W. H. & R. B. McARDLE.

AUTOMATIC ENVELOP AND CARD FEEDING ATTACHMENT FOR TYPE WRITERS.

APPLICATION FILED FEB. 10, 1909.

985,429. Patented Feb. 28, 1911.

5 SHEETS—SHEET 1.

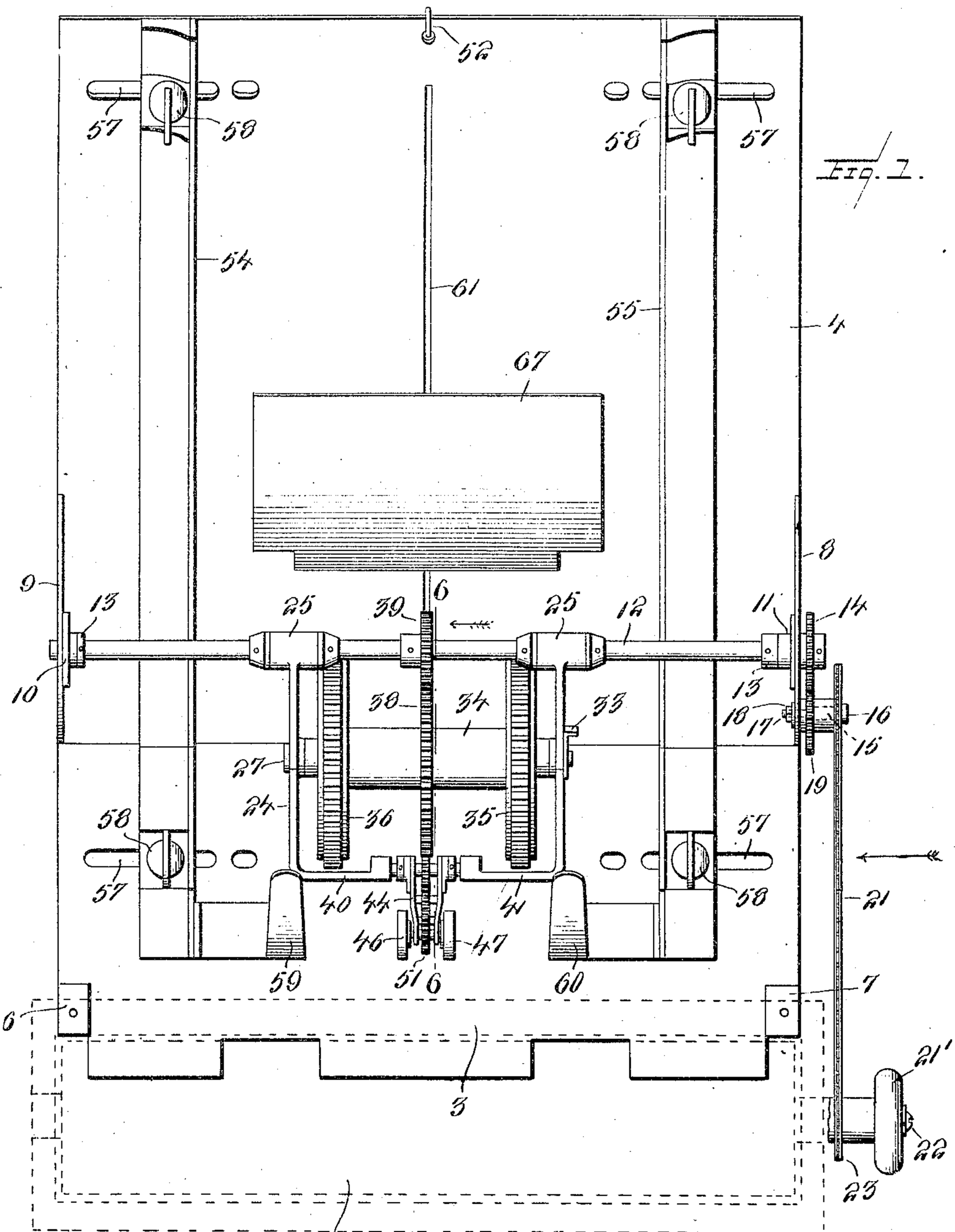

Fig. 1.

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5 SHEETS—SHEET 2.

Fig. 2.

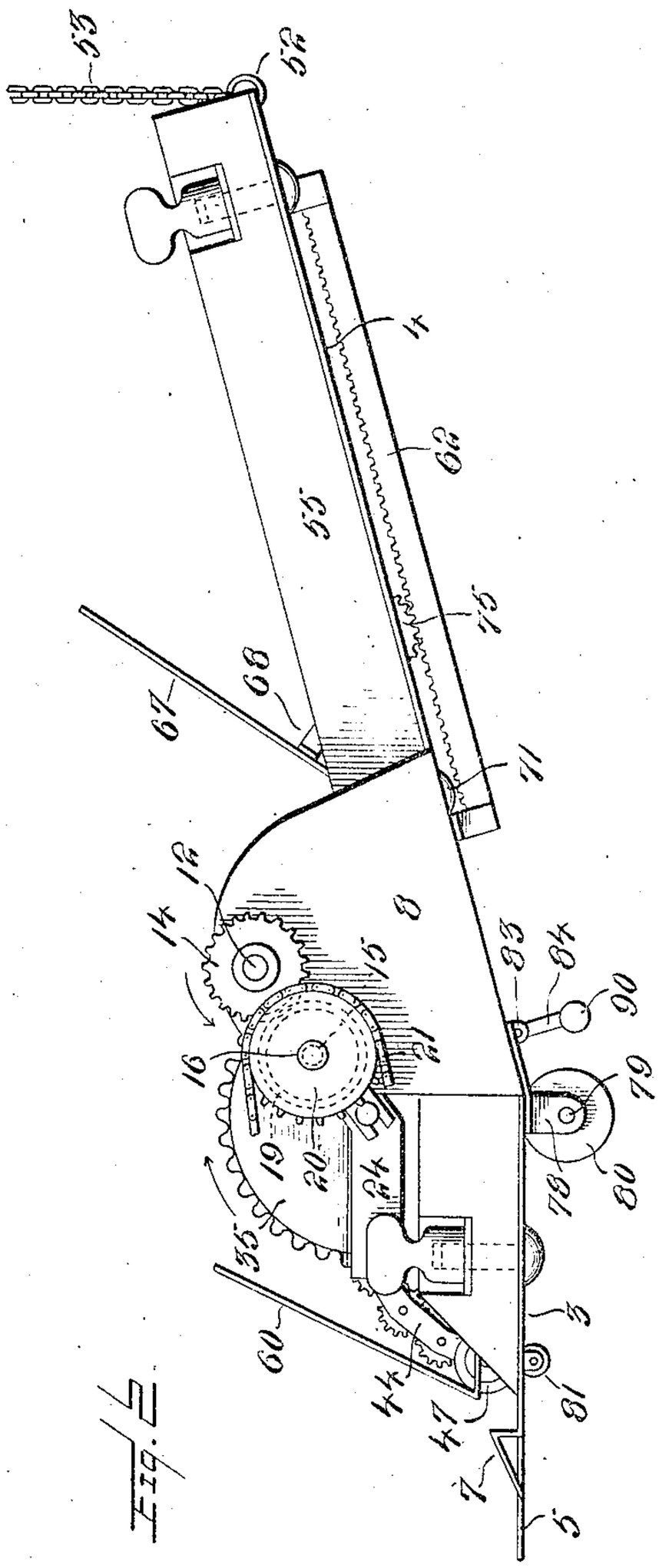
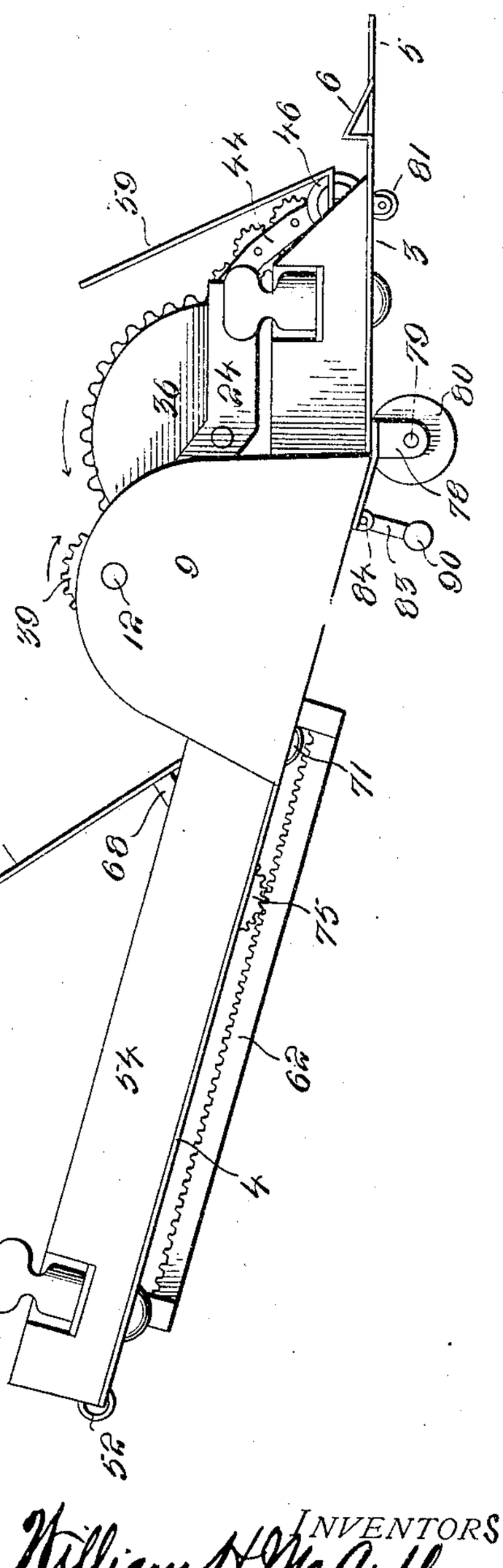


