Dec. 8, 1925. 1,564,758

M. C. CRAWLEY

TYPEWRITING MACHINE CUSHIONING FOOT

Filed July 25, 1922

Fig. 1.

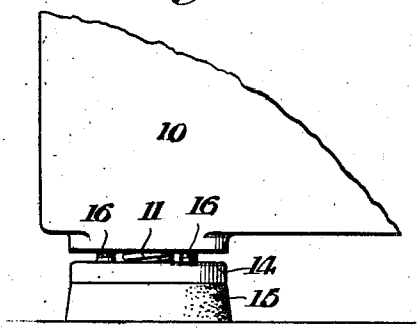


Fig. 2.

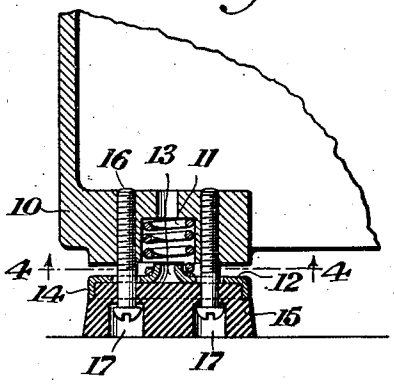


Fig. 3.

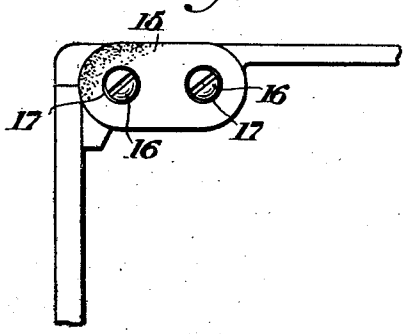


Fig. 4.

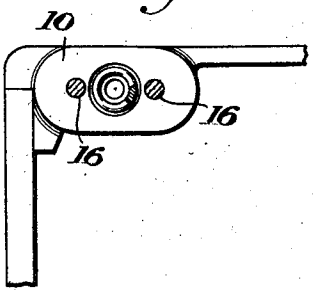
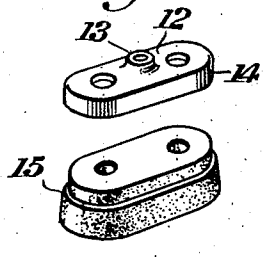


Fig. 5.



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UNITED STATES PATENT OFFICE.

MANSFIELD C. CRAWLEY, OF GROTON, NEW YORK, ASSIGNOR TO ADDOGRAPH COMPANY, OF LOS ANGELES, CALIFORNIA, A CORPORATION OF CALIFORNIA.

TYPEWRITING-MACHINE-CUSHIONING FOOT.

Application filed July 25, 1922. Serial No. 577,363.

To all whom it may concern:

Be it known that I, MANSFIELD C. CRAWLEY, a citizen of the United States, and resident of Groton, in the county of Tompkins and State of New York, have invented certain new and useful Improvements in Typewriting-Machine-Cushioning Feet (case No. 25), of which the following is a specification.

This invention has special reference to typewriting machines in that it is especially efficacious, when used on those machines, in destroying the vibrations and noise resulting from the operation of the machine; but it will be understood that the invention is applicable to other machines in which it is desirable to accomplish the same purpose.

In the drawing annexed, Fig. 1 is a side elevation of one corner of a typewriting machine frame having one of my cushion feet attached thereto;

Fig. 2 is a vertical sectional view of the same;

Fig. 3 is a bottom view of the same;

Fig. 4 is a sectional view on the line 4—4 of Fig. 2, looking upward; and

Fig. 5 is a perspective view of the rubber pad and its cap plate, the two parts being separated for better illustration.

Referring to the various parts by reference characters, 10 designates a part of a typewriting machine frame, the under side of which is provided with a cylindrical pocket, up into which extends the upper end of a coil spring 11. The lower end of this coil spring presses against a cap plate 12 having a central upstanding circular lug 13 which fits within the lower end of the spring and tends to center the same with reference to the aforesaid cylindrical pocket in the machine frame.

