

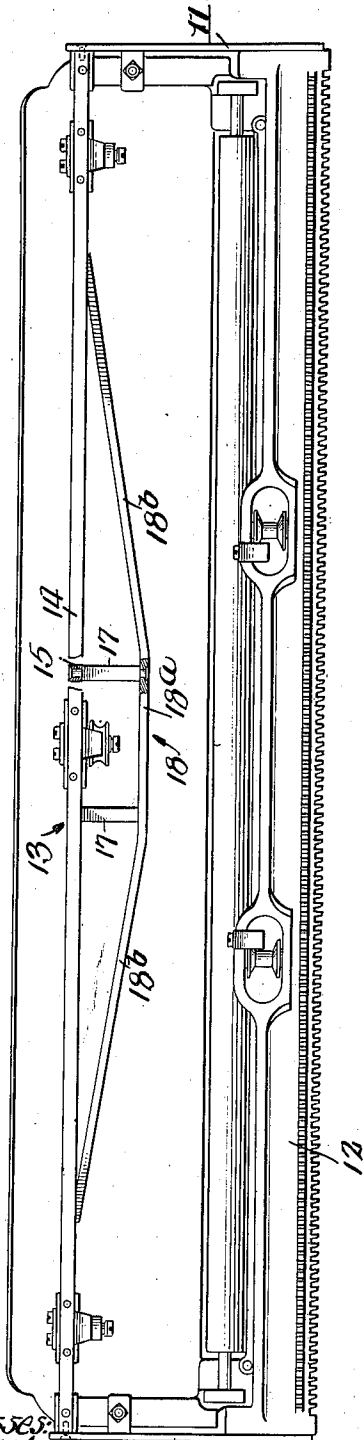
J. H. TAYLOR.
PAPER CARRIAGE FOR TYPE WRITING MACHINES.
APPLICATION FILED JULY 11, 1910.

983,581.

Patented Feb. 7, 1911.

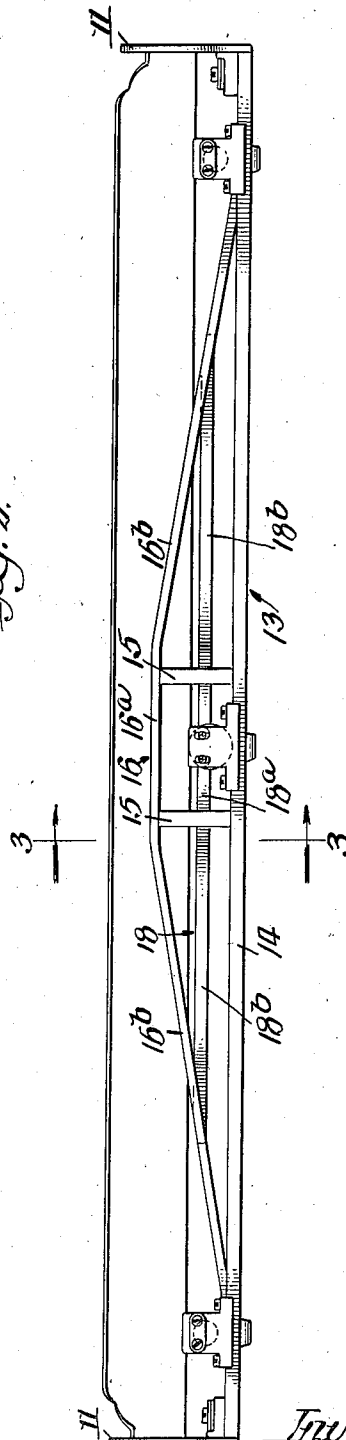
2 SHEETS—SHEET 1.

Fig. 1.



Witnesses:
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Fig. 2.



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2 SHEETS—SHEET 2.

Fig. 3.

