July 29, 1924. 1,503,216.

F. J. UHER

TYPEWRITER ATTACHMENT

Filed Sept. 2, 1922 3 Sheets-Sheet 1

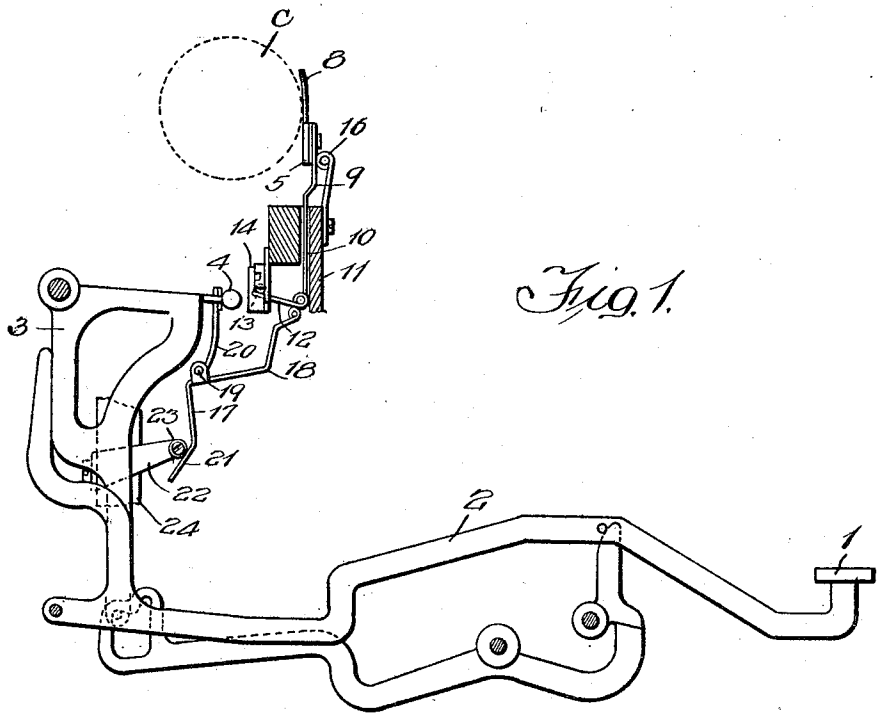
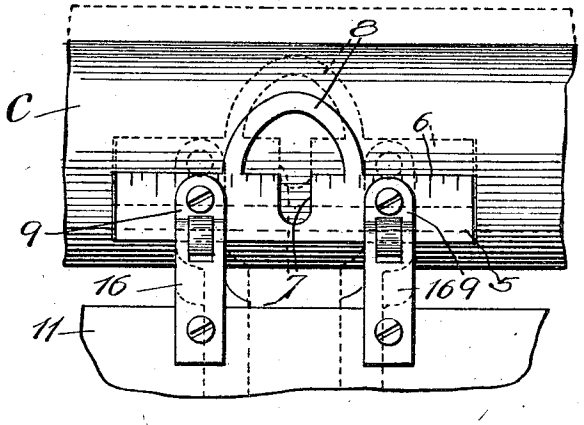


Fig. 1.

Fig. 2.



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July 29, 1924.

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TYPEWRITER ATTACHMENT

Filed Sept. 2, 1922

3 Sheets-Sheet 2

Fig. 3.