Fig. 1.



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5 SHEETS—SHEET 3.

Fig. 3.

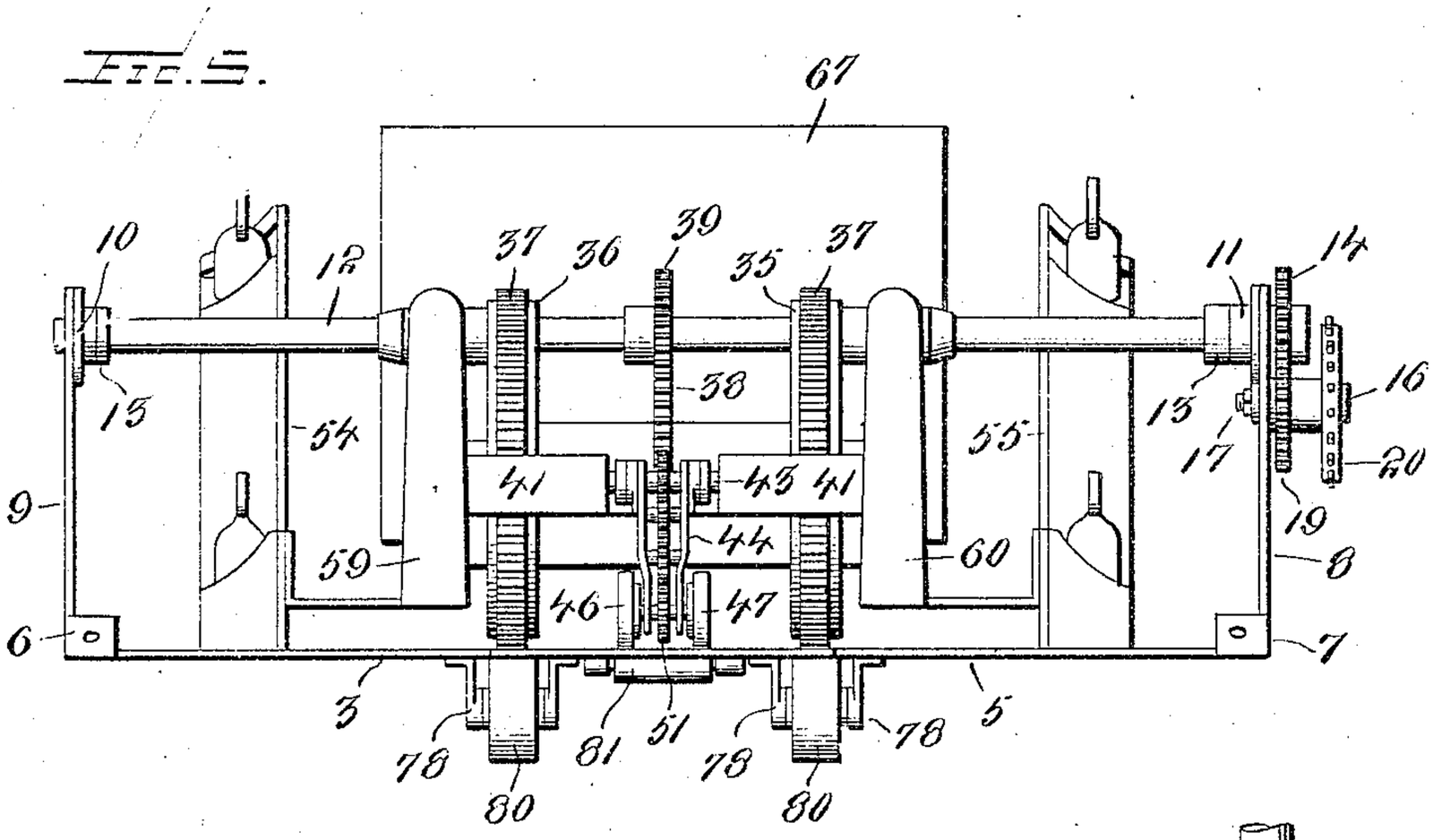
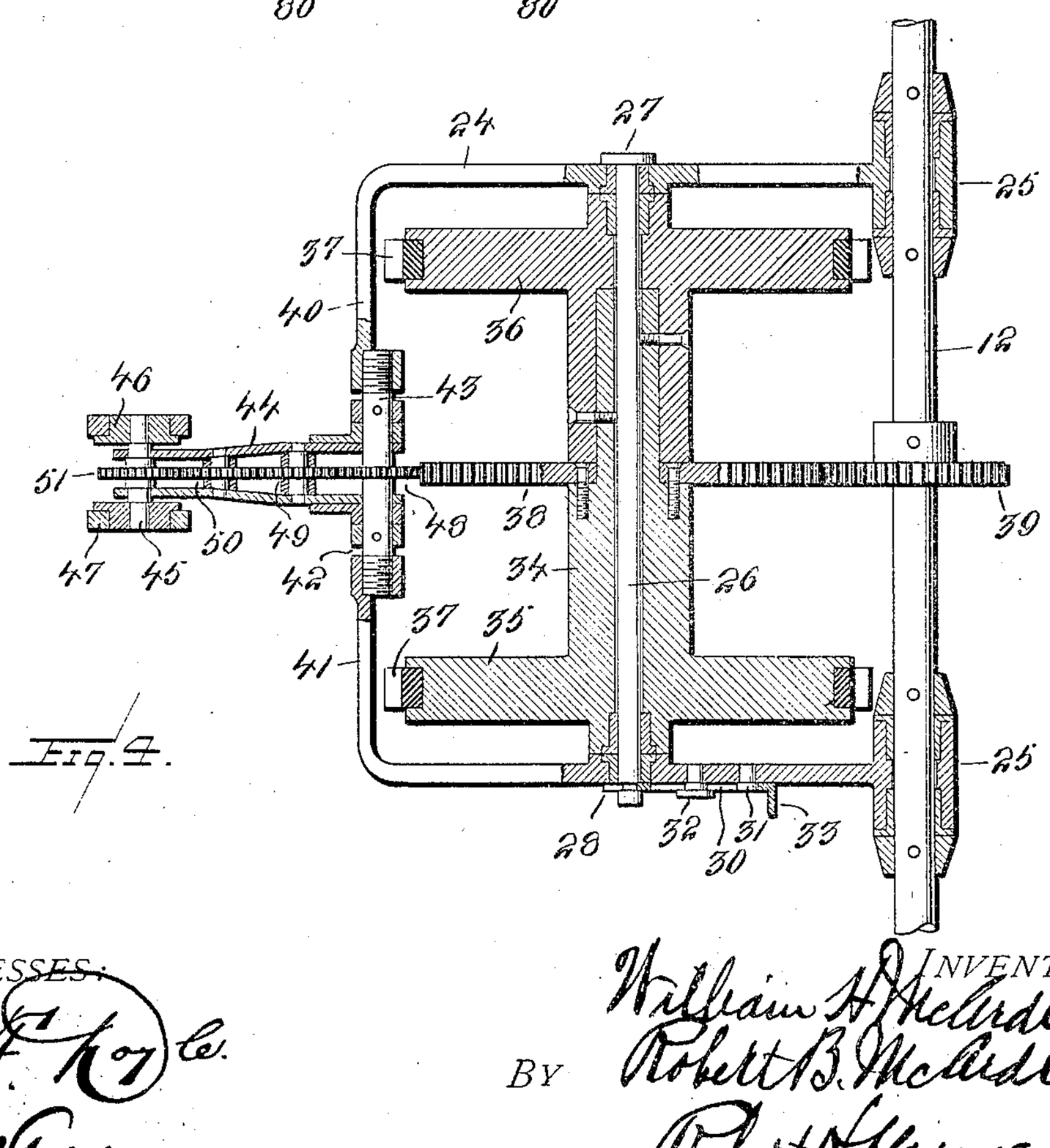


