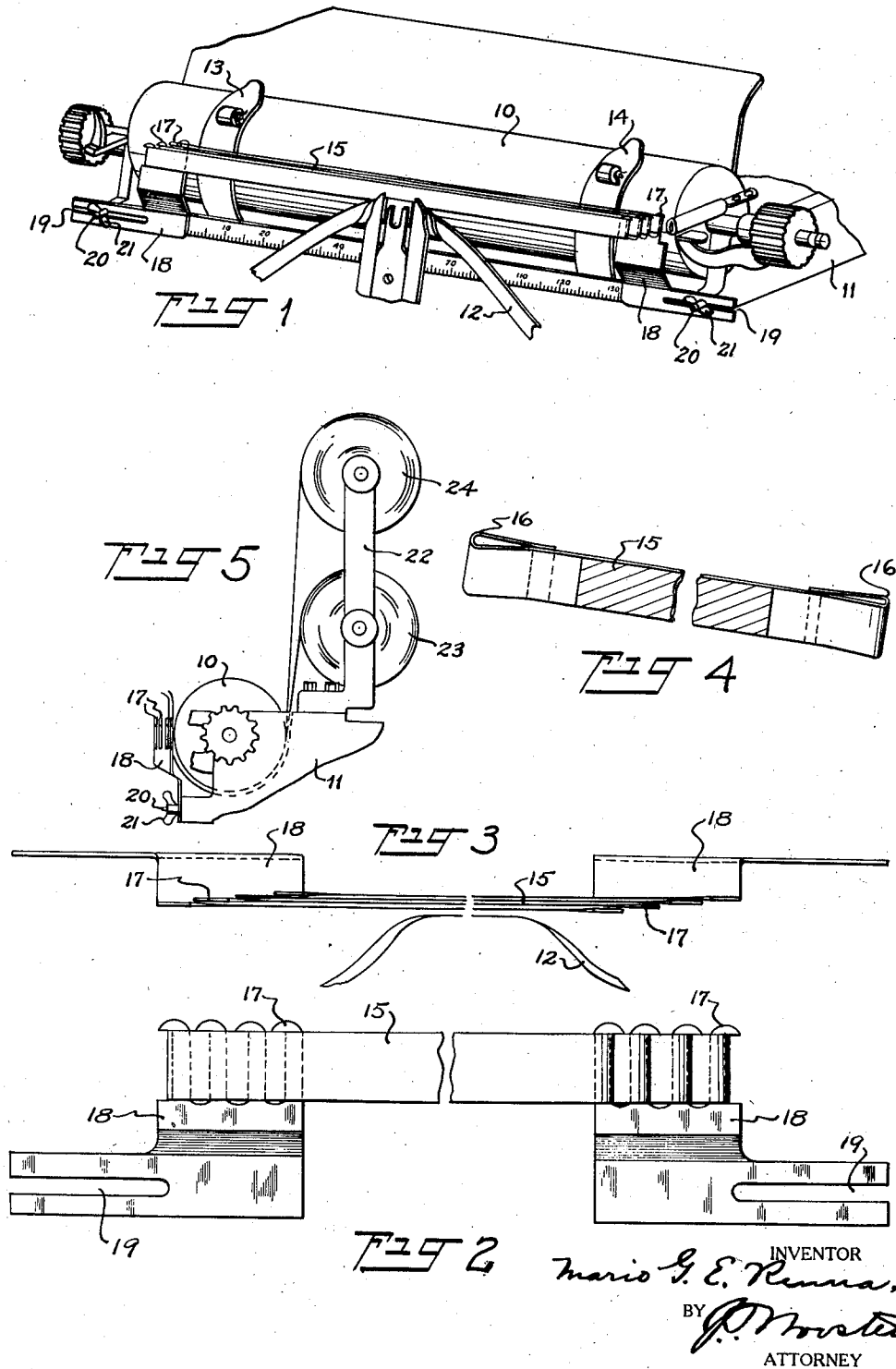


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M. G. E. RENNA
TYPEWRITER ATTACHMENT
Filed Feb. 19, 1924



UNITED STATES PATENT OFFICE.

MARIO G. E. RENNA, OF BROOKLYN, NEW YORK.

TYPEWRITER ATTACHMENT.

Application filed February 19, 1924. Serial No. 693,757.

To all whom it may concern:

Be it known that I, MARIO G. E. RENNA, a citizen of the United States, and resident of Brooklyn, in the county of Kings, city and State of New York, have invented certain new and useful Improvements in Typewriter Attachments, of which the following is a specification.

This invention relates to an attachment for typewriting machines for the production of more than one ribbon copy at the same time. An object of this invention is to provide such a device which may be readily attached to a present typewriter by the operator to make the desired number of ribbon copies and wherein additional ribbons may be added or taken from the attachment without soiling the operator's hands and without the use of tools.

According to this invention, these extra ribbons are separately mounted and may be added or removed as desired by providing them in interchangeable short lengths each having uninked looped ends adapted to fit over spaced supporting pins adjustably attached to each end of the carriage.