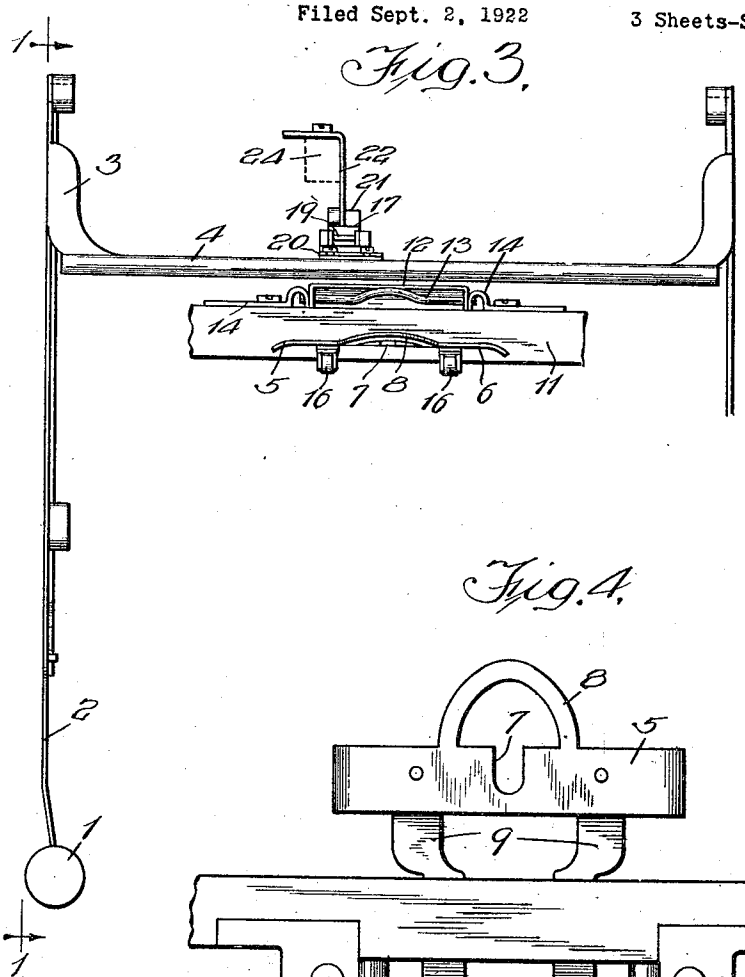
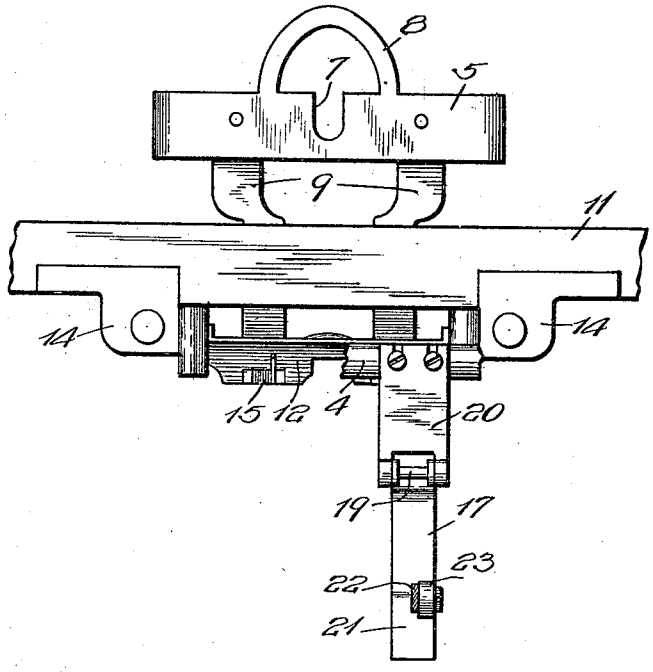


Fig. 4.



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TYPEWRITER ATTACHMENT

Filed Sept. 2, 1922 3 Sheets-Sheet 3

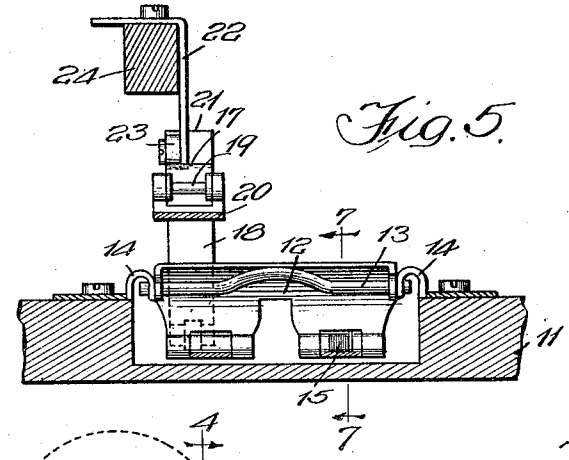


Fig. 5.

