

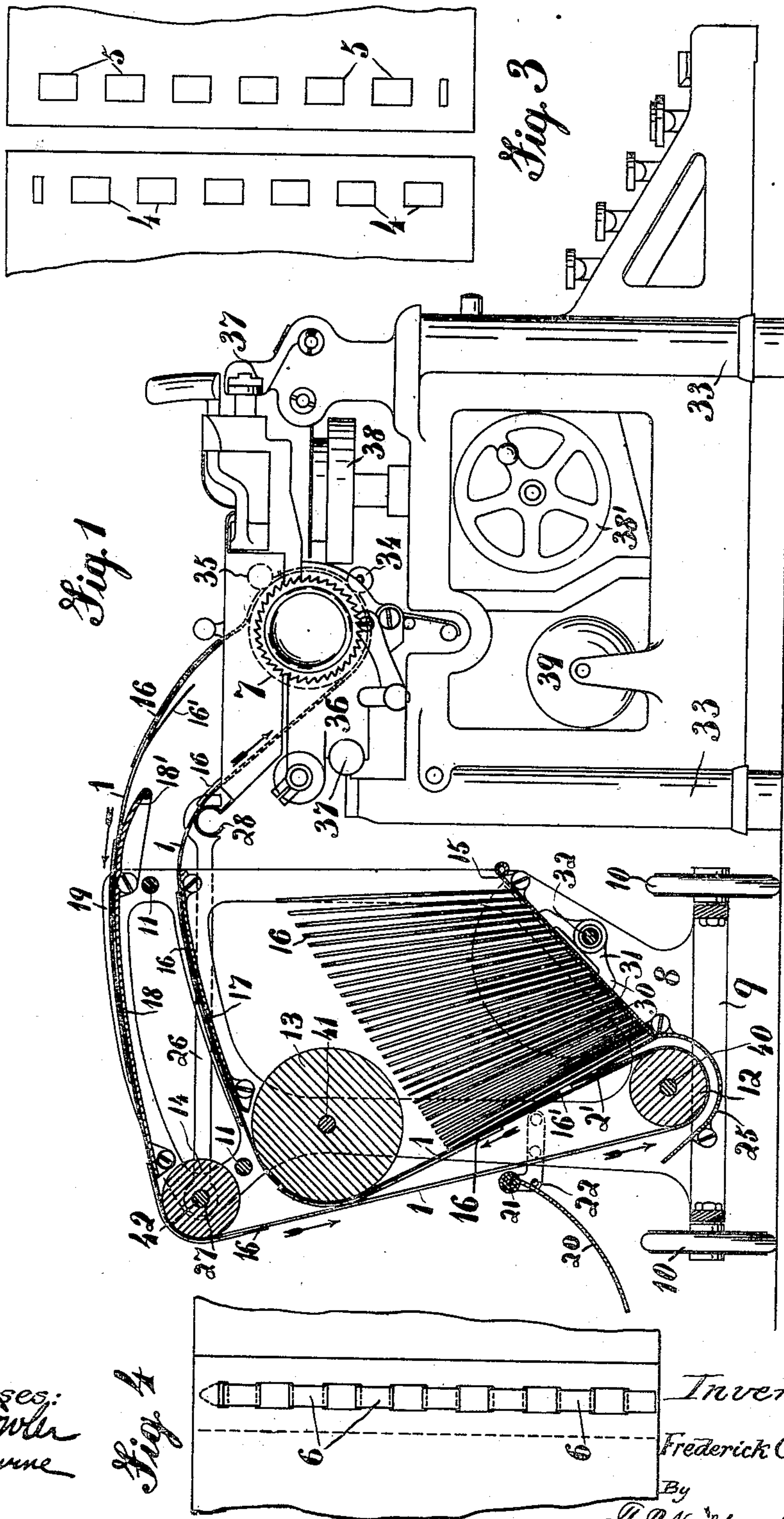
No. 868,093.

PATENTED OCT. 15, 1907.

F. C. JENKINS.
APPARATUS FOR FEEDING ENVELOPS.

APPLICATION FILED JAN. 12, 1907.

2 SHEETS—SHEET 1.



Witnesses:
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Fig. 4

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2 SHEETS—SHEET 2.

