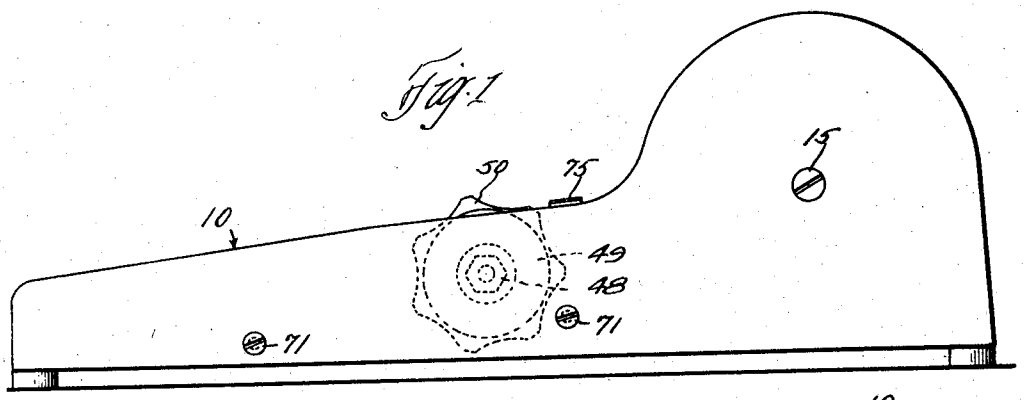
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HANDWRITING MACHINE

