Mar. 13, 1923.

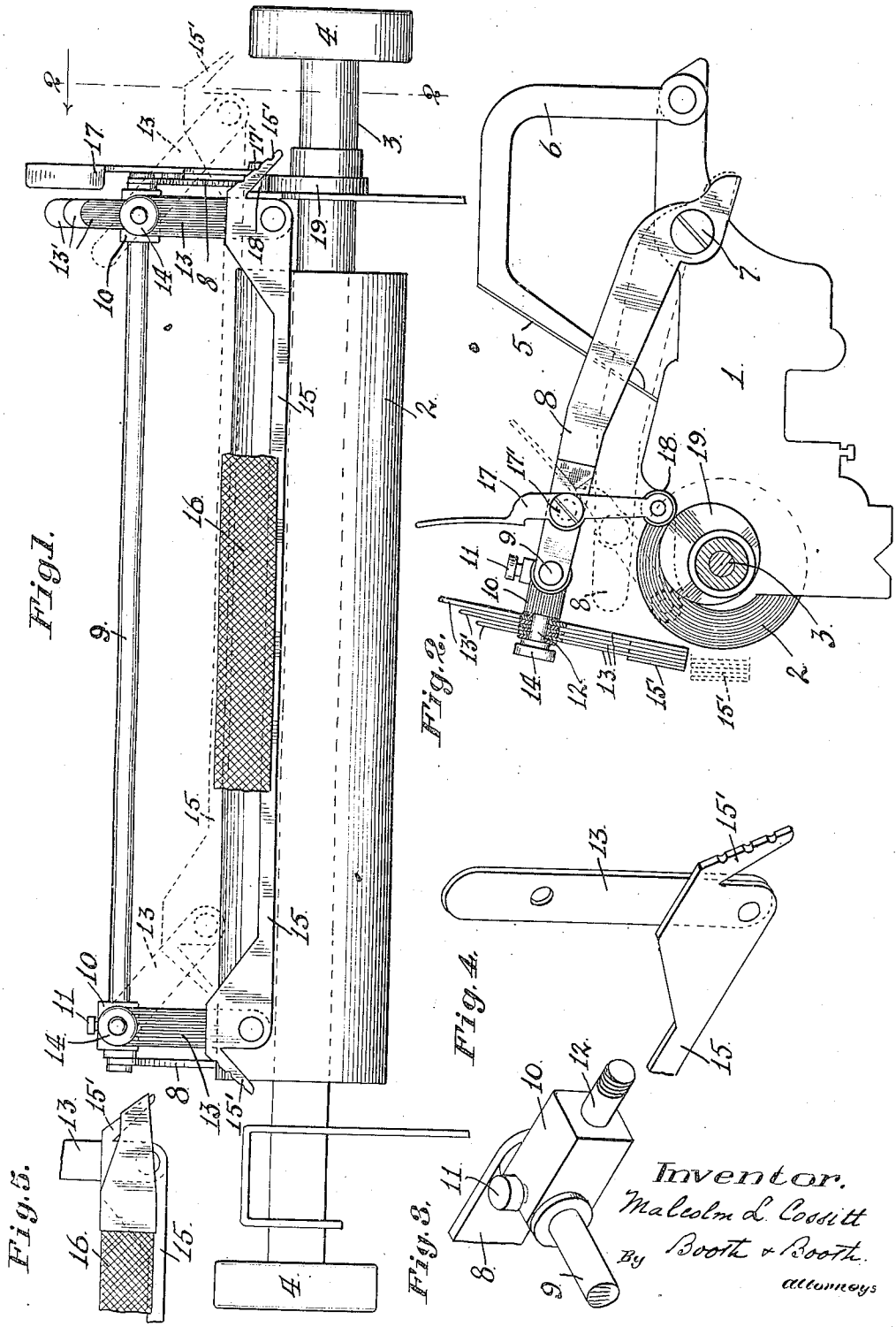
1,448,335.

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MANIFOLDING ATTACHMENT FOR TYPEWRITERS.

FILED JUNE 17, 1922.

