April 4, 1950 H. A. LUNDGREN 2,503,162

REMOVABLE TYPE ASSEMBLY FOR TYPEWRITERS

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Fig. 1

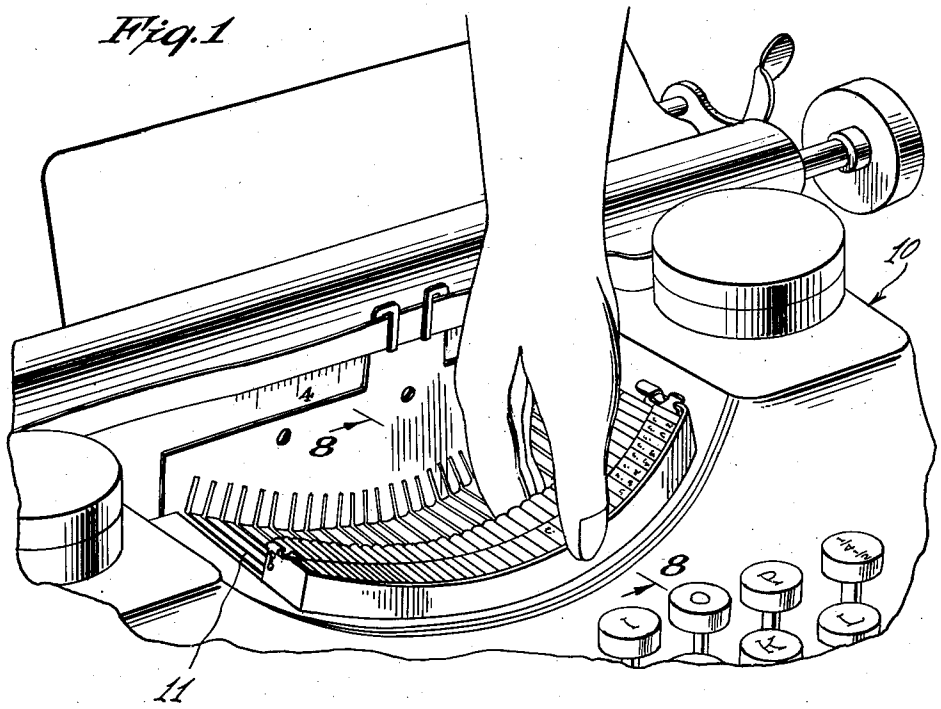


Fig. 2

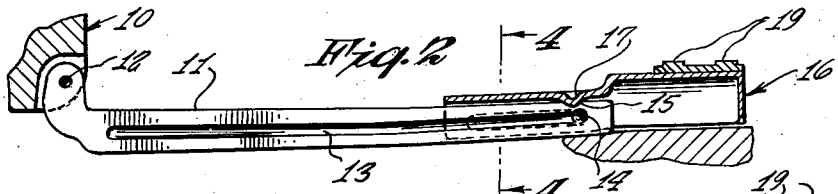


Fig. 3

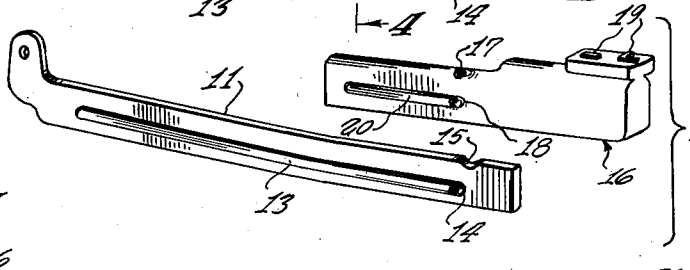


Fig. 4

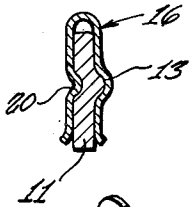


Fig. 5

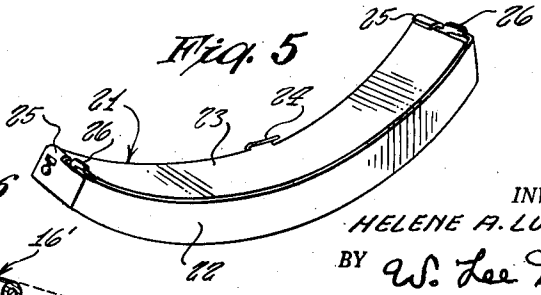
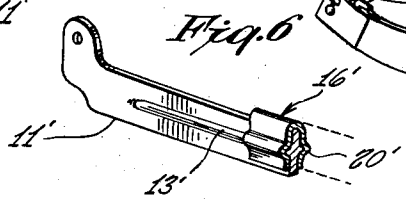


Fig. 6



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REMOVABLE TYPE ASSEMBLY FOR TYPEWRITERS

