F. L. SHOLES.

TYPE WRITING MACHINE.

APPLICATION FILED NOV. 21, 1906.

962,169. Patented June 21, 1910.

2 SHEETS—SHEET 1.

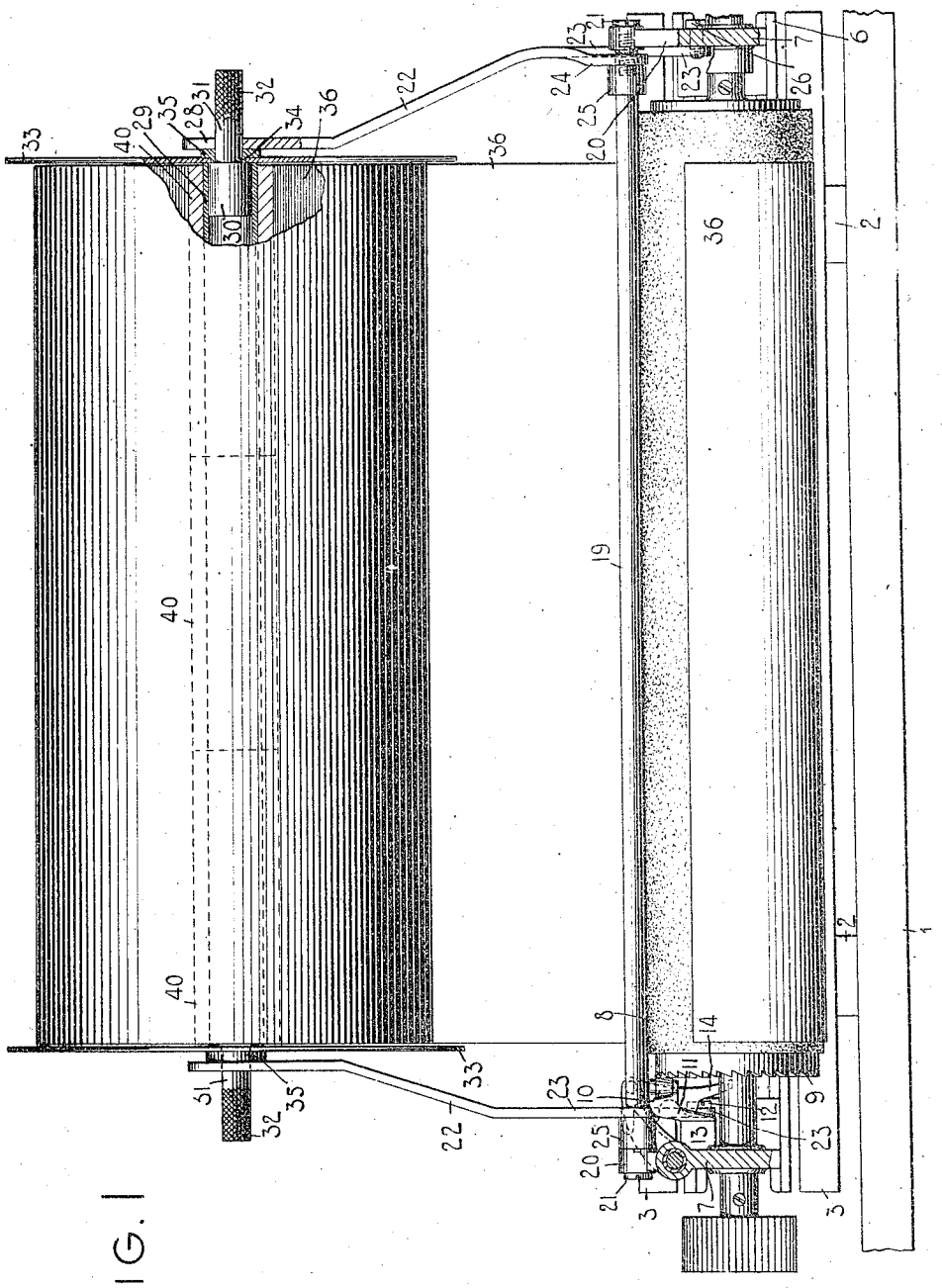

FIG. 1

WITNESSES.

J. B. Reeves.

M. W. Pool

INVENTOR

Frank L. Sholes

By James Talbot

HIS ATTORNEY

F. L. SHOLES.

TYPE WRITING MACHINE.

