Aug. 25, 1925. 1,551,516

J. McGOVERN

TYPEWRITING MACHINE SUPPORT

Filed Aug. 18, 1920

Fig. 1

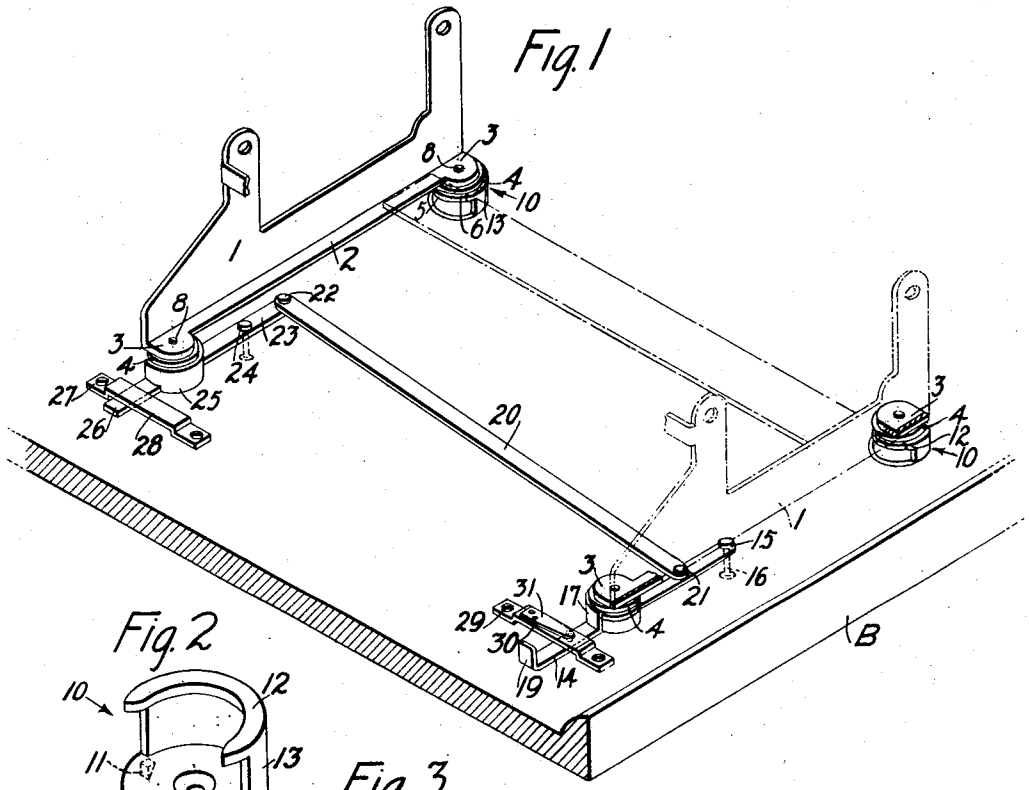


Fig. 2

Fig. 3

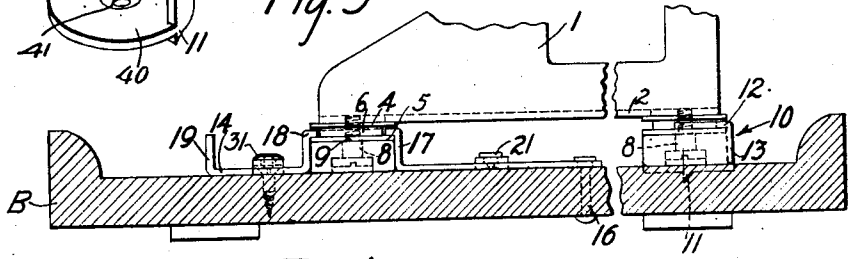


Fig. 6

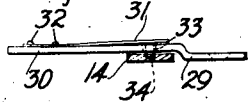
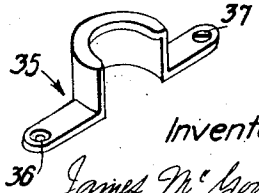


Fig. 4

Fig. 5



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Patented Aug. 25, 1925. 1,551,516

UNITED STATES PATENT OFFICE.

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TYPEWRITING-MACHINE SUPPORT.

Application filed August 18, 1920. Serial No. 404,357.

To all whom it may concern:

Be it known that I, JAMES McGOVERN, a citizen of the United States, residing in Brooklyn Borough, in the county of Kings, city and State of New York, have invented certain new and useful Improvements in Typewriting-Machine Supports, of which the following is a specification.