This cap plate has a marginal, downwardly-turned flange 14 which forms a cup-like receptacle for a soft rubber pad block 15, the upper end of this pad block fitting tightly within the flange 14 and abutting against the under side of the body of the cap plate. At each side of the central lug 13 the cap plate is provided with a hole, and the rubber pad is provided with a registering hole, and through these registering holes is passed upwardly a screw 16 whose upper end is tapped into the machine frame at a point closely adjacent to the spring-pocket, the lower end of the screw being provided with a head which is housed in a pocket 17 formed in the under side of the rubber pad, said head engaging the bottom surface of the pocket so as to thereby prevent the pad and its cap plate from being pushed off the end of the screw by the action of the spring 11. It will be observed that the pressure of the spring 11 against the cap plate forces the pad against the heads of the screws, these heads serving, therefore, to restrict the downward limited movement of the pad. These two screws also serve to prevent the pad from having a rotative action, thereby insuring the centering of the lug 13 with reference to the spring-pocket in the frame. The pockets 17 are made sufficiently deep to permit a considerable compression of the pad and spring without bringing the heads of the screws into contact with the support on which the machine rests.

In actual tests I have found that the use of a metallic coil spring in combination with a support-engaging rubber pad is very efficacious in dissipating the usual vibrations and sounds produced by the operation of a typewriting machine, the rubber pad serving to almost completely dissipate whatever sounds and noises may be transmitted through the spring to the cap plate of the pad. It will be observed also that by the use of a metallic coil spring to take up what might be called the primary vibrations, deterioration of the rubber pad (which, of course, is inevitable) will not materially affect the efficiency of my device as a sound deadener. It will be observed that the tension of the spring 11 may be readily adjusted by adjusting the screws 16 in the frame. It will be observed also that it is desirable that the screw holes in the cap plate 12 shall be slightly larger than the screws, in order to avoid a scraping contact therewith, and further that the screw holes in the pad shall be slightly smaller than the screws so that the pad will firmly grasp the screws and thus avoid lateral oscillations of the machine frame, except such as result from yielding of the pad.

The length of screws 16 and spring 11, and the strength of said spring, are such that the lower edge of the frame is normally yieldably maintained well above the top of cap plate 12, as shown in Figs. 1 and 2. This permits considerable compression of the spring without the frame striking the

cap plate, whereby violent shocks in handling or transportation of the machine will be absorbed and the typewriter mechanism protected against injury.

What I claim is:

1. In a typewriting machine, in combination, a main frame having a downwardly facing recess therein and a plurality of vertical threaded passages adjacent said recess, a plurality of vertically disposed screws having their upper ends screwed into said threaded passages, a rubber supporting foot having vertical passages through which the shanks of the screws extend and recesses in its lower face in which the heads of the screws are housed, said recesses being substantially deeper than the thickness of the screw heads and the upper walls of the recesses forming cushion abutments adapted to be engaged by the screw heads to limit upward movement of the frame relatively to the foot, a metal cap attached to the upper end of the foot having a central projection in register with the recess in said frame and apertures adjacent said projection through which the screw shanks extend, and an upright coiled spring having its upper end seated in the recess in the frame and its lower end seated on the cap and surrounding the projection and normally supporting the frame above the cap with the heads of the screws above the bottom of the foot.

2. In a typewriting machine, the combination of a main frame, a rubber supporting foot for the frame having a pair of sockets in its lower face and a pair of vertical passages leading from said sockets to the upper face of the foot, a metal top plate secured on the upper end of the foot, an upstanding coil spring seated on said plate and engaging with the frame at its upper end, a pair of rigid vertical members depending from the frame and secured thereto at their upper ends, said members extending down through the passages in the foot in sliding frictional engagement with the walls of the passages and provided at their lower ends with heads normally disposed above the lower face of the foot in said sockets and adapted to engage the top walls of the sockets to limit upward movement of the frame relatively to the foot, said top plate having openings through which said vertical members extend registering with the passages and larger than the ends of the passages so that the edges of the apertures are out of contact with the vertical members, and cooperating means on the main frame and top plate for maintaining said coil spring in an upright position over the center of the foot between said pair of vertical members.

3. In a device of the class set forth, a machine frame having a pocket opening downwardly, a coil spring having its upper part enclosed in said pocket, a foot pad consisting of a rubber block and a cap plate affixed thereto and being provided with an upstanding lug entering the lower end of said spring, said rubber block having two pockets formed in its under side, and a pair of screws extending up through the rubber block and the cap plate and tapped into the machine frame, the heads of said screws being housed in said pockets formed in the rubber block.

In testimony whereof I hereunto affix my signature.

MANSFIELD C. CRAWLEY.