2 SHEETS—SHEET 1.



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2 SHEETS—SHEET 2.

Fig. 6.

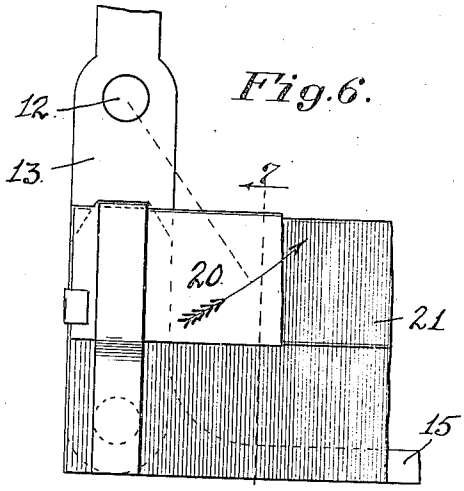


Fig. 7.

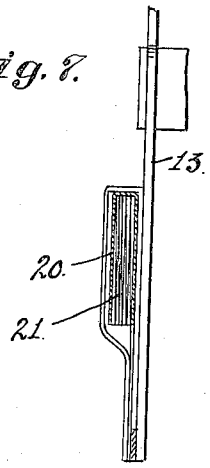


Fig. 8.

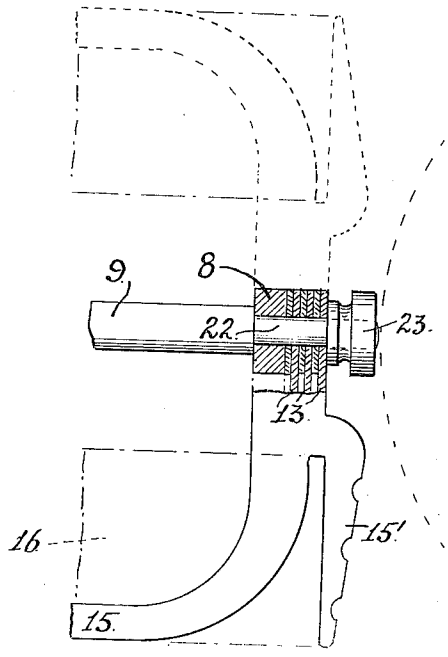


Fig. 9.

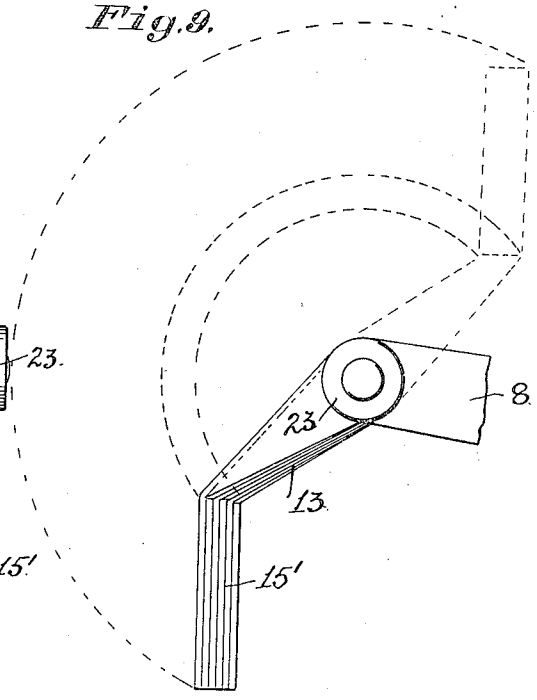
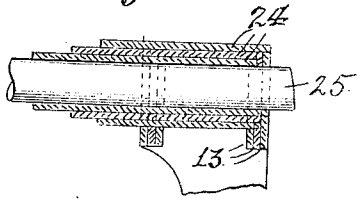


Fig. 10.



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Patented Mar. 13, 1923.

1,448,335

UNITED STATES PATENT OFFICE.