Fig. 4.



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5 SHEETS—SHEET 4.

Fig. 6.

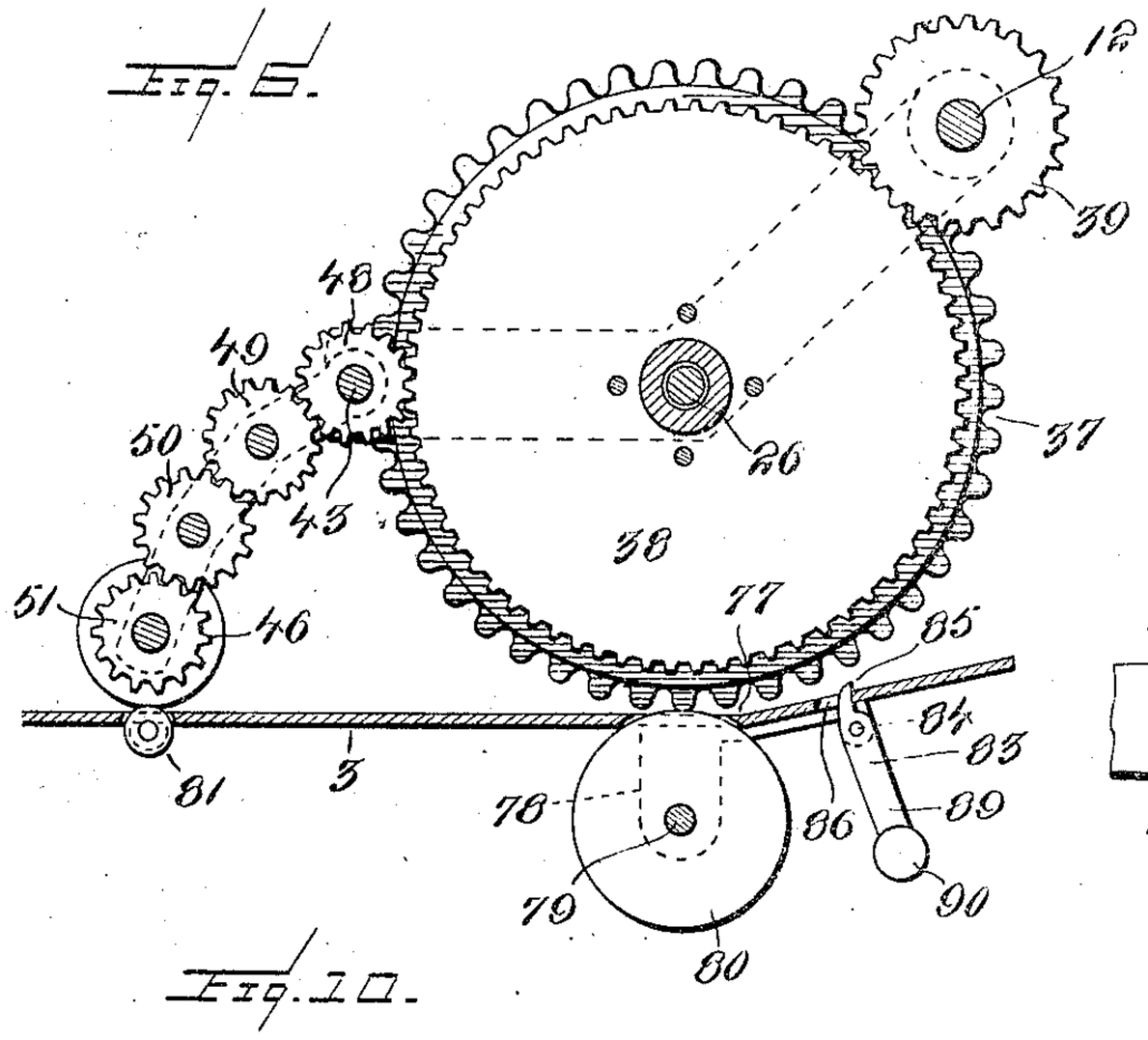
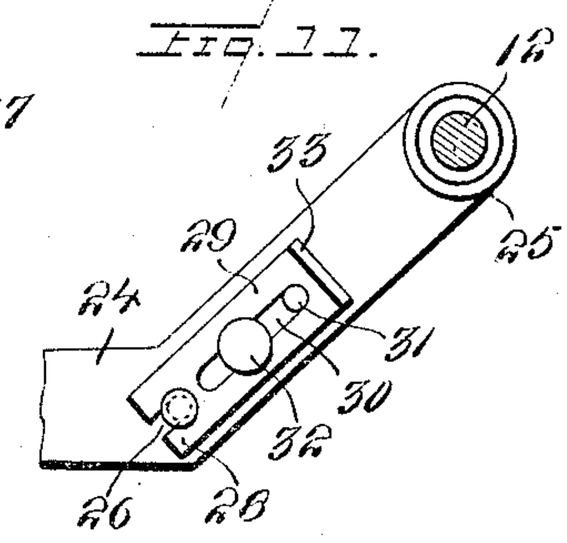
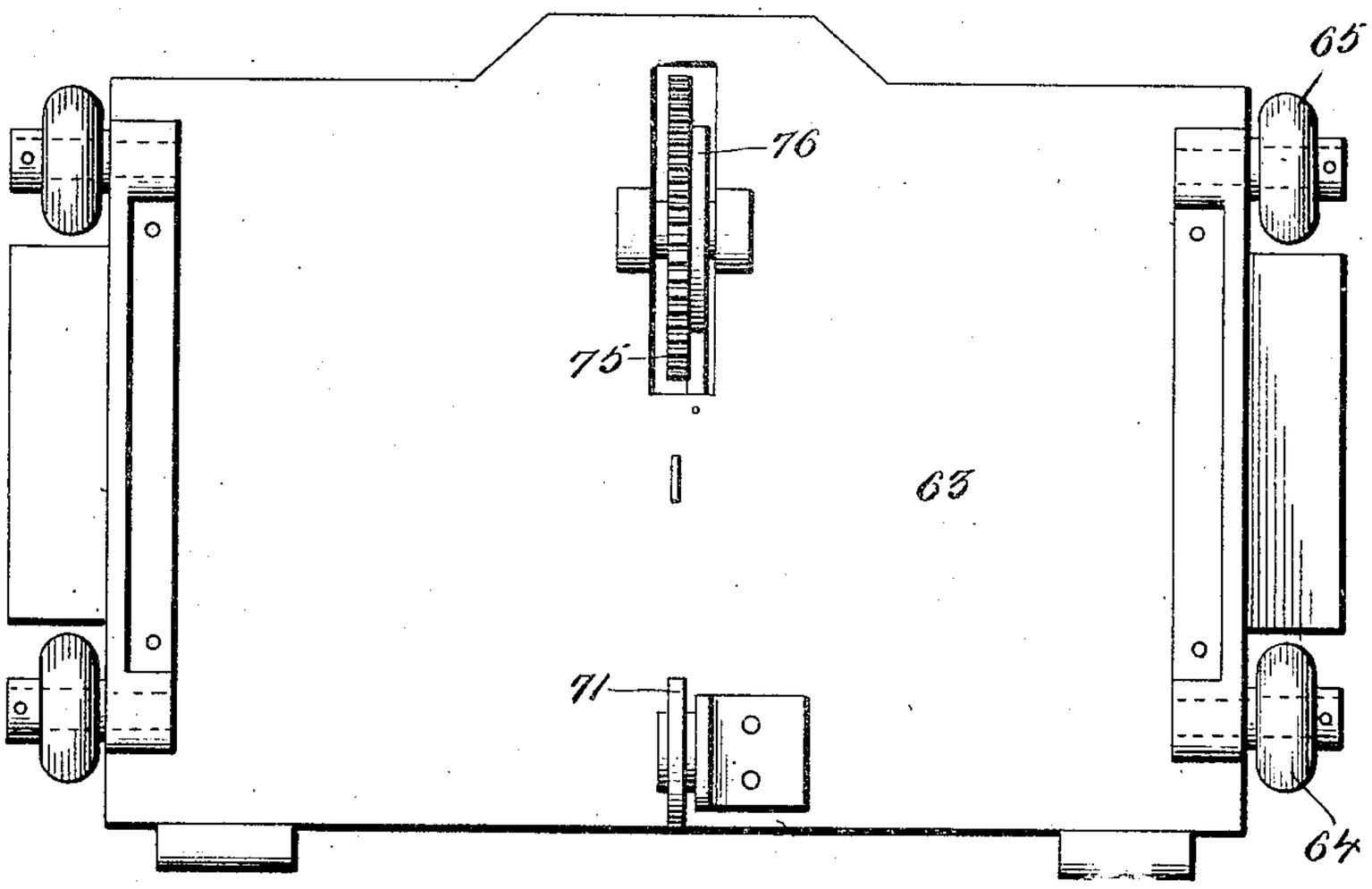