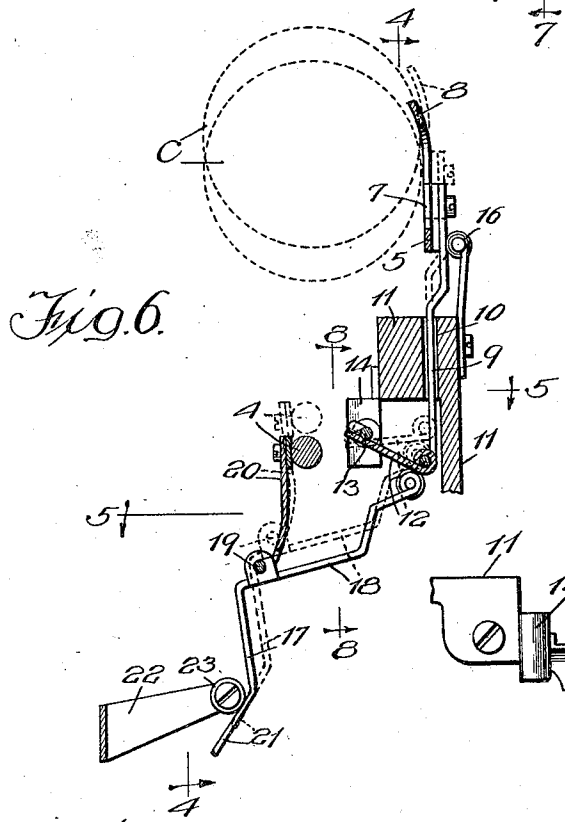


Fig. 6.

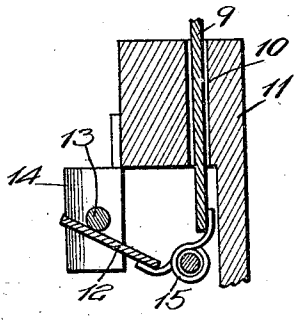


Fig. 7.

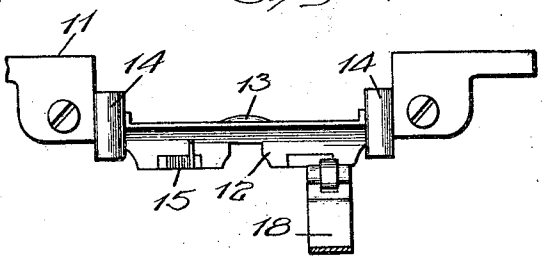


Fig. 8.

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Patented July 29, 1924. 1,503,216

UNITED STATES PATENT OFFICE.

FRANK J. UHER, OF BERWYN, ILLINOIS, ASSIGNOR TO UNDERWOOD TYPEWRITER COMPANY, OF NEW YORK, N. Y., A CORPORATION OF DELAWARE.

TYPEWRITER ATTACHMENT.

Application filed September 2, 1922. Serial No. 585,922.

To all whom it may concern:

Be it known that I, FRANK J. UHER, a citizen of the United States, residing at Berwyn, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Typewriter Attachments, of which the following is a description.