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Fig. 1



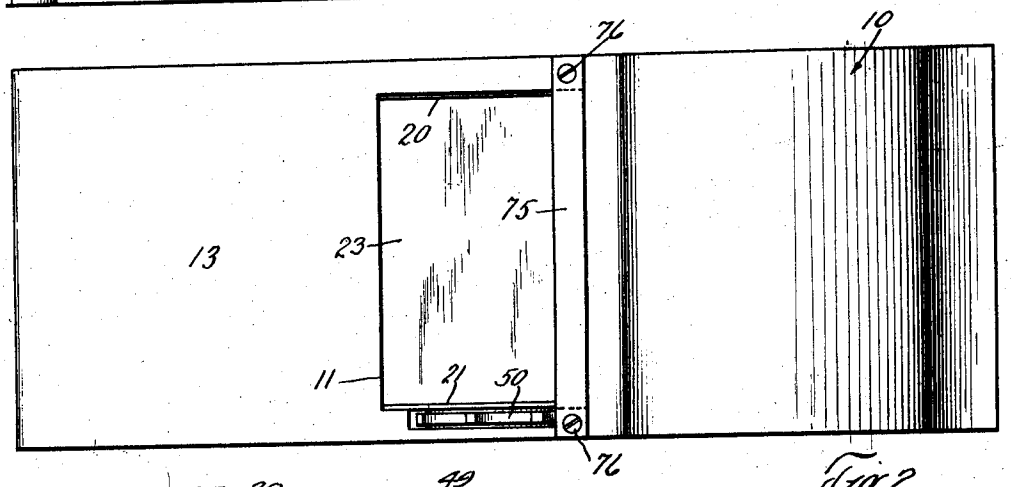


Fig. 2

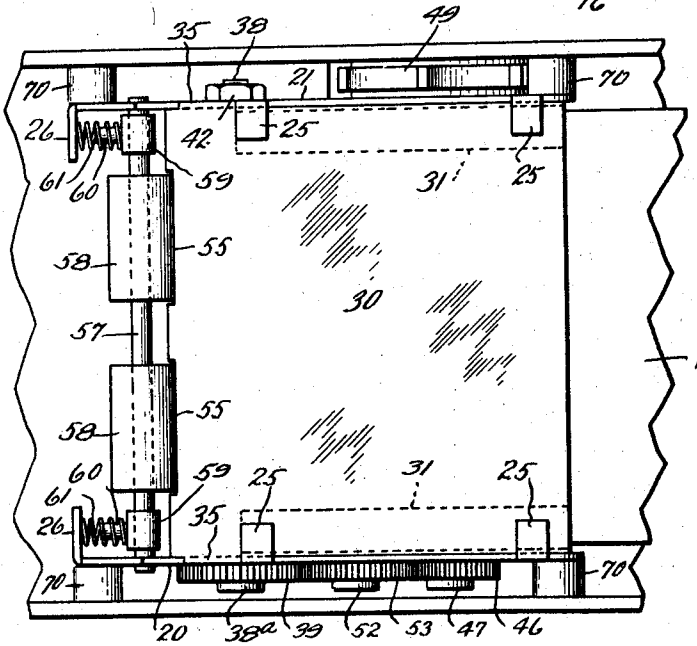


Fig. 3

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HANDWRITING MACHINE

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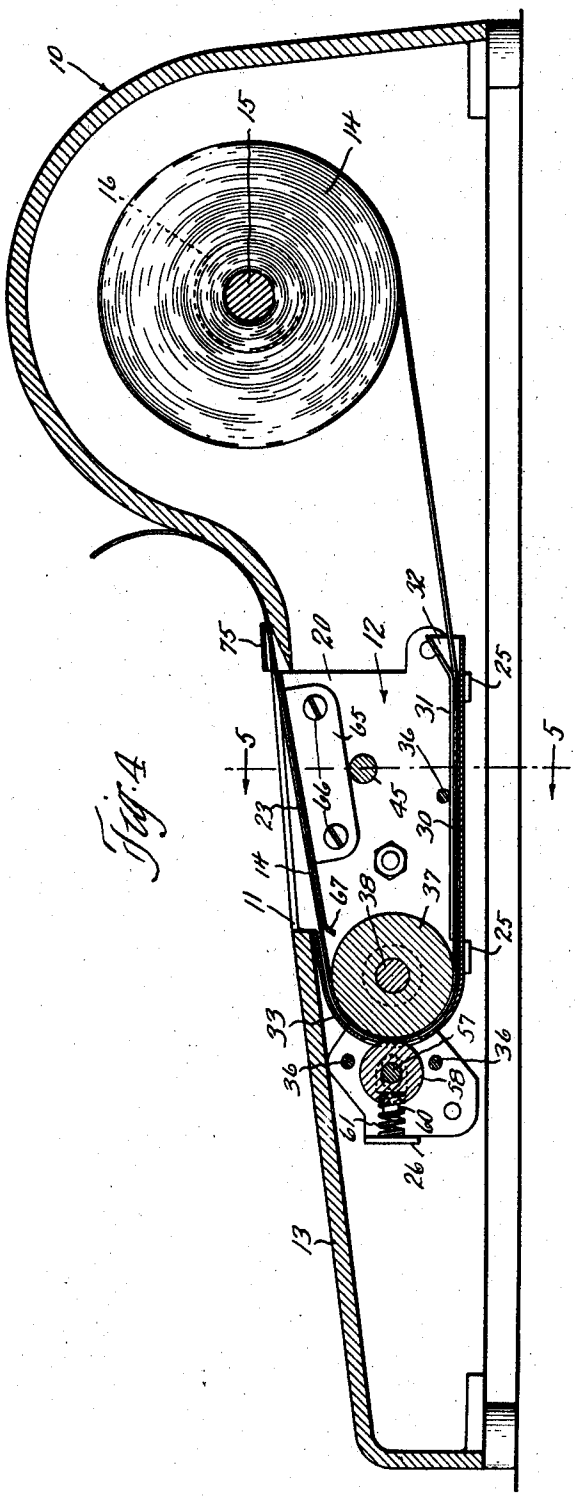


