Feb. 22, 1938. C. REBL 2,109,342

PRINTING ATTACHMENT FOR PENCILS

Filed July 17, 1937

Fig. 1.

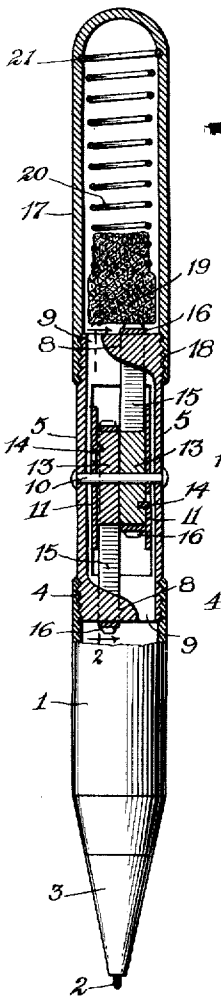


Fig. 3.

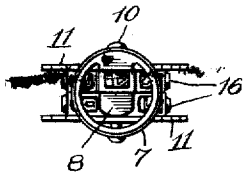


Fig. 2.

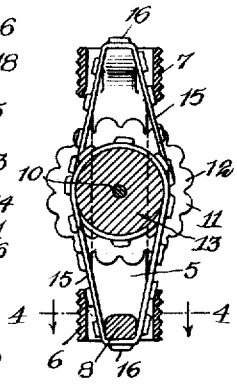


Fig. 4.

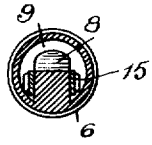


Fig. 5.

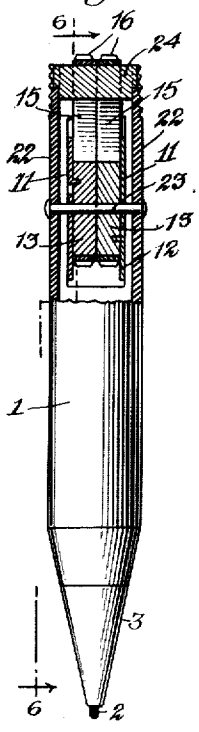


Fig. 8.

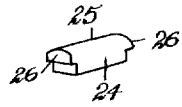


Fig. 7.

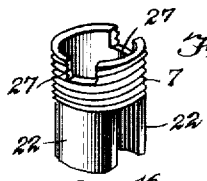
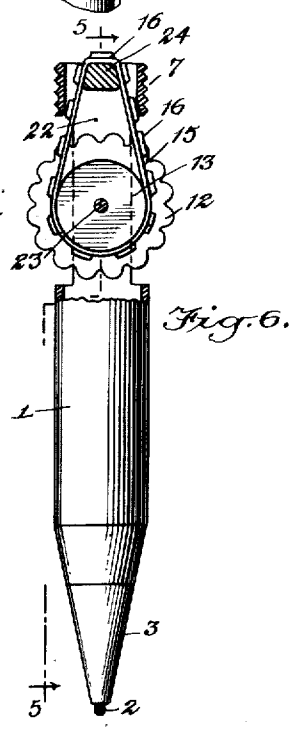


Fig. 6.



WITNESSES

INVENTOR
Carl Rebl
BY
Munn Anderson & Liddy
ATTORNEYS

Patented Feb. 22, 1938 2,109,342

UNITED STATES PATENT OFFICE

2,109,342

PRINTING ATTACHMENT FOR PENCILS

Carl Rebl, Brooklyn, N. Y.

Application July 17, 1937, Serial No. 154,248

2 Claims. (Cl. 101—103)

The present invention relates to writing implements, either pencil or pen, and more particularly to a printing device located at the upper end of a pencil or pen so that by the use of the device a combined printed and written memorandum may be produced.

More particularly the present invention relates to a printing attachment which may be embodied in any of the well-known forms of automatic pencil or fountain pen.

In the drawing the invention is shown as embodied in a pencil only, in which—

Fig. 1 shows partly in elevation and partly in vertical section a pencil with the printing device connected therewith;

Fig. 2 shows a vertical section on the line 2 in Fig. 1 of the printing device removed;

Fig. 3 shows a top plan view of one of the operative ends of the printing device shown in Figs. 1 and 2;

Fig. 4 shows a cross section taken on the line 4—4 in Fig. 2, looking in the direction of the arrows;

Fig. 5 shows a modified form, partly in elevation, and partly in section, the section being on the line 5 in Fig. 6, in which the printing device constitutes a permanent part of the pencil structure;

Fig. 6 is a view similar to Fig. 5 taken on the line 6 in Fig. 5;

Fig. 7 shows in perspective a detail of the upper end of the frame of the printing device as embodied in Figs. 5 and 6;

Fig. 8 is a perspective view of the saddle or support for that portion of the printing bands exposed at the upper end of the casing.

Similar reference characters will be employed to designate corresponding parts.

Referring to Figs. 1, 2, 3 and 4 of the drawing, 1 indicates a casing enclosing any usual form of mechanism not shown for projecting and retracting the lead 2, the lower end of the casing being tapered as usual in such devices as shown at 3. The casing 1 is open at its upper end and provided with an internal thread 4. As usual the elements constituting the pencil, including the casing 1, will be made of some suitable plastic material such as vulcanite or Celluloid.