Fig. 10.

Fig. 11.





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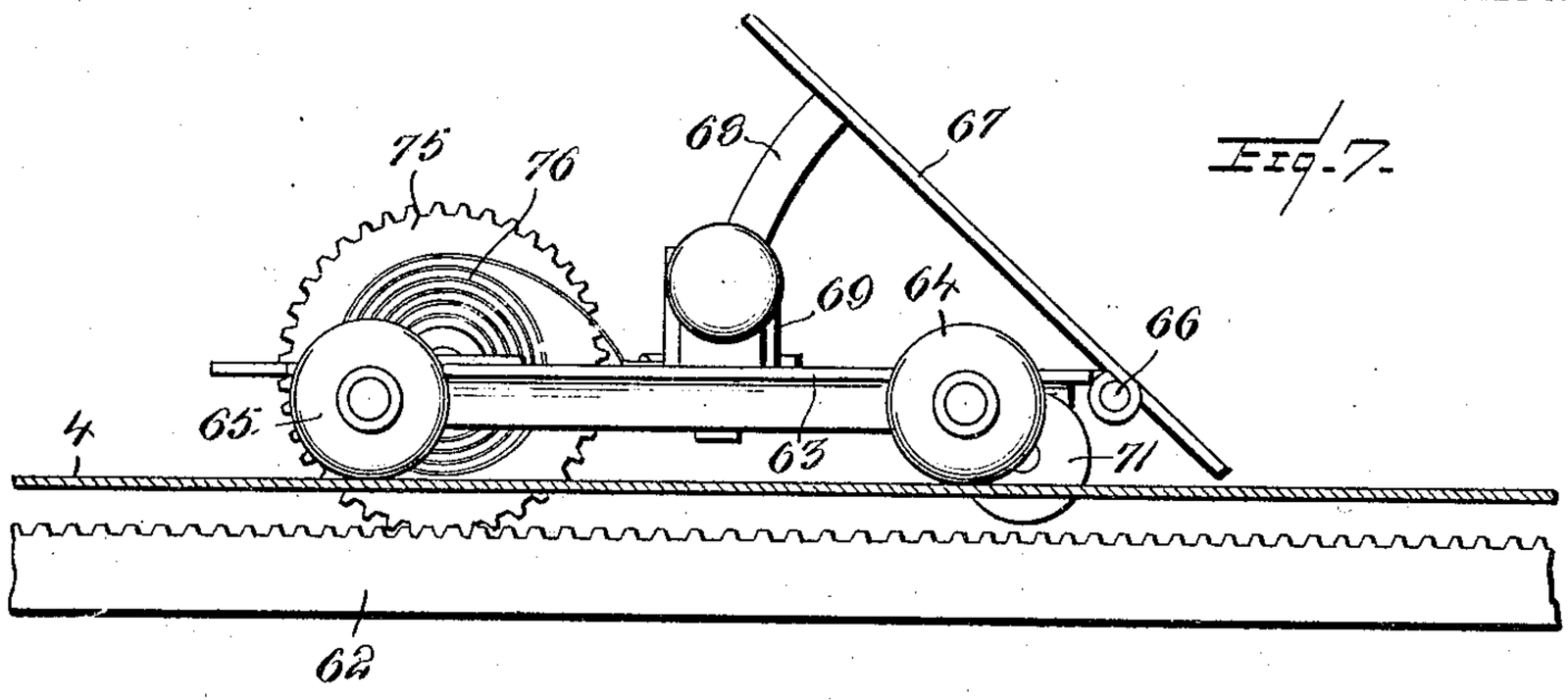

Fig. 7.

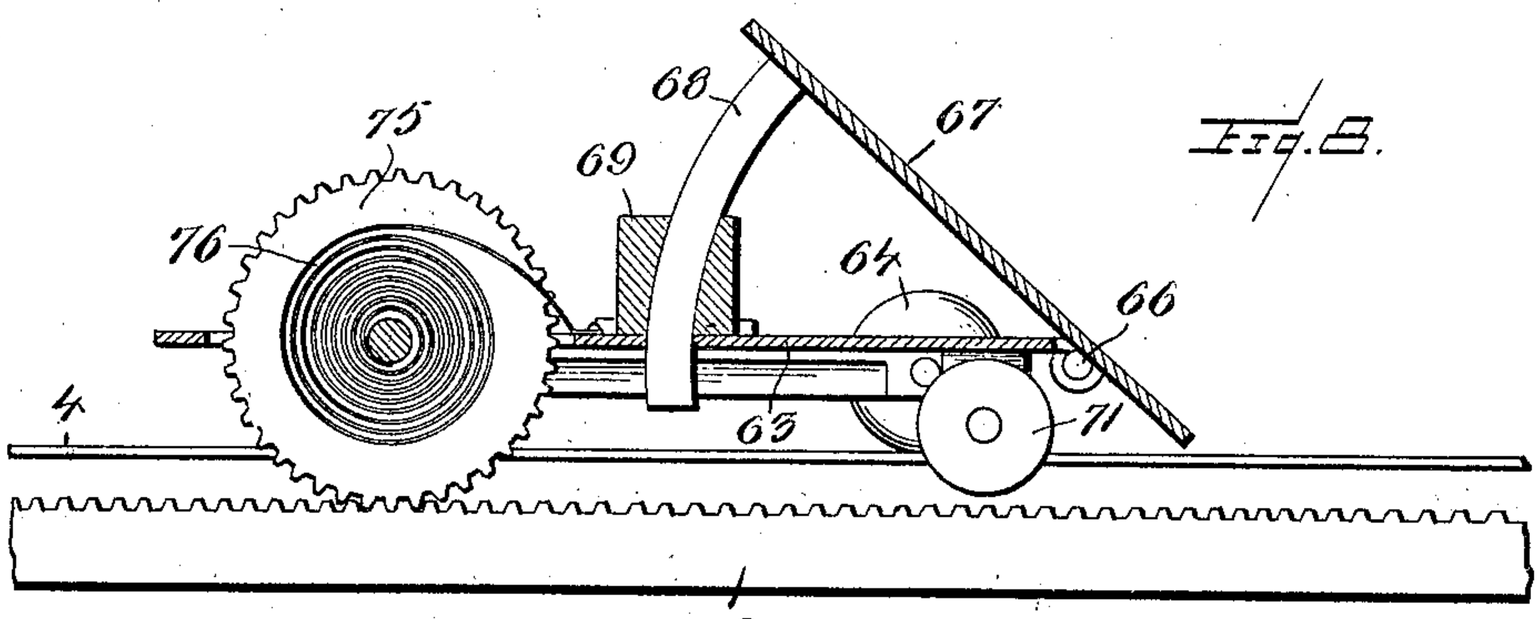

Fig. 8.