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Fig. 7

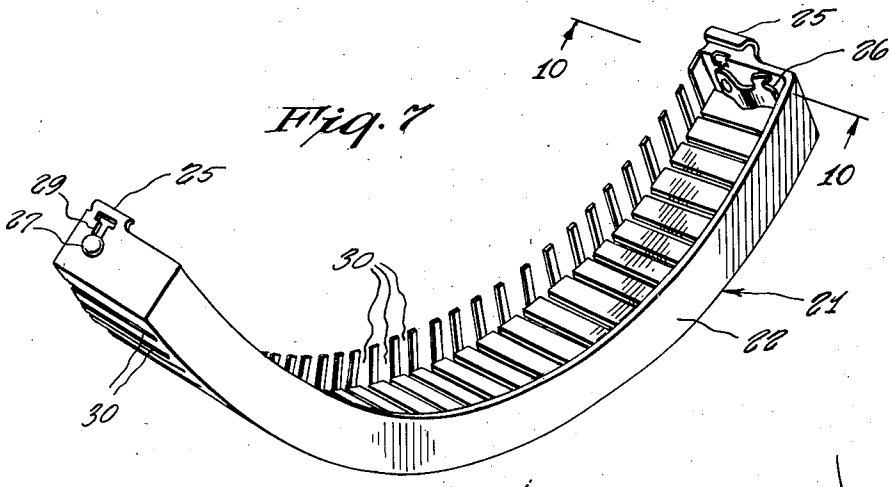


Fig. 8

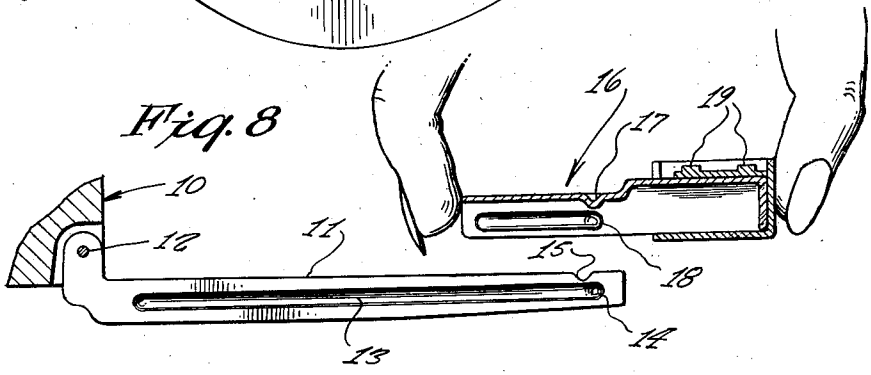


Fig. 9

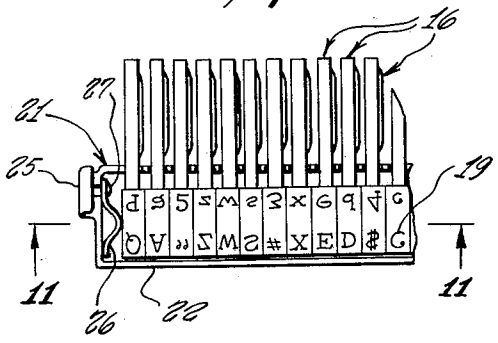


Fig. 10

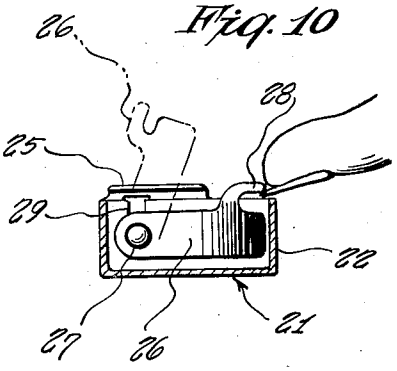
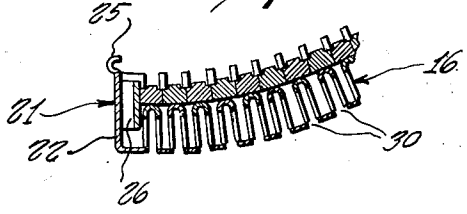


Fig. 11



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REMOVABLE TYPE ASSEMBLY FOR TYPEWRITERS

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Application June 8, 1948, Serial No. 31,753

5 Claims. (Cl. 197—36)

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This invention relates to an interchangeable type arrangement for typewriters.

It is an object of the present invention to provide an interchangeable type arrangement for typewriters which can be easily secured in a releasable manner upon the type bars of the typewriter and wherein the type elements can be included in a casing adapted to be fitted upon the bed of the typewriter in proper location for connection with the typewriter type bars and wherein this casing can serve for the storage of the type elements when not in use.

Other objects of the present invention are to provide a releasable type element adapted for attachment to swingable type bars, which is of simple construction, easy to install on the bars and adapted to be positively held on the bars against longitudinal displacement thereon, inexpensive to manufacture, adapted to be collected in a storage casing, and efficient in operation.

For other objects and for a better understanding of the invention, reference may be had to the following detailed description taken in connection with the accompanying drawing, in which

Fig. 1 is a fragmentary perspective view of a typewriter with a set of type being disposed with their storage casing in place upon the type bed.

