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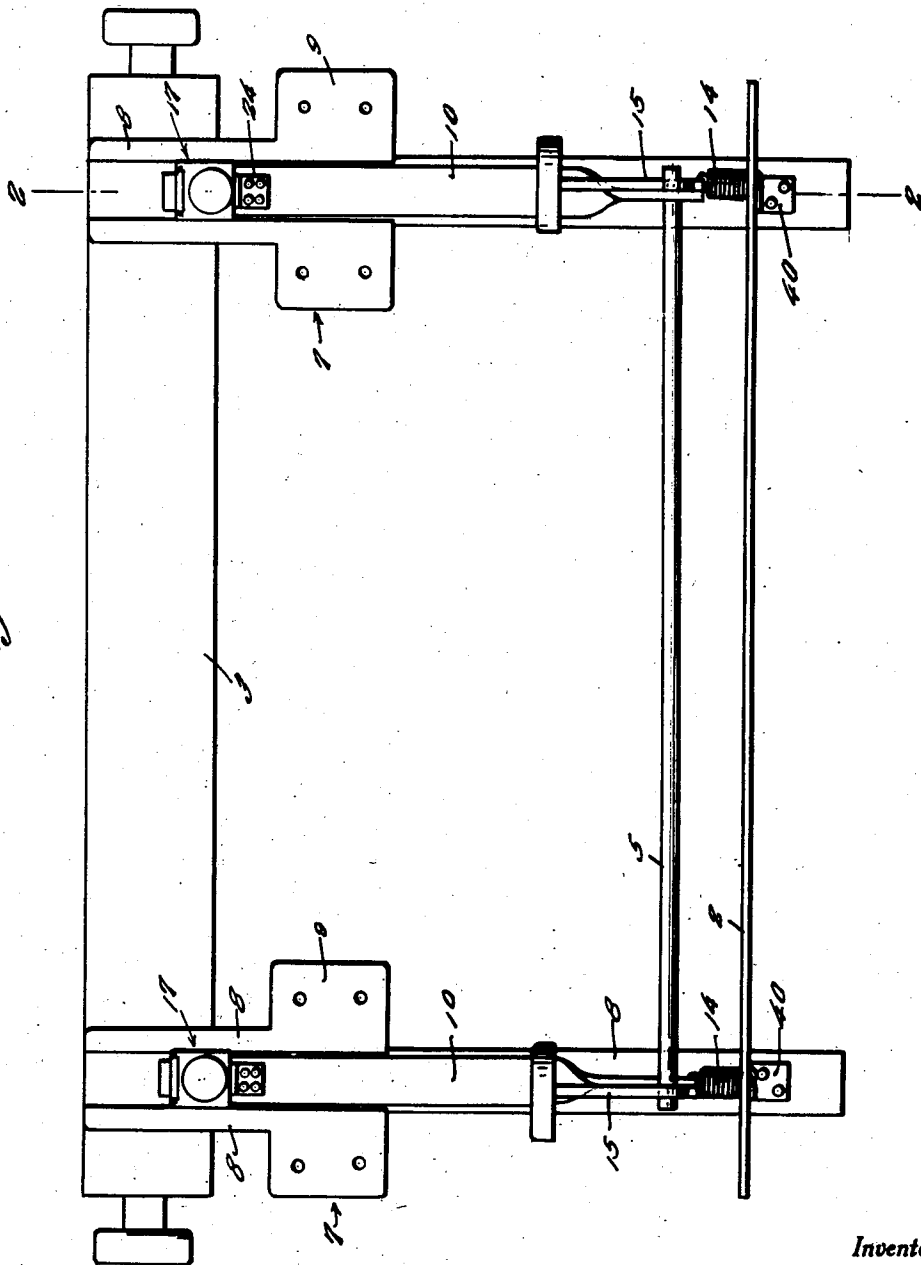
F. C. SCHNABEL