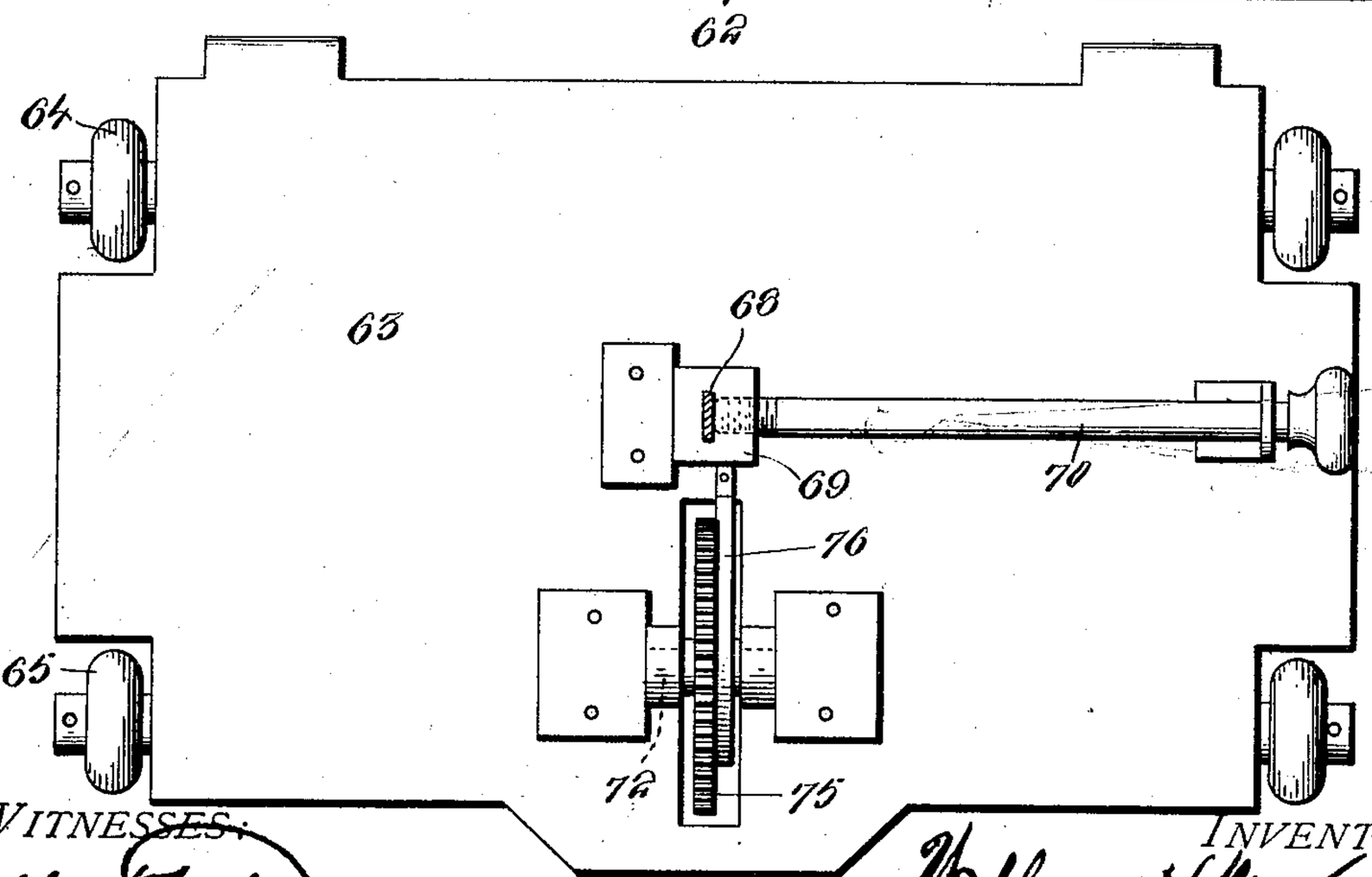

Fig. 9.

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AUTOMATIC ENVELOP AND CARD FEEDING ATTACHMENT FOR TYPE-WRITERS.

985,429. Specification of Letters Patent. Patented Feb. 28, 1911.

Application filed February 10, 1909. Serial No. 477,162.

To all whom it may concern:

Be it known that we, WILLIAM H. McARDLE and ROBERT B. McARDLE, citizens of the United States, residing at Camden, in the county of Camden and State of New Jersey, have invented new and useful Improvements in Automatic Envelop and Card Feeding Attachments for Type-Writers, of which the following is a specification.

Our invention relates to improvements in automatic envelop, post card or index card feeding attachment for typewriters for feeding the same to the platen of a typewriter.

The object of our invention is to provide an attachment which can be readily attached to the ordinary typewriter and in which a series of envelops, post or index cards can be placed one against the other and fed separately to the typewriter machine as the completed envelop, post or index card is removed from the typewriter in the ordinary manner, all of which is operated by the platen of the typewriter.

Another object of our invention is to provide an attachment of this character having certain details of structure, whereby the envelops, post or index cards are fed to the platen of the typewriter in perfect alinement and it is not necessary to adjust the same after they enter the machine.

Another object of our invention is to provide an attachment of this character, whereby envelops of different widths may be accurately fed to the typewriter.

In the accompanying drawings: Figure 1 is a top plan view of a typewriter, showing our attachment applied thereto; Fig. 2 is a side elevation looking in the direction of the arrow in Fig. 1; Fig. 3 is a side elevation of the attachment looking from the opposite side of Fig. 2; Fig. 4 is an enlarged plan view partly in section of the envelop feeding rollers; Fig. 5 is an end view of the attachment looking in the direction of the arrow in Fig. 1; Fig. 6 is a transverse sectional view, taken on the line 6—6 of Fig. 1; Fig. 7 is an enlarged side elevation, partly in section, of the envelop supporting plate, showing the feed mechanism therefor; and with the top of the envelop supporting plate broken away; Fig. 8 is a side sectional view of the envelop supporting plate and feeding carriage; Fig. 9 is a top plan view of our envelop supporting carriage; Fig. 10 is a bottom plan view of the same, and Fig. 11 is a detail view of the locking means for removably securing the shaft on which the feeding rollers are carried in its frame.

Referring now to the drawings, 1 represents the carriage of the ordinary typewriter carrying the usual platen 2 rotated in the ordinary manner.

3 represents a frame having an inclined rear portion 4 and a horizontal front portion 5. The horizontal portion at its forward end is provided with tongues 6 and 7, which are adapted to rest on the steps carried by the carriage of the typewriter. Said steps are those which are provided in some designs of typewriters to support the paper supporting plate at the rear of the platen. While we have shown this arrangement for attaching our device to the carriage of the typewriter, it will be understood that in some cases it is secured upon the carriage by any other fastening means adapted to the different makes and designs. The forward end of the inclined portion 4, adjacent to the horizontal portion 5, is provided with upwardly extending ears 8 and 9, carrying the bearings 10 and 11, in which is rotatably mounted the shaft 12. Said shaft, at each end, on the inside of the bearings, is provided with collars 13, keyed upon the shaft, whereby the shaft is held against longitudinal movement. The outer end of the shaft has keyed thereon a gear wheel 14. The ear 8, in front of the shaft 12, has a short shaft 15 secured thereto. This shaft is constructed with an outer head portion 16 and an inner reduced threaded portion 17 upon which a nut 18 is screwed for locking the shaft to the ear. The said shaft 15, on the outside of the ear, has loosely mounted thereon a gear wheel 19 meshing with the gear 14. Secured to the outer face of the gear 19 is a sprocket wheel 20 around which a link belt 21 passes. The platen 2 of the typewriter, at the right, has an operating knob 21. This operating knob is removably held to the platen by means of the screw 22. The said knob carries on its hub a sprocket wheel 23 which is in alinement with the sprocket wheel 20 over which the link belt 21 passes for rotating the shaft 12. The shaft 12 at the center is provided with a

forwardly extending U-shaped frame 24 having enlarged bearing portions 25 loosely mounted upon the shaft, whereby the frame swings thereon.