The printing device consists of a frame having parallel side bars 5 spaced apart to leave a transverse opening as shown, and provided with circular coupling members 6 at the opposite ends of the side bars 5, all formed integrally of the same material as the casing 1. The coupling members 6 are provided with external threads 7 and with integrally formed projections 8 which partially span the opening in the couplings 6, the said opening extending partially about the projections 8 as shown at 9 in Figs. 3 and 4. As shown in the drawing, these projections 8 extend in opposite directions for a purpose which will be described.

In the opening between the side bars 5 is a shaft 10 upon which are mounted disks 11 having serrated or scalloped edges 12 whereby the disks may be revolved on the shaft 10. Each of the disks 11 carries a smooth pulley 13 affixed thereto as by the prongs 14. The pulleys 13 are in close contact with each other but revolve independently of each other. About each of the pulleys 13 is passed an elastic band 15 of soft rubber or some other suitable material which carry on their outer surface a line of printing characters 16 formed integrally with the bands 15. The elastic printing bands 15 also pass over and are supported by the projections 8, the tension of the bands being sufficient to hold them in close contact with the outer exposed surface of the projections 8 which constitute a firm support for the printing character exposed at the open free ends, as clearly shown in Figs. 1 and 2. The opening 9 about the projections 8 permits the endless bands 15 to be passed about and engage the projections.

The printing device is connected to the casing 1 by engaging the external threads 7 of the frame of the printing device with the internal threads 4 of the casing 1.

A removable cap 17 has an open end carrying an internal thread 18 which may be engaged with the external threads 7 at the ends of the frame. The cap 17 carries an inking pad 19 which may be of felt or any other suitable material carried by a coil spring 20, the upper coil of which is somewhat larger than the other coils and of a diameter to snap into a seat 21 so as to permanently connect the spring and inking pad and to position the operative face or lower end of the pad at the desired point, so that when the cap is connected to the printing device the particular character of the printing device in position for use will contact with the inking pad.

When the parts are assembled, as shown in Fig. 1, by turning the scalloped wheels 12 the flexible printing bands may be moved about the shaft 10 and over the projections 8 and when connected to the cap 17 the inking pad 19 will supply sufficient ink to the face of the printing character so that a printed duplicate thereof may

be applied to a card or other memorandum as desired.

It will of course be understood that the cap 17 is made of the same material as the casing 1 and the frame of the printing device.

In the construction shown in Figs. 5 to 8 inclusive, the casing 1 is provided at its upper end with the integrally formed upwardly extending side bars 22 which support a shaft 23 and the disks 11 and pulleys 13. The elastic printing belts or bands 15 are the same as in Figs. 1 to 4 inclusive, excepting that in the modified form the printing characters 16 carried by the bands 15 are exposed at the upper end of the frame for simultaneous use.

At the upper end there is provided a bridge or support 24, preferably having a rounded upper surface 25, and having projecting lugs 26 at its opposite ends. The upper end of the supporting frame for the printing device is provided with diametrically disposed notches 27 into which the lugs 26 are fitted so that the elastic printing bands will be supported by the bridge or support 24 and over which they may pass in the same manner as in the construction shown in Figs. 1 to 4 excepting that, as before noted in this form of the invention, the two printing bands are intended to be used simultaneously while the printing is being done. Obviously, however, they are independently movable so as to produce any desired combination of the characters exposed for printing within the limit of the number of characters carried by each band. In this form the removable cap 17 engages the external threads and operates in the same manner as shown in Fig. 1.

It may be noted that with the removable printing device as shown in Fig. 1, it may be used either with a writing implement in the form of pen or pencil, that is to say, it may be transferred or fitted to the form of writing implement required, whereas in Figs. 5 to 8 inclusive, the printing device constitutes a permanent part of the writing implement.

It will be noted that the supporting bed for the elastic printing bands will have its upper or exposed surface in the plane of the edge of the circular ends of the frame so that when the elastic bands are supported thereon the printing character at any time in position thereon will project to that extent required to produce a printed impression.

It is thought that the operation of the device has been sufficiently described in connection with the foregoing description of its construction and that any further description of the operation will be found unnecessary.

I claim:

1. In a device of the class described, in combination, a casing open at its upper end, a printing device within the casing, a flexible band carrying printing characters, a support for said band spanning the opening at one end of the casing, the upper surface of the support being in the same plane as the edge of the opening, means for moving said flexible band to position the characters thereon on the upper surface of the support in a plane above the edge of the opening, and means projecting from the casing at opposite diametrical points to move said flexible band about the support, a removable cap for covering the open end of the casing and the projecting printing characters, an inking pad within the cap for engaging the projecting printing characters, and means for connecting the cap to the open end of the casing.

2. In a device of the class described, a casing comprising a section having a writing or marking element at one end, an intermediate reversible section provided with coupling members and supports at its opposite ends, the supports spanning the opening in the coupling members, flexible bands provided with printing characters engaging the supports, said bands extending in opposite directions, means to operate said bands, a removable cap carrying an inking device, and means to couple the cap to the coupling members at either of the opposite ends of the printing device.

CARL REBL.