

L. RANNEY.
TYPE BAR.

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1,048,878.

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Fig. 1

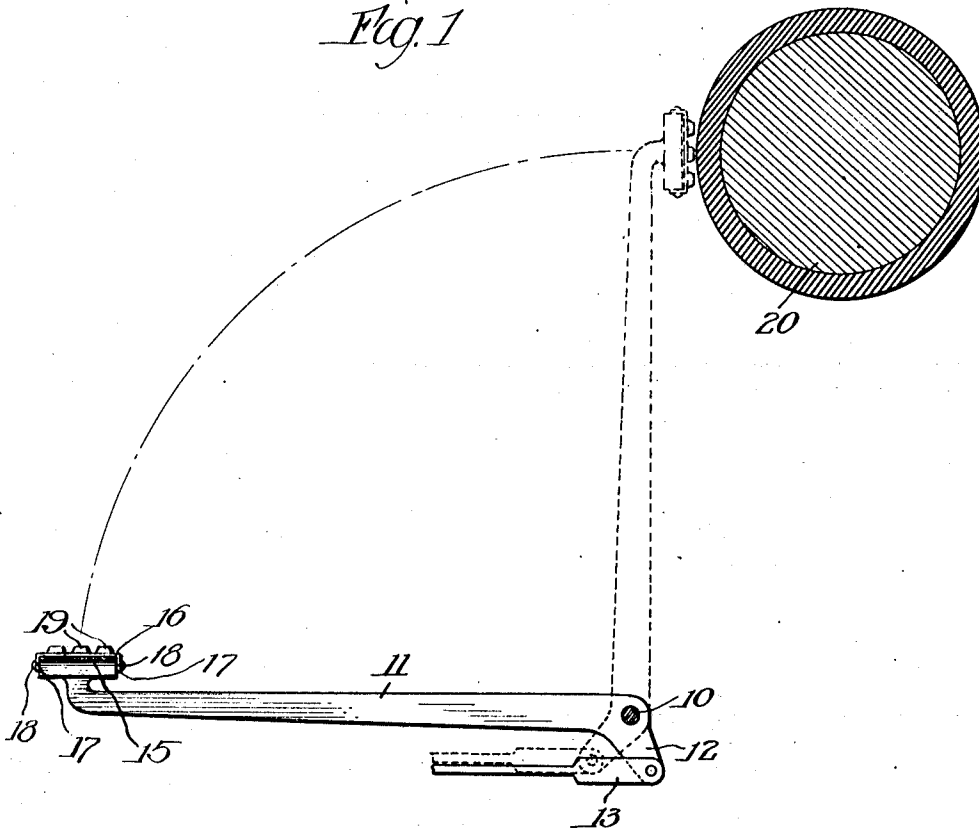


Fig. 2

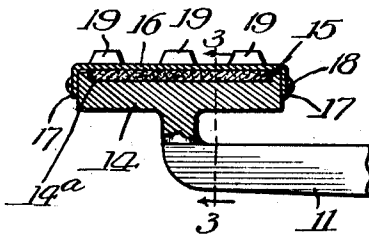
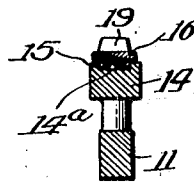


Fig. 3



Witnesses:

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UNITED STATES PATENT OFFICE.

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TYPE-BAR.

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Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, LEO RANNEY, a citizen of the United States, residing at New York, in the county of New York and State of New York, have invented certain new and useful Improvements in Type-Bars, of which the following is a specification.

My invention relates to typewriters and has particular reference to a device adapted to eliminate to a certain extent, the noise attendant upon the impact of the type bars upon the platen.

It is well known that the use of typewriting machines in business offices is objectionable, due to the noise of the machine in operation. Much, if not all, of the noise is caused by the impact of the type face against the platen of the machine.

One of the principal objects therefore of my invention is the provision of novel means in connection with a type bar whereby much of the noise heretofore complained of is eliminated. Furthermore, by the use of my device a more uniform impression is secured, due to the fact that the force of the blow on the platen is graduated or regulated by the mounting of the type on the type bar.

I am aware that it is not broadly new to employ a resilient mounting for the type upon the type bar, meaning thereby a type member carried by a yielding support, such as a spring, whereby the type may yield under impact. I am also aware that rubber type is in general use, and that printing plates have been mounted on resilient backing. My invention operates on an entirely different principle and to secure a different result. The principle employed is that of free vibration of the type-carrying member, and the object is to cushion the shock or impact, thus delivering a softer blow. Another object is to deaden the metallic sound or click of the type when it strikes the paper on the platen of the typewriter. These objects are furthered by, but are not exclusively dependent on, the use of a yielding pad between the type-carrying member and the base therefor.