Fig. 2 is a longitudinal sectional view of one of the type elements and of a swingable type bar to which the element is attached.

Fig. 3 is a perspective and exploded view of the type element lifted from the type bar.

Fig. 4 is a transverse sectional view taken on line 4—4 of Fig. 2.

Fig. 5 is a perspective view of the type case with the cover plate thereon.

Fig. 6 is a perspective view of a modified form of type element adapted for connection to a different type bar.

Fig. 7 is a large perspective view of the type case with the cover removed therefrom.

Fig. 8 is a collective and sectional view with the type element removed from the bar positioned thereover as when the connection of the same with the type bar is to be effected.

Fig. 9 is a fragmentary top plan view of the storage case and of a plurality of type elements.

Fig. 10 is a transverse sectional view taken on line 10—10 of Fig. 7 and looking in elevation upon the latch serving to maintain the type elements in the storage case against lateral displacement therewithin.

Fig. 11 is a fragmentary sectional view taken on line 11—11 of Fig. 9.

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Referring now to the figures, 10 represents a typewriter portion to which there is connected a type arm 11 by a pivot pin 12. This type bar has a depression 13 extending substantially throughout its entire length and which is enlarged at one end as indicated at 14. Adjacent this enlargement 14 and in the upper edge of the arm 11 is a notch 15. Adapted to be fitted upon the arm is a type element 16 having an enlargement 18 corresponding to the enlargement 14 of the arm 11 to receive the same and a top depression 17 forming a projection adapted to fit notch 15. The element 16 is of channel section and has fixed to the top of it type 19.