2,132,906

TYPEWRITER ERASER

Filed March 11, 1938

4 Sheets-Sheet 1



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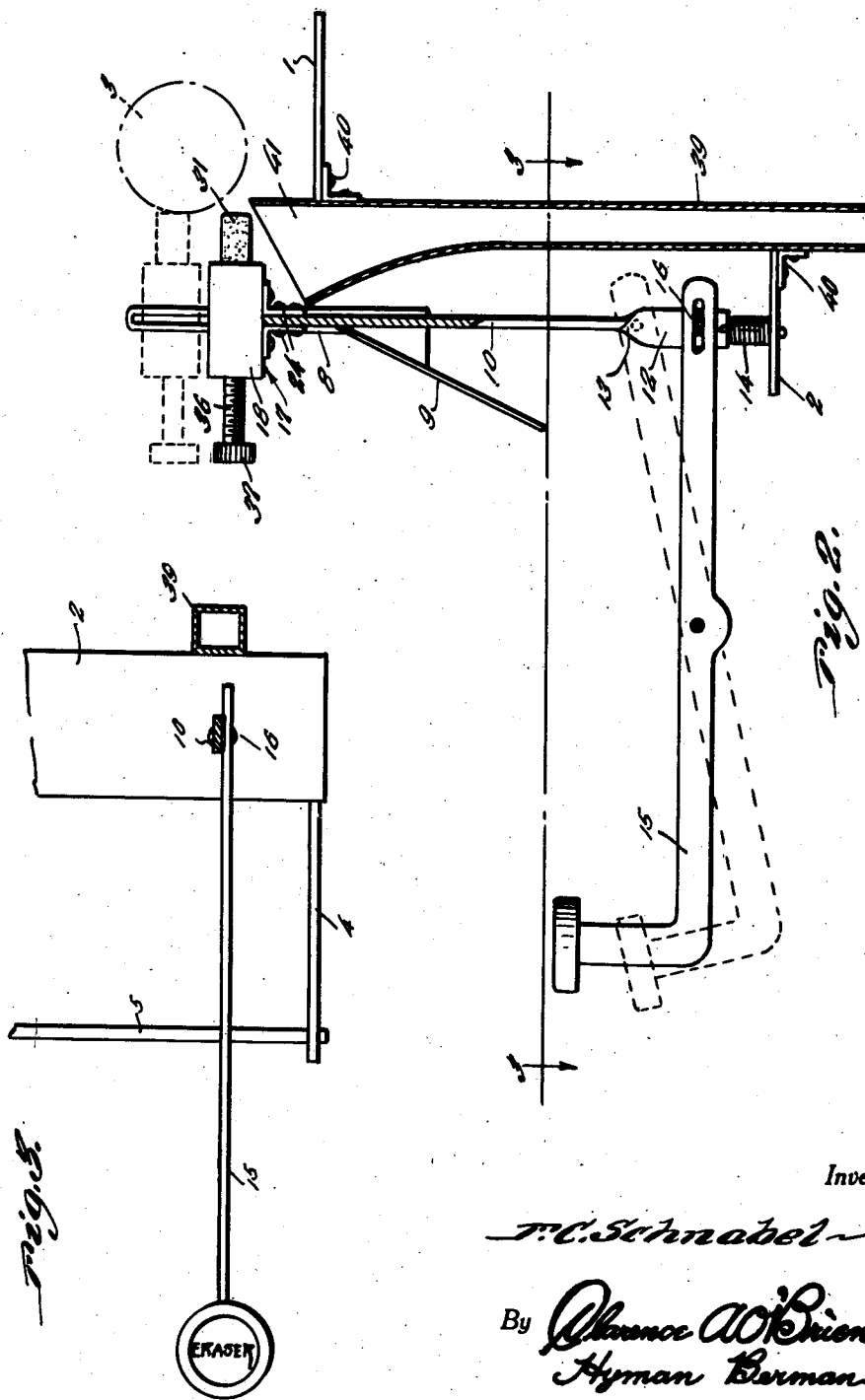
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TYPEWRITER ERASER

