McION J. D. CARTER.
ENVELOP FEEDING DEVICE FOR TYPE WRITERS.
APPLICATION FILED OCT. 24, 1910.

1,017,134. Patented Feb. 13, 1912.

3 SHEETS—SHEET 1.

Fig. 1.

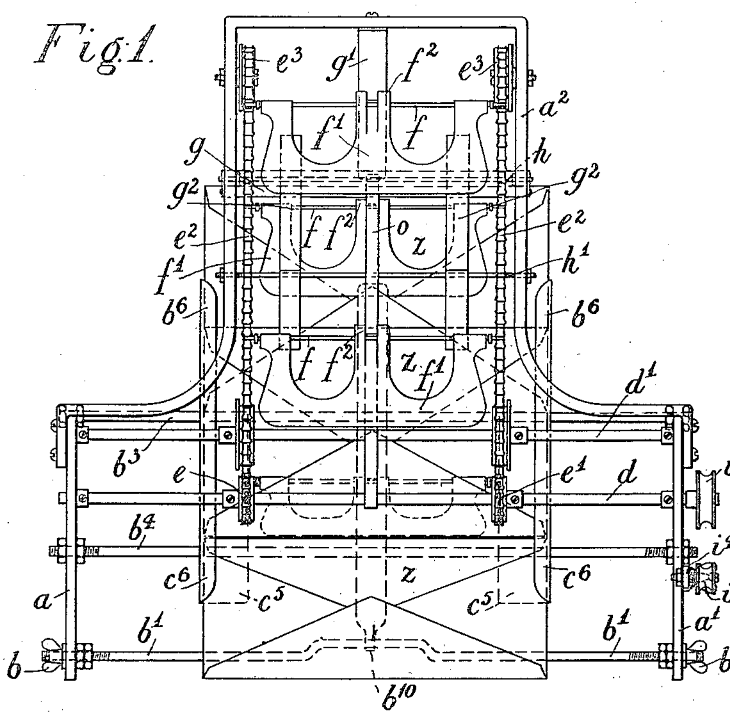
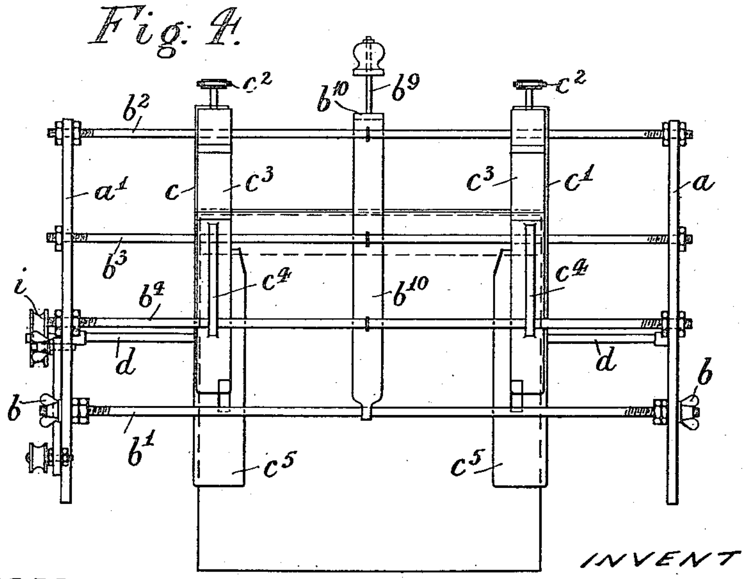



Fig. 4.

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3 SHEETS—SHEET 2.