In the accompanying drawings:

Figure 1 shows the attachment in place on the carriage,

Figure 2 is a side view of the attachment alone,

Figure 3 is a top plan view of the device of Figure 2,

Figure 4 shows one of the ribbons,

Figure 5 is an end view of the attachment in place on a carriage holding several paper rolls.

In Figure 1 is shown the usual typewriter carriage 11 having platen 10, paper guides 13 and 14, and the customary ribbon 12 cooperating with the platen. Between the ribbon 12 and the platen 10 are mounted a number of additional ribbons 15 each comprising a short length having looped ends adapted to fit over the upwardly extending fingers 17 of the end supports or bars 18, each of which is adjustably attached to the carriage near its end portions. The make of typewriter illustrated is provided with screws 20 adapted to fit within the slot 19 in each end support 18 and a wing nut 21 serves to clamp each end support 18 in position. As shown in Figures 2 and 3 the fingers 17 are arranged so that each of the ribbons 15 may be of same length, the space between them being just enough to enable a sheet of paper

to be inserted. In Figure 4 the inked portion of the ribbon is shown by the shaded area and therefore it will be seen that the looped ends 16 are not inked and that an operator may easily insert an upstanding finger 17 through these loops or take off a ribbon without the use of tools and without the danger of soiling the hands. If desired, only one side of the ribbon may be inked so that the back of the paper contiguous to its uninked side will not be marked.

In operation the paper may be inserted in the machine in the usual manner and the ribbons placed between each sheet so that the customary typewriter ribbon 12 marks the first sheet, the front ribbon 15 marks the second sheet, and so on. The ribbons 15 may be positioned on the finger 17 either before or after the paper is in place and after both have been placed in operative position either or both of the supporting ends 18 may be adjusted to tighten the ribbons 15 and clamp the wing nut 21.

In Figure 5 the carriage 11 is illustrated as carrying a bracket 22 in which are mounted a plurality of paper rolls 23 and 24 which may be especially suitable for some kinds of work where the paper may consist of blank forms to be filled in and then torn off along perforations. Any desired number of paper rolls may be thus carried.

Among the advantages of this invention may be enumerated the facility of quick adjustment of the extra ribbons 15 without soiling the operator's hands. Merely inserting the headed fingers 17 through the looped ends keeps the ribbons in place. If few copies are to be made the unnecessary ribbons 15 may be quickly removed to save wear while if additional copies are desired more ribbons 15 may be easily added. With the inexpensive mounting illustrated it will be seen that each of the ribbons 15 is interchangeable since of the same length and provided with the same type of fastening means. One reason for the increased facility of attachment and adjustment resides in the independent mounting of each of the short lengths 15. Another advantage of having each of the ribbons 15 separately mounted resides in the possibility of having some of the ribbons of different color than others so that some of the ribbon copies produced may be of one color and others of another. Another advantage of this invention resides in the mounting of the extra ribbons 15 so that

they are attached directly to the carriage and are independent of the paper guides 13 and 14. In some types of machines it will be desirable to mount the end supports 18 5 in some other manner than as illustrated but however mounted the facility of adjustment and removal of the extra ribbons is present. While the word "typewriter" has been used and pictured as referring to the conventional 10 kind of machines it will nevertheless be understood that this invention is not limited to typewriters in its strict sense but includes other forms of typewriting machines such as calculating, and bookkeeping machines, 15 etc.

I claim:

1. The combination with a platen, of a movable carriage therefor, and means attached to said carriage below the platen for 20 separately supporting a plurality of ribbons in a manner to be independently removable.

2. The combination with a platen, of a movable carriage on which the same is mounted, a length of ribbon provided with 25 looped ends, and means comprising an upwardly extending finger secured adjacent each end of the carriage for receiving the looped end of said ribbon.

3. The combination with a platen, of a 30 movable carriage therefor, and means in-

cluding upwardly extending fingers secured adjacent each end portion of the carriage for supporting a number of lengths of ribbon, said fingers adjacent each end portion 35 of the carriage being bodily adjustable toward and from those at the other end of the carriage to control the ribbon slack.

4. The combination with a platen, of a movable carriage therefor, a ribbon, an auxiliary ribbon adjacent the first ribbon and 40 the platen, supporting members mounted below the platen adjacent each end of the carriage, and means on said supporting members for retaining the auxiliary ribbon in position in front of the platen. 45

5. The combination with a platen, of a movable carriage therefor, a ribbon, a supporting bar mounted below the platen upon each end of the carriage, a plurality of 50 spaced fingers projecting upwardly from each of said bars in front of said platen, the said bars being bodily adjustable transversely of said platen, and a plurality of short lengths of ribbon removably mounted 55 upon said fingers in a position adjacent to the first mentioned ribbon and the platen.

Signed at New York city in the county of New York and State of New York this 18th day of February A. D. 1924.

MARIO G. E. RENNA.