APPLICATION FILED NOV. 21, 1906.

962,169. Patented June 21, 1910.

2 SHEETS—SHEET 2.

FIG. 3.

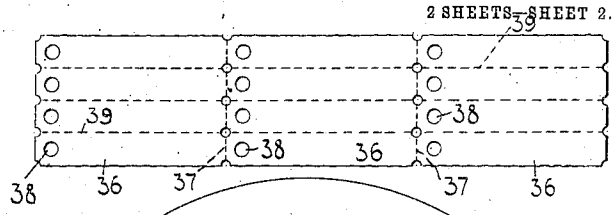

FIG. 4.

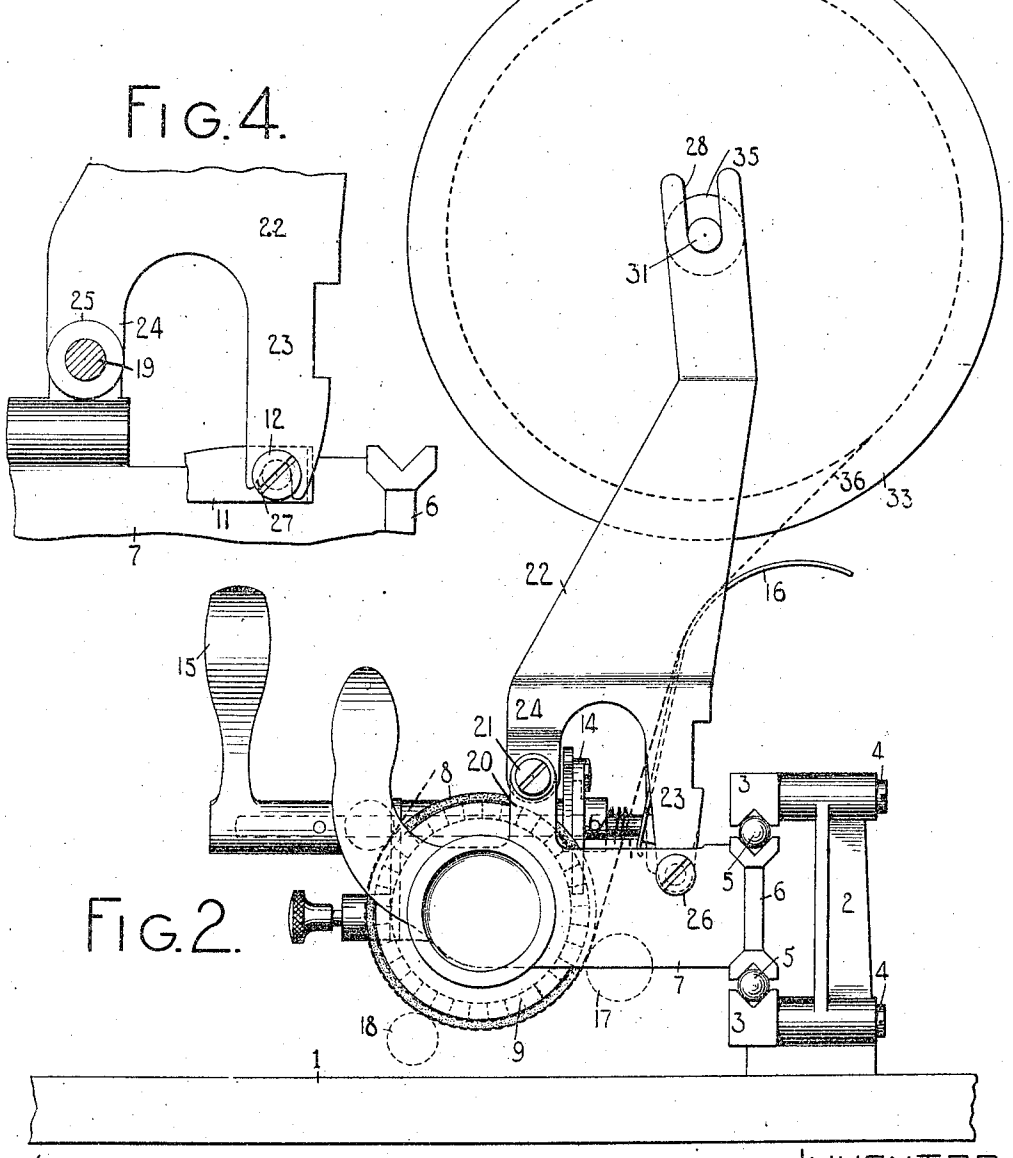

FIG. 2.