*Fig: 2.*

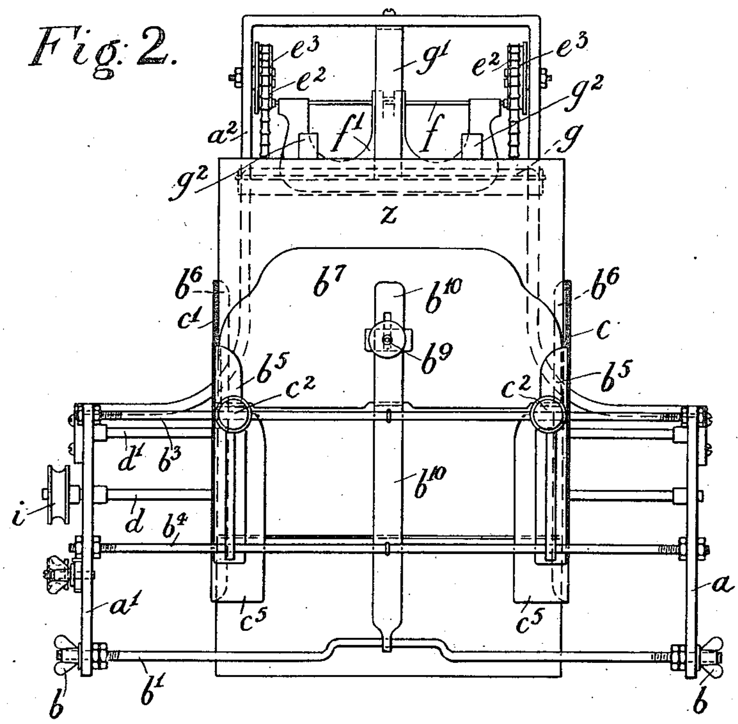
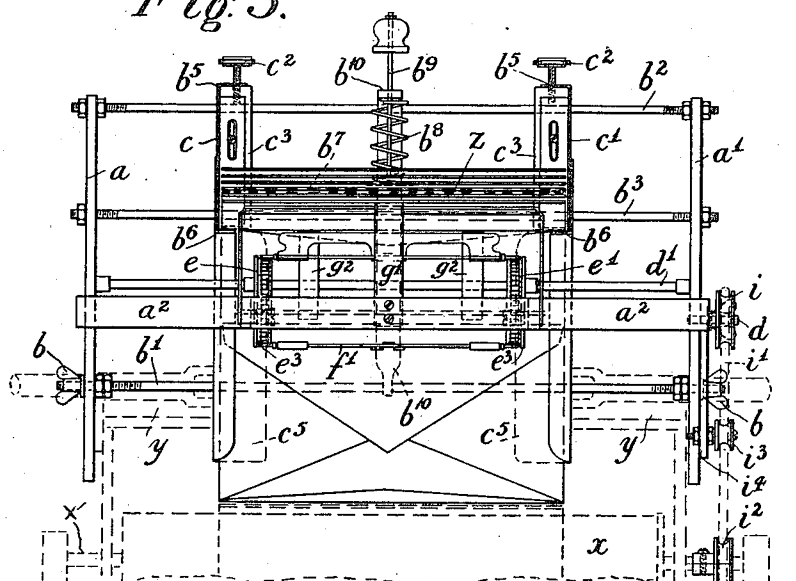


*Fig: 3.*



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3 SHEETS—SHEET 3.

Fig. 5.

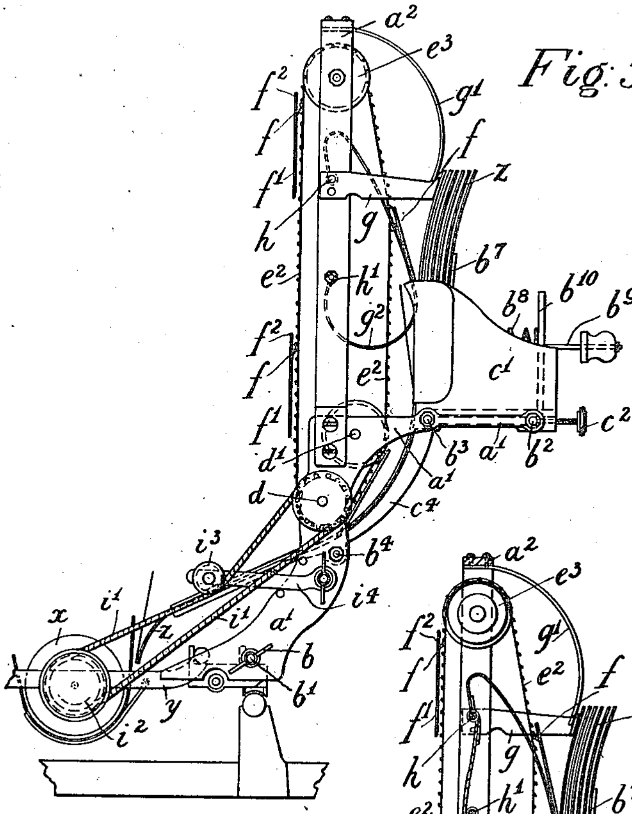


Fig. 6.

