Aug. 11, 1931. G. DE PAMPHILIS 1,818,046

PAPER PERFORATING DEVICE FOR TYPEWRITERS

Filed March 28, 1929

Fig. 1.

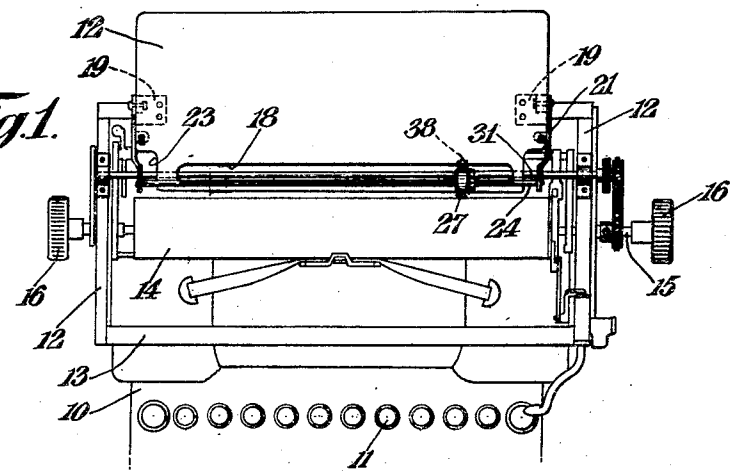


Fig. 2.

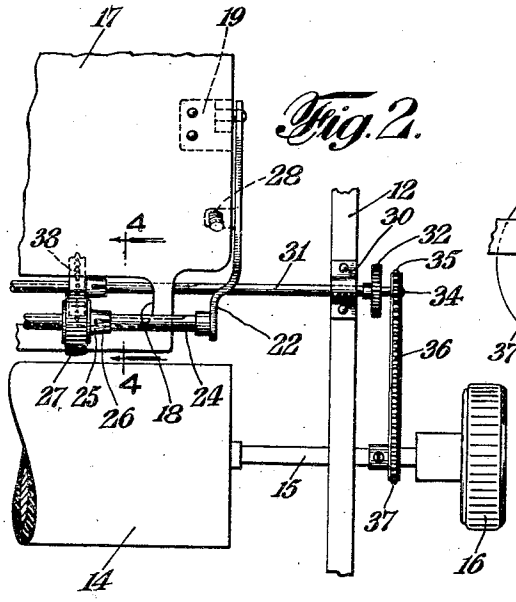


Fig. 3.

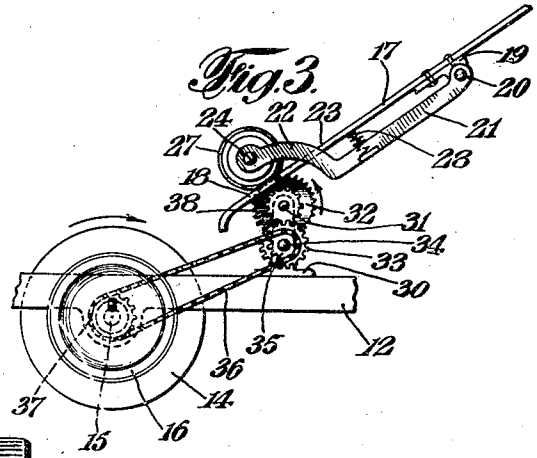


Fig. 4.

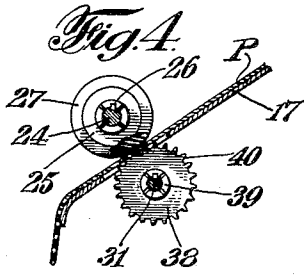
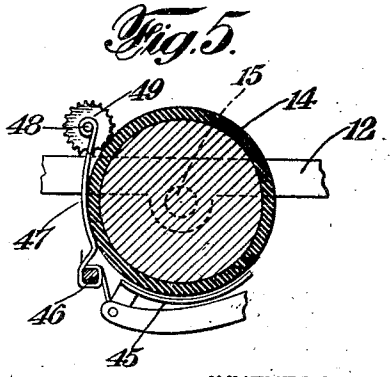


Fig. 5.



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UNITED STATES PATENT OFFICE

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PAPER PERFORATING DEVICE FOR TYPEWRITERS

Application filed March 28, 1929. Serial No. 350,506.

This invention relates to typewriters with special reference to billing and like machines in which it is desirable to separate one portion of the typed paper vertically from another.

One of the objects of the invention is to provide means for producing a continuous row of vertical perforations in the paper, either simultaneously with the typing, prior or subsequent thereto, as may be preferred, thereby facilitating severance of the paper sheet.

A further feature is in the provision of means whereby one or more perforating devices are driven conjunctively with the cylindrical platen of the typewriter, the perforating means being adjustable to any point along its length.

Another purpose is to produce a perforating device that is removably engageable with any standard form of typewriting machine.

These important purposes are accomplished by the novel construction and arrangement of parts hereinafter described and illustrated in the accompanying drawings, forming a material part of this disclosure, and in which:—

Figure 1 is a partial top plan view of a typewriting machine, showing an application of the invention.

Figure 2 is an enlarged fragmentary view showing the same in greater detail.

Figure 3 is an end elevational view of Figure 2.

Figure 4 is a partial transverse sectional view taken on line 4—4 of Figure 2.

Figure 5 is a transverse sectional view showing a modified form of the perforating means.