WITNESSES.

J. B. Reeves.

M. W. Pool

INVENTOR.

Frank L. Sholes

By Jacob Tebbel

HIS ATTORNEY

UNITED STATES PATENT OFFICE.

FRANK L. SHOLES, OF CHICAGO, ILLINOIS, ASSIGNOR TO THE MONARCH TYPEWRITER COMPANY, OF SYRACUSE, NEW YORK, A CORPORATION OF NEW YORK.

TYPE-WRITING MACHINE.

962,169. Specification of Letters Patent. Patented June 21, 1910.

Application filed November 21, 1906. Serial No. 344,456.

To all whom it may concern:

Be it known that I, FRANK L. SHOLES, citizen of the United States, and resident of Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Type-Writing Machines, of which the following is a specification.

My invention relates more especially to paper supply devices for typewriting machines and has for its main object to provide an improved roll holder and supports therefor.

The invention is particularly well adapted to the Monarch front-strike typewriter and is shown applied to the carriage of that machine but certain features of the invention may be embodied in other forms of writing machines and may be used on the framework or stationary part of such machines as well as on the carriage or movable parts thereof.

To the above and other ends the invention consists in the features of construction, combinations of devices and arrangements of parts hereinafter fully described and particularly pointed out in the claims.

In the drawings, Figure 1 is a fragmentary front elevation showing the upper part of a Monarch typewriter with the carriage thereon and my invention applied to said carriage, parts being sectioned and broken away and parts being omitted for the sake of clearness. Fig. 2 is a side elevation of the parts shown in Fig. 1. Fig. 3 is a plan view on a reduced scale of a tag strip such as may be used in roll form in connection with my improved roll holder. Fig. 4 is an enlarged fragmentary view showing the connection between the left-hand supporting bracket of the roll holder and the platen carrier.

In the drawings, the top plate 1 of the machine has rising from it at the rear, standards 2 to which top and bottom guide rails 3 are fixedly secured by headed screws 4. The guide rails are oppositely grooved to receive anti-friction balls 5 which coöperate with grooves formed at the top and bottom of a rear bar or slide bar 6 of a U-shaped platen frame or carrier, said platen frame comprising, in addition to the rear bar, side bars 7 projecting horizontally forward from the ends of said rear bar. Journaled in the side bars 7 is a platen 8, operatively connected with the left-hand end whereof is a crown-toothed line space ratchet wheel 9. Coöperative with the teeth of the ratchet wheel 9 is a roller detent 10 journaled at the forward end of a spring arm 11, the rear end of said spring arm being secured by a headed screw 12 to a lug 13 projecting inwardly from the rear portion of the left-hand side bar 7 of the platen frame or carrier. The detent 10 coöperates with the ratchet wheel 9 to maintain it, and through it the platen 8, in desired line space position, and said platen is adapted to be turned from one line to another by the usual line spacing devices comprising a pawl 14 and a handle or lever arm 15 by which said pawl is operated. A paper table 16 is arranged at the rear of the platen and receives and guides the work sheet into position to be fed around with said platen by the usual paper feeding devices, said paper feeding devices comprising feed rolls 17 and 18 which are diagrammatically indicated. As the work sheet is fed forwardly and upwardly from the forward feed roll 18, said work sheet is adapted to cooperate with the usual paper fingers (not shown), said paper fingers being adjustably mounted on a supporting rod or bar 19 which bar is arranged longitudinally of the platen above the same and slightly to the rear of its axis. The ends of the bar or rod 19 are supported in lugs or extensions 20 rising from the side bars 7 of the platen frame and said rod or bar is maintained in fixed relation with said platen frame by headed screws 21 which are supported in the ends of said rod.