My invention relates to improvements in typewriter attachments, and more particularly to an attachment primarily intended for Underwood typewriters and typewriters having a similar construction, and relates to means for holding sheets, cards, envelopes or the like in place on the typewriter during the operation thereof. One of the objects of my invention is to provide a device of the kind described which when used on a typewriter will enable the operator to write as far down as the bottom edge of the sheet, envelope or card held in the machine. The invention has among its other objects the production of a device of the kind described which is simple, convenient, reliable, efficient and satisfactory for use wherever found applicable. Another object of my invention is to provide a device as above described which will be operative when the carriage is shifted, as well as when the lower letters are used, and in which the movement of the holding means shall be affected by the shift key of the typewriter, the speed of travel of said holding means to be exactly equal to the speed of lifting of the cylinder roll. Many other objects and advantages of the construction herein shown and described will be obvious to those skilled in the art from the disclosures herein given.

To this end my invention consists in the novel construction, arrangement and combination of parts herein shown and described, and more particularly pointed out in the claims.

In the drawings, wherein like reference characters indicate like or corresponding parts,

Fig. 1 is a side elevation, partly in section, taken on the line 1—1 of Fig. 3;

Fig. 2 is a front elevation of my device;

Fig. 3 is a top plan view of the same;

Fig. 4 is a section taken substantially on line 4—4 of Fig. 6;

Fig. 5 is a section taken substantially on line 5—5 of Fig. 6;

Fig. 6 is an enlarged view of the parts shown in Fig. 1, but with some of the standard typewriter parts omitted;

Fig. 7 is a section taken substantially on line 7—7 of Fig. 5; and

Fig. 8 is a section taken substantially on line 8—8 of Fig. 6.

In the drawings, wherein I have illustrated the preferred embodiment of my invention, portions of a standard typewriter, preferably an Underwood typewriter or a machine of similar construction, are shown, the remaining parts being omitted as the typewriter forms no part of my invention. 1 indicates the shift key for the typewriter, 2 the shift key lever, and 3 the rocker arm shift rail actuated by the shift key lever to raise the carriage shift rail 4 upon which the carriage is mounted, a distance equal to the spacing apart of the lower and upper characters on the type bars.

In the general usage of machines similar to the Underwood construction, there are arranged a left hand and right hand paper finger adapted to bear on the sheet on the cylinder C, and there is a central finger intermediate the left and right hand fingers also adapted to bear on the sheet on the cylinder. Even when using all three of the paper-engaging fingers mentioned, it is not possible to write on the sheet as far down as the bottom edge of the sheet, because it stands away from the cylinder and is not held firmly. In order to overcome this difficulty and to enable the operator to write clear down to the bottom edge of the sheet, this being especially desirable in case of cards or the like, I have provided means for holding the sheet firmly against the cylinder during the entire writing operation.

A bar line gauge scale 5 of desired length, and preferably with a scale 6 marked thereon, is adapted to be mounted adjacent the cylinder C and cooperate therewith during the writing thereon. This bar or scale has a slot 7 intermediate the ends thereof and through which the type bars (not shown) pass on their way to the cylinder. An arcuate-shaped bridge portion 8 projects beyond the top edge of the bar 5 connecting across

the slot 7 and is curved toward the cylinder to more efficiently cooperate therewith while a sheet is fed therethrough.

A pair of arms 9 are carried by and extend downwardly of the bar 5, said arms slidable through slots 10 formed in the brace rod 11 of the frame upon which the type bars are pivotally supported and upon which the ribbon guides (not shown) are positioned. The lower end of the legs 9 are pivotally connected to a plate 12 which in turn is soldered or otherwise secured to a rod 13 mounted in bearings 14 at its ends, said bearings secured to said brace rod 11, as shown more clearly in Figs. 5 and 6. A spring 15 is arranged at the pivotal connection between the parts 9 and 12 and normally tending to hold the bar 5 in its lowermost position. Guide members 16 may be arranged upon the stationary part 11 to slidably engage the movable parts 9 and tend to press them toward the sheet on the cylinder.