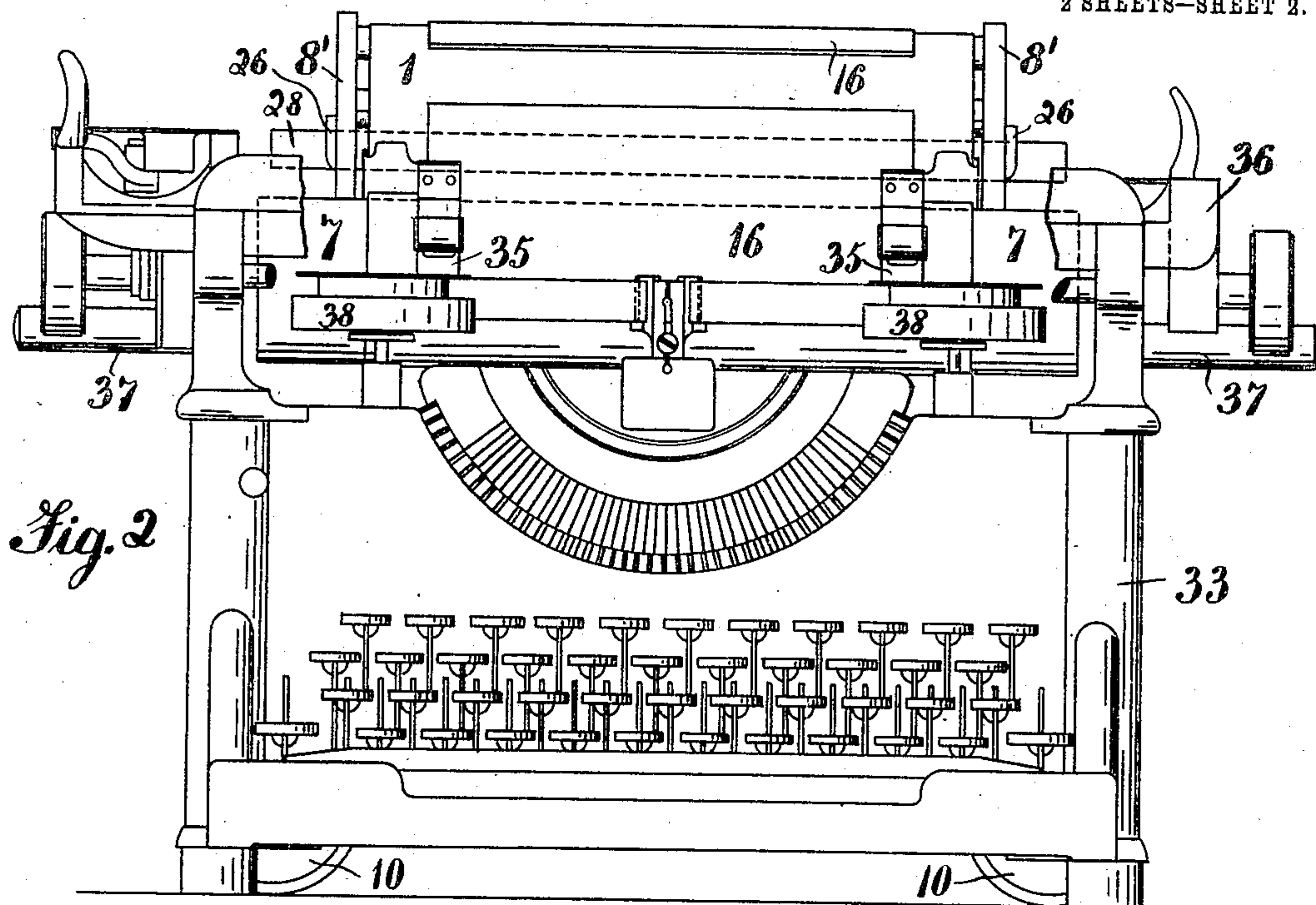


Fig. 2

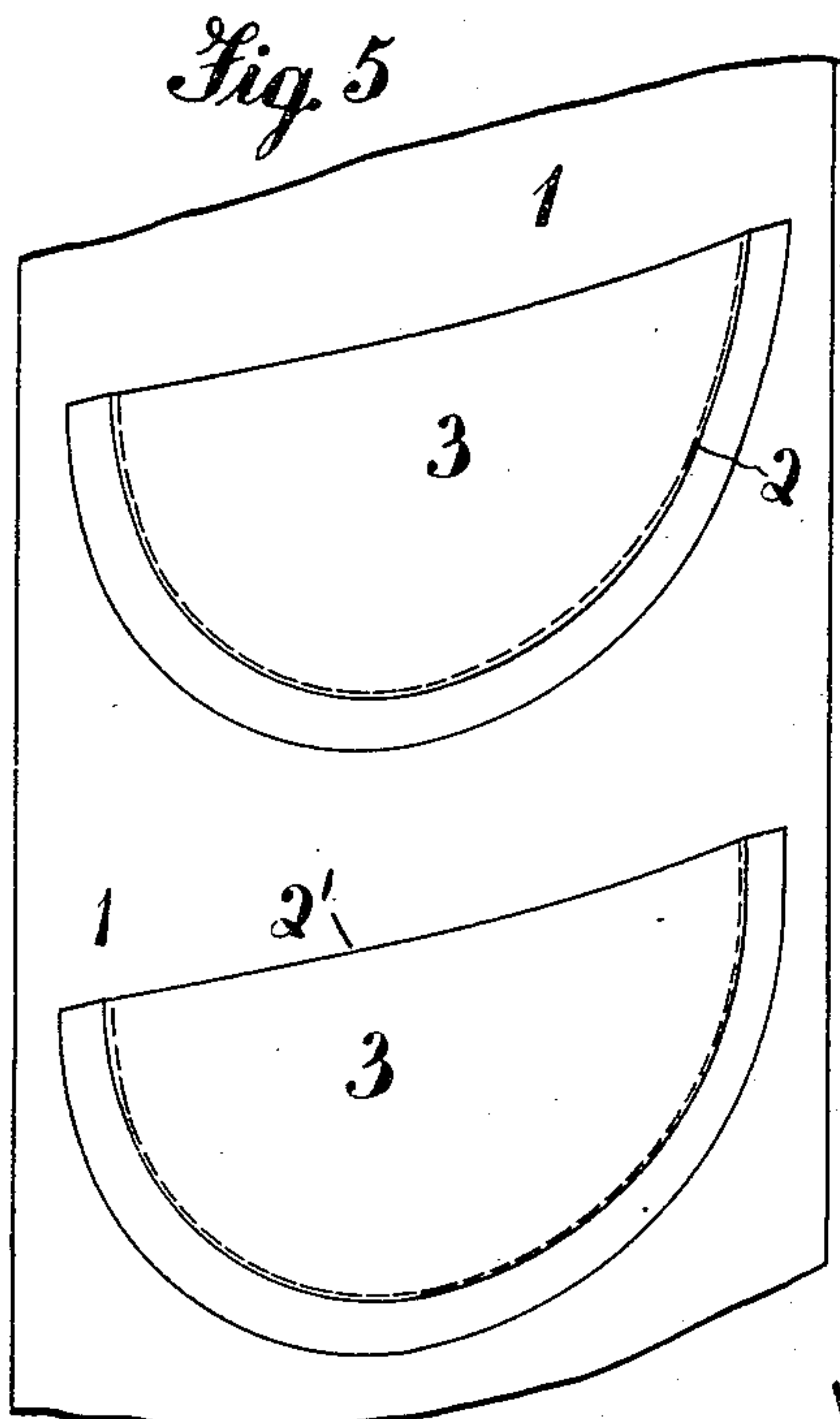


Fig. 5

