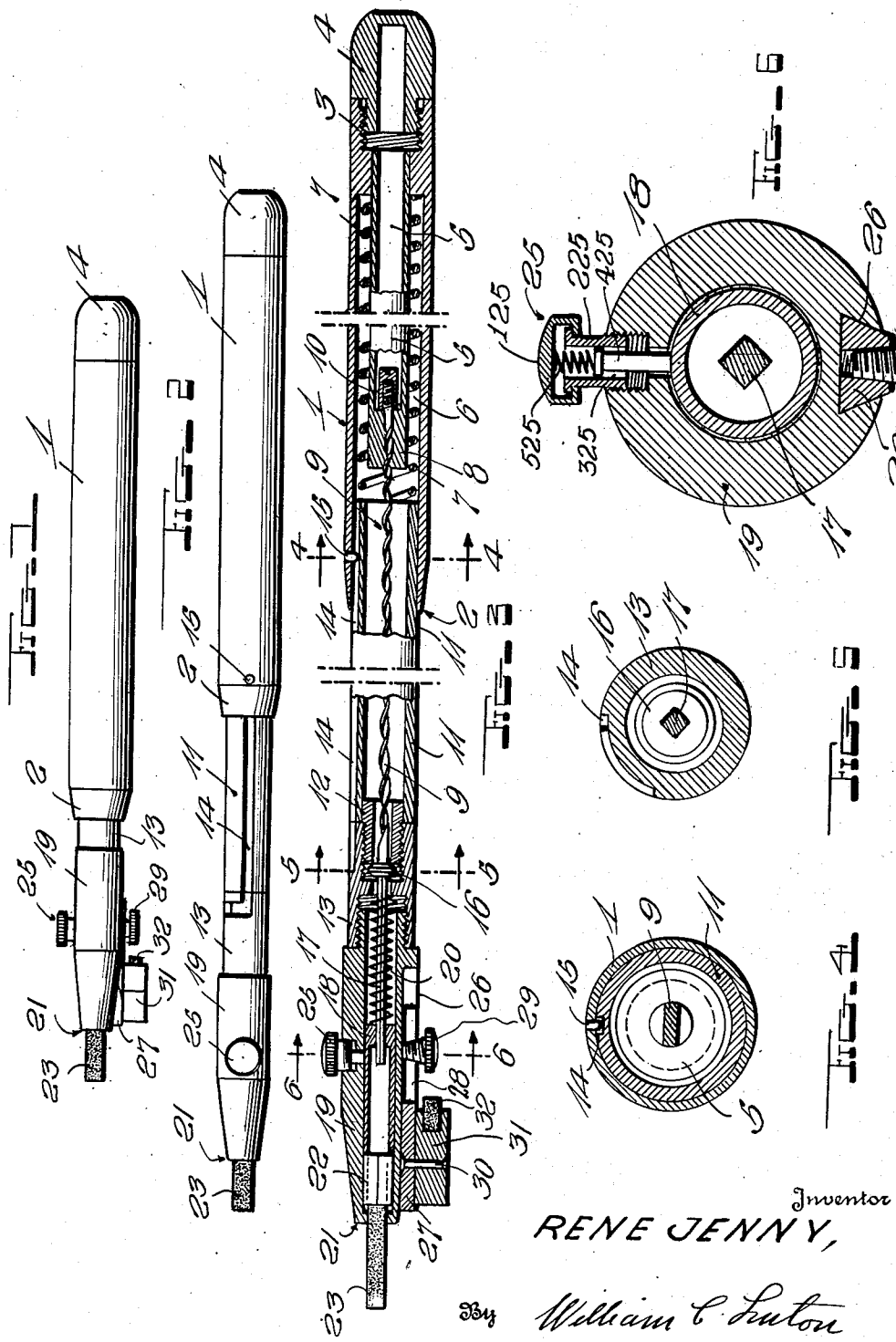
Aug. 14, 1951 R. JENNY 2,564,604

ERASING DEVICE

Filed Nov. 15, 1946 2 Sheets-Sheet 1



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Aug. 14, 1951 R. JENNY 2,564,604

