B. J. DOWD & A. UTZ.

CARRIAGE SUPPORT FOR TYPE WRITING MACHINES.

APPLICATION FILED OCT. 19, 1914.

1,193,526.

Patented Aug. 8, 1916.

2 SHEETS—SHEET 1.

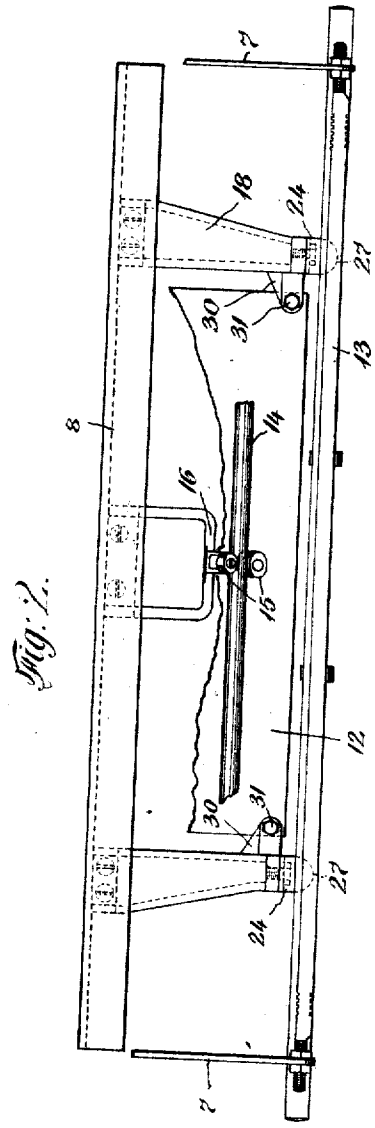


Fig. 2.

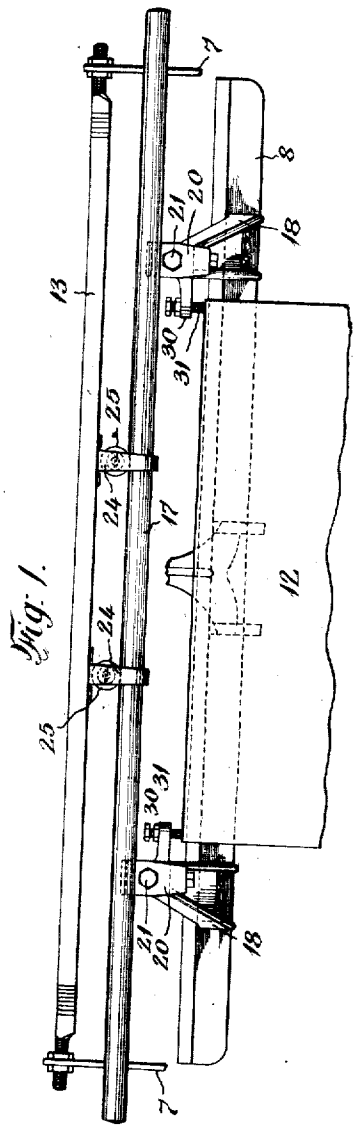


Fig. 1.