This invention relates to more efficient means for attaching and detaching a typewriter from the base-board, and is herein illustrated in connection with the Underwood standard portable typewriter, since the necessity for fastening and unfastening a machine of this type occurs frequently.

A feature of one form of this invention is the provision of a device for locking a typewriter to a base-board, which can be released simply by the movement of a single lever actuated by a finger-piece.

Another feature is the provision of a simple and efficient clamping device to fasten the feet of a typewriter to a base-board. According to the present invention, in the embodiment thereof herein disclosed each of the four feet upon which the typewriter usually rests is provided with a peripherally-grooved disk or washer. The base is provided with four receptacles or cups, each of which has a flange adapted to be inserted within the groove in the corresponding foot-disk, to lock the machine in position.

Other features and advantages will hereinafter appear.

In the accompanying drawings,

Figure 1 is a perspective view, showing the device in locking engagement with the feet of the machine, the inner side members of which are partly shown.

Figure 2 is an enlarged perspective of one of the rear cups.

Figure 3 is an end view of the device in Figure 1, the base-board being sectioned.

Figure 4 is an enlarged perspective of the right forward cup, showing the locking mechanism.

Figure 5 is a perspective of a modified form of cup.

Figure 6 is a cross-section of the spring detent in locking engagement with the operating lever.

In the portable typewriter referred to above, side members 1 adjoin the side members of the outer frame (not shown), and are provided at their lower edges with flanges 2, formed with enlargements 3 at their ends. To these enlargements or lips 3 are generally fastened the rubber or felt plugs 7 to form feet upon which the machine rests. In the present invention, however, there is inserted between each plug and each lip 3 a disk or washer to form a part of the foot and having a circumferential groove 6 centrally disposed on its outer periphery, thus forming upper and lower flanges 4, 5. The plugs and disks are fastened to the lips by means of a screw 8, having a shoulder 9 to limit its inward travel, and thus fix the distance between the head of the screw and the washer, as well as to clamp the grooved disk against the lip 3.

The fastening device or locking device is mounted upon the base-board B, and comprises two rear and two forward cups. The rear cups 10 each have a base-plate 40, apertured at 41 for the reception of an attaching screw, prongs 11 being formed on the base-plate for pressing into the board to hold the cup in position. Upon the base-plates are semi-cylindrical walls 13, provided at the top with semi-circular, horizontal flanges 12, adapted to co-operate with the grooves 6 of the disks on the machine. When the flanges 12 enter the grooves 6, they engage over the offset or shoulder formed by the upper side of the lower flange 5, and hold the rear part of the machine firmly down upon the base-board B. The semi-cylindrical walls 13 of the cups embrace the parts 5 and 7 of the rear feet, engaging partly around these feet at the rear and laterally. The semi-circular walls 13 face the rear edge of the board, while the cut-away or open portions of the cups face the forward edge and are adapted to allow the rear feet of the machine to be inserted in the cups from the front, by pushing the machine rearwardly on the base-board B, and to be withdrawn from the cups by pulling the machine forwardly.

The forward cups form portions of movable levers 14 and 23. Lever 14 is pivoted at 15 by means of a bolt 16 passing through the baseboard, and carries intermediate its length a cup composed of a semi-cylindrical wall 17 and a horizontal top flange 18. The extreme forward end of lever 14 carries a finger-piece 19. To the lever 14, inter-

mediate its length, is pivoted a link 20 at 21, said link being pivoted at its other end at 22 to the lever 23. Lever 23 is pivoted intermediate its length at 24, and carries a cup having a semi-cylindrical wall 25 provided with a semi-circular flange, similar to the cup carried by lever 14. These forward cups have their cut-away portions faced outwardly, while their semi-cylindrical walls or backs are turned toward each other. By means of this arrangement and linkage, it will be seen that as end 19 of lever 14 moves from left to right, that is, from open to closed position, end 26 of the lever 23 moves from right to left, also from open to closed position. In other words, movement of the finger-piece 19 will effect a simultaneous movement of the lever end 26, so that both cups will engage or disengage the front feet of the machine at the same time. The semi-cylindrical walls of the forward cups engage partly around or embrace the front feet of the machine, the top flanges of these cups entering the grooves 6 and engaging over the offset or shoulder formed by the upper side of the lower flange 5, so as thereby to hold the front of the machine firmly down upon the base-board B, and the semi-cylindrical walls of these cups prevent sliding movement of the machine in any direction.