ERASING DEVICE

Filed Nov. 15, 1946 2 Sheets-Sheet 2

FIG. 7

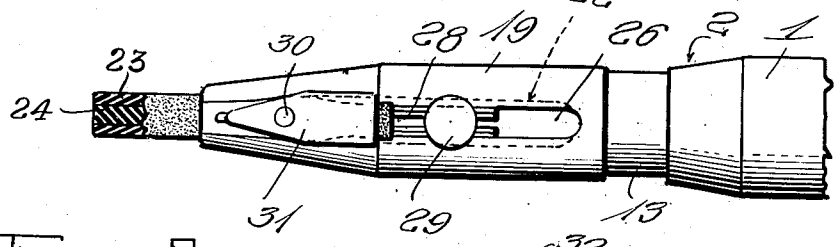


FIG. 8

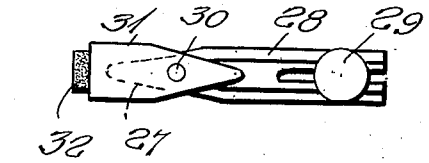


FIG. 9

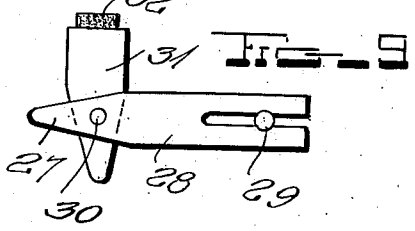


FIG. 10

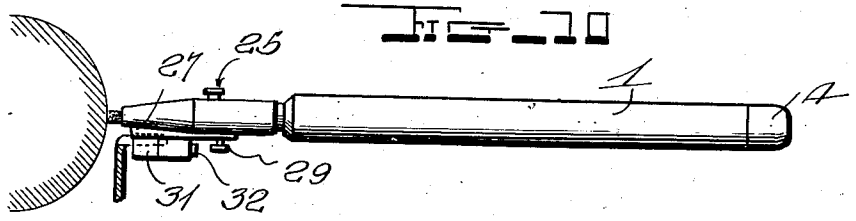


FIG. 11

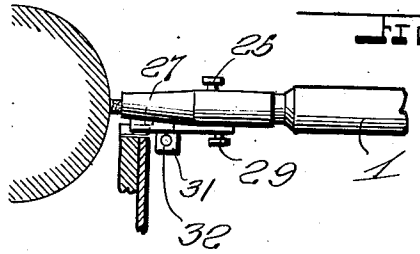


FIG. 12

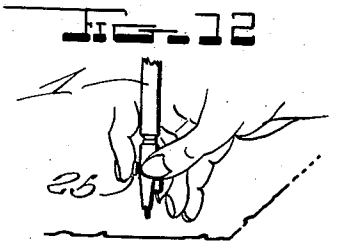
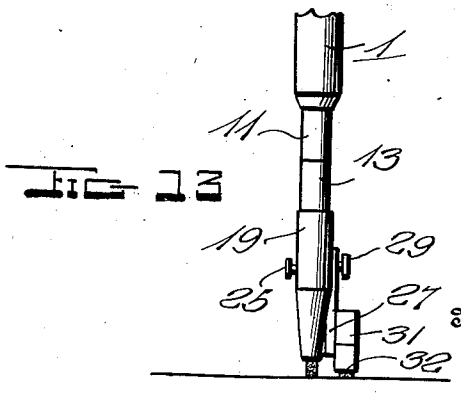


FIG. 13



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ERASING DEVICE

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Application November 15, 1946, Serial No. 710,084
In Switzerland November 15, 1945

4 Claims. (Cl. 120—36)

1

The present invention relates to rotary erasers and is more particularly directed to instruments wherein rotary motion is manually imparted to an eraser during the erasing operation by reciprocal movement of a handle with respect to the instrument.

One of the principal objects of the present invention is to provide an erasing instrument with means in the convenient grasp or reach of the operator whereby the eraser may be adjusted and retained in the proper adjusted positions with respect to the matter to be erased upon a sheet of paper.

Another equally important object of the invention is to provide an instrument with a rotary driven eraser having a beak shaped lug which may have supporting engagement with any conventional forked type-bar guide of a typewriter and yet have an adjustable connection therewith whereby the eraser may be retained in proper erasing positions with respect to a sheet of paper having matter thereon to be erased as it passes on the platen roller of the typewriter.

Another important object of the invention is to provide an instrument having a rotarily driven eraser with a telescopic handle whereby when not in use it may be retained in a shorter position so as to take up a relatively small amount of space.

A still further object of the invention is to generally improve the details of construction and arrangements of parts employed in rotary eraser instruments of the aforesaid character whereby the erasing operations will be more efficiently performed and yet less expensive in the cost of manufacture thereby rendering the same more commercially desirable.

In the accompanying drawings:

Fig. 1 is a plan view of the instrument when contracted embodying the present invention.

Fig. 2 is another plan view of the instrument when expanded.

Fig. 3 is an enlarged longitudinal sectional view.

Fig. 4 is an enlarged transverse section taken in the line 4—4 of Fig. 3 in the direction of the arrow points.