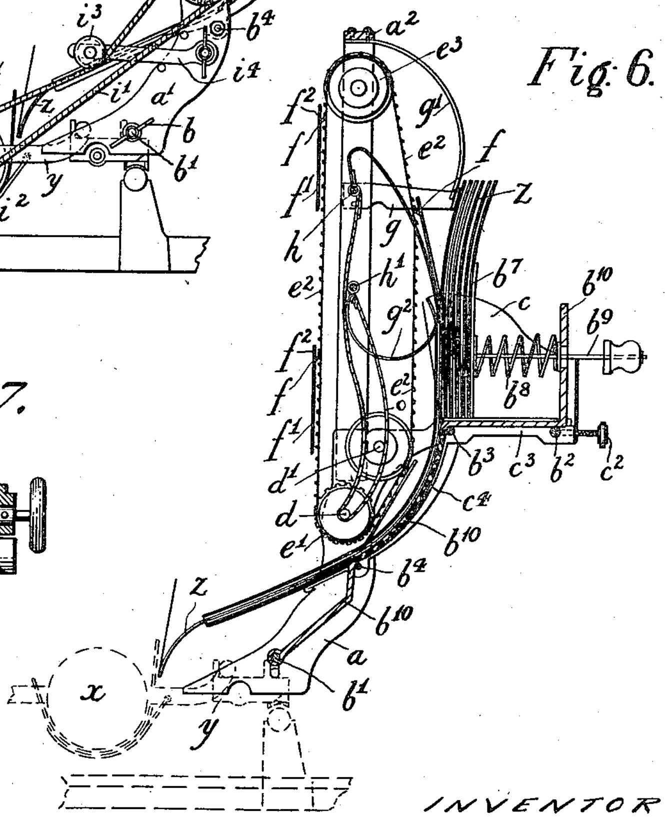
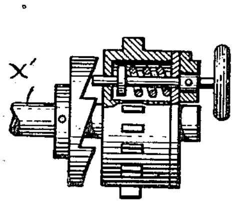


Fig. 7.



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# UNITED STATES PATENT OFFICE.

McION JAMES DOUGLAS CARTER, OF LONDON, ENGLAND.

ENVELOP-FEEDING DEVICE FOR TYPE-WRITERS.

1,017,134. Specification of Letters Patent. Patented Feb. 13, 1912.

Application filed October 24, 1910. Serial No. 588,844.

*To all whom it may concern:*

Be it known that I, McION JAMES DOUGLAS CARTER, subject of Great Britain, residing at London, England, have invented new and useful Improvements in Envelop-Feeding Devices for Type-Writers, of which the following is a specification.

This invention relates to apparatus for feeding envelops to typewriters and it refers to apparatus of the class in which the envelops are placed in a magazine supported independently of the machine and from which they are removed by an endless band provided with means for engaging the flaps of the envelops and which band carries them around the platen of the machine.

The present invention has for its object to provide an improved form of apparatus of this class which may be readily mounted upon the platen carriage of the machine and in which the envelop carrying band or the like, although operated from the spindle of the platen, is itself independent thereof. The construction employed is further of such a character that the envelop feed may be readily rendered inoperative without removal of the apparatus from the machine and moreover said apparatus does not interfere in any way with the use of the machine in the ordinary manner apart from the typing of the envelops.