MALCOLM L. COSSITT, OF ALAMEDA, CALIFORNIA, ASSIGNOR TO MANIFOLD IMPRESSIONS CORPORATION, OF CARSON CITY, NEVADA, A CORPORATION OF NEVADA.

MANIFOLDING ATTACHMENT FOR TYPEWRITERS.

Application filed June 17, 1922. Serial No. 569,137.

To all whom it may concern:

Be it known that I, MALCOLM L. COSSITT, a citizen of the United States, residing at Alameda, in the county of Alameda and State of California, have invented certain new and useful Improvements in Manifolding Attachments for Typewriters, of which the following is a specification.

My invention relates to that class of manifolding attachments for typewriters and the like, which comprises one or more manifolding members, and means for mounting them, whereby they are adapted to be moved into and out of functional position in the line of type impact.

The object of my invention is to provide a simple and effective attachment of this nature, adapted especially for the employment of a plurality of manifolding members; and to this end my invention consists in the novel attachment which I shall hereinafter fully describe by reference to the accompanying drawings, in which—

Fig. 1 is a front elevation of my attachment.

Fig. 2 is an end view and section on the line 2—2 of Fig. 1.

Fig. 3 is a perspective view, enlarged, of the means for pivotally carrying the ribbon-bearing links.

Fig. 4 is a perspective view enlarged of the lower end of one of the ribbon bearing links.

Fig. 5 is a front elevation of the same showing the ribbon clipped to the link.

Fig. 6 is a front view of one of the links, showing a modification in the mounting of the manifolding member.

Fig. 7 is a section on the line 7—7 of Fig. 6.

Fig. 8 is a view partly in section showing a modification in the mounting of the ribbon carrying members.

Fig. 9 is an end view of the same.

Fig. 10 is a sectional view showing another modification of the mounting of the ribbon carrying members.

1 is the platen-carriage of a typewriter; 2 is the platen; 3 is the platen-shaft, and 4 is the knob on said shaft by which the platen is turned for line spacing. 5 is the paper-guide apron and 6 is the bracket carrying said apron.

To the ends of the platen-carriage are pivoted at 7 the arms 8, one at each end. These arms extend upwardly and forwardly above the platen, and their free extremities are connected by a bar 9.

Upon the bar 9, near each end, is fitted a bracket 10, fixed by a set screw 11. The bracket 10 has a short shaft 12 upon which one or more ribbon carrying links 13, here shown as three, are pivotally mounted, said links being controllably fixed by a thumb nut 14. The set of links 13 at one end have individually accessible handles 13′.

Connected to and between the free extremities of each pair of links 13 is a bar 15, the ends of which are provided with fingers 15′ for the detachable connection between them of a manifolding ribbon 16.

To one of the arms 8 is pivoted at 17′ a lever 17, the lower end of which carries a roller 18.

Upon the platen shaft 3 at one end of the platen is fixed a cam 19, upon which the foot roller 18 of the lever 17 rests.

The operation of the attachment is as follows:—

If, as is obvious, the arms 8 be turned about their pivotal centers 7, to or towards or back of an upright position, the manifolding ribbons 16 will be elevated to a position out of the way and will present no interference to entering the sheets of papers as usual.

When the paper sheets have been entered and turned about the platen to present the upper edges in front of the platen, the arms 8 are then thrown forwardly and down to the position shown in Figs. 1 and 2, and are there held by the foot roller 18 of the lever 17 resting on the cam 19,—Fig. 2. In this position all the manifolding ribbons 16 lie in front of the platen but above the line of type-impact, as seen in Fig. 2, and are entered between the paper sheets, these

sheets, for the sake of clearness, not being here shown.

Now, the lever 17 is turned about its pivot 17′ in such wise that its foot roller 18 traveling forwardly over the cam 19, allows the arms 8 to move farther down to an extent sufficient to carry the manifolding ribbons 16 down into the line of type impact, all as shown by the dotted lines in Fig. 2.

The typing operation of the machine is then proceeded with, and at each line spacing movement of the platen, the cam 19 on the platen shaft, acting on the foot roller 18 of lever 17 will slightly change the position of the arms 8 and thus vary the position of the manifolding ribbons with respect to their width, so that the ribbons may be used over practically their entire width.