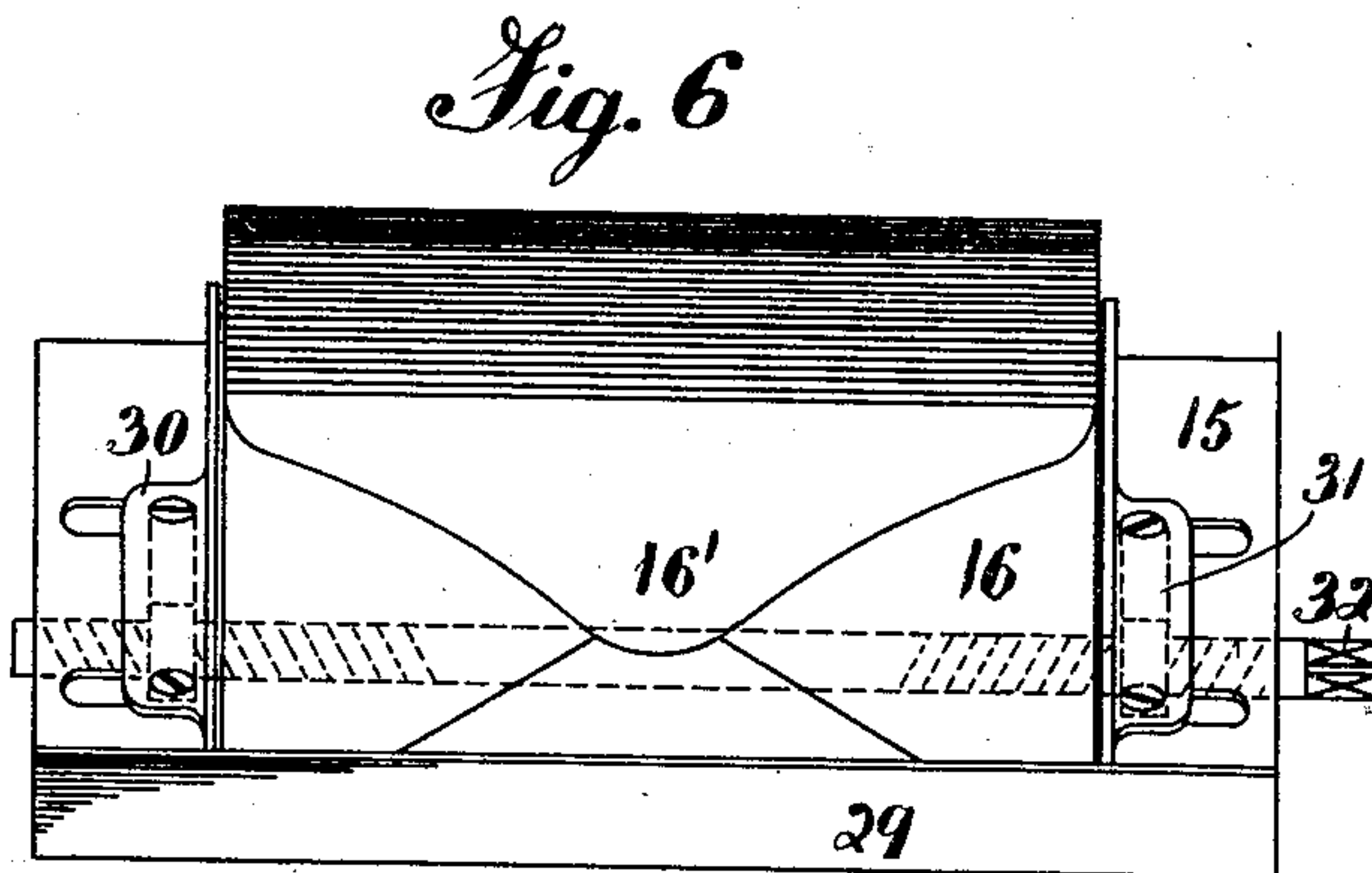


Fig. 6

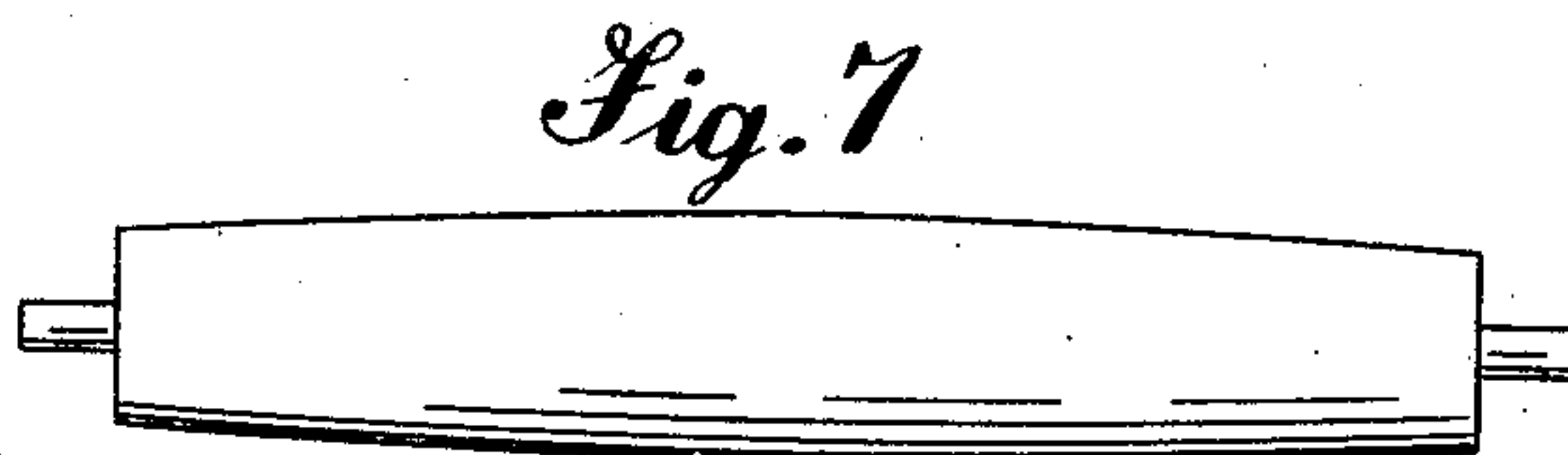


Fig. 7

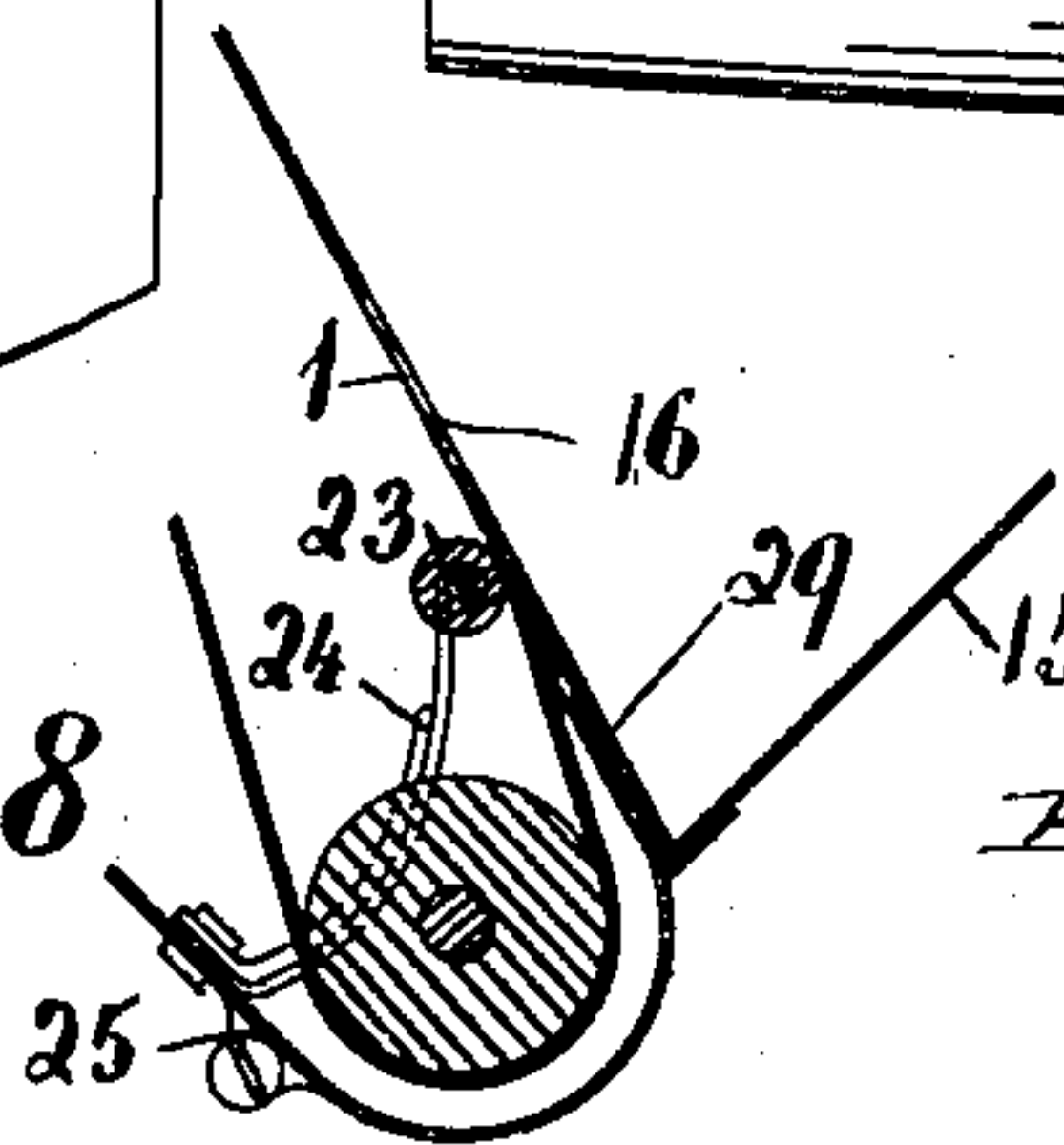


Fig. 8

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UNITED STATES PATENT OFFICE.