Extending transversely of the frame 24 intermediate of its ends, is provided a shaft 26 having at one end the head 27 which limits the inward movement of the shaft. The opposite end of the shaft, on the outside of the frame 24, is provided with a peripheral groove in which the bifurcated end 28 of the member 29 rests. This arrangement, as will be seen, prevents the outward movement of the shaft and yet allows the ready removal of the shaft for the purpose hereinafter set forth. The plate 29 is provided with a slot 30 through which a stud 31, carried by frame 24, passes, to prevent the plate from twisting out of line on the frame. Passing through the slot 30 is a set screw 32 which is screwed in the frame for holding the plate in its adjusted position. The inner end of the plate is provided with an outwardly turned end 33 to form a finger hold whereby the plate is moved in or out. Mounted on the shaft 26, within the frame 24, is a spool-like wheel 34, which is adapted to freely rotate upon the shaft. The outer enlarged ends of the spool member 34 form two feed rollers 35 and 36, which are adapted to engage the envelops and feed them forward toward the platen. For the purpose of preventing the roller slipping on the envelops, we secure upon the outer periphery thereof a tire or covering 37, preferably of rubber, transversely corrugated. The spool 34 is provided with a gear 38 meshing with the gear 39 rigidly keyed upon the shaft 12, whereby the spool is rotated in the direction of the arrow in Figs. 2 and 3. It will be apparent that the frame 24 being placed forward of the shaft 12, the wheel 34 is adapted to shove the envelops away from itself and feed them forward and toward the platen of the typewriter and into contact with the auxiliary feeding mechanism hereinafter described.

For the purpose of adapting our invention to the use of envelops, post cards or index cards of varying widths and dimensions and insure their regular and uniform feeding into the proper position upon the platen of the typewriter, it has been found necessary to provide an additional feed roller to convey the same to the platen. This feed roller is placed at the forward end of the swinging frame 24, which we will now proceed to describe.

The frame 24 is preferably made in two sections 40 and 41 leaving a space 42 between the forward ends thereof. This space is bridged by a stud or shaft 42 which rigidly connects the two sections of the frame and also serves as pivot for the auxiliary frame carrying the additional feed roller. Loosely mounted upon the stud or shaft 43 is a swinging frame 44 mounted in a similar manner to the frame 24. The outer end of said swinging frame is provided with a shaft 45 which extends through the frame and carries at the outside of the frame a pair of rollers 46 and 47 having rubber or other friction tires upon their periphery which are adapted to feed the envelop forward to the platen.

The shaft 43 is provided with an idle gear 48 mounted thereon adapted to drive a gear 49, which in turn drives a gear 50 which drives the gear 51 mounted on the shaft 45, and whereby the rollers 46 and 47 are rotated in the same direction as the rollers 36 and 35. As envelops and index cards vary in width, as heretofore stated, the feed wheels 36 and 37 cannot be set in a fixed distance from the typewriter platen and accommodate cards of all widths, and it therefore becomes necessary to adjust their position to accommodate the larger sizes. Thus it has been found necessary to provide the auxiliary feed rollers 46 and 47 to convey the narrow cards or envelops to the typewriter platen. Also it is necessary to place the main swinging frame and feed rollers a sufficient distance back to provide sufficient space to take the cards and envelops from the typewriter without buckling them.

One end of the frame 3 being supported by the carriage of the typewriter, it becomes necessary to provide an additional support at the other end of the frame that will not interfere with the escapement of the typewriter. This has been accomplished by providing the rear end of the frame with a ring 52 to which is attached a chain or cord 53, the upper end of which may be attached to the ceiling or other support above the typewriter. By this arrangement it will be apparent that the weight of the rear end of the frame is supported by the chain, which necessarily being approximately seven feet long will describe a very slight arc, and will therefore, not materially raise or lower the carriage. This means of support has been found to cause the least resistance to the travel of the carriage upon the typewriter.

The frame 3 is provided at the sides with longitudinally extending guide plates 54 and 55 which are adapted to form guides for the ends of the envelops or cards to insure the feeding of same in proper alignment to the typewriter. These plates are provided with holes through which the clamp bolts 58 pass and extend into the slots 57 in the frame 3 whereby the guide plates may be adjusted on the frame to adapt same to envelops or cards of different lengths. The inner ends of the guide plates 54 and 55 are provided with upwardly curved arms 59 and 60 which are adapted to support and

prevent the envelops from falling upon the feed rollers as they are delivered from the platen of the typewriter.

To cause the proper feeding of the envelops to the feed rollers, it has been found advantageous to support them in an inclined position at an angle of from thirty to fifty degrees according to the thickness of the envelop or card. The frame 3, at the center, is provided with a slot 61 and carried by the lower face of the frame and below the slot is a rack bar 62. The envelop supporting carriage consists of a rectangular frame 63 having at each side the rollers 64 and 65 adapted to roll upon the upper face of the frame 3. Pivotally mounted at 66 to the forward end of the frame is an inclined envelop supporting plate 67. In order to support the envelops or cards at the different angles, as heretofore set forth, the rear face of the plate 67 is provided with a segmental bar 68 which passes downwardly through a housing 69 carried by the frame 63. Extending through the housing 69 is a thumb screw 70 which engages the segmental bar 68 and locks it in its adjusted position. The said set screw 70 is in an elongated form and extends out flush with the plate 67. The forward end of the carriage is provided with a wheel 71 which extends through the slot 61 in the frame 3 and serves as a guide to keep the carriage 63 at right angles to the frame 3. The rear end of the carriage 63 is provided with a transverse shaft 72 upon which is rigidly mounted a gear wheel 75 extending through the slot 61 and engaging the rack 62. Surrounding the shaft 72 and secured thereto is a coil spring 76 which has one end rigidly secured to the frame 63. Said carriage 63, as will be seen, is adapted to roll down the inclined portion of the frame by gravity, aided by the spring 76, and feeds the envelops to the feed rollers.

In replenishing a supply of cards or envelops in our device, the frame 63 may be rolled up the incline of the frame by engagement of the gear 75 with the rack 62, the spring 76 being wound upon the shaft 72 imparts sufficient power to the carriage to keep the cards or envelops at the proper angle and push them forward. The horizontal portion 5 of the frame is provided with a cut-away portion 77, directly below the feed rollers 36 and 35. The lower face of said portion, on the outside of the cut-away portion 77, is provided with ears 78, in which is mounted a shaft 79. Carried on said shaft is a roller 80 which extends upwardly through the cut-away portion 77. The portion 5 of the frame, below the rollers 46 and 47, is also provided with a roller 81 which performs the same function as the roller 80. It has been found that if the feed rollers 36 and 37 were allowed to rest on the rigid surface of the frame 5, in rotating in the proper position, they would be inclined to clench with the frame 5 and stop the operation. Said rollers working in conjunction with the rollers 36 and 37 provide a forward yielding surface and eliminate this tendency.

For the purpose of preventing more than a single envelop or card being fed to the platen of the typewriter, we provide a pivoted pointer stop 83, which is pivoted at 84 to the lower face of the frame and having an upwardly extending pointed end 85 extending through an opening 86 in the frame. This stop, as seen in the drawings, is in the rear of the feed rollers 36 and 37. The stop, below its pivoted point, is provided with a downwardly extending arm 89, carrying a weight 90, whereby it is free to rock upon its pivot. The weight normally holds the point 85 above the frame to prevent more than a single envelop or card passing under the rollers 36 and 37, which is accomplished in the following manner: The pointed end 85 is weighted to swing with such power as to be sufficient to retard the under envelop from feeding forward with the friction of the envelop immediately in contact with the feed rollers 36 and 37, yet not sufficient to retard it when it in turn comes in immediate contact with the feed rollers, and in feeding forward it pushes the points 85 forward level with the frame, passes over the point 85, and bending to pass under the feed rollers, forms a hollow space which permits the points 85 to resume their upright position and so retard the next succeeding envelop.