Fixed guides 27 and 29 are provided for the ends of levers 23 and 14, respectively, the guides having raised portions 28 and 30 under which the ends of the levers may oscillate. One of the guides, preferably adjacent the finger-piece 19, is provided with a latching device in the form of a spring detent 31, lying flat upon elevated portion 30 of guide 29 to which it is fastened at 32. A pin 33 having a rounded lower end is rigidly attached to the spring, and projects through portion 30. When lever 14 is shifted to closed or locking position, it strikes the rounded end of pin 33, lifting the pin against the action of the spring. The pin lodges in a depression 34 in bar 14, and is held in said position by the spring 31.

In Figure 5 is shown a modified cup device adapted for use especially where a more rigid mounting is desired. The device is in the form of a cup-carrying lever 35, similar to lever 14, but is provided with openings 36 through which pass screws 37. One end of the lever is pivoted as at 15 or 24, and the other end is swung into locking engagement with the disk, and fixed in position by a screw. In this case the spring detent is, of course, unnecessary. Since the mounting is more permanent in its nature, the linkage may be dispensed with, each of the two forward feet being fixed in position separately. It is apparent also that the cup-carrying levers or locking members 35 may be used on all four feet, the rear cups being then held in place by screws 37 instead of by central screws and prongs 11. If the linkage and levers are retained, as shown in Figure 1, the rear cups alone may be supplanted by the members 35.

Briefly, the operation of the device is as follows: All four feet of the machine being provided with the grooved disks, the two rear feet are inserted in the rear cups (which may be of the type 10 or type 35), so that the flanges of the cups project into the grooves of the disks. Lever 14, being originally toward the left, or open, position, is moved to the right until pin 33 lodges in depression 34, the flanges of the forward cups being forced into the grooves of the disks. If the levers 14 and 23 are replaced by levers 35, the spring detent is unnecessary, and if the linkage is dispensed with, each lever 35 is fixed in position separately.

Variations may be resorted to within the scope of the invention, and portions of the improvements may be used without others.

Having thus described my invention, I claim:

1. The combination with a typewriter frame, of depending feet on said frame, each comprising a disk grooved circumferentially on its periphery, and a base-board provided with cups, one for each foot, said cups each having a vertical semi-cylindrical surface and a horizontal flange adapted to co-operate with the grooves of said disks, two adjacent cups being fixed in position, and the other two being movable to allow insertion and withdrawal of the typewriter.

2. The combination with a typewriter frame, of depending feet on said frame, each comprising a disk grooved circumferentially on its periphery, a base-board provided with two fixed adjacent cups, each having a vertical semi-cylindrical surface and a horizontal flange adapted to co-operate with the grooves of said disks, and two levers pivoted on said board each carrying intermediate its length a cup similar to the fixed cups, each cup having a vertical semi-cylindrical surface and a horizontal flange, said levers being adapted to be swung, so that the flanges of the cups on said levers are brought into engagement with the grooves in the disks on the two remaining feet of the typewriter to lock the typewriter to the base-board.

3. The combination with a typewriter frame, of depending feet on said frame, each comprising a disk grooved circumferentially on its periphery, a base-board provided with two fixed adjacent cups, each having a vertical semi-cylindrical wall and a horizontal flange adapted to co-operate with the grooves of said disks, two levers pivoted on said board, each carrying intermediate its length

a cup similar to the fixed cups, each cup having a vertical semi-cylindrical surface and a horizontal flange, said levers being adapted to be swung, so that the flanges of the cups on said levers are brought into engagement with the grooves in the disks on the two remaining feet of the typewriter, and a linkage between said levers whereby movement of one produces a simultaneous movement of the other to lock or release the typerwriter feet.

4. The combination with a typewriter frame, of depending feet on said frame, each comprising a disk grooved circumferentially on its periphery, a base-board provided with two fixed adjacent cups, each having a vertical semi-cylindrical wall and a horizontal flange adapted to co-operate with the grooves of said disks, an operating lever pivoted at its end on said base-board, a second lever pivoted on said board intermediate its length, and a link pivoted at one end on said operating lever intermediate the length thereof, and pivoted at its other end on said second lever at the end thereof, each of said levers carrying intermediate its length a cup similar to the fixed cups, each cup having a vertical semi-cylindrical surface and a horizontal flange, the flanges of the cups on said levers being adapted to be brought into engagement with the grooves of said disks upon movement of said operating lever acting through the aforementioned linkage to produce a simultaneous movement of both cups to lock or release the feet of the typewriter.