The ordinary typewriter, shown best in Figure 1, is composed of a body generally designated by the numeral 10, having a keyboard 11 at the front and provided at its raised rear portion with guide-ways on which is slidably mounted a work carrying frame having end members 12 and a scale bar 13 at the front.

A cylindrical platen 14 is fixed on a shaft 15, journalled in the frame ends 12, provided with twirling knobs 16 by which it is rotated, the paper being held against the platen by spring actuated fingers, all these parts being of well known construction.

Rearwardly and above the platen is an inclined paper table 17 which, in the present disclosure, has a longitudinal slot 18 near its lower edge, this table being supported by the rear element of the platen carrying frame.

Fixed on the under side of the table, near its ends, are brackets 19 carrying pivots 20 by which are attached lever arms 21 having raised free ends 22 to extend upwardly through recesses 23 in the lower corners of the table to carry a longitudinally grooved rod 24 extending between the levers, above the surface of the table.

Slidably mounted on the rod 24 are one or more sleeves 25 having spring hubs 26 to resiliently grip the rod and engage in its groove to transmit rotary motion, these sleeves having mounted on them rolls 27 of yieldable material, as rubber, the rolls being pressed downwardly towards the slot 18 by compression springs 28 disposed between the levers 21 and table 17.

Fixed on the platen frame ends 12 are brackets 30 in which is mounted a splined shaft 31 having at one end a spur pinion 32 meshed with a mating pinion 33 rotatable on a stud 34 set in the bracket 30.

Secured alongside the pinion 33, to rotate on the stud, is a sprocket 35 around which is trained a chain 36 engaged with another sprocket 37 held to the platen shaft 15 in a manner to permit release when the use of the device is not desired.

It is to be noted that the shaft 31 is positioned below the paper table 17, parallel with the rod 24. Slidably engaged on the shaft 31 is a wheel 38 having a spring hub 39 to grip the shaft and means engaging the spline in the shaft to prevent relative rotation, the periphery of the wheel being provided with teeth 40 to cause perforations in the paper P as it is passed between the wheel and roll 27, as best seen in Figure 4.

It will now be understood that a sheet of paper passed over the table 17, between the roll and perforator, will be partially detached and readily severed.

This is accomplished by turning the knob

16, and hence the platen, and may be done during the typing, or after as preferred.

When not required for use, the table may be removed, together with the attached parts, and a plain table of the usual type substituted; temporarily, by releasing the securing means on the sprocket 37, the device is rendered inoperative.

In the modification shown in Figure 5 the usual paper support 45 is shown before the platen 14, and also a paper finger rail 46 carrying a resilient arm 47 having at its free end a forked coil 48 in which is rotatably mounted a perforating roll 49.

The arm, together with the roll, may be moved lengthwise of the rail 46, and obviously more than one may be mounted. Should the arm have insufficient tension to press the roll operatively against the platen disposed over the platen, additional pressure may be applied by hand, while the other hand turns the knob 16.

From the foregoing it will be seen that an effective device for the purposes set forth has been described but it is to be understood that as changes of construction could be made within the scope of the invention, it is intended that all matter contained in the foregoing description or shown in the accompanying drawings shall be interpreted as illustrative and not in a limiting sense.

Having thus described the invention, what is claimed as new and desired to secure by Letters Patent, is:—

1. The combination with a typewriting machine of the cylindrical platen type having a manually operable twirling knob and paper table, of one or more perforating rolls, and gear driven means actuated by rotation of said knob to rotate said rolls thereby to perforate paper passed over said table adjacent the platen.

2. The combination with a typewriting machine of the cylindrical platen type and provided with a twirling knob and paper table, of one or more perforating rolls having axes rotatable in a plane parallel to the axis of the platen, said rolls being adjustable lengthwise of the platen, and gear driven means dependent upon rotation of the platen knob to cause rotation of said rolls.

3. The combination with a typewriting machine of the cylindrical platen type, of one or more perforating rolls adjustably mounted on the carriage of said machine, cushion rolls co-operative therewith and on opposite sides of a paper sheet to be perforated longitudinally, means for guiding the paper between said rolls, and a chain and gear drive actuated by the platen spindle to rotate said perforating rolls simultaneously with rotation of the platen.

4. The combination with a typewriting machine of the cylindrical platen type, of one or more perforating rolls adjustably mounted on the carriage of said machine, cushion rolls co-operative therewith and on opposite sides of a paper sheet to be perforated vertically, a paper table having a longitudinal slot through which the teeth of the perforating rolls extend, means to normally retain said rolls in an adjusted position, and means positively driven by the platen to co-incidently cause rotation of said rolls.

5. The combination with a typewriting machine of the cylindrical platen type, of one or more perforating rolls adjustably mounted on the carriage, cushion rolls co-operative therewith and on opposite sides of a paper sheet to be perforated vertically, a paper table having a longitudinal slot through which the teeth of the perforating rolls extend, resilient means for pressing said cushion rolls against the perforating rolls, and geared means to transmit rotary motion to the perforating rolls from the shaft of said platen.

6. The combination with a typewriting machine having a slidable frame, a shaft journalled in the frame ends, said shaft having mounted on it a platen and being provided with twirling knobs, a paper table having a slot, levers pivoted to the ends of said table, a rod journalled in the ends of said levers, a yielding roll slidable on said rod to travel over the mentioned slot, a shaft journalled in bearings on the frame ends, a perforating roll slidable on said shaft co-operative with the yielding roll, and geared connections between said platen shaft and the perforating roll shaft.

In testimony whereof I affix my signature.

GENNARO DE PAMPHILIS.