In some instances it is more desirable to operate the shaft 12 by hand, and for this purpose the end of the shaft opposite to that carrying the sprocket wheel is provided with a knob or wheel 91.

The construction and operation of our device will be readily understood from the foregoing description and accompanying drawings, and it will be appreciated that the parts and combinations thereof may be varied within a wide range without departing from the spirit and scope of our invention.

Having thus fully described our invention, what we claim as new and desire to secure by Letters Patent, is:

1. The combination with a typewriter, of an envelop supporting frame carried by the carriage of the typewriter, a rotary shaft carried by the frame, a swinging frame carried by the shaft, feed rollers rotatably mounted in the frame and driven by the shaft, and an auxiliary swinging frame carried by the said swinging frame, feed rollers rotatably mounted in the auxiliary frame, and means operated by the main feed rollers for operating the auxiliary feed rollers.

2. The combination with a typewriter, of an envelop supporting frame carried by the

carriage of the typewriter, a rotary shaft mounted in the frame and driven by the platen of the typewriter, a swinging frame mounted upon the shaft, feed rollers mounted in the said frame and driven by the shaft, an auxiliary swinging frame carried by the outer end of the said swinging frame, feed rollers carried by the outer end of the auxiliary frame, means operated by the main feed rollers for rotating the auxiliary rollers, and means carried by the frame for supporting the envelops in an inclined position and feeding them to the main feeding rollers.

3. The combination with a typewriter, of an envelop supporting frame carried by the carriage of the typewriter, a rotary shaft mounted in the frame and driven by the platen of the typewriter, a swinging frame mounted upon the shaft, feed rollers mounted in the said frame and driven by the shaft, an auxiliary swinging frame carried by the outer end of the main swinging frame, feed rollers carried by the outer end of the auxiliary frame, means operated by the main feed rollers for rotating the auxiliary rollers, and an inclined plate mounted on a driven carriage for supporting the envelops in an inclined position and feeding them to the main feeding rollers.

4. The combination with a typewriter, of an envelop supporting frame carried by the carriage of the typewriter, a rotary shaft mounted in the frame and driven by the platen of the typewriter, a swinging frame loosely mounted upon the shaft, a spool shaped member rotatably mounted in the swinging frame forming feed rollers at its ends, a gear carried by the spool, a gear rigidly carried by the shaft and meshing with the gear of the spool, a swinging auxiliary frame carried by the outer end of the main swinging frame, a transverse shaft extending through the end of the auxiliary frame, rollers carried by the ends of the shaft on the outside of the frame, a gear carried by the shaft within the frame, and a train of gearing between the said gear and the gear on the spool, whereby the main and the auxiliary rollers are driven in the same direction.

5. The combination with a typewriter, of an envelop supporting frame carried by the carriage of the typewriter, main rotary feed rollers carried by a swinging frame and driven by the platen of the typewriter, auxiliary feed rollers carried by an auxiliary swinging frame mounted on said swinging frame and driven by said main feed rollers, and idle rollers carried by the lower face of the envelop supporting frame and working in conjunction with the main and auxiliary feed rollers, substantially as described.

6. The combination with a typewriter, of an envelop supporting frame carried by the carriage of the typewriter, a rotary shaft mounted in the frame and driven by the platen of the typewriter, a swinging frame loosely mounted upon the shaft, a spool shaped member rotatably mounted in the swinging frame forming feed rollers at its ends, a gear carried by the spool, a gear rigidly carried by the shaft and meshing with the gear of the spool, a swinging auxiliary frame carried by the outer end of the main swinging frame, auxiliary rollers carried by the outer end of the auxiliary frame, a train of gearing between the gear carried by the spool and the auxiliary roller, whereby the same are driven, an inclined envelop supporting plate in the rear of the main feed roller, means for adjusting the said plate at different angles, and a spring driven mechanism for feeding the plate forward to feed the envelops to the main guide rollers.

7. The combination with a typewriter, of an envelop supporting frame carried thereby, an envelop feeding mechanism carried by the forward end of the frame, a rack carried by the frame, a carriage supported by the frame, a gear carried by the carriage and meshing with the rack, a spring for driving the said gear, an inclined envelop supporting plate pivoted at its lower end to the said carriage, a segmental arm carried by the plate, and adjustably secured in the carriage, and rollers carried by the carriage for supporting the same.

8. The combination with a typewriter, of an envelop supporting frame carried by the carriage of the typewriter, a rotary shaft supported by the frame and driven by the platen, a swinging frame carried by the shaft, feed rollers carried by the swinging frame and driven by the shaft, an auxiliary swinging frame carried by the main swinging frame, auxiliary rollers carried by the outer end of the auxiliary swinging frame, a train of gearing between the main and auxiliary rollers for driving them in the same direction, idle rollers carried by the frame and working in conjunction with the main and auxiliary feed rollers, an intermediately pivoted weighted stop in the rear of the main feed roller for allowing but a single envelop to pass to the feed rollers, guide plates carried by the frame and transversely adjustable on the frame, a rack carried by the lower face of the frame, the frame having a slot exposing the same, a wheel supported carriage carried by the frame, a guide wheel carried by the forward end of the carriage, a gear carried by the rear end of the carriage and extending through the slot and engaging the rack, a spring for driving said gear, a plate pivoted at its lower end to the carriage and adapted to support the envelops on the frame in an inclined position, a segmental

arm carried by the rear face of the inclined plate, and entering a housing carried by the carriage, and a set screw for locking the arm in its adjusted position in the housing, substantially as described.

9. The combination with a typewriter, of an envelop supporting frame carried by the carriage of the typewriter, a rotary shaft carried by the frame, a swinging frame carried by the shaft, feed rollers rotatably mounted in the frame and driven by the shaft, and an auxiliary swinging frame carried by the main swinging frame, feed rollers rotatably mounted on the auxiliary frame, and means operated by the main feed rollers for operating the auxiliary feed rollers, and laterally adjustable side guides carried by the envelop supporting frame for guiding the envelops in the proper position to the platen of the typewriter.

10. The combination with a typewriter, of an envelop supporting frame carried by the carriage of the typewriter, a rotary shaft mounted in the frame and driven by the platen of the typewriter, a swinging frame mounted upon the shaft, feed rollers mounted in the said frame and driven by the shaft, an auxiliary swinging frame carried by the outer end of the main swinging frame, feed rollers carried by the outer end of the auxiliary frame, means operated by the main feed rollers for rotating the auxiliary rollers, and an inclined plate mounted on a driven carriage for supporting the envelops in an inclined position and feeding them to the main feeding rollers, and laterally adjustable side guides carried by the envelop supporting frame for accommodating envelops of different widths and guiding them in the proper position to the typewriter platen.

11. The combination with a typewriter, of an envelop supporting frame carried by the carriage of the typewriter, a rotary shaft mounted in the frame and driven by the platen of the typewriter, a swinging frame loosely mounted upon the shaft, a spool shaped member rotatably mounted in the swinging frame forming feed rollers at its ends, a gear carried by the spool, a gear rigidly carried by the shaft and meshing with the gear of the spool, a swinging auxiliary frame carried by the outer end of the main swinging frame, a transverse shaft extending through the end of the auxiliary frame, rollers carried by the ends of the shaft on the outside of the frame, a gear carried by the shaft within the frame and a train of gearing between the said gear and the gear on the spool, whereby the main and the auxilary rollers are driven in the same direction, and laterally adjustable side guides carried by the envelop frame for accommodating envelops of different sizes and guiding them in the proper position to the typewriter platen.

12. The combination with a typewriter, of an envelop supporting frame carried and only partially supported by the carriage of the typewriter, main rotary feed rollers carried by a swinging frame and driven by the platen of the typewriter, auxiliary feed rollers carried by an auxiliary swinging frame and driven by the main feed rollers, and idle rollers carried by the lower face of the envelop supporting frame and working in conjunction with the main and auxiliary feed rollers.

