(No Model.)

M. G. MERRITT.

PAPER HOLDING DEVICE FOR TYPE WRITING MACHINES.

No. 442,633. Patented Dec. 16, 1890.

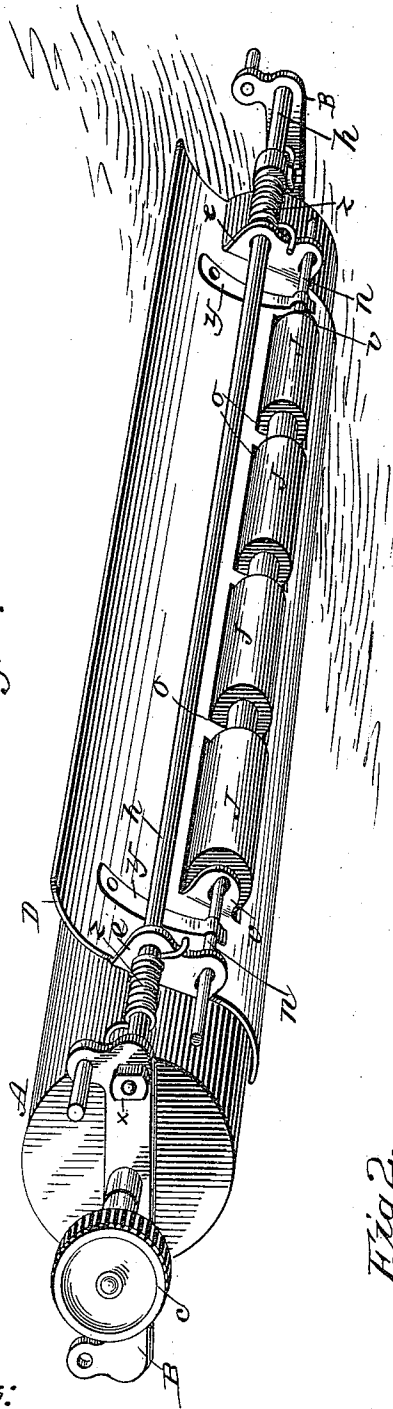


Fig. 1.

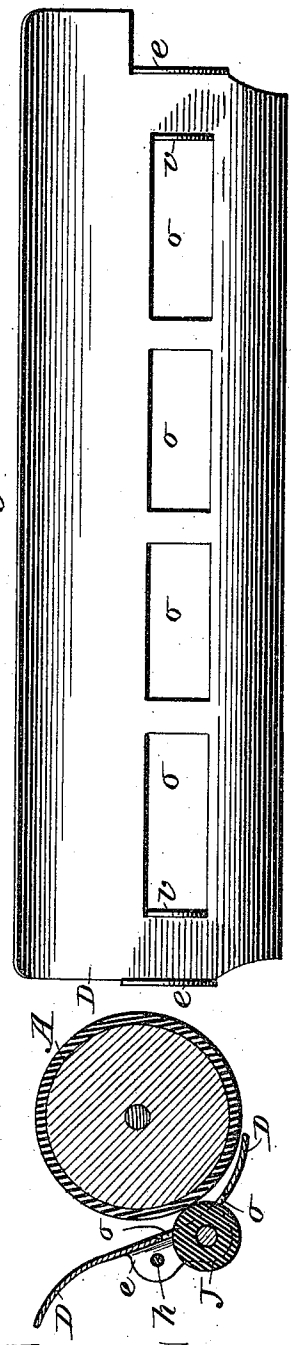


Fig. 3.

Fig. 2.

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UNITED STATES PATENT OFFICE.

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PAPER-HOLDING DEVICE FOR TYPE-WRITING MACHINES.

SPECIFICATION forming part of Letters Patent No. 442,633, dated December 16, 1890.

Application filed August 4, 1890. Serial No. 360,905. (No model.)

To all whom it may concern:

Be it known that I, MORTIMER G. MERRITT, a citizen of the United States, residing at Springfield, in the county of Hampden and State of Massachusetts, have invented new and useful Improvements in Paper-Holding Devices for Type-Writing Machines, of which the following is a specification.

This invention relates to type-writing machines, the object being to provide an improved paper-holder and paper-holding roll to co-operate with the platen of the machine; and the invention consists in the peculiar construction and arrangement of said paper-holder and paper-holding roll in conjunction with said platen, all as hereinafter fully described, and pointed out in the claims.

In the drawings forming part of this specification, Figure 1 is a perspective view of the platen of a type-writing machine and its supporting-frame having applied thereto a paper-holder and a paper-holding roll constructed according to my invention. Fig. 2 is a sectional view of said platen, paper-holder, and paper-holding roll. Fig. 3 is a side elevation of the paper-holder.

In the drawings, A indicates a platen of a type-writing machine of ordinary construction, said platen being hung to rotate in a frame B, rotary motion being given to said platen by grasping the finger-wheel *c*, which is fixed to one end of the platen-shaft.

The herein-described improved paper-holder D is of sheet-metal construction preferably, having a rearwardly-curved form in respect to the upper side of the platen and its lower edge being curved or bent in an opposite direction and extending somewhat under said platen, as shown in Figs. 1 and 2. The said paper-holder D has a rearwardly-extending ear-piece *e* on each end thereof, preferably integral with the paper-holder itself, the preferable manner of making said holder being to form it and said ears *e* wholly from sheet metal, said ears being a part of said sheet and bent rearwardly to the positions shown, and they constitute bearing-points at the rear of the paper-holder for two shafts, as below described.

h is a shaft on which a paper-holder D is hung and supported, whose ends have their bearings in said frame B, said shaft *h* being rigidly secured in said frame by a nut *x* on the end of said shaft and serving to bind the latter to the frame. The said paper-holder is capable of an oscillating or rocking motion on the shaft *h*, its normal position being that shown in Fig. 1, wherein its lower edge is shown as held against the under side of the platen A, and for the purpose of retaining the said paper-holder against the platen two springs *z* are placed on shaft *h* adjoining the ends of the paper-holder, one end of each of said springs being engaged with said shaft and the other ends thereof being engaged with the paper-holder below the line of said shaft, said springs thus acting to swing the lower edge of the paper-holder against the platen to the position aforesaid.