Fig. 5 is another enlarged transverse section taken on the line 5—5 of Fig. 3 in the direction of the arrow points.

Fig. 6 is still another enlarged transverse section taken on the line 6—6 of Fig. 3 in the direction of the arrow points.

Fig 7 is a detail bottom plan view of one end of the instrument.

2

Fig. 8 is a plan view of the supporting member when adjusted for use other than with the type-bar guide of a typewriter.

Fig. 9 is a bottom plan view of the same showing another adjusted position thereof.

Fig. 10 is a side elevation of the instrument when applied to a typewriter having one form of type-bar guide.

Fig. 11 is a similar detail view of the instrument when applied to a typewriter having another form of type-bar guide.

Fig. 12 illustrates how the instrument is positioned when performing ordinary erasing operations, and

Fig. 13 illustrates how the instrument may be supported without the use of the type-bar guide of a typewriter when retaining the eraser.

The instrument as shown in the accompanying drawings comprises a tubular handle section 1 having a tapered opened end 2 and a threaded socket 3 formed in its opposite end for removably and detachably receiving a closing plug 4. Suspended concentrically within this tubular section 1 is a cylindrical tube 5 forming a space 6 between the inner peripheral surface of the handle section 1 and the outer peripheral surface of the tube 5 with a coil spring 7 freely housed therein. The cylindrical tube 5 has one end secured to the handle section 1 and its opposite or free end has formed therewith a bearing block 8 through which extends a spindle 9. This spindle is provided with a threaded end to which is connected a screw nut 10 of sufficient outside diameter as to freely move within the tube 5, but which when attached to the spindle prevents the latter's withdrawal through the bearing block 8. The spindle 9 has a helical twist and extends through a correspondingly shaped opening through the block 8 whereby when the latter reciprocates along the spindle a rotary motion in opposite directions will be transmitted to the latter.

Slidable within the space 6 against the tension of the spring 7 is one end of a connector section 11 having a threaded plug 12 arranged adjacent the outer or opposite end thereof to which is detachably connected a bearing sleeve 13. The outer periphery of the sections 11 and 13 have a substantially L-shaped groove 14 therein as best shown in Fig. 2 of the drawings and slidable within this groove is a pin 15 secured to the handle section 1. When the handle is extended due to the expansion of the spring 7 the pin 15 will freely slide within the longitudinal part of this groove thereby preventing the rotation of the handle section 1 with re-

spect to the connector section 11. The pin 15 may be moved into the transverse peripheral part of the groove 14 by giving a slight turn to the handle section 1 whereby the latter will be retained against longitudinal or reciprocating movement relative to the connector section 11 and the handle will be held in this contracted position or as shown in Fig. 1 of the drawings so as to shorten the length of the instrument when the latter is not in use or when it is being used for ordinary erasing operations, as illustrated in Fig. 12 of the drawings.

The helical spindle 9 extends through the plug 12 and has formed therewith an annular bearing block 16 which latter has bearing engagement with one end of the plug 12. The extended portion 17 of the spindle is preferably of a square or rectangular cross section so that when it fits within a correspondingly shaped recess of the slidable socket member 18 the latter will be caused to rotate therewith. This cylindrical socket member 18 has an exterior diameter slightly less than that of the opening within the eraser holding section or nipple 19 whereby it may freely reciprocate therein and arranged between the socket member 18 and the annular shoulder of the bearing sleeve is a light compression spring 20 which normally holds the socket member against the inturned flange 21 formed at the outer end of the nipple 19.

A chuck or eraser holder 22 is formed at one end of nipple 19 for receiving one end of a cylindrical eraser 23. This eraser is preferably made with a hard centre 24 or a centre section of greater abrasive qualities than that of the surrounding outer section thereof to give to this elongated rubber eraser more rigidity which has been found more desirable during its erasing operations.

To disassemble the various parts of the instrument when it is desired to replace any one or all the parts thereof or when the same require cleaning, it is simply necessary to remove the plug 4 whereby access may be gained with a small screw driver through the then opened end of the tube 1 to the nut 10 and by removing the latter the section 1 and the spring 7 may be removed from the connector section 11.

By disconnecting the section 11 from the sleeve 13 the spindle 9 may be removed and by disconnecting the sleeve 13 from the eraser holding section 19 the spring 20 as well as the socket member 18 may be removed whereby access to all of the several working parts of the instrument may be had.