13. The combination with a typewriter, of an envelop supporting frame carried by the carriage of the typewriter, main rotary feed rollers carried by a swinging frame and driven by the platen of the typewriter, auxiliary feed rollers carried by an auxiliary swinging frame and driven by the main feed rollers, and idle rollers carried by the lower face of the envelop supporting frame and working in conjunction with the main and auxiliary feed rollers, and laterally adjustable side guides carried by the envelop frame for guiding the envelops to the platen of the typewriter in the proper position.

14. In an attachment for feeding envelops to a typewriter, the combination of an envelop holding frame attached to the carriage of the typewriter, a rotary feeding roller for feeding the envelops to the platen of the typewriter, a rubber tire having corrugations in its periphery around the periphery of the feed roller, and a plate mounted on a carriage driven by a spring driven gear meshing with a rack carried by the main envelop holding frame.

15. In an attachment for feeding envelops to a typewriter, the combination of an envelop holding frame attached to the carriage of the typewriter, rotary feeding rollers for feeding the envelops to the platen of the typewriter, a rubber tire having corrugations in its periphery around the peripheries of the feed rollers, and a plate mounted on a carriage driven by a spring driven gear meshing with a rack carried by the main envelop holding frame, and laterally adjustable side guides carried by said frame for accommodating envelops of different sizes and guiding them in the proper position to the typewriter platen.

16. In an attachment for feeding envelops and other sheets to a typewriter, the combination of an envelop carrying frame, a transverse rotatable shaft carried by the frame, a swinging frame loosely pivoted on the shaft, a feed roller mounted in the free end of the swinging frame and rotated by gearing on the shaft, and laterally adjustable side guides carried by the envelop carrying frame for accommodating envelops of different sizes and guiding them in the proper position to the typewriter platen.

17. The combination with a typewriter,

of an envelop supporting frame, a transverse rotatable shaft carried by the frame, a swinging frame loosely pivoted on the shaft and swinging toward the discharging end of the envelop frame, a spool shaped roller having a corrugated rubber periphery rotatably mounted in the free end of the swinging frame, idle rollers carried by the under face of the envelop supporting frame and extending through orifices in the said frame beneath the paper feeding roller and adapted to produce a moving support on which to rest the paper feeding roller and prevent the corrugated rubber periphery of the feeding roller from impinging against the envelops being propelled under said feed roller while same is being rotated in the proper direction for feeding the envelops from the frame, and laterally adjustable side guides carried by the envelop frame for accommodating envelops of different sizes and guiding them in the proper position to the typewriter platen.

18. In an attachment for feeding envelops and other sheets of similar stiffness to typewriting machines, the combination of an envelop supporting frame carried by the typewriter carriage, of a mechanism for feeding the envelops or cards from the frame to the typewriter, an inclined plate mounted on a driven carriage for supporting the envelops in an inclined position and feeding them to the feeding mechanism, and a spring driven gear carried by the driven carriage meshing with a rack carried by the main supporting frame for driving the said driven carriage, and adjustable side guides carried by the main envelop supporting frame for accommodating envelops or cards of different sizes and guiding them in the proper position to the platen of the typewriter.

19. The combination with a typewriter, of an envelop supporting frame carried by the carriage of the typewriter, a pivoted freely swinging envelop feeding mechanism swinging toward the discharging end of the frame, and means whereby said mechanism may be operated.

20. The combination with a typewriter, of an envelop supporting frame, a freely swinging envelop feeding mechanism carried by the frame for feeding the envelops toward the platen of the typewriter, and an auxiliary envelop feeding mechanism carried by the main swinging mechanism for forwarding the envelops therefrom to the platen of the typewriter.

21. The combination with a typewriter, of an envelop supporting frame carried thereby, a rotary shaft mounted in the frame and driven by the platen of the typewriter, a swinging frame mounted upon the shaft pivoted to swing freely, feed rollers mounted in the said swinging frame and driven by the shaft, an auxiliary swinging frame carried by the outer end of the main swinging frame, feed rollers carried by the outer end of the auxiliary frame, means coupled with the main feed rollers for rotating the auxiliary feed rollers, means carried by the frame first above mentioned for supporting the envelops in an inclined position and forwarding them to the main feeding rollers, and adjustable guides carried by the frame for guiding the envelops to the typewriter, and means for preventing more than a single envelop from feeding at a time.

22. In an attachment for feeding envelops to typewriters the combination of an envelop supporting frame, a rotatable transverse shaft carried by the frame, means for rotating the shaft, a swinging member pivoted on the shaft, a feed roller rotatably mounted in the free end of the swinging member, means for transmitting the motion from the shaft to the feed roller, means for preventing more than a single envelop from feeding at a time, and means for guiding the envelops to the typewriter.

23. In an attachment for feeding envelops to typewriters, the combination of an envelop supporting frame having the rear portion of its bottom bent upwardly at an obtuse angle to the front portion, and having upwardly extending side portions, a transverse rotatable shaft having its bearings in the said side portions, means for rotating the shaft, a swinging member pivoted on the shaft, a feed roller rotatably mounted in the swinging member, the feed roller swung in such position as to bear on the frame at the apex of the angle or juncture of its two converging portions and adapted to pull the envelops by frictional contact around under itself and propel them over the front portion of the frame to the typewriter, means for forwarding the envelops to the feed roller, means for preventing more than a single envelop from feeding at a time, and means for guiding the envelops to the typewriter.

24. In an attachment for feeding envelops or cards to typewriting machines, the combination of an envelop carrying frame, a rotatable shaft carried by the frame, means for rotating the shaft, a swinging member pivoted on the shaft and swinging toward the discharging end of the attachment, a feed roller carried by the free end of the swinging member and rotated by the shaft on which the swinging member is pivoted, means for preventing the feed roller from impinging against the frame, means for forwarding the envelops to the feed roller, means for preventing more than a single envelop from feeding at a time, and means for guiding the envelops to the discharging end of the attachment.

25. In an attachment for feeding envelops

to a typewriter, the combination of an envelop supporting frame, a transverse rotatable shaft carried by the frame, means for rotating the shaft, swinging feeding mechanism pivoted on the said shaft and rotated by same and adapted to rest loosely upon, but in constant engagement with, the envelops in the frame, means for preventing the feeding mechanism from impinging against the frame beneath, means for advancing the envelops in the proper position to the feeding mechanism, means for preventing more than a single envelop from feeding at a time, and means for guiding the envelops to the discharging end of the attachment.

26. In an attachment for feeding envelops to a typewriter, the combination of an envelop supporting frame, an envelop feeding mechanism carried by the frame, means for forwarding the envelops to the feeding mechanism, means for operating the feeding mechanism, and automatically operated pivoted weighted stops for preventing more than a single envelop from being fed at a time by the feeding mechanism.

27. The combination with a typewriter, of an envelop supporting frame having a substantially horizontal front portion and an inclined rear envelop-carrying portion at an obtuse angle to said front portion, and means located at the angle of said front and rear portions for feeding the envelops from the frame to the typewriter, and means for operating said feeding mechanism.

28. The combination with a typewriter, of an envelop supporting frame having a substantially horizontal front portion and an inclined rear envelop-carrying portion at an obtuse angle to said front portion, means located at the angle of said front and rear portions adapted to feed envelops from the frame to the typewriter, means for operating the feeding mechanism, and means for preventing more than a single envelop feeding at a time, and means for guiding the envelops to the platen of the typewriter.

29. The combination with a typewriter, of an envelop-supporting frame, a longitudinally traveling spring-driven carriage for feeding envelops forward mounted on said frame, a rotary feeding mechanism adapted to feed envelops from said frame to the platen of the typewriter, and laterally adjustable guide plates carried by said frame adapted to guide the envelops to the typewriter.

30. The combination with a typewriter, of an envelop supporting frame, a longitudinally traveling spring driven carriage for feeding envelops forward mounted on said frame, an adjustably inclined plate mounted on said carriage, means for feeding envelops from said frame to the platen of the typewriter, and laterally adjustable guide plates carried by said frame adapted to guide the envelops to the typewriter.

In testimony whereof, we have hereunto signed our names to this specification in the presence of two subscribing witnesses.

WILLIAM H. McARDLE.
ROBERT B. McARDLE.

Witnesses:
ALBERT U. HEAL,
WM. V. FISHER.