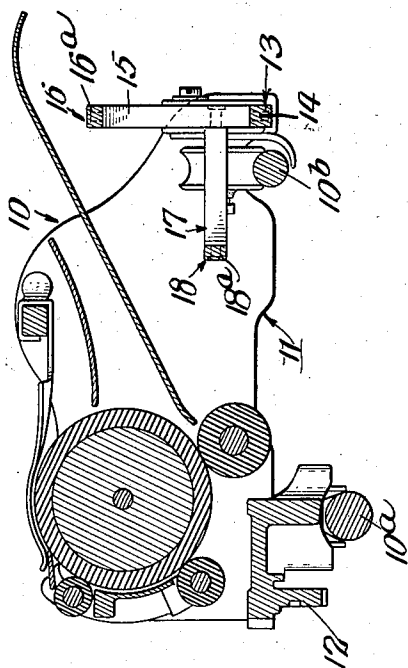
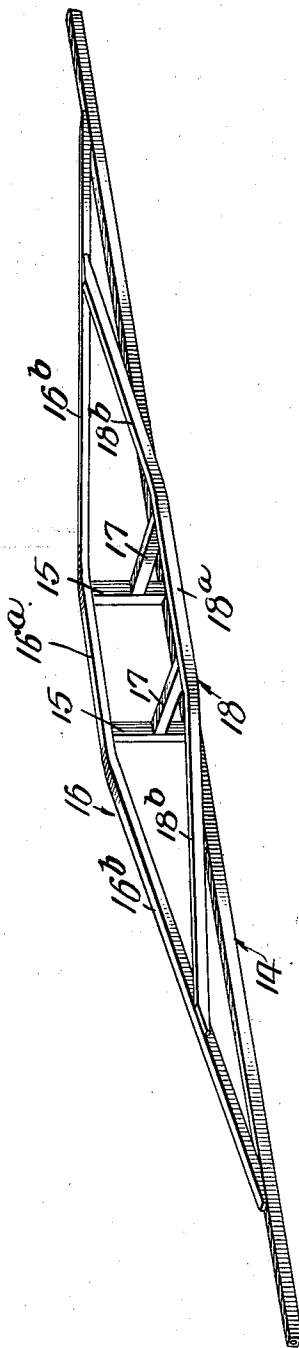


Fig. 4.



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UNITED STATES PATENT OFFICE.

JAMES H. TAYLOR, OF WOODSTOCK, ILLINOIS, ASSIGNOR TO THE OLIVER TYPEWRITER COMPANY, OF CHICAGO, ILLINOIS, A CORPORATION OF ILLINOIS.

PAPER-CARRIAGE FOR TYPE-WRITING MACHINES.

983,581.

Specification of Letters Patent.

Patented Feb. 7, 1911.

Application filed July 11, 1910. Serial No. 571,314.

To all whom it may concern:

Be it known that I, JAMES H. TAYLOR, 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 Paper-Carriages for Type-Writing Machines; 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 an improvement in typewriting machines and particularly to certain novel features of construction for strengthening the paper-carriage.

The invention is of especial advantage in the case of typewriting machines in which the paper-carriage is of considerable length and projects at each side beyond the base of the machine.

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

The invention as shown herein is applied to a machine of the "Oliver" type but is not limited to that type of machine as it may be applied to others as will presently appear.

In the drawings:—Figure 1 is a bottom plan view of a paper-carriage provided with my improvement. Fig. 2 is a rear elevation of the paper-carriage shown in Fig. 1. Fig. 3 is a vertical section through Fig. 2 on the line 3—3 thereof. Fig. 4 is a perspective view of the rear longitudinal member of the paper-carriage.