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4 Sheets-Sheet 2



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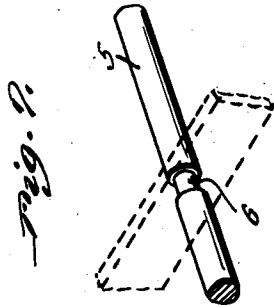
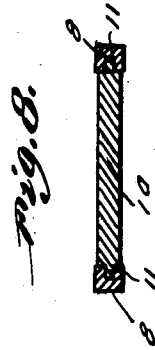
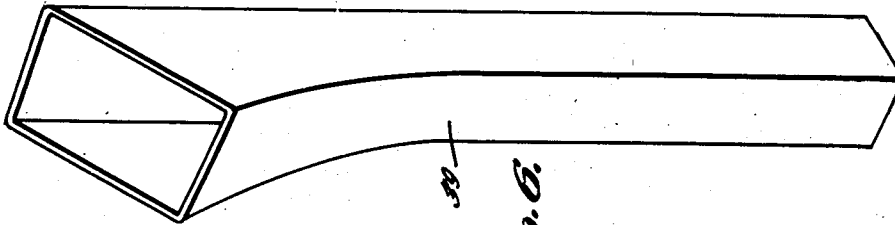
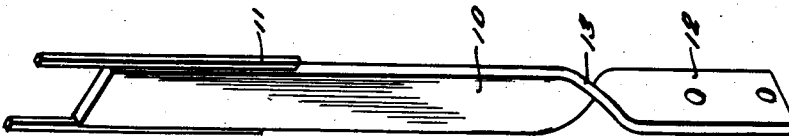
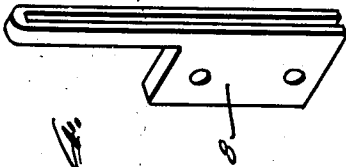
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TYPEWRITER ERASER

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4 Sheets-Sheet 3



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TYPEWRITER ERASER

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4 Sheets-Sheet 4

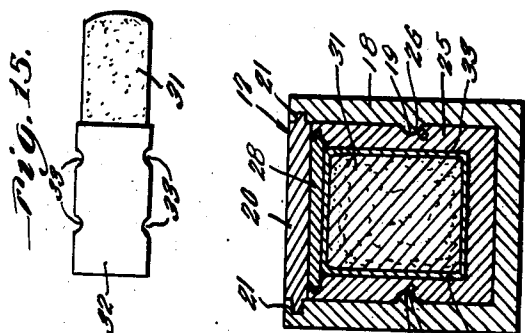
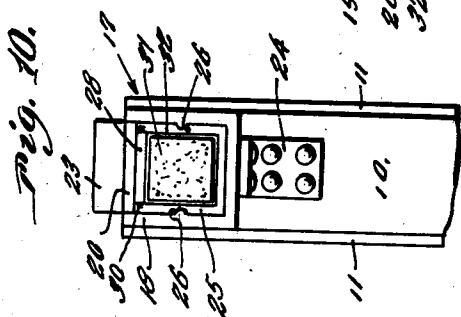
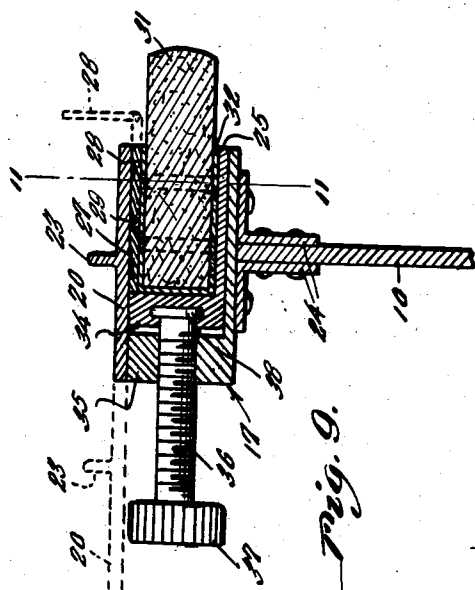


Fig. 11.

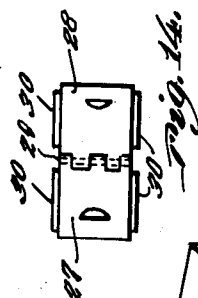
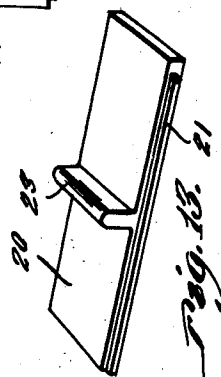
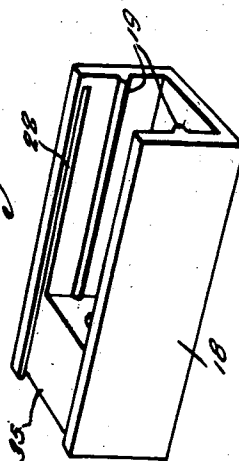


Fig. 12.