5. The combination with a typewriter frame, of depending feet on said frame, each comprising a disk grooved circumferentially on its periphery, a base-board provided with two fixed adjacent cups, each having a vertical semi-cylindrical wall and a horizontal flange adapted to co-operate with the grooves of said disks, an operating lever pivoted at its end on said base-board, a second lever pivoted on said board intermediate its length, a link pivoted at one end on said operating lever intermediate the length thereof, and pivoted at its other end on said second lever at the end thereof, each of said levers carrying intermediate its length a cup similar to the fixed cups, each cup having a vertical semi-cylindrical surface and a horizontal flange, the flanges of the cups on said levers being adapted to be brought into engagement with the grooves of said disks upon movement of said operating lever acting through the aforementioned linkage to produce a simultaneous movement of both cups to lock or release the feet of the typewriter, and means for holding the operating lever in locking position.

6. The combination with a typewriter frame, of depending feet on said frame, each comprising a disk grooved circumferentially on its periphery, a base-board provided with two fixed adjacent cups, each having a vertical semi-cylindrical wall and a horizontal flange adapted to co-operate with the grooves of said disks, an operating lever pivoted at its end on said base-board, a second lever pivoted on said board intermediate its length, a link pivoted at one end on said operating lever intermediate the length thereof, and pivoted at its other end on said second lever at the end thereof, each of said levers carrying intermediate its length a cup similar to the fixed cups, each cup having a vertical semi-cylindrical surface and a horizontal flange, the flanges of the cups on said levers being adapted to be brought into engagement with the grooves of said disks upon movement of said operating lever acting through the aforementioned linkage to produce a simultaneous movement of both cups to lock or release the feet of the typewriter, a guide for the end of each of said levers, spring means on the guide of the operating lever, said operating lever having a depression on its surface, and a pin depending from said spring means and co-operating with said depression to lock the operating lever in position.

7. The combination with a typewriter frame having depending feet, of two adjacent feet, each comprising a disk grooved circumferentially on its periphery, a base-board, two levers pivoted on said base-board, each carrying intermediate its length a cup having a vertical semi-cylindrical wall and a horizontal flange, each flange being adapted to engage a groove of one of said disks, and a linkage between said levers whereby movement of one produces a simultaneous movement of the other to lock or release the typewriter feet.

8. The combination with a typewriter frame having depending feet, or two adjacent feet, each comprising a disk grooved circumferentially on its periphery, a base-board, an operating lever pivoted at its end on said base-board, a second lever pivoted on said board intermediate its length, and a link pivoted at one end on said operating lever intermediate the length thereof, and pivoted at its other end on said second lever at the end thereof, each of said levers carrying intermediate its length a cup, each cup having a vertical semi-cylindrical surface and a horizontal flange, the flanges of said cups being adapted to be brought into engagement with said disks upon movement of said operating lever acting through the aforementioned linkage to produce a simultaneous movement of both cups to lock or release the feet of the typewriter.

9. The combination with a typewriter frame having depending feet, of two adja-

cent feet, each comprising a disk grooved circumferentially on its periphery, a base-board, an operating lever pivoted at its end on said base-board, a second lever pivoted on said board intermediate its length, a link pivoted at one end on said operating lever intermediate the length thereof, and pivoted at its other end on said second lever at the end thereof, each of said levers carrying intermediate its length a cup, each cup having a vertical semi-cylindrical surface and a horizontal flange, the flanges of said cups being adapted to be brought into engagement with said disks upon movement of said operating lever acting through the aforementioned linkage to produce a simultaneous movement of both cups to lock or release the feet of the typewriter, and means for holding the operating lever in locking position.

10. The combination with a typewriter frame having depending feet, of two adjacent feet, each comprising a disk grooved circumferentially on its periphery, a base-board, an operating lever pivoted at its end on said base-board, a second lever pivoted on said board intermediate its length, a link pivoted at one end of said operating lever intermediate the length thereof, and pivoted at its other end on said second lever at the end thereof, each of said levers carrying intermediate its length a cup, each cup having a vertical semi-cylindrical surface and a horizontal flange, the flanges of said cups being adapted to be brought into engagement with said disks upon movement of said operating lever acting through the aforementioned linkage to produce a simultaneous movement of both cups to lock or release the feet of the typewriter, guides for the ends of said levers, spring means on the guide of the operating lever, said operating lever having a depression on its surface, and a pin depending from said spring means and co-operating with said depression to lock the operating lever in position.