Referring more especially to my attachments, the roll holder is mounted in supporting brackets 22 made preferably of sheet metal and bifurcated at their lower ends to form downwardly extending arms 23 and 24. The lower portion of the forward arm 24 of each bracket is provided with a lateral inwardly extending collar portion 25 which coöperates with the rod or bar 19, the latter passing through the collar portions of the brackets. The lower end portion of the rear arm 23 of the right-hand bracket 22 is formed with a threaded hole to receive a headed screw 26 which passes through an opening in the right-hand side bar 7 and engages with said threaded hole in the arm 23. The lower end of the rear arm 23 of the left-hand bracket 22 is formed with a slot 27 which coöperates with the screw 12 to assist in holding the left-hand bracket 22

in fixed relation with the platen frame. In securing the left-hand bracket arm in place on the platen frame it is only necessary to loosen the screw 12 without entirely removing it and then to slip the slotted end of the arm 23 over the shank of said screw and between the under side of its head and the spring arm 11. The rod 19 is, of course, removed until the two brackets 22 and 23 are properly positioned after which said rod is replaced so as to pass through the collar portions 25. The rod is then secured in place by its screws 21 and the screws 12 and 26 are screwed into engaging positions. It will be noted that the only change necessary in the ordinary construction of the platen frame or carrier to enable the supporting brackets 22 to be mounted thereon is the provision of the opening in the right-hand side bar 7 through which the securing screw 26 passes. The brackets 22 extend almost straight upward from the platen frame and support the roll holder at their upper ends and this arrangement enables the said brackets to be made of comparatively light material and yet withstand the strains to which they will be subjected. As shown in the front view the upper ends of the brackets 22 are slightly off-set inwardly toward each other, and, as seen from the side, each of said brackets is formed at its upper end portion with a downwardly extending slot 28, the closed lower end of said slot serving as a bearing for the roll holder.

The roll holder comprises a tubular shaft 29, the ends of which are closed by blocks or plugs 30, said plugs being suitably secured in place, as by being sweated in. The plugs project outwardly from the ends of the tubular shaft and the projecting parts are reduced as indicated at 31, the reduced parts resting in the slots 28 and serving as bearings for the tubular shaft 29. The outer end portions of the parts 31 are knurled as shown at 32 and afford convenient means for manually turning the shaft. A disk-like flange 33 is mounted on each of the reduced bearing parts 31, said flange being formed with a central opening which receives a bushing 34, the latter being driven into the opening in the flange or otherwise suitably secured therein. The bushings 34 have heads 35 arranged outside the flanges 33 and each of said bushings is provided with a central bearing opening which coöperates with the bearings 31. The openings in the bushings are large enough to permit the flanges 33 to be readily slipped on and off the bearings 31. Normally, as will be understood from a consideration of Fig. 1, the inner faces of the flanges 33 contact with the ends of the tubular shaft 29 and with the shoulders formed by the junction of the blocks 30 with the reduced bearing parts 31. The parts are proportioned so that the distance between the outer faces of the heads 35 of the bushings is slightly less than the distances between the inner faces of the upper ends of the brackets 22 so that the assembled roll holder, comprising the tubular shaft and flanges 33, may be readily entered in or removed from the slots 28 at the upper ends of said brackets 22.

The roll holder receives a roll of paper or other material to be written on, and this material may, of course, be of any desired sort. I have illustrated in detail in Fig. 3 of the drawings a roll of tags to which my invention is especially well adapted. Widthwise the tag roll comprises three tags 36 arranged end to end and adapted to be separated along the dotted lines 37. Each tag is provided with a hole 38 near one end by which the tag, after being written, is adapted to be hung on a hook in a car record apparatus in which this style of work sheet is employed. The tags are adapted to be separated longitudinally along the dotted lines 39. It will be understood that the roll of tags when wound up and before being written and separated, comprises a practically continuous web or roll of material. The holes 38 and the lines of separation 37 and 39 have been omitted for convenience from the showing in Fig. 1. The roll of tags is wound upon wooden core sections 40 which are arranged end to end, one core section for each width of tags. Of course, it will be understood, that while I have illustrated a tag roll comprising three tags widthwise yet, nevertheless, tag rolls only one tag wide may be employed, or tag rolls of any other width, the roll holder being made of a width corresponding with the tag roll employed. In arranging the tag roll in place, the roll holder is removed from the supporting brackets and one of the flanges 33 is slipped off, after which the tubular shaft 29 is passed through the wooden core sections 40, the flange 33 is replaced and the roll holder carrying the roll is mounted in place on the supporting brackets 22. The free end of the tag roll is passed downwardly from behind said roll as shown in Fig. 2 and thence over the paper table and into the machine where it is written upon in the usual way.