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Fig. 3

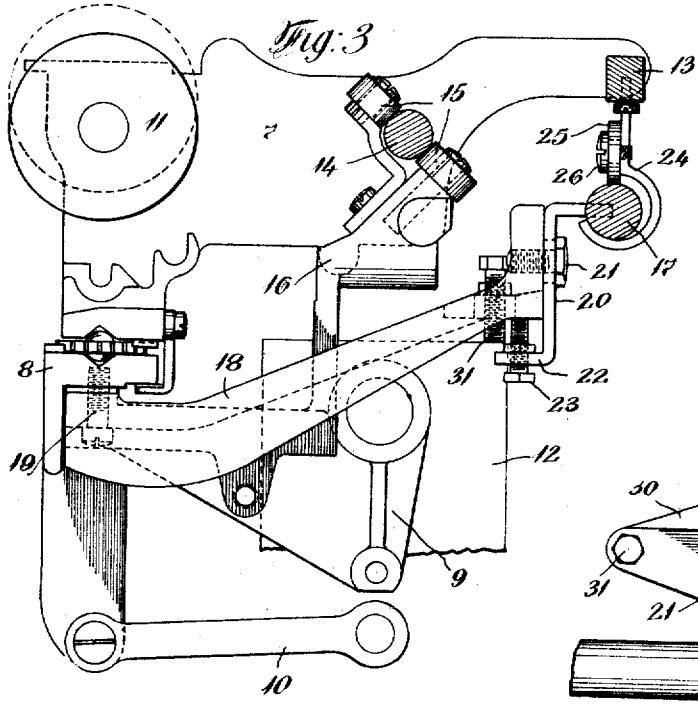


Fig. 4.

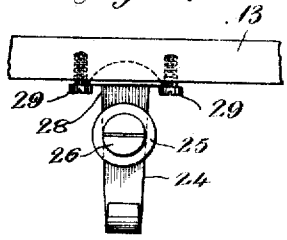
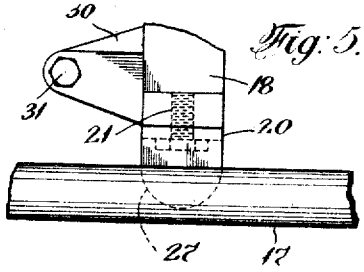


Fig. 5.



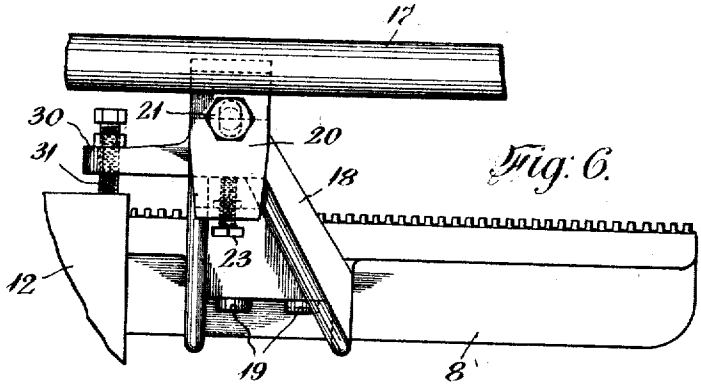


Fig. 6.

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UNITED STATES PATENT OFFICE.

BERNARD J. DOWD AND ANTHONY UTZ, OF HARTFORD, CONNECTICUT, ASSIGNORS TO ROYAL TYPEWRITER COMPANY, INC., OF NEW YORK, N. Y., A CORPORATION OF NEW YORK.

CARRIAGE-SUPPORT FOR TYPE-WRITING MACHINES.

1,193,526. Specification of Letters Patent. Patented Aug. 8, 1916.

Application filed October 19, 1914. Serial No. 867,270.

To all whom it may concern:

Be it known that we, BERNARD J. DOWD and ANTHONY UTZ, residing in Hartford, in the county of Hartford and State of Connecticut, citizens of the United States of America, have jointly invented a certain new and useful Carriage-Support for Type-Writing Machines, of which the following is a specification.

The object of this invention is to provide an outlying support for the carriage of type-writing machines, that is a support located beyond each side of the back central support of the carriage to more steadily hold extra long carriages and prevent tilting when in extreme overhang lateral positions.

The invention, as adapted to be applied to the Royal typewriting machine, comprises a guide rod at the extreme rearward part of the carriage connected by suitable brackets to the lower guide-way and bearing rollers carried by a bar extending the length of the carriage at its rear, as the tabular rack, and arranged to act on the top of this third bearing rail and constitute lateral supports for the carriage at each side of the central support of the other guide rod of the carriage. These bearing rollers moving with the carriage afford perfect supports and prevent all tilting of the carriage when it is in outer or overhang positions.

Referring now to the accompanying drawings to more fully describe the invention: Figure 1 is a rear elevation of the parts of a machine to which the third bearing rod is attached and with which it coacts. Fig. 2, a plan view of the same; Fig. 3, a transverse section on an enlarged scale; Fig. 4 shows one of the bearing rollers and its connection to the tabular rack; Fig. 5 is a plan view of one of the third bearing rod connections and its supporting bracket; and Fig. 6 is a rear elevation of the same.