The paper-holding roller operating in conjunction with the platen of a type-writing machine, as heretofore often arranged, is ordinarily hung on the platen-frame in swinging bearings, and is held against the platen by rubber bands in a well-known manner, and the paper holder or support is mounted on the platen-frame back of the paper-holding roller; but in the construction herein shown said roller is hung on said paper-holder D, and the latter is hung closely at the side of the platen, as below described.

That portion of the paper-holder D below the line of its supporting-shaft *h* has a series of openings *o* formed therethrough, and near each end of said paper-holder and at the extremity of the openings *o* nearest the ends of the holder are formed two shaft-bearing arms *v*, preferably integral with the paper-holder D. Perforations of an oblong form, as shown, are made in said arms *v* and in the lower part of said lips *e* to receive the ends of the paper-roller shaft *n*, whereby the said roller is permitted to have a movement toward and from the platen A independent of the holder D for a purpose below set forth, and the roller is by a yielding spring-pressure held against the platen or the paper thereon. The paper-roller consists of several cylindrical sections J, preferably rubber-faced, suitably mounted and fixed, as said shaft *n*. Said roll-sections J are arranged opposite and adapted to protrude through the openings *o* in the paper-holder D

and bear against the surface of the platen A somewhat below its axial line, as shown, the roll being retained normally in that position partly by the action of the springs *z* on the shaft *h*, by which action the lower edge of the paper-holder D and the paper-holding roller are moved coincidently against the platen by the action of the springs *y*, secured by one end to the holder D and having their free ends bearing on the roller-shaft *n*.

In practice the springs *z*, which swing the lower edge of the holder D, are preferably made stronger than the springs *y*, in order that the roll may yield rearwardly more or less when the holder bears against the paper in order to accommodate the action of the holder and roll to abnormal thicknesses of paper and carbon sheets in manifold type-writing. Therefore the lower edge of the holder D and the surfaces of the roll-sections J are caused (see Fig. 2) to press against and hold a sheet of paper against the platen and in such contact therewith that when the platen is turned to space the lines of printing in the usual way the paper is carried along therewith as is required.

The operation of the within-described improvements on a type-writing machine to hold a sheet of paper upon which type-writing is to be performed, and in moving along said paper to space the lines of the writing, is as follows: The position of the platen on said machine, as is well known, is directly in front of the writer, and to place the sheet of paper in the machine upon which to write or print, the operator grasps the upper edge of the paper-holder D, and drawing it forward gently causes said holder to rock (against the force of springs *z*) more or less on its shaft *h* and swing the lower edge of said holder and the paper-holding roll away from the surface of the platen. One end of a sheet of paper is then entered between the platen and said holder and roll, and the operator lets go of the holder and permits it and the roll to swing against the paper, thereby pressing it slightly against the platen, and then by applying the fingers to the finger-wheel *c* the platen is turned, and the paper is drawn under the latter to the requisite position to be written or printed upon, the roller consisting of the sections J rotating when the paper is so moved and automatically adjusting itself relative to the paper and the paper-holder.

The above-described improvements wholly obviate the inconveniences pertaining to the above-described old style of paper-holder and paper-holding roller in respect to the frequent breakage of said rubber bands and their derangement from varying tension, inasmuch as the metallic springs *z* and *y*, which govern the pressure of said roller against the paper, are constant in their action and not likely to derangement. Furthermore, the construction of the type-writing-machine parts which form the subject for this application are, from an economical point of view, considerably less costly than those heretofore employed for the same purpose.

What I claim as my invention is—

1. The combination, with the platen of a type-writing machine and its supporting-frame, of a shaft engaged in said frame and extending opposite the rear side of the platen, a paper-holder having one or more openings to permit the extension therethrough of a portion of a paper-holding roll, which paper-holder is hung on said shaft and free to rock thereon, a paper-holding roll having its shaft-bearings on said holder and its surface projecting through said openings in the holder, and one or more springs engaging with said first-named shaft and with said holder, whereby the lower edge of the latter and the surface of said roll are moved against said platen, substantially as set forth.

2. The combination, with the platen of a type-writing machine and its supporting-frame, of a shaft *h*, engaging in said frame and extending opposite the rear side of said platen, the rocking paper-holder D, having integral bearings thereon for engagement with said shaft and to support the shaft of a paper-holding roll, the paper-holding roll consisting of the roll-sections J, projecting through perforations in said holder, having its shaft engaging in said bearings on the paper-holder, and one or more springs engaging with said shaft *h* and with the paper-holder D to swing one edge thereof and said roll against said platen, substantially as set forth.

3. The combination, with the platen of a type-writing machine and its supporting-frame, of a shaft engaged in said frame and extending opposite the rear side of the platen, a paper-holder having one or more openings to permit the extension therethrough of a portion of a paper-holding roll, which paper-holder is hung on said shaft and free to rock thereon, a paper-holding roll having shaft-bearings on said holder in which the shaft of said roll may move toward and from the platen, its surface projecting through said openings in the holder, springs attached to said holder and bearing on said roller-shaft, and one or more springs engaging with said holder, whereby the lower edge of the latter and the surface of said roll are moved against said platen, substantially as set forth.

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