The apparatus, which as aforesaid can be readily fitted to the sliding carriage of any typewriter, comprises a magazine for holding the envelops with guides for conducting them to the platen, and a spindle or spindles supporting a flexible body in the nature of a band or chain, which spindles receive motion from the platen of the machine. The bands or chains as the case may be, are provided with plates or blades which engage the tongues of the envelops and draw them out of the magazine and down the guides to a point adjacent to the usual guides for supplying the paper to the platen and into which they are pushed by the following envelops. The arrangement is such that the rotation of the platen by hand in the usual manner will operate the chain and feed the envelops.

While as aforesaid the apparatus may be applied to the carriage of any typewriter; for the purposes of the present description, it is assumed that the said apparatus is applied to a Remington machine, and in the drawing illustrating the invention only those parts of the typewriter itself are shown which are considered necessary for the proper understanding of the invention. It will, however, be understood that the invention may be applied to other forms of typewriter, in which case such modifications may be made in the construction and arrangement of the parts and for effecting the attachment and support of the apparatus upon the platen carriage as may be found necessary or desirable.

In order that the invention may be the better understood, I will now proceed to describe same with reference to the aforesaid drawings in which:—

Figure 1 is a front elevation of apparatus constructed in accordance with the present invention. Fig. 2 is a back view. Fig. 3 is a plan. Fig. 4 is a plan of the underside. Fig. 5 is an end view. Fig. 6 is a transverse section. Fig. 7 is a detail view of the clutch on the platen shaft.

Referring to the appended drawings, it will be seen that the apparatus comprises a frame formed of two horizontal members $a$ $a^1$ to which is secured by means of screws a third member comprising a vertically disposed U shaped frame $a^2$. The device as applied to a "Remington" machine is clamped to the carriage $y$ supporting the platen $x$, the attachment thereto being effected by means of the plates $a$ $a^1$, which are disposed one at each end of the aforesaid carriage and clamped thereto by the fly nuts $b$ disposed at each end of the rod $b^1$ connecting the side plates $a$ $a^1$, see Figs. 4 and 5.

$b^2$, $b^3$, $b^4$ indicate transverse stays connecting the plates $a$ $a^1$ and mounted upon stays $b^2$, $b^3$ is a magazine or holder for the envelops.

The magazine may be of more or less common form usually employed for feeding envelops to printing and other machines and in which adjustable sides and front stops are provided against which latter the envelops are pressed by a spring follower. In the present instance the said magazine comprises two side plates $c$ $c^1$ adjustable longitudinally of the stays $b^2$ $b^3$ to accommodate envelops of different lengths and secured after adjustment by means of the thumb screws $c^2$ $c^2$

tapped into the outer ends of plates $c^3$ $c^3$ through which the aforesaid stays $b^2$ $b^3$ pass. The side plates $c$ $c^1$ are secured to the plates $c^3$ and are provided upon their front and rear edges respectively with flanges $b^5$ $b^6$, the flanges $b^6$ serving to retain the envelops $z$ against the pressure of the plate $b^7$ pressed forward by means of the spring $b^8$ encircling the rod $b^9$ attached at one end to the aforesaid plate $b^7$ and at the other passing freely through a hole in the vertical portion of the plate $b^{10}$, which in combination with the plates $c^3$ forms the bottom of the magazine. The plate $b^{10}$ is secured to the stays $b^2$ $b^3$ and extends downward and is bent as shown to form a guide for the envelops when they are removed from the magazine and are being transferred to the platen. Provision may be made whereby the size of the passage at the upper end of the guides may be varied to suit thick or thin envelops and may comprise thin plates sliding on the upper surface of plates $c^3$. The plate $b^{10}$ is also secured to the stay $b^4$ and $b^1$ as shown in Figs. 2, 4 and 6. Secured to or formed integral with the plates $c^3$ are curved extensions $c^4$ supported at their lower ends by the stay $b^4$ and to which extensions are secured guides $c^5$ which embrace the ends of the envelop and prevent its lateral displacement. The outermost member $c^6$ of the guides $c^5$ forms a continuation of the flanges $b^6$ $b^6$.