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UNITED STATES PATENT OFFICE

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TYPEWRITER ERASER

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Application March 11, 1938, Serial No. 195,373

2 Claims. (Cl. 197—181)

The present invention relates to new and useful improvements in typewriter erasers and has for one of its important objects to provide, in a manner as hereinafter set forth, a device of this character which is adapted to be permanently attached to a machine and through the medium of which erasures may be expeditiously and neatly made with the paper on the platen.

Another very important object of the invention is to provide a device of the aforementioned character embodying novel means for holding and adjusting the eraser elements.

Other objects of the invention are to provide a typewriter eraser of the character described which will be comparatively simple in construction, strong, durable, highly efficient and reliable in use, compact and which may be manufactured at low cost.

All of the foregoing and still further objects and advantages of the invention will become apparent from a study of the following specification, taken in connection with the accompanying drawings wherein like characters of reference designate corresponding parts throughout the several views, and wherein:

Figure 1 is a view in front elevation of an embodiment of the invention.

Figure 2 is a vertical sectional view through the invention, taken substantially on the line 2—2 of Fig. 1.

Figure 3 is a view in horizontal section, taken substantially on the line 3—3 of Fig. 2.

Figure 4 is a detail view in perspective of one of the vertical guides.

Figure 5 is a detail view in perspective of one of the vertically reciprocating eraser supporting bars.

Figure 6 is a detail view in perspective of one of the discharge chutes or conduits.

Figure 7 is a perspective view of an intermediate portion of the key lever supporting shaft.

Figure 8 is a view in horizontal section through one of the vertically reciprocating bars and its guides.

Figure 9 is a view in vertical longitudinal section through what may be referred to as the head of the device.

Figure 10 is a view in end elevation of the portion of the invention shown in Fig. 9.

Figure 11 is a vertical sectional view, taken substantially on the line 11—11 of Fig. 9.

Figure 12 is a perspective view of the casing constituting a part of the head.

Figure 13 is a detail view in perspective of the

slidably removable cover for the casing shown in Fig. 12.

Figure 14 is a detail view in top plan of two elements of the head assembly.

Figure 15 is a top plan view of the eraser element and its holder.

Referring now to the drawings in detail, it will be seen that the embodiment of the invention which has been illustrated comprises a pair of horizontal, transversely extending upper and lower plates 1 and 2, respectively, which may be attached to a typewriting machine in any suitable manner. The reference numeral 3 designates the usual platen of a typewriter. Mounted on arms 4 in spaced relation to the lower plate 2 is a transverse rod 5. The end portions of the rod 5 are provided with reduced portions 6 (see Fig. 7). Mounted on the typewriting machine, adjacent the sides thereof, are erasing units which are designated generally by the reference numeral 7. As the units 7 are identical in construction and operation a detailed description of one will suffice for both.

Each unit 7 includes a pair of vertical, grooved guides 8 which are secured in position on the typewriting machine by any suitable means, as at 9. Mounted for vertical sliding movement in the pair of guides 8 is a metallic bar 10 having tongues 11 on its edges engaged in the grooves of said guides 8. The lower end portion 12 of the bar 10 is twisted a quarter of a turn, as at 13.

The lower end of the vertically sliding bar 10 is connected by a coil spring 14 to the plate 2. The coil spring 14 yieldingly resists upward movement of the bar 10. The reference numeral 15 designates a key lever which is journaled, at an intermediate point, on the reduced portion 6 of the rod 5 for swinging movement in a vertical plane. One end portion of the key lever 15 is coupled to the lower end portion of the bar 10 by a pin and slot connection 16.

Mounted on the upper end of the bar 10 is a head assembly which is designated generally by the reference numeral 17. The head 17 comprises a casing 18 of suitable material which, as illustrated to advantage in Fig. 12 of the drawings, is open at its top and forward end. Longitudinal tongues 19 are formed in the opposed sides of the casing 18. The top of the casing 18 is adapted to be closed by a removable sliding closure 20 having tongues 21 on its longitudinal edges. Channels 22 are provided in the upper portion of the casing 18 for the reception of the tongues 21. Rising from the closure 20 at an intermediate point is a transverse operating rib 23. The casing

18 is rigidly secured on the vertical bar 10 through the medium of brackets 24.