As shown in the drawings the parts existing in the Royal typewriting machine consist of the end frames 7 of the carriage, the lower guide-way 8, rocking arm 9 and parallel link 10 for operating and controlling the shift frame to which the guide-way 8 is attached, platen 11, part of the main frame 12, tabular rack 13 secured to and extending between the frames 7, the bearing rod 14 also secured to the frames 7 and the rod controlling rollers 15 carried on a bracket 16 extending rearwardly from the carriage shift frame. The third carriage bearing is shown as a rod 17 at the rearward part of the machine extending somewhat in lateral directions beyond the lower ball bearing guide-way 8. It is carried on two bracket arms 18 secured by screws 19 to and projecting rearwardly from the lower guide-way 8. The ends of these arms are vertically faced, and double angle plates 20 are secured to these faces by screws 21, the holes in the plates being vertically elongated to provide for their vertical adjustment. The guide rod 17 has slots or grooves formed in its front side into which fit the ends of the top angle parts of the plates 20, they being securely fastened together by any suitable means. The bottom angle parts 22 of plates 20 extend under the ends of the arms 18, and through them pass screws 23 provided with lock nuts and whose ends butt against the underside of the arms. By these means the rod 17 is set accurately and parallel with the lower ball bearing and guide rod 14 of the carriage and, when set, is securely held by the screws 21.

Depending from the tabular rack 13 are hook-shaped guards and roller carriers 24, the hooked portions of which extend around the rod 17 with their ends a short distance from the undersides of the parts of the angle plates 20 that are secured to said rod. This allows the guards 24, which, of course, move with the carriage, to pass by the angle plates 20 without hindrance. To the vertical portions of the guards 24 are attached bearing rollers 25 fitted to rotate on screw studs 26, the rollers being located to rest on the top side of the guide supporting rod 17, as shown at Fig. 1; and, with the carriage in central position on its guide bearings, these rollers 25 are a considerable distance from each side of a central line, on which the rollers 15 of the bearing rod 14 are located. This construction and arrangement of parts, as will be observed in Fig. 2 (in which the dotted circles 27 represent the end bearing balls of the carriage front bearing) provides a very extended base of support for the carriage far in excess of such base with the carriage provided with front ball bearing and rod 14 and rollers 15 rear bearing only.

The guard and roller carriers 24 are secured to the tabular rack 13 by their upper ends 28 having segments of circles formed

thereon and seated in corresponding grooves or slots formed in the underside of tabular rack 13, and screws 29 fitted in the rack adjacent the ends of the grooves with their heads bearing against the undersides of the segments, as seen in Fig. 4. The guards 24 are securely fastened to the rack, and they may be adjusted on the rack by manipulating the screws 29.

The bracket arms 18 have lateral lugs 30 projecting toward the center of the machine, and through these lugs are vertically fitted screws 31 provided with lock nuts and arranged to rest on the body or main frame 12. These screws act as stops for the low position of the shift frame and carriage and, by reason of their position and proper adjustment, the rear part of the carriage is rigidly supported and the platen steadily held against all vibration and rocking motion in lower case printing.

The bearing bar 17 and its coacting parts are shown applied as an auxiliary bearing to a machine having a bearing bar 14 on the carriage and held between the end frames. The bar 17 may be used as the sole means for supporting the rear part of the carriage in the manner described and it will effectually do so,—the base of the bearing support of the carriage being more extended than that due to the use of the bearing bar 14.

We claim:

1. In a typewriting machine, the combination with a platen carriage of a front guide way, an intermediate guide bearing rod secured to the carriage, a central support therefor fixed relatively to the feeding movement of the carriage, a bar secured to the carriage at the rear part thereof, bearing rollers carried and depending from said bar, and a guide rod beneath said bar upon which the bearing rollers rest fixed relatively to the movement of the carriage.

2. In a typewriting machine, the combination with a platen carriage and a front bearing therefor, of an intermediate carriage bearing and a rear bearing for the carriage comprising a bearing rod at the rear of the machine supported from said front bearing and fixed relatively to the feeding movement of the carriage and two rollers at the rear part of the carriage supported by the carriage frame and adapted to bear on the bearing rod to support the rear part of the carriage.