$d$ indicates a spindle running transversely of the frame of the apparatus and mounted at its ends in the plates $a$ $a^1$. Secured to the spindle $d$ are two chain wheels $e$ $e^1$, around which pass endless chains $e^2$ which at their upper ends pass over sheaves $e^3$ secured to the inner surfaces and at the upper ends of the member $a^2$. The chains also pass over guides sheaves or pulleys secured to the spindle $d^1$ revolubly mounted at its ends in the side plates $a$ $a^1$. Connected at each end to the chains $e^2$ are a number of transverse rods $f$ upon which are pivotally mounted plates $f^1$ which plates, as will be hereafter described, engage the flaps of the envelops and pull them downward out of the magazine. The transverse rods are spaced a sufficient distance apart to permit each envelop to be drawn clear of the magazine before the next envelop is engaged. As shown in Fig. 6, the envelops are placed in the magazine with the flaps down, and with the said flaps inward, so that they project upward and outward into the path of the plates $f^1$. In order to insure the proper positioning of the plates $f^1$ preparatory to their engagement with the envelops, I may provide guides, which guide comprises a curved member $g^1$ secured at its upper end to the transverse member of the frame $a^2$ and at its lower end resting against or secured to a U-shaped plate $g$ disposed at a right angle to the frame $a^2$ and to which the ends of the horizontal portion of the guide $g$ are secured in any convenient manner. By means of the guide just described, the chance of the plates swinging outward and fouling the envelops is prevented. The guide $g$ also projects sufficiently toward the envelops to press or push the upper ends thereof backward so that they curve or bend as shown in Figs. 5 and 6 which causes the flaps to project and facilitates their engagement by the plates $f^1$. Other guides such as $g^2$ may be provided to prevent the movement of the plates in the opposite direction so that they miss the flaps of the envelop. The guides $g^2$ are secured at their upper and lower ends to the rods $h$ $h^1$ secured at their ends to the side members of $a^2$. The curved member $g^1$ further insures the proper positioning of the plates $f^1$ by engaging the projections $f^2$ formed in the centers of the said plates so that they are caused to incline or tilt in the desired direction as the chain passes over the sheaves $e^3$. A guide O is also provided to prevent the flaps $f^1$ fouling the spindle $d$, such guide being connected at its upper and lower ends respectively to stay $h^1$ and spindle $d$ see Fig. 6. Motion is transmitted to the chain by means of a sheave $i$ mounted upon the end of the spindle $d$ and around which passes a belt $i^1$ which also passes around a sheave $i^2$ secured to the spindle of the platen $x$ as shown in Figs. 3 and 5. In order that the tension of the belt may be regulated, a jockey pulley $i^3$ is provided which is carried by an adjustable arm $i^4$ mounted upon the side plate $a^1$ of the frame. I may however substitute a chain and chain wheels for the belt and sheaves so that a positive drive is secured. A clutch may be provided to throw the chain into or out of operation on the platen spindle $x^1$. In use the magazine is charged with envelops which are arranged upside down with their flaps inward. The envelops are pushed forward by the spring pressed plate $b^7$, and their ends being engaged by the flanges $b^6$ $b^6$ the flaps are caused to project into the path of the plates $f^1$ which successively engage the said envelops and withdraw them from the magazine down the guide and release the envelops at a point adjacent to the platen $x$ and in such a position that the following envelop will push it into the paper guide of the machine where it will be fed into the said machine upon the rotation of the platen in the usual manner, the rotating of the platen being as aforesaid transmitted to the envelop feed.

By arranging the chain so that it does not pass around the platen, it is possible to instantly disconnect the envelop feed when the machine is ready for ordinary use, the envelop guides offering no impediment to the introduction of the paper as they terminate at a point more or less removed from the ordinary guides upon the machine. To disconnect the envelop feed, it is only necessary to relax the pressure of the jockey pulley on the belt.

Claims.

1. Apparatus for feeding envelops to typewriting machines comprising a receptacle for the envelop adapted to be attached to the typewriter, endless flexible traveling members free of the platen, guide rollers operatively associated with said members, said members being provided with pivotally mounted bodies engaging the envelops between the flap and body portions thereof and a guide by which the envelops are led from the receptacle to the platen of the machines.