Mounted for sliding adjustment in the casing 18 is a sleeve 25 of polygonal cross section conforming substantially to the cross sectional shape of said casing 18. The sleeve 25 has formed longitudinally on its sides grooves 26 which receive the tongues 19 on the casing 18. This is shown to advantage in Fig. 11 of the drawings. The top of the sleeve 25 is formed by means including a pair of slidable plates 27 and 28 which are hingedly connected, as at 29. Tongues 30 (see Fig. 14) are provided on the longitudinal edges of the elements 27 and 28 for sliding engagement in grooves which are provided therefor in the upper portions of the opposed side walls of the main body of the sleeve 25 (see Fig. 11).

The sleeve 25 is for the reception of an eraser element 31. One end portion of the element 31 is enclosed in a metallic holder 32 in the form of a cup or socket member. The holder 32 has pressed into its side walls vertical ribs for anchoring the eraser element 31, said pressed ribs providing grooves 33 in said holder for slidably receiving complementary tongues on the sides of the sleeve 25. Threadedly mounted in the rear end 35 of the casing 18 is a feed screw 36 for the eraser 31, said screw having an operating head 37 on its outer end. The inner end of the screw 36 is rotatably connected to the adjacent end 34 of the sleeve 25.

The reference numeral 39 designates a discharge chute or tube which is mounted vertically beneath the eraser element 31 and secured to the plates 1 and 2 through the medium of brackets or the like 40. The discharge tube 39 comprises an enlarged or flared upper end portion 41. This is shown to advantage in Fig. 2 of the drawings.

It is thought that the operation of the device will be readily apparent from a consideration of the foregoing. When an erasure is to be made, the platen 3 of the machine, with the work thereon, is shifted to a position wherein the erasure to be made is in vertical alignment with the free end of either of the elements 31. The respective lever 15 is then depressed, as suggested in broken lines in Fig. 2 of the drawings, thereby elevating the respective bar 10 against the tension of its coil spring 14, thus bringing the element 31 into operative engagement with the work, as also shown to advantage in Fig. 2 of the drawings. Then, by oscillating or rocking the key lever 15, thereby reciprocating the bar 10, the erasure may be made in an expeditious manner. When the key lever 15 is released the spring 14 returns the parts to inoperative position. Any dust, rubber,

etc., resulting from the erasure as it is made falls into and is conveyed downwardly by the tube 39 thus preventing it from getting on the mechanism of the typewriting machine.

As wear on the eraser elements 31 occurs it may be compensated for by adjusting said elements outwardly through the medium of the screws 26. Then, the eraser elements 31 may be removed for replacement when necessary by removing the cover 20 from the casing 18 and the elements 27 and 28 from the sleeve 25. As suggested in broken lines in Fig. 9 of the drawings, the hinged element 28 may be swung upwardly after it has been drawn out of the sleeve 25 and clears said sleeve and then used as a handle or the like to facilitate pulling the element 27 out of the sleeve.

It is believed that the many advantages of a typewriter eraser constructed in accordance with the present invention will be readily understood and although a preferred embodiment of the device is as illustrated and described, it is to be understood that changes in the details of construction and in the combination and arrangement of parts may be resorted to which will fall within the scope of the invention as claimed.

What is claimed is:—

1. A typewriter eraser comprising, in combination, a plate adapted to be mounted transversely on a typewriting machine, guides adapted to be mounted vertically on the machine adjacent the platen thereof, a bar mounted for vertical reciprocation in the guides, a coil spring connecting the lower end of the bar to the plate for yieldingly resisting upward movement of said bar, a key lever pivotally mounted at an intermediate point and operatively connected, at one end, to the lower end portion of the bar for actuating said bar, and an eraser element mounted on the upper end of the bar and operatively engageable with the work on the platen.

2. A typewriter eraser comprising a bar adapted to be slidably mounted on a typewriting machine adjacent the platen thereof, means for actuating said bar, a casing fixed on one end of the bar, said casing being open at its top and at one end, a slidable closure removably mounted in the top of the casing, a sleeve removably mounted in the casing, an eraser element removably mounted in the sleeve and projecting therefrom for engagement with the work on the platen, and an adjusting screw threadedly mounted in the other end of the casing and connected to the sleeve for actuating said piston.

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