Fig. 4

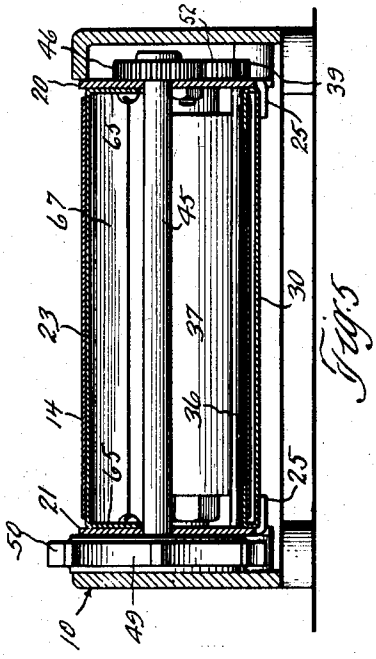


Fig. 5

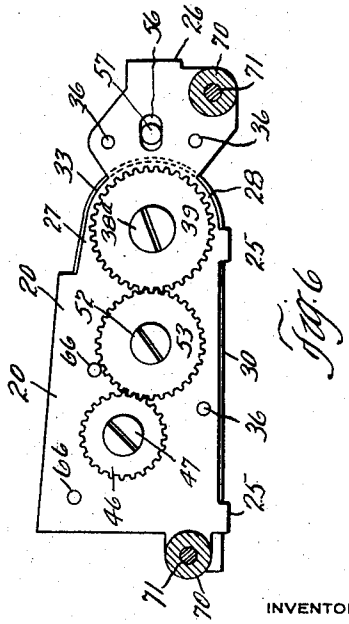


Fig. 6

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HANDWRITING MACHINE

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Fig. 1

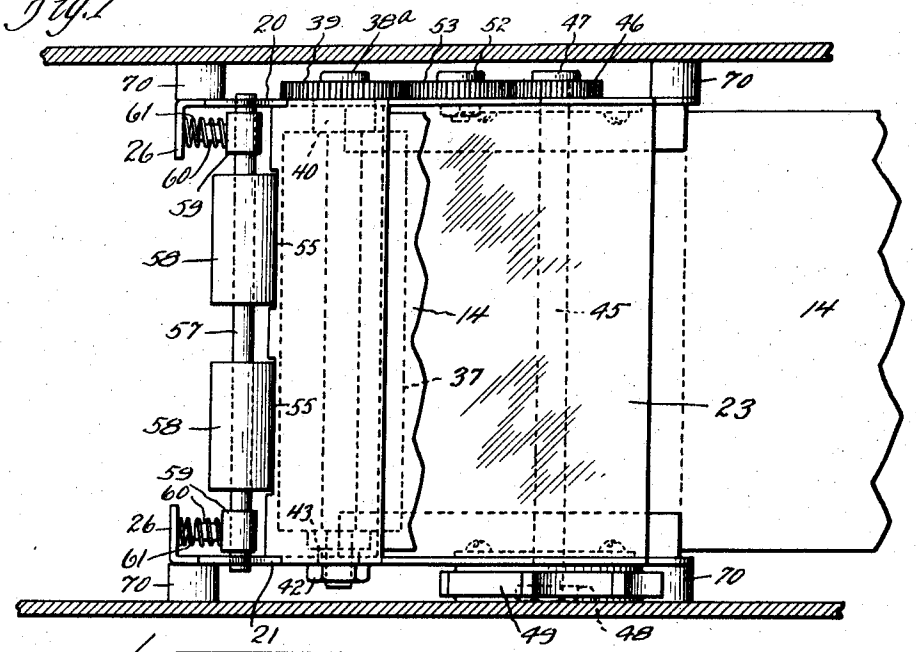
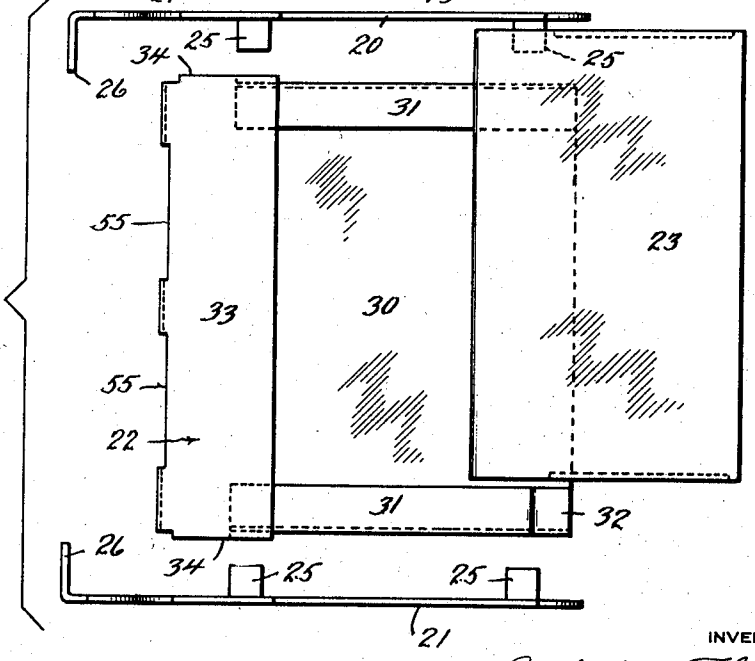


