers on said shafts, presser rollers traversing the feed rollers and gearing connecting the shafts and the platen.

5. In combination with a typewriting machine, a frame mounted on the carriage of said machine, feed mechanism mounted in said frame, gearing connecting said mechanism with the platen of the machine, an upper frame detachably mounted on the lower frame, discharging mechanism mounted in the upper frame and gearing connecting the discharging mechanism with the feeding mechanism.

6. In combination with a typewriting machine, a frame mounted on the carriage of the machine, a shaft journaled in the frame above the platen, feed rollers on the shaft to move the stock downward to the platen and upward away from the same, an upper frame detachably mounted on the shaft, a

series of conveying rollers in the upper frame, gearing connecting said rollers with said shaft to operate the same and presser rollers yieldably mounted above the conveying rollers.

7. In combination with a typewriting machine, a frame mounted on the carriage of said machine, a shaft journaled in said frame above the platen of the machine, feed rollers on said shaft to feed the stock to and from the platen, an upper frame detachably mounted on said shaft, guide arms extending downward from said upper frame toward the platen, a train of conveying rollers mounted on shafts journaled in the upper frame, gearing connecting all of said shafts with the platen shaft to simultaneously rotate the same, and presser rollers yieldably engaging each of said feed rollers and conveying rollers.

8. In combination with a typewriting machine, a frame mounted on the carriage, feeding mechanism in said frame, gearing connecting said mechanism with the platen of the machine, an upper frame, a series of conveying rollers in said upper frame, gearing connecting said rollers with the platen to rotate the rollers, a yieldable loop mounted on the upper frame, bars mounted on the loop and presser rollers carried by the bars respectively engaging the conveying rollers.

9. In combination with a typewriter, a frame mounted on the carriage, feeding mechanism mounted in said frame, an upper frame detachably mounted on the upper frame, a series of conveying rollers mounted in the upper frame and projecting above the plane thereof, gearing for simultaneously rotating said rollers, a yieldable loop attached transversely to the said upper frame and projecting above the same, and also projecting beyond the sides of the same, bars attached to the upper part of said loop, spring members attached to the bars and presser rollers mounted on said spring members and respectively engaging the conveying rollers.

10. In combination with a typewriter, a frame mounted on the carriage of the typewriter, a shaft journaled in the frame above the platen, feed rollers mounted on said shaft, an upper frame having open end slots to receive said shaft and hooks to engage said shaft, downwardly extended guides on each end of said frame, a series of conveying rollers in said frame, presser rollers respectively engaging the conveying rollers, yieldable supports for said presser rollers and gearing to operate all of said rollers.

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

JASPER H. STANFIELD.
LEWIS D. STOCKING.

Witnesses:
RALPH L. DOUGHERTY,
C. J. JENKINS.