A push button assembly 25 is secured to the eraser holding section 19, as shown in Fig. 6, and comprises a push button 125 slidably mounted on a shouldered sleeve 225, which is threadedly connected in an opening 325 to the nipple 19. A stem 425 is movable in this opening with its inner end in abutment with the socket member 18 and its outer end in abutment with one end of a spring 525, the other end of which spring is in abutment with the button 125. The button is normally retained in an extended position by means of the spring as shown, but by normally pushing upon this button the inner end of the stem will frictionally engage the socket member 18 to retain the latter against sliding movements within the section 19. By this arrangement the eraser 23 may be retained in various extended positions from the instrument when using the latter for ordinary erasing operations as illustrated in Fig. 12 of the drawings.

Formed in the outer face of the section 19 is a longitudinally extending groove 26. One end of this groove, which terminates with the outer end of the section 19, is open and the opposite side walls thereof are tapered inwardly away from the base of the groove. The beak shaped lug 27 having supporting engagement with the opposite side walls of the groove 26 will fit any conventional forked type-bar guide of a typewriter and comprises a bearing block 28 which is capable of having slidable engagement within the groove 26. The opposite side walls of this block are tapered so as to be received by the tapered side walls of the groove 26 in order to retain the block 28 within this groove. This block is split longitudinally and a tapered screw 29 has threaded engagement therewith whereby the split sections of the block may be forced into or let out of frictional engagement with the side walls of the groove for adjustably retaining the block and the lug 27 formed therewith in various positions within said groove. The block 28 has pivotally connected thereto by means of the pin 30 a lug 31. One end of this lug 31 is tapered to correspond with the tapered end of the lug 27 whereas the opposite end of the lug 31 has a resilient or non-skidding plug 32 seated therein. When employing the instrument with type-bar guides of typewriters having pressed metal forks or forks with a deep slot therebetween, both the lug 27 and lug 31 may be inserted therein as shown in Fig. 10 of the drawings, but where there is only a shallow recess between the forks of the type-bar guide as shown in Fig. 11 the lug 31 is moved at right angles to the lug 27 so that the latter may fit therein. When the type-bar guides of the typewriter are not employed to support the instrument the lug 31 may be turned upon its pivoted support until the rear or squared end thereof projects beyond the lug 27 and instrument so that the resilient plug 32 may rest upon the platen of the typewriter or other support when rotating the eraser in the manner as shown in Fig. 13 of the drawings.

From the foregoing it is apparent that the instrument may be compacted so as to occupy a relatively small amount of space when not in use or when making ordinary erasing operations as illustrated in Fig. 12 of the drawings. Also, by simply inserting the lug 27 within the forked type-bar guide of a typewriter, the instrument will be supported in such a manner that with only one hand of the operator the handle 1 may be reciprocated for transmitting rotary movement to the eraser. The lug 27 in conjunction with the type-bar guide will direct and hold the eraser exactly upon the matter to be erased without erasing or smearing the written matter adjacent thereto. When the matter to be erased is not adjacent to the type-bar guide of the typewriter the instrument may still be used by using the non-skid end 32 of the lug as a support.

I claim:

1. An erasing instrument, for a typewriter having a type-bar guide, comprising a tubular handle, a body, means for telescopically connecting said body to said handle, an erasing element carried at a free end of said body, a compound member comprising a pair of superposed lugs having similarly tapered ends carried by said body, and means for pivotally interconnecting said lugs, said compound member being engageable with the type-bar guide.

2. A rotary eraser, for a typewriter having a type-bar guide, comprising a tubular handle, a body, means for telescopically connecting said body to said handle, an erasing element carried at a free end of said body, means responsive to telescopic movement of said body and handle for rotating said erasing element, a member, means for adjustably and slidably connecting said member to said body, and a beak-shaped lug carried by said member engageable with the type-bar guide.

3. A rotary eraser, for a typewriter having a type-bar guide, comprising a tubular handle, a body having a longitudinal groove on its exterior surface, means for telescopically connecting said body to said handle, an erasing element carried at a free end of said body, means responsive to telescopic movement of said body and handle for rotating said erasing element, a member including a block adjustably mounted upon said groove, means for retaining said block in an adjusted position, a beak-shaped lug carried by said block engageable with the type-bar guide, and a lug pivotally mounted upon said block.

4. A rotary eraser, comprising, in combination, a tubular handle, a body having a longitudinal groove on its exterior surface, means for telescopically connecting said body to said handle, a cylindrical erasing element carried at a free end of said body, means responsive to telescopic movement of said body and handle for rotating said erasing element, a member including a block adjustably mounted upon said groove, means for retaining said block in an adjusted position, a beak-shaped lug carried by said block, and an antiskidding plug disposed at one end of said lug.

RENE JENNY.

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