3. In a typewriting machine, the combination with a platen carriage and a front bearing therefor, of a rear bearing for the carriage comprising a bearing rod at the rear of the machine fixed relatively to the feeding movement of the carriage, bracket arms extending from the lower guide way of the front bearing and to which the rear bearing rod is connected and two rollers at the rear part of the carriage adapted to bear on the bearing rod to support the rear part of the carriage.

4. In a typewriting machine, the combination with a platen carriage and a front bearing therefor, of a rear bearing for the carriage comprising a bearing rod at the rear of the machine fixed relatively to the feeding movement of the carriage, bracket arms extending from the lower guide way of the front bearing, angle plates secured to the bearing rod and vertically adjustably connected to the rear ends of the bracket arms and two rollers at the rear part of the carriage adapted to bear on the bearing rod to support the rear part of the carriage.

5. In a typewriting machine, the combination with a platen carriage and a front bearing therefor, of a rear bearing for the carriage comprising a bearing rod at the rear of the machine fixed relatively to the feeding movement of the carriage, bracket arms extending from the lower guide way of the front bearing, adjustable stops on the arms adapted to bear on the frame of the machine, angle plates secured to the bearing rod and vertically adjustably connected to the rear ends of the bracket arms, and two rollers at the rear part of the carriage adapted to bear on the bearing rod to support the rear part of the carriage.

6. In a typewriting machine, the combination with a platen carriage and a front bearing therefor, of a rear bearing for the carriage comprising a bearing rod at the rear of the machine fixed relatively to the feeding movement of the carriage and supported from the front bearing, a bar connected to the carriage at its upper rear part, guard pieces depending from the bar and partly surrounding the rear bearing rod, and rollers carried on the guard pieces adapted to bear on the upper side of the rear bearing rod.

7. In a typewriting machine, the combination with a platen carriage and a front bearing therefor, of a rear bearing for the carriage comprising a bearing rod at the rear of the machine fixed relatively to the feeding movement of the carriage, a bar connected to the carriage at its upper rear part, guard pieces depending from the bar and partly surrounding the rear bearing rod, and having at their upper ends segments of circles, corresponding grooves formed in the underside of the bar in which the segments are seated, screws with their heads acting under the ends of the segments to hold them in their grooves, and rollers carried on the guard pieces adapted to bear on the upper side of the rear bearing rod.

8. In a typewriting machine, the combination with a platen carriage and a front bearing therefor, of a rear bearing for the carriage comprising a bearing rod at the rear of the machine fixed relatively to the feeding movement of the carriage, bracket arms

extending from the lower guide way of the front bearing and to which the rear bearing rod is connected, a bar connected to the carriage at its upper rear part, guard pieces depending from the bar and partly surrounding the rear bearing rod and rollers carried on the guard pieces adapted to bear on the upper side of the rear bearing rod.

9. In a typewriting machine, the combination with a platen carriage and a front bearing therefor, of a rear bearing for the carriage comprising a bearing rod at the rear of the machine fixed relatively to the feeding movement of the carriage, bracket arms extending from the lower guide way of the front bearing, adjustable stops on the arms adapted to bear on the frame of the machine, angle plates secured to the bearing rod and vertically adjustably connected to the rear ends of the bracket arms, a bar connected to the carriage at its upper rear part, guard pieces depending from the bar and partly surrounding the rear bearing rod and rollers carried on the guard pieces adapted to bear on the upper side of the rear bearing rod.

10. In a typewriting machine, the combination with a platen carriage and a front bearing therefor, of a rear bearing for the carriage comprising a bearing rod at the rear of the machine fixed relatively to the feeding movement of the carriage and supported from said front bearing, a bar connected to the carriage at its upper rear part, rollers resting on the bearing rod and means carrying the rollers and adjustably connected to the carriage bar.

11. A carriage of a typewriting machine provided with three supporting bearings, viz: a vertically movable front bearing held against sidewise movement, a central bearing comprising a rod carried by the carriage and movable vertically and sidewise therewith and a central support for said rod stationary relatively to the feeding movements of the carriage but vertically movable therewith, and a rear bearing comprising a rod vertically movable with the carriage but stationary relatively to the feeding movement of the carriage and two bearings for said rod carried by the carriage and movable vertically and sidewise therewith whereby the carriage is fully supported when in overhanging positions.