A bent rocker lever having arms 17 and 18 is pivoted intermediate its ends, as at 19, to the end of an arm 20 depending from and rigidly secured to the carriage shift rail 4, as shown more clearly in Figs. 4 and 6. The free end of the leg 18 is slidably engageable with the flat plate 12, as shown in Fig. 6, and the free end of the leg 17 is bent obliquely, as at 21, and is slidably engageable with a rigid bearing guide 22 mounted stationary at a rear upright 24 of the typewriter frame. The bent lever 17—18 is so formed and mounted that the roller 23 of the guide 22 is always in engagement with the bent portion 21 of the arm 17, thus tending to rock said bent lever about the pivot 19 whenever the bent lever is lifted or lowered.

The operation of the device is as follows: When the parts are in the position shown in full lines in Fig. 6, the bar 6 will engage with the sheet fed through the typewriter and permit writing even though the sheet has been fed as far as its bottom edge.

If the shift key is pressed to lift the carriage shift rail and cylinder upwardly, the bent lever 17—18 will be lifted and as the roller 23 bears on the portion 21 of the bent lever, the lever will be rocked slightly and moved to the position shown in dotted lines in Fig. 6. The free end of the lever 18 engages against the plate 22, rocking it on its bearings 14 to raise the bar 6 hinged thereto to the position shown in dotted lines. It will be noted that the lifting movement of the bar is in a straight line and not along an arc, and the bar will be lifted a distance exactly equal to the lift of the cylinder, thereby constantly maintaining its grip on the sheet of paper in the machine and permitting writing to be done in the shifted position as well as in the previous position. Releasing the shift key permits the parts to drop to their normal position, aided by the retrieving action of the spring 15.

Having thus described my invention, it is obvious that various immaterial modifications may be made in the same without departing from the spirit of my invention; hence I do not wish to be understood as limiting myself to the exact form, construction, arrangement and combination of parts herein shown and described, or uses mentioned.

What I claim as new and desire to secure by Letters Patent is:

1. An attachment for a typewriter comprising a member adapted to be mounted adjacent the cylinder and movable independently thereof to hold a sheet thereon, and means for actuating said member to lift it at the same speed as the lift of said cylinder, whenever said cylinder is shifted, comprising a part hinged to said member, means to normally maintain said member at its lowermost position, a lever pivotally mounted intermediate its ends to the carriage shift rail of the typewriter, both of the ends being free and operatively engageable at one end with said first-mentioned member, and guide means fixedly mounted and engageable with the other end of said lever for oscillating it in a predetermined manner whenever said carriage shift rail is lifted.

2. An attachment for a typewriter comprising a member adapted to be mounted adjacent the cylinder to hold a sheet thereon, said member being arranged to move independently of the shift lever mechanism, and means for actuating said member to lift at the same speed as the lift of said cylinder whenever said cylinder is shifted, said means comprising a part hinged to said member, spring means between said part and member to normally maintain said member at its lowermost position, a bent lever pivotally mounted intermediate its ends to the carriage shift rail both of its ends being free, and operatively engageable at one end with said holding member, and guide means fixedly mounted and engageable with the other end of said bent lever for oscillating it in a predetermined manner whenever said carriage shift rail is lifted.

3. An attachment for typewriter of the kind described comprising a bar adapted to be reciprocatorally mounted parallel to and adjacent the cylinder to hold a sheet thereagainst and having an opening therethrough for the passage of the type bar, and means operable by the shift key for shifting said bar at the same speed as the shifting of said cylinder, said means comprising a pivotally mounted part hingedly connected to said bar and permitting the reciprocation thereof, a bent lever pivotally mounted intermediate its ends to the rail-lifting rocker arm, one leg of said bent lever slidably engage-

able with said part and the other leg having an offset portion, and a guide slidably engageable with said offset portion to rock said bent lever in a predetermined manner whenever said lever is lifted by said rail-lifting arm.

In testimony whereof, I have hereunto signed my name in the presence of two subscribing witnesses.

FRANK J. UHER.

Witnesses:
RUTH M. EPHRAIM,
ROY W. HILL.