Fig. 8



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Patented July 7, 1931 1,813,237

UNITED STATES PATENT OFFICE

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HANDWRITING MACHINE

Application filed April 5, 1929. Serial No. 352,627.

This invention relates to hand writing machines of the type where a strip of paper is fed across a platen on which memoranda may be made by hand and the strip advanced by regulated steps and torn from the strip for filing or other purposes as desired.

The object of my invention is to provide a handwriting machine the platen rollers and advancing mechanism of which are constructed as a unit and may be secured in any suitable casing, or in any type of showcase, table or desk where desired through which to feed a continuous strip of paper from a roll or ziz-zag stack.

A further object is to provide a device for the purpose set forth which is comparatively simple in construction, readily assembled and positive in operation an in which the roll of paper is hidden from view and only a short strip is exposed as it passes over the platen, and in which the paper may be advanced by regulated steps by a wheel or other means conveniently arranged under the heel of the hand as the memorandum is made.

With these and such other objects in view as will be apparent as the description proceeds, the invention resides in all the novel features of construction and combination of parts herein disclosed and particularly pointed out in the appended claims.

In the drawings Fig. 1 is a side elevation of the complete handwriting machine in its casing; Fig. 2 is a top plan view of the same; Fig. 3 is a bottom plan view of the paper advancing unit as mounted in the casing which is shown with the ends broken away; Fig. 4 is a vertical sectional view longitudinally through the casing and paper advancing unit; Fig. 5 is a vertical section through the device on the line 5—5 of Fig. 4; Fig. 6 is a side elevation of the paper advancing unit; Fig. 7 is a top plan view of the paper advancing unit, the central part of the casing being shown in section; and Fig. 8 is a top view of the sides, top and bottom members of the paper advancing unit disassembled.

In describing my invention, reference is made to the accompanying drawings in which like reference numerals are used to designate like parts in the several views.

In the embodiment of my invention illustrated in the drawings, 10 designates a one-piece casing molded or stamped from any suitable material, the bottom of which is open. In the top is a suitable opening 11 under which the platen and paper advancing unit designated generally by the reference numeral 12 is mounted. The casing is made longer than necessary to house the unit and the opening 11 is a sufficient distance from the one end so that a rest for the arm is provided at 13. The opposite end of the casing is made large enough to accommodate a roll of paper 14 which is rotatably held on a rod 15 which extends through the one side wall of the casing and into a boss 16 (indicated in dotted lines in Fig. 4) on the opposite side wall.

The paper advancing mechanism and platen are constructed as a self-contained and separable unit 12 which may be mounted in any casing desired.

The frame of the unit 12 comprises two side plates 20 and 21, a bottom plate 22 which includes a semi-cylindrical end member and a top plate or platen 23 all shown in dissassembled relation in Fig. 8.

