

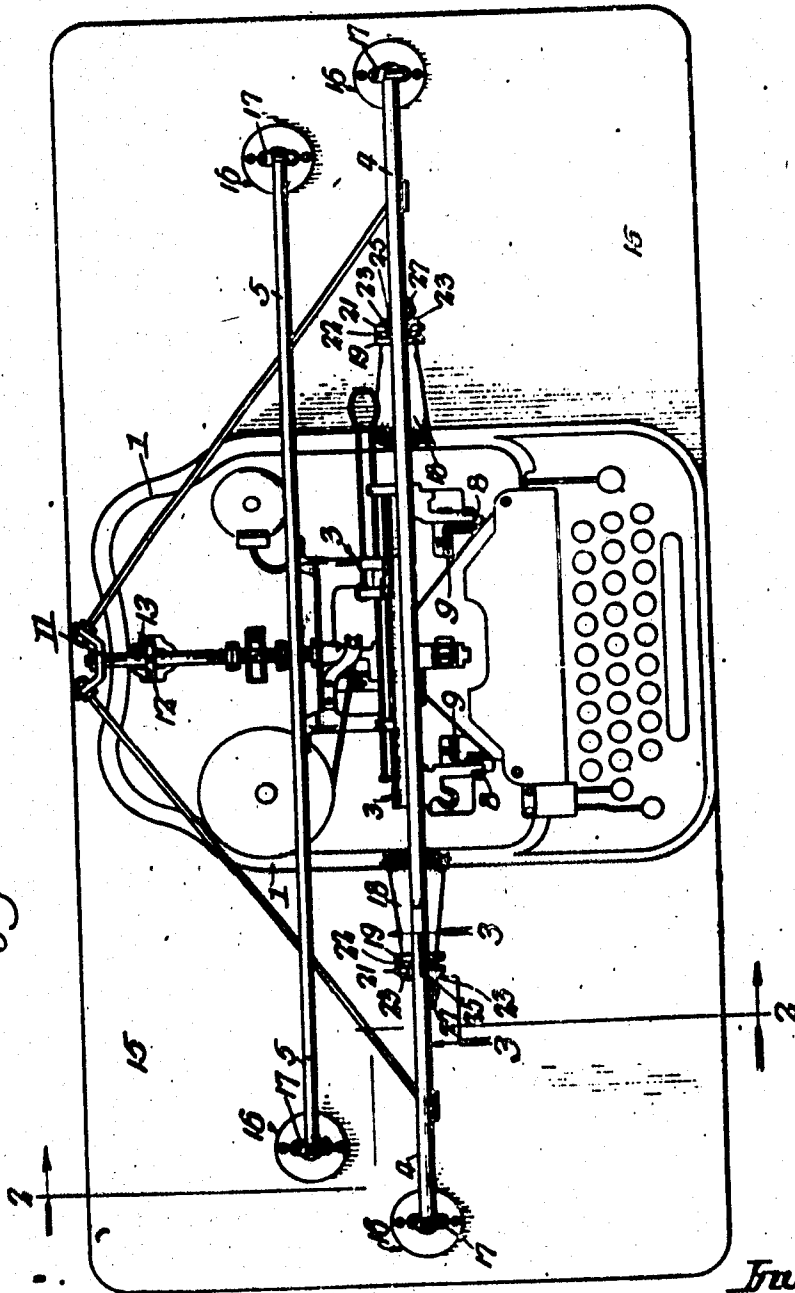
G. J. GRIFFITHS.
 AUXILIARY SUPPORT FOR TYPE WRITER SHIFT FRAMES.
 APPLICATION FILED JUNE 27, 1910.

984,906.

Patented Feb. 21, 1911.

3 SHEETS-SHEET 1.

FIG. 1.