It will be seen that the roll holder is disposed quite close to the platen and that the work sheet or web of tags is fed into the machine at a convenient angle. The tags are comparatively thick and the tag roll correspondingly weighty, and heretofore it has been customary to support rolls of this kind on a stationary part of the machine, and owing to the stiffness of the tag sheet and the relative endwise movement between the tag roll and the carriage as it is moved back and forth, some special arrangement or device

has heretofore been employed to avoid the twisting of the tag sheet and the obstruction of carriage movement. By mounting the tag roll on the carriage itself, I am enabled to maintain the roll holder always in the same relation with the carriage, and, aside from the weight of the tag roll itself, add very little to the weight of the movable parts. This last fact is due to the advantages of my construction which, while sufficiently strong and rigid, is nevertheless, comparatively light in weight. Furthermore, it will be seen that the roll is about centered over the guides 3 and 6 and the antifriction rollers 5 by which the carriage is supported in its travel and that the weight of the roll does not therefore materially affect the carriage in its travel. It will also be seen that the roll holder is in the nature of an attachment which may be readily attached to or detached from existing styles of typewriting machines without changing the structural features of such machines or the operation thereof.

Various changes may be made without departing from the spirit and scope of my invention.

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

1. In a typewriting machine, the combination of a platen frame supporting a platen and comprising side bars connected by a detachable rod or bar; supporting brackets each comprising two downwardly extending arms, one of said arms being detachably secured in a fixed relation with the associate side bar of the platen frame and the other of said arms being perforated to coöperate with said detachable rod or bar; and a roll holder mounted on said supporting brackets.

2. In a typewriting machine, the combination of a platen frame supporting a platen and comprising side bars connected by a detachable rod or bar; supporting brackets each comprising a pair of downwardly extending arms, one of said arms being screwed to the associate side bar of the platen frame and the other of said arms terminating in a collar which receives said detachable rod or bar; and a roll holder supported on said brackets.

3. In a typewriting machine, the combination of a U-shaped platen frame comprising forwardly extending horizontally disposed side bars on which the platen is journaled, said side bar being connected by a detachable rod or bar; supporting brackets removably secured to the side bars of the platen frame and rising in a substantially vertical direction therefrom, said supporting brackets having arms screwed to the side bar of the platen frame and having other arms perforated to coöperate with said detachable rod or bar; and a roll holder supported on said brackets and arranged over the platen and in proximity thereto.

4. In a typewriting machine, the combination of a platen frame or carrier on which the platen is journaled; supporting brackets detachably secured to said platen frame; and a roll holder carried by said brackets, said roll holder comprising a tubular shaft, plugs in said shaft having bearing portions coöperating with said brackets and flanges removably mounted on said bearing portions.

5. In a typewriting machine, the combination of a platen frame or carrier; supporting brackets or plates removably secured to said platen frame and slotted at their upper ends; and a roll holder mounted in the slots of said brackets, said roll holder comprising a tubular shaft, end plugs in said shaft, said end plugs having reduced bearing portions coöperating with the slots in said brackets, and detachable flanges mounted on the bearing portions of said plugs.

6. In a typewriting machine, the combination of a platen frame or carrier; supporting brackets or plates removably secured to said platen frame and slotted at their upper ends; and a roll holder mounted in the slots of said brackets, said roll holder comprising a tubular shaft, end plugs in said shaft, said end plugs having reduced bearing portions coöperating with the slots in said brackets, and disk-like flanges provided with headed bushings, said bushings being perforated to coöperate with the bearing portions of said end plugs.

7. In a typewriting machine, the combination of a platen frame supporting a platen and comprising side bars connected by a detachable rod or bar; supporting brackets each comprising two downwardly extending arms, one of said arms being detachably secured in a fixed relation with the associate side bar of the platen frame, and the other of said arms being perforated to coöperate with said detachable rod or bar; and a roll holder mounted on said supporting brackets, said roll holder comprising a tubular shaft, end plugs therein having bearing portions coöperating with bearings in said brackets, and detachable flanges on said end portions.

Signed at Chicago, in the county of Cook, and State of Illinois this sixteenth day of November A. D. 1906.

FRANK L. SHOLES.

Witnesses:
ALFRED C. GILMORE,
FRED. C. COLBY.