FREDERICK CYRIL JENKINS, OF GOLDINGTON, NEAR BEDFORD, ENGLAND, ASSIGNOR TO
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APPARATUS FOR FEEDING ENVELOPS.

No. 868,093.

Specification of Letters Patent.

Patented Oct. 15, 1907.

Application filed January 12, 1907. Serial No. 352,006.

To all whom it may concern:

Be it known that I, FREDERICK CYRIL JENKINS, a subject of the King of England, residing at The Grange, Goldington, near Bedford, England, manufacturer, have invented a certain new and useful Apparatus for Feeding Envelops to Addressing-Machines, of which the following is a full, clear, and exact description and for which I have applied for Letters Patent in Great Britain, dated December 12, 1906, No. 28,371.

This invention has reference to an apparatus for feeding envelops to envelop-addressing machines. It consists of apparatus adapted to contain a number of envelops and capable of being fitted to such a machine, these envelops being attached to or picked up by a traveling band or apron which feeds them to the addressing machine where they are suitably addressed and afterwards conveys them from such machine and allows them to become detached from the traveling band.

The envelops are automatically picked up by the traveling band and after having been addressed are detached therefrom by a deflector device or, by suitably arranging the path of the band, the envelops may drop therefrom by their own weight and in either case they may be collected in a hopper or similar holder.

The machine for addressing the envelops is illustrated as an ordinary standard typewriter but other similar machines may be employed for this purpose.

The invention is illustrated upon the accompanying drawings in which:—

Figure 1 shows in side elevation the apparatus and addressing machine, the former being in central section. Fig. 2 is a front elevation with a portion of the machine broken away so as to show clearly the platen and band. Fig. 3 shows the ends of the band ready for connection together. Fig. 4 represents the same when joined. Fig. 5 is a view of a portion of the band. Fig. 6 shows the chute in which the envelops are placed. Fig. 7 is a diagram showing a convex roller. Fig. 8 shows a guide for the band so as to divert it from its line of travel and bring it towards the flap of the envelop.

The traveling band or apron employed in this apparatus is shown consisting of a sheet 1 of stout flexible material such as paper or linen provided with transverse slots 2 and gussets 3 forming pouches into which the flaps of the envelops enter so that the envelop is engaged by and carried along with the band. The slot and gusset may be of any desired shape, straight or otherwise; in the example illustrated the slot is curved and the gusset is of slightly larger extent so as to cover completely the bay 2' formed in the band by the slot. This arrangement possesses the advantage of facilitating the ultimate discharge or detachment of the envelop from the band. The free end of the gusset is at right angles

to the edges of the band or to the line of travel of the band in order to secure correct alinement of the envelops as they are presented to the striking face of the type. As a pocket approaches the flap of the envelop it bellies out, see Figs. 1 and 2, and consequently the tongue of the flap is with certainty engaged by the pocket. Preferably this band is of a width in excess of that of the envelops intended to be used therewith and the distance of the slots 2 apart is greater than the height or depth of the envelop of the maximum width proposed to be used upon the band.

The band is shown joined at its ends so as to form a continuous apron or belt by means of the slots 4, 5 at each end which are interconnected by means of the flexible strip 6 of metal, xylonite or the like. Alternatively the ends of the bands may be pasted or similarly secured together. This band 1 is represented on the accompanying drawings (Fig. 1) as extending around the platen or cylinder 7 of the typewriting machine. The band 1 passes out from a frame work or structure 8 the wheelbase 9 of which is mounted on wheels 10 so that the wheelbase and the frame supported thereby move in conformity with the longitudinal movements of the platen 7. The band is drawn from the apparatus 8, 9 by the revolution of the platen in the ordinary way, the usual clips or guides 35, 35 maintaining the band in frictional contact with the platen 7.

The standards or uprights of the frame of the typewriter are shown at 33, while 34 is the usual grip roller which holds the band and envelop against the platen 7.

The ordinary sliding clips or stops which hold the band down upon the platen are represented at 35 in Figs. 1 and 2. The carriage 36 travels on the rails 37 of the typewriter. The ribbon spool is shown at 38 the spool winder at 38 and the bell at 39.

The frame 8 is shown comprising parallel end members 8' suitably braced and tied by means of the rods 11, 11; it carries rollers 12, 13 and 14 conveniently journaled or spindled at 40, 41 and 42 respectively in the end members 8' and the band passes around these rollers in the direction indicated by the arrows. The roller 12 is the lowest one in the frame and the band extends thence over the roller 13 and after having been wound around the platen 7 it is returned over the roller 14 down to the roller 12 again. Above the point where the band rises from the roller 12, it passes close to a chute 15 wherein the envelops have been placed with their flaps towards said band.