In that embodiment of my invention illustrated in the drawings,—10 indicates the paper-carriage, as a whole, and 10^a, 10^b, the front and rear guide-bars on which it rides. It comprises end plates 11, 11, a longitudinal front bar 12, and a rear longitudinal member 13. Said longitudinal members extend the full length of the paper-carriage frame and are secured at their ends to the end plates of the same. The front member 12 is of the usual construction. The rear member embraces the following:—14 is a bar which runs the full length of the paper-carriage and is bolted at its ends to the end plates 11, 11. At each side of the middle of said bar are located upright bars or struts 15, 15 which are secured at their lower ends to the bar 14 and at their upper ends to a

long chord 16 having a horizontal portion 16^a at its middle and inclined ends 16^b which extend to points near the ends of the bar 14 to which they are rigidly secured. These parts are secured together in any convenient manner. The bar 14, the struts 15, 15 and the long chord 16, thus constitute a truss located in a vertical plane which resists any tendency to distort the carriage frame in a vertical direction. A similar truss is formed in a horizontal plane by forwardly projecting horizontal struts 17, 17 located in the vertical planes of the struts 15 and secured at their rear ends to said struts 15 and their forward ends to a long chord 18 having a part 18^a parallel to the bar 14 and inclined parts 18^b located each side of said horizontal struts 17, 17, which inclined parts are secured at their ends to the chord 16 at points where the planes of said chords intersect.

By this construction it is possible to make the rear longitudinal frame member of light material, and at the same time secure the required rigidity. Said rear bar of the paper-carriage is braced in two planes at an angle to each other which enables it to resist transverse strains in any direction, since a transverse strain in any plane through said bar may be resolved into two components, one in the plane of one truss and the other in the plane of the other truss. By locating the truss, comprising the struts 17, 17, and the chord 18, forward of the bar 14, it is brought within the limits of the carriage. On account of this location said truss is positioned above the bar 14 so as not to strike the rear guide bar 10^b.

I claim as my invention:

1. In a typewriting machine, a frame for a paper-carriage comprising end plates, a front longitudinal bar, a rear longitudinal bar, said bars being rigidly connected to said end plates, means adapted to brace said rear bar against transverse strains in one plane, and means adapted to brace said rear bar against transverse strains in a plane at an angle to the first plane.

2. In a typewriting machine, a frame for a paper-carriage comprising end plates, a front longitudinal bar, a rear longitudinal bar, said bars being rigidly connected to said end plates, means adapted to brace said rear bar against transverse strains in a horizontal plane, and means adapted to brace said rear

bar against transverse strains in a vertical plane.

3. In a typewriting machine, a frame for a paper-carriage comprising end plates, a front longitudinal bar, a rear longitudinal bar, said bars being rigidly connected to said end plates, a truss member adapted to brace said rear bar against transverse strains in one plane, and a second truss member adapted to brace said bar in a plane at an angle to said first named plane.

4. In a typewriting machine, a frame for a paper-carriage comprising end plates, a front longitudinal bar, a rear longitudinal bar, said bars being rigidly connected to said end plates, a truss member adapted to brace said rear bar against transverse strains in a horizontal plane, and a truss member adapted to brace said bar against transverse strains in a vertical plane.

5. In a typewriting machine, a frame for a paper-carriage comprising end plates, a front longitudinal bar, a rear longitudinal bar, said bars being rigidly connected to said end plates, and means for bracing said rear bar against transverse strains consisting of bars abutting against said longitudinal bar at one end, and a chord against which said bars abut at their opposite ends, said chord having inclined ends and being rigidly connected to said longitudinal bar.

6. In a typewriting machine, in combination with the front and rear guide-bars for the paper-carriage, a paper-carriage frame comprising end plates, a front longitudinal bar, a rear longitudinal bar, said longitudinal bars being rigidly connected to said end plates, and means for bracing said rear longitudinal bar against transverse strains consisting of upright members located in a vertical plane at each side of the middle of said longitudinal bar with their ends abutting against said longitudinal bar, a chord member against which the upper ends of said upright members abut, said chord having inclined ends rigidly secured to said longitudinal bar, a pair of horizontal members abutting at one end against said upright members in a plane above said rear guide-bar, and a second chord member against which the other ends of said horizontal members abut, said second chord member having inclined ends rigidly secured to said first chord member.

In testimony, that I, claim the foregoing as my invention I affix my signature in the presence of two witnesses, this 30th day of June A. D. 1910.

JAMES H. TAYLOR.

Witnesses:

A. J. MULLEN,
B. C. YOUNG.