12. A carriage for a typewriting machine provided with three supporting bearings, viz: a vertically movable front bearing held against sidewise movement, a central bearing comprising a rod carried by the carriage and movable vertically and sidewise therewith, and a central support for said rod, consisting of an upper and lower roller stationary relatively to the feeding movements of the carriage but vertically movable therewith, and a rear bearing comprising a rod vertically movable with the carriage but stationary relatively to the feeding movement thereof, two bearing rollers for said rod and a bar by which said rollers are carried at the rear of the carriage, the organization being such that the carriage is fully supported when in overhanging positions.

In testimony whereof, we have hereunto subscribed our names.

BERNARD J. DOWD.
ANTHONY UTZ.

Witnesses:
ELLEN MCCARTHY,
F. H. VAN ANSDALL.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."

extending from the lower guide way of the front bearing and to which the rear bearing rod is connected, a bar connected to the carriage at its upper rear part, guard pieces depending from the bar and partly surrounding the rear bearing rod and rollers carried on the guard pieces adapted to bear on the upper side of the rear bearing rod.

9. In a typewriting machine, the combination with a platen carriage and a front bearing therefor, of a rear bearing for the carriage comprising a bearing rod at the rear of the machine fixed relatively to the feeding movement of the carriage, bracket arms extending from the lower guide way of the front bearing, adjustable stops on the arms adapted to bear on the frame of the machine, angle plates secured to the bearing rod and vertically adjustably connected to the rear ends of the bracket arms, a bar connected to the carriage at its upper rear part, guard pieces depending from the bar and partly surrounding the rear bearing rod and rollers carried on the guard pieces adapted to bear on the upper side of the rear bearing rod.

10. In a typewriting machine, the combination with a platen carriage and a front bearing therefor, of a rear bearing for the carriage comprising a bearing rod at the rear of the machine fixed relatively to the feeding movement of the carriage and supported from said front bearing, a bar connected to the carriage at its upper rear part, rollers resting on the bearing rod and means carrying the rollers and adjustably connected to the carriage bar.

11. A carriage of a typewriting machine provided with three supporting bearings, viz: a vertically movable front bearing held against sidewise movement, a central bearing comprising a rod carried by the carriage and movable vertically and sidewise therewith and a central support for said rod stationary relatively to the feeding movements of the carriage but vertically movable therewith, and a rear bearing comprising a rod vertically movable with the carriage but stationary relatively to the feeding movement of the carriage and two bearings for said rod carried by the carriage and movable vertically and sidewise therewith whereby the carriage is fully supported when in overhanging positions.

12. A carriage for a typewriting machine provided with three supporting bearings, viz: a vertically movable front bearing held against sidewise movement, a central bearing comprising a rod carried by the carriage and movable vertically and sidewise therewith, and a central support for said rod, consisting of an upper and lower roller stationary relatively to the feeding movements of the carriage but vertically movable therewith, and a rear bearing comprising a rod vertically movable with the carriage but stationary relatively to the feeding movement thereof, two bearing rollers for said rod and a bar by which said rollers are carried at the rear of the carriage, the organization being such that the carriage is fully supported when in overhanging positions.

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ANTHONY UTZ.

Witnesses:
ELLEN MCCARTHY,
F. H. VAN ANSDALL

Correction in Letters Patent No. 1,193,526

It is hereby certified that in Letters Patent No. 1,193,526, granted August 8, 1916, upon the application of Bernard J. Dowd and Anthony Utz, of Hartford, Connecticut, for an improvement in "Carriage-Supports for Type-Writing Machines," an error appears in the printed specification requiring correction as follows: Page 2, line 40, claim 1, after the word "carried" insert the word *by;* and that the said Letters Patent should be read with this correction therein that the same may conform to the record of the case in the Patent Office

Signed and sealed this 28th day of November, A. D., 1916.

[SEAL.]

F. W. H. CLAY,
Acting Commissioner of Patents.

Cl. 197—69.

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