These type elements can be aligned and arranged in a case 21 comprising a bottom part 22 and a top cover part 23. The cover part has a projection 24 into which can be extended a thumb nail for the removal of the cover from the bottom part 22. The cover is retained in place by bent over projections 25 at the ends of the case 22. These bent over projections 25 provide recesses into which the ends of the cover may be extended. At each end of the bottom part of the case is a lever 26 pivoted on a pin 27 and bent laterally to cause the type elements to be pressed laterally against one another as the lever 26 is moved from a dotted line position as shown in Fig. 10 to the full line position well within the end of the case. The lever 26 has an upwardly extending projection 28 under which a thumb nail can be extended to pull the lever out of the case to loosen the type elements in order that they can be made free for securement to the type arms or bars 11. The pin 27 which retains the holding lever 26 can be extended from slot 29 in order to locate the lever properly within the bottom part of the case. In the front face of the case 22 are spaces 30 out of which extend portions of the type elements. These spaces permit the type elements to be extended over the type bars and the type bars to be extended into the case 22 to receive the elements. The case 22 is rested upon the typewriter bed and by depressing the elements they are forced upon the ends of the bars 11. The type elements are made of metal so that they may spring laterally a sufficient amount so that the side depression 18 can be extended over the side of the bar to reach the depression 14 of the bar. The bars rest on the bed and thus are retained against vertical displacement while this operation is being effected.

In Fig. 6, there is shown the adaptation of a modified type element 16' to a bar 11' which has

ribs 13' extending from the opposite sides of the same and over which the type element 16' is extended. The sides of the type element 16' have projections 20' adapted to receive the projections 13' of the bar 11'. Otherwise, the type element is constructed similarly to the type element 16.

The case 21 serves as a storage device for the various type elements and a case having different type elements can be used when different type is desired.

After the type elements have been disposed on the bars, the case remains in the typewriter until such time as it is desired to remove the type elements and replace them with another set.

While various changes may be made in the detail construction, it shall be understood that such changes shall be within the spirit and scope of the present invention as defined by the appended claims.

I claim:

1. A type arrangement for typewriters comprising a case having a bottom part with a series of spaces extending thereacross, a cover part, means for securing the cover part to the bottom part, and a set of type elements disposed in the bottom part and accessible through the spaces to type bars, whereby upon inserting the case with the type elements therein into the typewriter and against the bed thereof the type elements can be assembled upon the type bars of the typewriter.

2. A type arrangement for typewriters comprising a case having a bottom part with a series of spaces extending thereacross, a cover part, means for securing the cover part to the bottom part, a set of type elements disposed in the bottom part and accessible through the spaces to type bars, whereby upon inserting the case with the type elements therein into the typewriter and against the bed thereof the type elements can be assembled upon the type bars of the typewriter, and tension elements disposed on the opposite ends of the bottom part of the casing and adapted to be pivoted into the casing for engagement with the end elements to cause such elements to be pressed tight against one another and retained in the case.

3. A type arrangement for typewriters comprising a case having a bottom part with a series of spaces extending thereacross, a cover part, means for securing the cover part to the bottom part, and a set of type elements disposed in the bottom part and accessible through the spaces to type bars, whereby upon inserting the case with the type elements therein into the typewriter and against the bed thereof the type elements can be assembled upon the type bars of the typewriter, each of said type elements being of channel section having an internal projection extending from the top and adapted to engage with a notch on the type bar whereby to retain said type element against longitudinal displacement on the bar and a further formation in one of the side walls of the type element adapted to cooperate with a formation of the type bar whereby to retain the type element on the type bar against vertical displacement therefrom.

4. In combination, a type bar of a typewriter having a projection extending from one side of the same and a notch in its top edge near the free end of the bar, a type element of channel section adapted to be fitted over the top edge of the type bar and having a recess in one side of the element to receive the projection on the end of the bar and an inwardly extending projection adapted to be fitted in the notch of the bar, and type mounted on top of the element, the sides of the type element being adapted to spring sufficiently in order to fit the projection of the type bar into the recess of the type element and in order that the type element may have a spring fit engagement with the end of the type bar.

5. In combination, a type bar having longitudinal projections extending from the opposite sides of the same, a type element of channel section having outwardly depressed portions adapted to respectively receive the projections on the sides of the bar whereby the type element will be retained on the bar against vertical displacement therefrom, said type element having a depending projection in its upper edge, said type bar having a notch for receiving the depending projection of the type element, whereby the type element will be held against longitudinal displacement upon the end of the type bar with the depending projection engaging the notch, and type secured to the type element.

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