Witnesses:
 J. H. Alfuda
 H. R. McKinnis

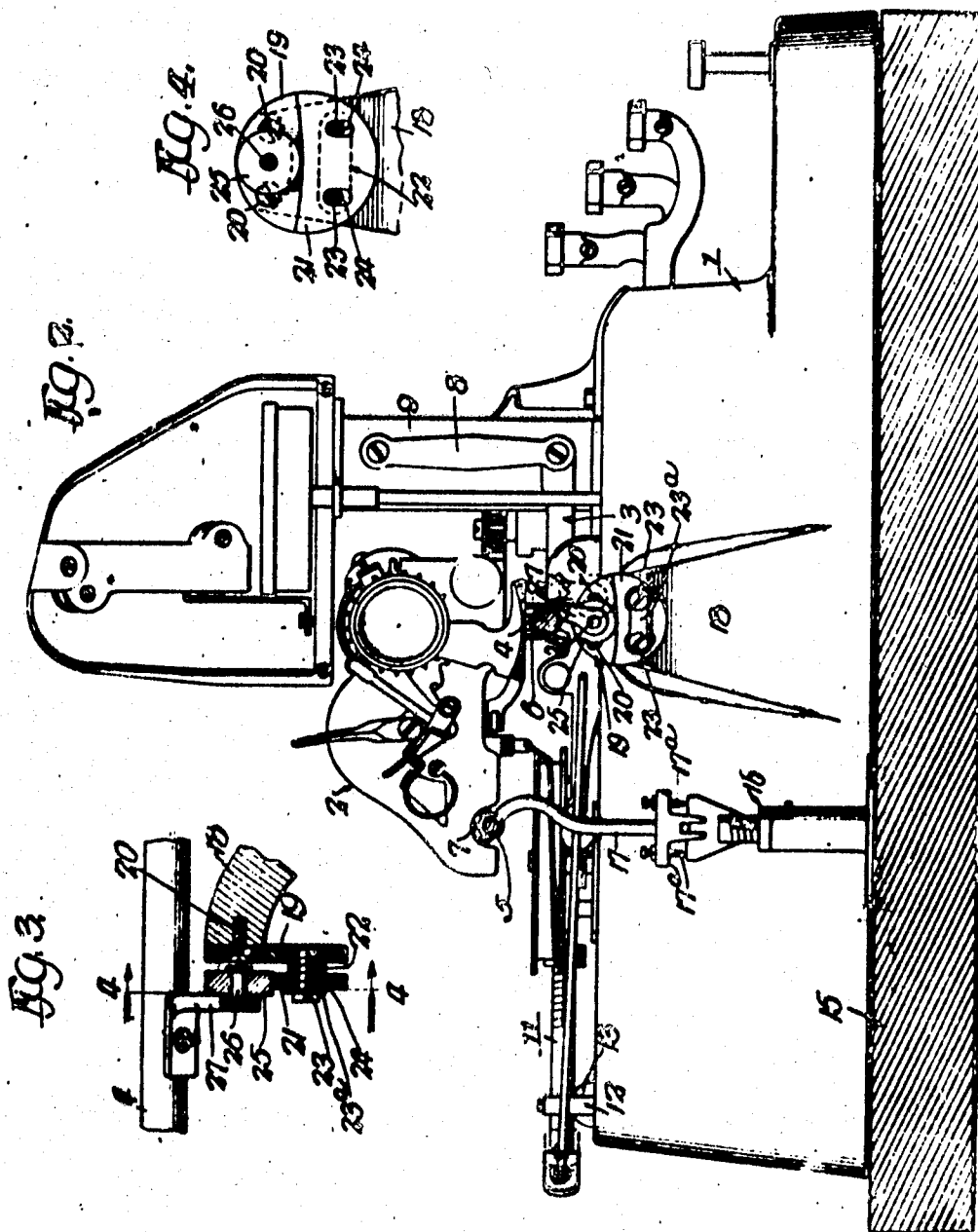
Inventor:
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2 SHEETS—SHEET 2.



Witnesses:
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 George J. Griffiths
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UNITED STATES PATENT OFFICE.

GEORGE J. GRIFFITHS, OF WOODSTOCK, ILLINOIS, ASSIGNOR TO THE OLIVER TYPE-WRITER COMPANY, OF CHICAGO, ILLINOIS, A CORPORATION OF ILLINOIS.