In the particular construction I have chosen to illustrate my invention, the flexible or vibratable member is formed as a separate part attached at its ends to the base member, but I do not wish to be understood as limiting my invention to this particular embodiment as my invention is sufficiently

broad to include a mount in which the flexible or vibratable member is formed as an integral part of the base and in which such member is secured at its middle or at one end only.

My invention will be more readily understood by reference to the accompanying drawings illustrating one embodiment of my invention, wherein,—

Figure 1 is a side elevation of a type bar and platen, showing in dotted lines the position assumed by the type bar when contacting the platen; Fig. 2 is an enlarged detail of the end of the type bar, showing my novel attaching means for the type, and Fig. 3 is a cross section on the line 3—3 of Fig. 2.

It will be understood that the construction herein illustrated is more or less diagrammatic as to the details of the typewriter proper. However, it is believed that sufficient of the typewriter is shown in order to make clear the connection between the parts.

Referring now to the drawings, it will be seen that to a shaft 10 I pivot a type bar 11, which type bar is in effect a rocker, to the short arm 12 of which is connected the link 13, which is in turn properly connected to a key not shown. To the outer end of the type bar is secured a rectangular body of metal or base 14, of a length sufficient to support in spaced relation the type or printing faces, and of a width corresponding to the width of the type. Within a groove 14^a in this base I place a quantity of felt 15, or other similar sound-deadening, slightly resilient material. Over this felt I place a preferably metallic cover 16, having depending end portions 17, fitting over the end walls of the body portion 14 and properly secured by means of set-screws 18. On this cover 15 I mount type faces 19, as desired. On reference to Fig. 1, it will be seen that actuation of the link 13 to the left will cause the travel of the type bar in the arc of the circle indicated, until the dotted line position is reached, where one of the type faces will contact the platen 20. It will also be seen that the impact of the blow will be greatly lessened by the use of felt or other deadening material, and that inasmuch as the majority of the letters are printed from the middle of the three type faces shown, that a still more resilient action will be secured than if the printing were performed with

either of the two extreme type faces. Furthermore, it will be seen that because of the resilient action, the work turned out by the operator will be more uniform and have a better appearance.

The resultant action is due to two causes; first, the cover of the mount is itself slightly flexible or elastic, due to the fact that it is a thin sheet of material supported only at its ends and therefore while the cover gives the necessary firmness of support it does not produce as much noise as a solid type base; secondly, the felt packing which is of a flocculent nature, supports the flexible cover modifying or limiting its movement according to the density of the packing while it absorbs or deadens the shock and materially reduces the noise. While the flexible cover and the packing are separately useful, they co-act when together and I preferably so employ them. However, I do not wish to limit my invention necessarily to their conjoint use.

It is obvious that many modifications may be made in the construction herein shown and I do not therefore wish to be limited to the exact form shown and described.

I claim:

1. In a typewriter having a platen therefor, the combination of a type bar, a mount or base provided with a recess and carried by the type bar, one wall of said mount consisting of a thin sheet of freely vibratable material having type characters thereon, and a body of flocculent or resilient material packed within said recess and in contact with said wall, thereby softening the blow when said type characters are brought into contact with paper on said platen, substantially as described.

2. In a typewriter having a platen therefor, the combination of a type bar and a type mounting carried by said bar, said type mounting comprising a base, and a thin sheet of type-carrying material attached to said base and flexible in its body portion, whereby a yielding resistance is offered when

said type is brought into contact with paper on said platen, substantially as described.

3. In a typewriter having a platen therefor, the combination of a type bar, and a type mounting carried by said bar, said mounting comprising a base, a thin sheet of freely vibratable type-carrying material fixedly attached to said base, and resilient material confined between said base and said type-carrying sheet, thereby reducing the shock or impact when the type is brought into contact with paper on said platen, substantially as described.

4. A device of the class described comprising, in combination, a pivoted rocker, a grooved block secured to the free end of said rocker, noise-deadening material seated in the groove in said block, a cover for said block and type disposed on said cover, substantially as described.

5. A device of the class described comprising, in combination, a pivoted rocker having a rectangular, grooved body of material at one end thereof, padding seated in said body, a cover for said body and type mounted on said cover, substantially as described.

6. A device of the class described comprising, in combination, a pivoted rocker having a rectangular body of material mounted on one end thereof, said body of material having a groove on one face thereof, resilient material located in said groove, a cover for said block, fastening means whereby said cover is attached to said block at two points, and type mounted on said cover, substantially as described.

7. In a typewriter, the combination of a type bar and a type mounting, said type mounting comprising the combination of a base, a flexible type-carrying member attached to said base, and sound deadening material between said type-carrying member and said base, substantially as described.

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Witnesses:

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