The chute is composed of a hopper into which the envelops 16, 16 are stacked and it is so inclined at for example 45° that the foremost envelop 16 falls against the traveling band 1 and its flap 16' is engaged by the pouch or pocket of the band. The band as it is drawn

up from the roller 12 by the rotation of the platen sags at the gusset of the pouch and engages and lifts the envelop and conveys it over the roller 13 to the platen 7 of the typewriting machine. On this portion of its journey it passes over a lower runway shown here as a turtleback 17 which consists of an arched or curved surface mounted between the end members 8' of the frame.

An upper runway also shown here as a turtleback 18 is similarly arranged between the members 8' and over this surface 18 the band 1 still carrying the envelop 16 passes on its return from the top of the platen 7. The upper turtleback 18 extends over the lower one in the direction of the typewriter being beveled or dropped at its extremity 18' to facilitate the travel of the band and envelops. At its other end the turtleback 18 projects beyond the roller 13 and up to the roller 14 being practically tangential thereto so as to lead the band to the said roller whence the band is shown descending almost vertically to the roller 12. The roller 13 is with advantage made of larger diameter than either of the rollers 12, 14 because when passing around this roller 13 the envelop is on its front with the flap away from the roller. These three rollers 12, 13 and 14 may be cylindrical, convexed or concave as may be desired; on the drawings they are shown cylindrical.

The end members 8' may extend upwardly above the turtleback 18 to a slight extent if so desired; in this way these extensions may, as shown at 19 for example, afford guides or flanges for the turtleback 18 and may so prevent undesirable lateral movement of the band 1.

It will be noted that whereas between the rollers 12 and 13 and the platen the envelops are upon the under side of the band 1, the latter after passing around the platen 7 is of course inverted with the result that when the band leaves the turtleback 18 in order to descend to the roller 12 as shown by the arrow the envelops are inverted and as soon as they are clear of the roller 14, that is to say when the flap is no longer held between the pocket gusset 3 or the band 1 and the roller 14, they will fall by their own weight, being jerked off if necessary by the advance of the band from the platen. In order, however, to insure the detachment of the addressed envelop from the band 1 and in case the envelop should from any cause have become adherent thereto, I may provide a deflector plate 20 curved outwardly from the path of the band 1 and having a striking roller 21 at its end nearest the band 1. This plate is mounted on a suitable support as a bracket 22 riveted or otherwise affixed to the frame of the machine 8. A hopper or other receiver may be arranged away from the band 1 and outwardly below this deflector plate 20 in order to collect the envelops as they leave the band, but such collector is not shown on the drawings.

In the arrangement illustrated in Fig. 8 I have shown a spring-pressed roller 23 guiding the band 1 between the rollers 12 and 13 outwardly towards the flaps of the envelops. The spring 24 presses the roller 23 in that direction in a yielding manner and this device insures the proper engagement of the flaps with the pockets in the band.

Extending around the lower side of the roller 12 is a guard plate 25 which also insures the guiding of the

band 1 around the roller 12 when the band is being secured in position.

The attachment consisting of the frame 8 with wheel base 9, rollers 12, 13, 14 and turtlebacks 18, 19 is secured to the carriage of the typewriter in any convenient way. The rollers or wheels 10 running on the table, desk or other support allow the attachment to travel longitudinally with the platen of the machine and in order that with a typewriter having a "shift" key in which the carriage is displaced in a direction at right angles to that of its longitudinal movement, the carriage may be able to shift without hindrance from the attachment, I connect the carriage or bed which carries the platen by means of hinged bars or connections such as 26, 26 with the end member 8' or other convenient portion of the attachment 8. The bars 26 are shown in the example illustrated, as pivoted at 27 to the end members 8' and at the other end clipped to or sprung over a bar or guide roll 28 mounted on the carriage. Other hinged connections between the attachment 8 and the carriage of the typewriter may be used as the equivalent of the one now described.

The chute for the stacked envelops and comprising a hopper 15 has a forward edge or flange 29 against which the bottom or lowest part of the foremost envelop will bear. The lower part of the chute is of smaller size than the upper so as to allow for the increased thickness of the stack of envelops at the top because of their flaps. It will be noted from an inspection of Fig. 1 that the envelops as they fall from the rear to the front are slightly tilted over so that the flap is in advance of the base represented by the edge or flange 29. The width of this chute or hopper 15 may be varied by means of the adjustable guides 30, 31 which as shown separately in Fig. 6 may be mounted on a right and left hand screw 32 so as to be brought together or separated with movements of equal extent.

Having thus described my invention, what I claim as such and desire to secure by Letters Patent is:—

1. An apparatus for feeding envelops to typewriters comprising a frame work between the opposite sides of which are disposed superposed runways, a band of flexible material having cross slots at intervals, gussets of flexible material secured upon said band with one edge overlapping each of said slots, said gussets forming pouches wherein to secure the flaps of envelops, guide means in said frame for the band, said band having its going and return portions supported by said runways, means for causing the band to travel to an adjacent typewriter carrying with it the envelops, and means for diverting said envelops from said band after passage around the typewriter platen.

2. An organized apparatus of the character described having in combination a typewriter having a platen, a band of flexible material having pouches formed thereon, said pouches being closed at the sides and open at the forward end, means for causing said band to travel around the platen of the typewriter and sidewise in conformity with the longitudinal movements of said platen, and means for feeding envelops by means of their flaps to said traveling band.