Thus far it has been assumed that all the ribbons have been in use for the preparation of a plurality of duplicate copies. If, however, but one of the ribbons is required, the operation is as follows. The arm 8 having been thrown forward to carry all the ribbons to the position of the full lines in Fig. 2, in which they lie above the line of type impact, two of the ribbon-carrying links 13 are taken hold of by their handles 13′ and are turned upon their pivots at 12, to one side. These links being connected by the bars 15 with their corresponding links at the other end, the pairs of links move sidewise, parallel ruler fashion, with the effect of lifting up their respective ribbons to a slightly higher position, leaving the remaining ribbon depressed. This movement is clearly shown in Fig. 1, the single ribbon being shown in full lines and the slightly elevated links in dotted lines.

Now, when the lever 17 is thrown back, to move forward its foot roller 18 as heretofore described, all the ribbons will move down, but only one of them will reach the line of type impact, the others being still elevated above said line. Thus any one or more of the ribbons may be presented to the line of type impact.

I have heretofore referred to the manifolding members as ribbons. Such a form is not, however, essential as such members may be in the form of sheets of carbon paper.

To illustrate such form, I refer to Figs. 6 and 7, in which one of the links 13 is shown. Secured to this link and extending to and secured to the opposite link, not shown, is a container 20 in which is housed either in fan-fold shape or in roll shape, a sheet of carbon paper 21, adapted to be drawn down and out from the container to present successive narrow areas, as required, to the line of type impact. Although in these Figs. 6 and 7 I have shown only one link and one carbon sheet container, it is clear that a plurality of these may be used, subject to the same selective operation heretofore described.

In case the parallel-ruler movement as hereinbefore described, to provide for selective temporary removal of any one or more of the plural ribbons from immediate use, be not desired, the arrangement may be modified as illustrated in Figs. 8 and 9 in which the ribbon carrying members 13 are pivotally connected with the bar 9 of the arms 8 by means of a pin 22 secured to each end of said bar, and upon which pin the arms are pivoted and are set by a thumb nut 23. The arms are, therefore, adapted, as shown by the dotted lines, to be independently swung up out of the way about the pin 22 as an axis.

In case the movement of the arms as shown in Figs. 8 and 9 be used, the connection of each pair to enable them to swing in unison, may be modified as shown in Fig. 10, wherein each pair of arms 13 are carried upon its own separate sleeve 24 nested for independent rotation upon the rod 25.

I claim:—

1. A manifold attachment for typewriters comprising a pair of connected spaced arms, pivotally mounted on the platen-carriage of the machine and adapted for swinging movement in a vertical arc above the platen; a pair of spaced members carried by said arms; a manifolding member carried by said spaced members; and a movable controlling stop carried by one of said arms, and adapted by its movement to vary the position of the arms when the latter are depressed, whereby the manifolding member is moved into and out of the line of type impact.

2. A manifolding attachment for typewriters comprising a pair of connected spaced arms pivotally mounted on the platen-carriage of the machine and adapted for swinging movement in a vertical arc above the platen; a pair of spaced members carried by said arms and adapted for movement independently of the movement of said arms; a manifolding member carried by said spaced members; and a movable controlling stop carried by one of said arms, and adapted by its movement to vary the position of the arms when the latter are depressed, whereby the manifolding member is moved into and out of the line of type impact.

3. A manifolding attachment for typewriters comprising a pair of connected arms pivotally mounted on the platen-carriage of the machine and adapted for swinging movement in a vertical arc above the platen; a pair of spaced connected links carried by said arms and adapted for swinging movement independently of the movement of said arms, in a plane parallel with the platen axis; a manifolding member carried by said

pair of spaced links; and a movable controlling stop carried by one of said arms, and adapted by its movement to vary the position of the arms when the latter are depressed, whereby the manifolding member is moved into and out of the line of type impact.