The side plates 20 and 21 are each made with inwardly bent lugs 25 on their bottom edges and a laterally directed portion 26 bent in from one end. For convenience in describing the arrangement of parts the end of the side members provided with the inwardly turned portions 26 will be termed the roller end of the frame and the opposite end will be called the platen end. The top and bottom edges of the side members 20 and 21 near the roller end are provided with arcuate cut-out portions 27 and 28 (Fig. 6).

The bottom plate 22 comprises a flat bottom portion 30 with its edges 31 folded inwardly parallel with but spaced slightly from the body portion 30 to provide guides for the paper. The outer ends of the flanges 31 are spread somewhat as at 32 to facilitate the threading of the paper into the guides and to prevent catching of the

paper as it is drawn therethrough. The opposite or inner end 33 of the bottom plate 22 is bent into a semi-cylindrical form to conform to the arcuate portions 27 and 28 of the side members, and is provided at each side with short extensions 34 and 35 which fit into the cut-out portions 27 and 28 respectively. The bottom portions 30 of the member 22 rests on the lugs 21 of and is positioned between the side members and with the projections 34 and 35 of the curved end 33 engaged in the arcuate cut-out portions 27 and 28, the said members 20 and 21 are clamped tightly to the member 22 by tie rods 36 which extend froom one side member to the other.

Positioned in the semi-spherical end member 33 is a roller 37 which is spaced therefrom far enough to permit a sheet of paper to pass therebetween. The roller 37 is secured non-rotatably on an axle member 38 which in turn is journaled in the side plates 20 and 21. Rigidly secured to one end of the axle member 38 by the screw 38ª on the outside of the plate 20 is a gear wheel 39 having a flange 40 which extends through the plate 20 and forms the journal for that end of the axle. The roller 37 is clamped tightly against the flange 40 by a nut 41 at the opposite end of the axle. To prevent end play of the axle in the frame, a flanged nut 42 is threaded onto the axle from the outside of the plate 21, the flange 43 tightly abutting the nut 42 serving to lock the same in place and also providing a smooth journal where it passes through the plate 21 in which it rotates with the axle 38.

Journaled in the side plates 20 and 21 near the opposite end of the unit 12 is a second axle 45 which has a gear wheel 46 secured non-rotatably thereto outside the plate 20 by the screw 47. Secured non-rotatably to the other end of the axle 45 by a nut 48 is a notched wheel 49 of such a size that the projections 50 thereon extend slightly above the top edge of the side plate 21 when the wheel is rotated.

Secured for rotation on the side plate 20 by the bolt 52 and intermeshing with the gear wheels 39 and 46 is an idler gear wheel 53.

The semi-cylindrical end member 33 is provided with two elongated openings 55 extending longitudinally thereof and disposed between the line of the inwardly projecting portions 26 of the side members and the axis of the roller 37. Between the openings for the axle 38 and the inwardly projecting portions 26 each side plate is provided with a short slot 56 in which an axle member 57 which extends between the side plates has some movement toward and from the roller 37. On this axle 57 are two small rollers 58 arranged so their outer peripheries extend through the openings 55 in the member 33 and contact with the roller 37 or with the paper when it is threaded over the roll 37. Secured to each end of the axle 57 immediately inside of the side plates 20 and 21 are collars 59 each having a radially projecting lug 60. Compression springs 61 engage over the lugs 60 and extend between the inwardly projecting members 26 of the side plates and the collars 59 on the axle 57 for yieldingly pressing the rollers 58 toward the feed roll 37 to hold the paper thereagainst.

The platen 23 is provided with attaching portions 65 bent laterally from the side edges thereof by which the same is secured to the side plates 20 and 21 by screws 66. The end 67 of the platen near the roller 37 is bent down slightly and extends beneath the end of the member 33 to facilitate threading of the paper therebetween.