AUXILIARY SUPPORT FOR WRITER SHIFT-FRAMES.

984,906.

Specification of Letters Patent. Patented Feb. 21, 1911.

Application filed June 27, 1910. Serial No. 569,131.

To all whom it may concern:

Be it known that I, GEORGE J. GRIFFITHS, a citizen of the United States, and a resident of Woodstock, in the county of McHenry and State of Illinois, have invented certain new and useful Improvements in Auxiliary Supports for Type-Writer Shift-Frames; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form a part of this specification.

This invention relates to a typewriting machine shift-frame, upon which the carriage is supported and has endwise movement, and which itself has backward and forward shifting movement upon the machine frame in order to bring the platen and the paper thereon in position to receive impressions from a plurality of types carried by each of the type-bars of the machine.

The invention is more particularly applicable to machines of the "Oliver" type, in which the shift-frame is provided with two horizontal, transversely arranged guide-bars, on which the paper-carriage rests and travels and in which said guide-bars project at their ends beyond the shift-frame proper and extend laterally outside of the frame of the machine and are made of sufficient length to properly support the carriage, whatever may be the length of the latter.

The object of the invention is to provide means adapted to afford proper support for said guide-bars in machines in which the length of the guide-bars is such, as in the case of extra long carriages used for very wide paper, that the guide-bars cannot well be made sufficiently stiff or rigid in themselves to prevent the same from bending or flexing under the weight of the carriage.

The invention consists of the matters hereinafter described and more particularly pointed out in the appended claims.

The invention is shown in the accompanying drawings in connection with a typewriting machine of the "Oliver" type made in accordance with United States Letters Patent Number 559,863, granted to Thomas Oliver, March 1st, 1898, and United States Letters Patent Number 904,207, granted November 17th, 1908, to Theron L. Knapp.

In the drawings:—Figure 1 is a top plan view of an Oliver typewriting machine, together with a base board upon which it rests, with my improvement attached, with the paper carriage removed to show the shift frame and its guide-bars, and with the type-bars and associated parts above the level of the shift-frame omitted, the supporting standards for the type-bars being shown in section. Fig. 2 is a vertical section through the machine on an enlarged scale, taken on line 2—2 of Fig. 1. Fig. 3 is a partial vertical section through Fig. 1 on the line 3—3 thereof, the sectional view being shown on an enlarged scale. Fig. 4 is a vertical section through Fig. 3 on the line 4—4 thereof.

As shown in said drawings, 1 indicates the base-plate of the typewriting machine, 2, the paper-carriage, and 3, the shift-frame, which is supported on the base frame so as to have backward and forward shifting movement thereon, and is provided with forward and rear, horizontal, transversely extending guide-bars 4 and 5, on which rest and travel the grooved supporting pulleys 6, 7 of the carriage. Said shift-frame 3 is supported at its forward end by means of pivotally connected upright arms or links 8, 8 which are pivotally suspended from the standard 9 rising from the base-plate, and at its rear end by means of a horizontal guide stem 11 rigidly attached to the shift-frame and passing through a guide standard 12 on the rear of the base frame 1 and resting upon a guide roller 13 mounted in the standard 12.

In the machine illustrated, the paper-carriage 2 is made of considerable length in order to receive a very wide sheet of paper and the guide-bars 4, 5, in order to properly support said carriage when moved to the limit of its endwise movement in either direction, are extended a considerable distance beyond or outside of the base plate 1 at both sides of the machine. The ends of said guide-bars are each supported from a horizontally arranged base board 15, on which the base 1 is centrally disposed, by means of fixed members 16 secured to the base board and oscillating supporting arms 17 resting on said fixed members. Each oscillating arm 17 has pivotal connection with its associated guide-bar so as to swing transversely of the shift-frame, and bearing engagement with its fixed member 16 by means of horizontally

separated set-screws 17^a, 17^b, so as to afford rising and falling movement of the end of the guide bar to correspond with the rising and falling movement of the forward end of the shift-frame as the links 8 are swung on their suspension axes in the shifting movement of the shift-frame.