3. The combination with a typewriter having a movable carriage and a platen, of an attachment for said typewriter said attachment comprising a wheeled frame positioned relative to the typewriter and adapted to move coordinately with said carriage, guide rollers and superposed runways mounted in said frame, and a band having its going and return portions operable over said runways, said band having means for engaging, picking up and con-

veying envelops around said rollers and over said runways, and also passing around the platen of the typewriter.

4. An apparatus for feeding envelops to typewriting machines, comprising an attachment to the typewriting machine, said attachment being movable in conformity with the intermittent movements of the typewriter carriage, said attachment having end frames between which are mounted guide rollers and superposed runways, an endless band of flexible material having pouches to engage and convey envelops by means of their flaps, said band passing over said guide rollers, runways and the platen of the typewriting machine.

5. An apparatus for feeding envelops to typewriters, comprising an attachment to the typewriter movable both longitudinally and transversely with the carriage of the typewriter, said attachment having end frames mounted on a base, said base fitted at each of its corners with wheels, superposed runways and guide rollers arranged between said end frames and an endless band having pouches formed thereon to engage and lift envelops by their flaps, said band passing over said rollers and the platen of the typewriter.

6. An envelop addressing machine having in combination a typewriting machine with a traveling carriage and platen, an attachment positioned proximate to the typewriting machine and movable in conformity with said carriage, runways mounted upon said attachment and leading to and from said carriage, a band of flexible material passing over said runways, a holder for envelops arranged adjacent to said band said envelops being stacked with their flaps to face said band, and means carried by said band for engaging said flaps and carrying along said envelops.

7. An apparatus for feeding envelops to typewriters, comprising an attachment to the typewriter, said attachment being mounted on a base provided with wheel-carrying axles at each of its ends and being linked by means of pivoted connections to the carriage of the typewriting machine, end frames to said attachment, guide rollers and superposed runways arranged between said end frames and an endless band having cross slots and gussets overlapping said slots, said band being adapted to pick up and convey envelops by means of their flaps over said rollers and runways to and from the platen of the typewriter.

8. An apparatus for feeding envelops to typewriting machines, comprising an attachment to the typewriting machine, said attachment being movable in conformity with the intermittent movements of the typewriter carriage, said attachment having end frames between which are mounted guide rollers and runways, an endless band of flexible material having pouches to engage and convey envelops by means of their flaps, said band passing over said guide rollers, runways and the platen of the typewriting machine, said band passing in front of a hopper containing a stack of envelops, said hopper having means for adjusting its width to correspond with the width of envelops employed.

9. An apparatus for feeding envelops to typewriting machines, comprising an attachment to the typewriting machine, said attachment being movable in conformity with the intermittent movements of the typewriter carriage, said attachment having end frames between which are mounted guide rollers and an upper runway, a second runway arranged below the upper runway, said second runway being also between the end frames but being shorter in length than the upper runway an endless band of flexible material having pouches to engage and convey envelops by means of their flaps, said band passing over said guide rollers, runways and the platen of the typewriting machine.

10. An apparatus for feeding envelops to typewriting machines, comprising an attachment to the typewriting machine, said attachment being movable in conformity with the intermittent movements of the typewriter carriage, said attachment having end frames between which are mounted guide rollers and an upper and a lower runway, an endless band of flexible material having curved slots transversely of its length at intervals, gussets overlapping said slots and forming pouches on said band, a

hopper for envelops adjacent to said band, said hopper being of adjustable width to suit variously sized stacks of envelops, said band passing over said guide rollers and runways and to and from the platen of the typewriting machine.

11. An apparatus for feeding envelops to typewriting machines, comprising an attachment to the typewriting machine, said attachment being movable in conformity with the intermittent movements of the typewriter carriage, said attachment having end frames between which are mounted guide rollers and an upper and a lower runway, an endless band of flexible material provided at intervals in its length with pouches, a hopper containing a stack of envelops arranged adjacent to said band with the flap of the foremost envelop adapted to be engaged by the pouch, said hopper having adjustable guides whereby its width may be varied to suit envelops of different sizes, said band passing over said guide rollers and said runways and to and from the platen of the typewriting machine.

12. An apparatus for feeding envelops to typewriting machines, comprising an attachment to the typewriting machine, said attachment being movable in conformity with the intermittent movements of the typewriter carriage, said attachment having end frames between which are mounted guide rollers and superposed turtlebacks, an endless band of flexible material provided with pouches, a hopper for envelops adjacent to said band, adjustable slides in said hopper to suit various sizes of envelops, said band being adapted to engage and convey said envelops from the hopper over the guide rollers to the lower turtleback, thence around the platen and over the upper turtleback.

13. An apparatus for feeding envelops to typewriting machines, comprising an attachment to the typewriting machine, said attachment being movable in conformity with the intermittent movements of the typewriter carriage, said attachment having end frames between which are mounted guide rollers and a curved runway extending the full width between the end frames, a second similar curved runway of lesser length than the first, an endless band of flexible material having pouches to engage and convey envelops by means of their flaps, said band passing over said guide rollers, runways and the platen of the typewriting machine.

14. An apparatus for feeding envelops to typewriting machines, comprising an attachment to the typewriting machine, said attachment being movable in conformity with the intermittent movements of the typewriter carriage, said attachment having end frames between which are mounted runways extending the width of the frames and curved longitudinally, a guide roller revolvably arranged between said frames immediately in front of the lower runway, a second guide roller revolvably arranged between said frames immediately after the upper runway, and a third guide roller revolvably mounted between said frames below the other guide rollers, a hopper containing stacked envelops inclined to said third roller so that the flaps of said envelops are above said roller, and an endless band passing over said rollers and around the platen of the typewriter having means for picking up and translating said envelops in succession.