The unit 12 when assembled is positioned in the casing 10 with the platen 23 directly under the opening 11 and the operating wheel 49 extending slightly above the top surface of the casing. Spacing blocks 70 are interposed between the sides of the unit 12 and the casing, and screws 71 which pass through the sides of the casing 10, spacing blocks 70 and screw into the side plates 20 and 21 securely holding the unit in place.

Across the casing 10 at the top edge of the platen 23 a cutter bar 75 is secured by screws 76.

In operating the device, the paper 14 from the roll is threaded through under the guides 31 on top of the plate 30 and about the feed roll 37, between it and the semi-cylindrical end 33 which guides the paper thereabout, and from the feed roll over the platen 23 and under the cutter bar 75. The rollers 58 hold the paper 14 tightly against the roller 37 so there will be no slipping of the paper when the feed roller 37 is rotated.

After writing on the paper 14 which is presented in the opening 11 over the platen 23 the wheel 49 is rotated by a forward push with the heel of the hand under which it is conveniently located, and by means of the gears 39, 53 and 46, the feed roller 37 is rotated, and a fresh strip of paper is exposed. The paper written upon may be detached by a quick pull across the cutter bar 75 under which it passes.

The ratio of the gears may be made so that with each throw of the exposed projection 50 of the wheel 49, the paper may be fed over the platen 23 in larger or smaller amounts, depending on the particular use to which the device is to be put.

Having thus described my invention, what I claim is:—

1. In a handwriting machine, a separable paper advancing unit, a frame including side members, a bottom member having inturned side portions constituting a guide for the paper, and a semi-cylindrical end mem-

ber secured between said side members, a feed roller positioned in said semi-cylindrical end member and journaled in the side members, the semi-cylindrical member having openings, spring pressed rollers secured to the end of said side members extending through said semi-cylindrical member for holding the paper against said feed roll, a platen secured at the top of said members extending from said feed roller, and means pivoted to said frame for engaging said feed roller for rotating the same.

2. In a handwriting machine, a paper advancing unit, a frame, a feed roller journaled in said frame, a paper guide extending from the bottom of said roller to one end of said frame, a semi-cylindrical guide extending from said first guide about said roller and provided with openings, rollers secured in said frame and extending through said openings for holding the paper to said feed roller, springs interposed between said rollers and the frame for resiliently urging said rollers against the feed roll or interposed paper, a gear wheel secured to said feed roll, and means on said frame cooperating with said gear wheel for turning said roller.

3. A handwriting machine comprising a casing, means at one end of the casing for supporting a roll of paper, a paper advancing unit secured in said casing, said unit including a guide for said paper, a feed roller at one end of said guide, a semi-cylindrical guide extending from said first guide about said roller, spring pressed means for holding the paper to said feed roller, a platen extending from said feed roller over which paper is to be fed, said casing having an opening over said platen and a bar at the end of the platen opposite the feed roller under which paper is to be threaded, said feed roller having a gear wheel fixed thereto, and means secured in said casing engaging said gear wheel for rotating said feed roll, said means having a part projecting through the top of said casing adjacent said opening adapted to be moved by the hand when in writing position over said opening, for rotating said feed roller and advancing the paper over the platen.

4. In a handwriting machine, a separable paper advancing unit, a frame including side members, and a semi-cylindrical end member secured between said side members, a feed roller positioned in said semi-cylindrical end member and journaled in the side members, the semi-cylindrical member having openings, spring pressed rollers secured to the end of said side members extending through said semi-cylindrical member for holding the paper against said feed roll, a platen secured at the top of said members extending from said feed roller, and means pivoted to said frame for engaging said feed roller for rotating the same.

5. In a handwriting machine, a separable paper advancing unit, a frame including side members, a bottom member having internal side portions constituting a guide for the paper, a feed roller journaled in the side members, spring-pressed rollers carried by said side members for holding the paper against the feed roll, a platen secured at the top of said members extending from said feed roller, and means for rotating said feed roller.

In testimony whereof, I hereunto affix my signature.

ROBERT A. FLUM.