The parts thus far briefly described are substantially as shown in the patent above referred to, Number 904,207, and as they form no part of this invention, require no further description.

18, 18 are laterally disposed, horizontal lugs or projections preferably formed integral with the base 1, and located in the position usually occupied by the carrying horns of an "Oliver" typewriting machine. Each of said lugs is provided with means for supporting the front guide-bar 4 at a point intermediate its outer end and its connection with the shift-frame. Said means embrace the following: The outer end of each lug 18 is faced off in a vertical plane to receive a vertical plate 19 which is secured to it in any convenient manner as by means of screws 20.

21 is a short rail or track, extending in a direction transverse to that of the guide bar 4. Said track is spaced from said plate 19 by means of a spacing washer 22, and is connected thereto by means of screws 23, 23 which are threaded into the plate 19 and pass through slots 24, 24 formed in the rail 21. A washer 23^a is interposed between the heads of said screws and the face of the rail 21 to cover said slots and give bearing for said heads. Upon the upper edge of said rail is adapted to rest and roll a roller 25 rotatably mounted on a stud 26 which has screw-threaded connection to an angle bar 27 secured to the guide bar 4. As the guide bar 4 is shifted forward and backward with the shift-frame, the roller 25 travels forward and backward on the rail 21 which thus furnishes an efficient support for the guide-bar at this point.

In order to accommodate the rise and fall of the rail, due to the rise and fall of the shift-frame 3, as it swings forward and backward with the links 8, the upper edge of the rail 21 is curved transversely to the direction of the guide-bar 4, being higher at its ends and depressed at its middle, said curvature corresponding to the curve in which the pivotal connections of the links 8 with the shift-frame travel as said frame is shifted forward and backward. By reason of the slots 24, said rail may be accurately adjusted so as to give support for said roller 25 in each position of the guide bar.

I claim as my invention:—

1. The combination with a typewriting machine frame, a paper-carriage, a shift-frame having shifting movement on the ma-

chine frame, said shift-frame being provided with a guide-bar, supporting arms for the shift-frame pivotally connected with the machine frame above the shift-frame, and means for supporting the ends of said guide-bar, of intermediate supports for said guide-bar embracing laterally disposed lugs made rigid with said machine frame, tracks supported on said lugs extending in a direction transverse to the length of said guide-bar, and parts carried by said guide-bar adapted to rest and ride on said tracks, said tracks being curved to afford rising and falling movement of said guide-bar when said arms are swung forwardly and backwardly from the central position thereof.

2. The combination with a typewriting machine frame, a paper-carriage, a shift-frame having shifting movement on the machine frame, said shift-frame being provided with a guide-bar, supporting arms for the shift-frame pivotally connected to the machine frame above the shift-frame, and means for supporting the ends of said guide-bar, of intermediate supports for said guide-bar embracing laterally disposed lugs made rigid with said machine frame, tracks supported on said lugs extending in a direction transverse to the length of said guide-bar, and rollers carried by said guide-bar adapted to rest and roll on said tracks, said tracks being curved to afford rising and falling movement of said guide-bar when said arms are swung forwardly and backwardly from the central position thereof.

3. A support for a shift-frame guide-bar embracing, in combination with the machine frame, a laterally disposed lug made rigid with said machine frame, a rail carried by said lug extending in a direction transverse to the direction of said guide-bar, said rail being curved horizontally, and a part carried by said guide-bar adapted to rest and ride on said rail.

4. An auxiliary support for a shift-frame guide-bar comprising, in combination with the machine frame, a laterally disposed lug formed integrally with said frame, a vertical plate secured to said lug, a rail spaced from and rigidly secured to said plate, said rail extending in a direction transverse to the direction of the length of said guide-bar and being curved horizontally, means for adjusting the position of said rail, and a roller carried by said guide-bar adapted to rest and roll on said rail.

In testimony, that I claim the foregoing as my invention I affix my signature in the presence of two witnesses, this 17th day of June A. D. 1910.

GEORGE J. GRIFFITHS.

Witnesses:

A. J. MULLEN,
LILLIAN SCHROEDER.