4. A manifolding attachment for typewriters comprising a pair of arms pivotally mounted on the platen-carriage of the machine and adapted for swinging movement in a vertical arc above the platen; a bar connecting the free extremities of said arms to effect their movement in unison; a pair of spaced connected links pivotally carried by said bar and adapted for swinging movement independently of the movement of said arms, in a plane parallel with the arm connecting bar; a manifolding member carried by said pair of spaced links; and a movable controlling stop carried by one of said arms, and adapted by its movement to vary the position of the arms when the latter are depressed, whereby the manifolding member is moved into and out of the line of type impact.

5. A manifolding attachment for typewriters comprising a pair of connected spaced arms pivotally mounted on the platen carriage of the machine and adapted for swinging movement in a vertical arc above the platen; a plurality of independent pairs of spaced members carried by said arms, each pair being adapted for independent movement, independently of the movement of said arms; a manifolding member carried by each pair of said spaced members; and a movable controlling stop carried by one of said arms, and adapted by its movement to vary the position of the arms when the latter are depressed, whereby the manifolding members are moved into and out of line of type impact.

6. A manifolding attachment for typewriters comprising a pair of connected arms pivotally mounted on the platen-carriage of the machine and adapted for swinging movement in a vertical arc above the platen; a plurality of independent pairs of spaced connected links carried by said arms, each pair being adapted for swinging movement independently of the movement of said arms in a plane parallel with the platen axis; a manifolding member carried by each pair of said spaced links; and a movable controlling stop carried by one of said arms, and adapted by its movement to vary the position of the arms when the latter are depressed, whereby the manifolding members are moved into and out of the line of type impact.

7. A manifolding attachment for typewriters comprising a pair of arms pivotally mounted on the platen carriage of the machine and adapted for swinging movement in a vertical arc above the platen; a bar connecting the free extremities of said arms to effect their movement in unison; a plurality of independent pairs of spaced connected links carried by said arms, each pair being adapted for swinging movement independently of the movement of said arms, in a plane parallel with the arm connecting bar; a manifolding member carried by each pair of said spaced links; and a movable controlling stop carried by one of said arms, and adapted by its movement to vary the position of the arms when the latter are depressed, whereby the manifolding members are moved into and out of the line of type impact.

8. A manifold attachment for typewriters comprising a pair of connected, spaced arms pivotally mounted on the platen-carriage of the machine and adapted for swinging movement in a vertical arc above the platen; a pair of spaced members carried by said arms; a manifolding member carried by said spaced members; a stop lever pivotally carried by one of said arms; and a supporting member with which said lever coacts when the arms are depressed to vary the position of said arms and move the manifolding member into and out of the line of type impact.

9. A manifold attachment for typewriters comprising a pair of connected, spaced arms pivotally mounted on the platen carriage of the machine and adapted for swinging movement in a vertical arc above the platen; a pair of spaced members carried by said arms; a manifolding member carried by said spaced members; a movable controlling stop carried by one of said arms, and adapted by its movement to vary the position of the arms when the latter are depressed, whereby the manifolding member is primarily varied with relation to the line of type impact; and means acting on said stop to automatically vary the position of the manifolding ribbon when in the line of type impact at each line spacing of the platen.

10. A manifold attachment for typewriters comprising a pair of connected, spaced arms pivotally mounted on the platen carriage of the machine and adapted for swinging movement in a vertical arc above the platen; a pair of spaced members carried by said arms; a manifolding member carried by said spaced members; a movable controlling stop carried by one of said arms, and adapted by its movement to vary the position of the arms when the latter are depressed, whereby the manifolding member is primarily varied with relation to the line of type impact; and means acting on said stop to automatically vary the position of the manifolding ribbon when in the line of type impact at each line spacing of the platen, consisting of a cam in the axis of the platen.

11. A manifolding attachment for typewriters comprising a pair of spaced connected links, a manifolding member carried by and between said links; means for mounting said links on the platen carriage of the machine adapting them for movement to carry the manifolding member into and out of position in the line of type impact; and means for pivoting said links for swinging movement parallel with the platen of the machine.

In testimony whereof I have signed my name to this specification.

MALCOLM L. COSSITT.