11. The combination of a typewriting machine having a cushion-foot, a baseboard on which said foot rests, said foot having a recessed cap, a locking piece mounted on said baseboard and engageable with the recess in said cap to hold the machine against lifting, and means for moving said locking piece into said recess.

12. A locking device for the leg of a typewriter comprising a disk on said leg, said disk being grooved circumferentially on its periphery and centrally thereof to form two flanges, one on either side of the groove, a base-board, and a cup mounted upon said board for lateral movement and having a vertical wall and a horizontal flange adapted to co-operate with the groove in said disk and held against vertical movement by the upper and lower flanges of said disk, said vertical wall cut out laterally to permit the lateral movement of the cup.

13. A locking device for the leg of a typewriter comprising a disk on said leg, a base-board, and a cup mounted on said board for lateral movement and having a horizontal flange to catch upon said disk, said cup cut away on one side to permit lateral movement away from the leg, said cup having laterally-disposed flanges adapted to rest on said board for fastening said cup to said board.

14. In combination, a baseboard, a typewriting machine having four cushioned legs resting thereon, two open-sided cups embracing two of said legs and co-operating with the latter to retain them on said baseboard, open-sided cups embracing the other legs, and means on said baseboard movable beneath said machine for simultaneously retracting the first-named cups from the adjacent legs.

15. The combination with a base-board and a typewriter having feet to rest thereon, of means to lock all of the feet of the typewriter to the base-board, and a single manually-operable device for operating the locking means concomitantly.

16. The combination with a typewriter and a base-board, of a plurality of pivoted devices for locking the typewriter to the base-board at a plurality of spaced locations, and a single manually-operable linkage interconnecting said plurality of devices for concomitantly releasing the typewriter from the baseboard or locking it thereto at all of said locations.

17. Means for locking the foot of a typewriter to a base-board, comprising a hook adapted to engage partly around and partly over the foot, the foot being shaped to permit such engagement, said hook being open at one side to provide for locking and unlocking movement, a lever pivoted on the base-board and carrying said hook for swinging it into or out of locking engagement with the foot, and means for detaining said hook at the locking position.

18. The combination with a base-board and a typewriter having feet to rest thereon, of a plurality of releasable locking members movably mounted on the base-board for engagement with a corresponding plurality of the feet of the typewriter in such manner as to prevent upward movement of these typewriter feet away from the base-board, these feet being shaped to permit such engagement, said members being also engageable with these feet to prevent sliding movements of the typewriter on the base-board, said locking members being constructed and arranged to be moved laterally into or out of locking engagement with the feet of the typewriter, and connections between said locking members for moving

them concomitantly into or out of locking engagement with the feet.

19. The combination with a base-board and a typewriter having feet to rest thereon, of a pair of releasable locking members movably mounted on the base-board and engageable with a corresponding pair of the feet of the typewriter to prevent upward movement of these typewriter feet away from the base-board, these feet being shaped to permit such engagement, said members being also engageable with these feet to prevent sliding movements of the typewriter on the base-board, said locking members being constructed and arranged to be moved laterally in opposite directions into or out of locking engagement with the feet of the typewriter, a pair of manually-operable substantially parallel levers pivoted on the base-board and each carrying one of said locking members for swinging said member into or out of locking engagement with the foot, and releasable means for detaining said levers at the locking position.

20. The combination with a base-board and a typewriter having feet to rest thereon, of a pair of releasable locking members movably mounted on the base-board and engageable with a corresponding pair of the feet of the typewriter to prevent upward movement of these typewriter feet away from the base-board, these feet being shaped to permit such engagement, said members being also engageable with these feet to prevent sliding movements of the typewriter on the base-board, said locking members being constructed and arranged to be moved laterally in opposite directions into or out of locking engagement with the feet of the typewriter, a pair of substantally parallel levers pivoted on the base-board and each carrying one of said locking members for swinging said member into or out of locking engagement with the foot, a link connecting said levers, for imparting concomitant locking or unlocking movement to said levers, whereby the manual actuation of one of said levers will actuate both of them, and a releasable latching device for detaining the locking members at the locking position.

21. The combination of a baseboard, a typewriter having four legs engaging said baseboard, a pair of retainers secured on said baseboard and having lateral openings into which two of said legs project, the latter legs being held against lifting in their retainers, another pair of retainers movable relatively to the other two legs and engaging them at opposite points respectively, to restrain movement of the latter in opposite directions, the movable retainers also preventing the first-named legs from moving out of said lateral openings, and a connecting bar extending movably under said typewriter and operated to actuate said movable retainers concomitantly.

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