15. In an apparatus for feeding envelops to typewriting machines, the combination of a typewriting machine having a traveling carriage and platen, an envelop feeding attachment proximate to the typewriting machine and movable coordinately with the carriage thereof, said attachment having a carrier for feeding envelops to said platen, and having upper and lower runways with end frames between which said runways are arranged, one of said runways having a dropped extremity facing the typewriter, and guide rollers adjacent to one extremity of said runways, said runways being approximately tangential to said rollers.

16. In an apparatus for feeding envelops to typewriting machines, the combination of an attachment having end frames and a wheeled base, an upper turtleback between said end frames, a lower turtleback also between said end frames said upper turtleback having a dropped extremity facing the typewriting machine; with means for causing envelops to be picked up by an endless band and carried

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over said turtlebacks to and from the typewriting machine.

17. The combination with a typewriting machine having a traveling carriage provided with a platen, of a wheeled attachment to the machine so as to be movable with the carriage thereof, said attachment having end frames between which are mounted guide roller and upper and lower runways, a hopper for envelopes, said hopper being so inclined as to present the foremost envelop against a contiguous portion of the band, an endless band having means for picking up said envelopes and carrying them over said guide roller and runways to and from the platen of the machine and a deflector plate mounted on the attachment and extending away therefrom.

18. In an apparatus for feeding envelopes to typewriting machines, the combination of an endless band of flexible material having cross slots and gusset pieces forming flexible pouches to engage the foremost of a stack of envelopes, with a typewriter platen, and runways over which said band is wound, said rollers and runways being mounted in a frame connected to the typewriting machine so as to move in conformity therewith.

19. In an apparatus for feeding envelopes to typewriting machines, the combination of a band of flexible material provided with pouches at intervals in its length, a frame having a wheeled base and connected by pivoted links to the carriage of the typewriting machine so as to be movable both longitudinally and laterally with the platen of the typewriting machine, guide rollers and runways mounted in said frame, and a hopper for stacked envelopes having means for adjusting its width, said band being arranged to pass over said guide rolls, and runways to and from the said platen, and automatically conveying envelopes from said hopper to and around said platen.

20. The combination with a typewriting machine having a traveling carriage, a platen, and a shift-key, of envelop feeding means for said machine said means comprising an attachment having a wheeled base and a holder for a stack of envelopes, an endless band passing from said attachment to and around the platen of said typewriter, and returning to said attachment, said band having means for picking up and carrying along said envelopes, and pivoted links between said attachment and the carriage of said typewriter, so that said carriage may be displaced to allow the shift key to be employed.

21. In an apparatus for feeding envelopes to typewriting machines, the combination of a band of flexible material provided with pouches at intervals in its length a frame having a wheeled base and connected by pivoted links to the carriage of the typewriting machine so as to be movable both longitudinally and laterally with the platen of the typewriting machine, guide rollers and runways mounted in said frame, and a hopper for stacked envelopes having means for adjusting its width, said band being arranged to pass over said guide rolls, and runways to and from the said platen, and automatically conveying envelopes from said hopper to and around said platen, and a deflector plate upon the outer side of the frame adja-

cent to said band to deflect said envelopes as they fall from said pouches.

22. An apparatus for feeding envelopes to typewriters comprising a wheeled attachment connected to the carriage of the typewriter, a band of flexible material passing out from said attachment to and around the platen of the typewriter, means for guiding said band, said means being carried by the attachment, a holder for stacked envelopes arranged adjacent to the band, said holder having adjustable guides at its side to allow its width to be adapted to different widths of envelopes.

23. In an apparatus for feeding envelopes to typewriters, an attachment comprising a wheeled base having mounted thereon end frames between which are mounted upper and lower turtlebacks, a guide roller adjacent to each of said turtlebacks, and a third guide roller arranged adjacent to the wheeled base and having a curved guard plate extending about its under portion and secured to the attachment.

24. An apparatus for feeding envelopes to envelop-addressing machines, comprising an attachment to a typewriting machine having a wheeled base and hinged connections to the carriage of said typewriter so as to move therewith, said attachment having end frames wherein rollers are mounted, an endless band passing over said rollers and around the platen of the typewriter, said band being caused to travel by the revolution of the platen, a hopper wherein envelopes are stacked so as to face the band and so set that the front envelop falls against the band, means carried by said band for engaging said envelopes successively and conveying them around the platen of the typewriter, a lower turtleback and an upper turtleback both arranged in the said attachment and over which the band passes on its way to and from the platen.

25. An apparatus for feeding envelopes to envelop-addressing machines, comprising an attachment to a typewriting machine having a wheeled base and hinged connections to the carriage of said typewriter so as to move therewith, said attachment having end frames wherein rollers are mounted, an endless band passing over said rollers and around the platen of the typewriter, said band being caused to travel by the revolution of the platen, a hopper wherein envelopes are stacked so as to face the band and so set that the front envelop falls against the band, means carried by said band for engaging said envelopes successively and conveying them around the platen of the typewriter, a lower turtleback and an upper turtleback both arranged in the said attachment and over which the band passes on its way to and from the platen.

In witness whereof I affix my signature in presence of two witnesses.

FREDERICK CYRIL JENKINS.

Witnesses:

M. WHEATLEY,
CYRIL JOSEPH FEENEY.