2. Apparatus for feeding envelops to typewriting machines comprising a frame supporting a receptacle for the envelops, said frame being mounted upon the carriage of the machine in rear of the platen, endless flexible traveling members, guide rollers operatively associated with said members, means for operating said members from the platen spindle, said members having pivotally mounted bodies engaging the envelops between the flaps and body portions thereof and a guide by which the envelops are led to the platen of the machines.

3. Apparatus for feeding envelops to typewriting machines, comprising a frame supported upon the non-rotatable portion of the carriage of the typewriter, an envelop receptacle carried by said frame, guide rollers supported by said frame, endless traveling members engaging said rollers, means operatively associated with the platen of the machine to actuate said members, pivotally-mounted bodies engaging the envelops between the flap and body portions thereof carried by said members, and means to guide the envelops from the receptacle to the platen.

4. Apparatus for feeding envelops to typewriting machines comprising a frame mounted upon the carriage of the machines in rear of the platen, a magazine having members adjustable to suit different sizes of envelops supported by said frame, guide rollers also supported by the frame around which pass endless flexible traveling members having pivotally mounted bodies for engaging the envelops between the flap and body portions thereof, a sheave upon one of the guide rollers, a belt passing around said sheave and around a sheave upon the platen spindle, and a guide by which the envelops are led to the platen of the machines.

5. Apparatus for feeding envelops to typewriting machines comprising a frame clamped to the carriage of the machine in rear of the platen, a magazine for the envelops supported by said frame, means for adjusting the magazine to different sizes of envelops, guide rollers also supported by said frame around which pass endless chains, cross bars upon said chain, plates upon said cross bars for engaging the flaps of the envelops, a sheave upon one of the guide rollers, a sheave upon the platen spindle, a belt passing around both sheaves, means for tensioning the belt, and a guide embracing the sides of the envelops by which they are led to the platen of the machine.

6. Apparatus for feeding envelops to typewriting machines comprising a frame having side members connected at their upper ends, clamping means for securing said members to the carriage of the machine in rear of the platen, a magazine for the envelops supported by said frame, guide rollers running transversely of and supported by the frame and around which pass endless chains, cross bars upon said chains, plates upon said bars engaging the envelops between the flap and body portions thereof, a sheave upon one of the guide roller spindles, a sheave upon the platen spindle, a belt passing around both sheaves, means for tensioning the belt, clutch means for connecting the platen sheave to the platen spindle, guides embracing the sides of the envelops by which they are led to the platen, and guards for preventing the fouling of the envelops as they pass to the guide.

7. Apparatus for feeding envelops to typewriting machines comprising a frame having side members connected at their upper ends, clamping means for securing said members to the carriage of the machine in rear of the platen, a magazine for the envelops supported by said frame, guide rollers running transversely of and supported by the frame, and around which pass endless chains, cross bars upon said chains, plates upon said bars engaging the envelops between the flap and body portions thereof, a sheave upon one of the guide roller spindles, a sheave upon the platen spindle, a belt passing around both sheaves, an adjustable arm upon one of the side frames, a pulley carried by the said arm and bearing upon the belt, clutch means for connecting the platen sheave to the spindle, guides embracing the sides of the envelops by which they are led to the platen, and guards for preventing the fouling of the envelops as they pass to the guide.

8. Apparatus for feeding envelops to typewriting machines comprising a frame having side members connected at their upper ends, clamping means for securing said members to the carriage of the machine in rear of the platen, a magazine for the envelops supported by said frame, means engaging the upper ends of the envelops to cause the flap of the outermost to pro-

ject, guide rollers running transversely of and supported by the frame, and around which pass endless chains, cross bars upon said chains, plates upon said bars engaging the envelops between the flap and body portions thereof, a sheave upon one of the guide roller spindles, a sheave upon the platen spindle, a belt passing around both sheaves, an adjustable arm upon one of the side frames, a pulley carried by the said arm and bearing upon the belt, clutch means for connecting the platen sheave to the spindle, guides embracing the sides of the envelop by which they are led to the platen, and guards for preventing the fouling of the envelops as they pass to the guide.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

McION JAMES DOUGLAS CARTER.

Witnesses:

R. WILSON,

C. P. LIDDON.