June 16, 1925. 1,541,950

H. W. HEESCH

PEN FOR RECORDING APPARATUS

Filed Oct. 29, 1923

Fig. 1

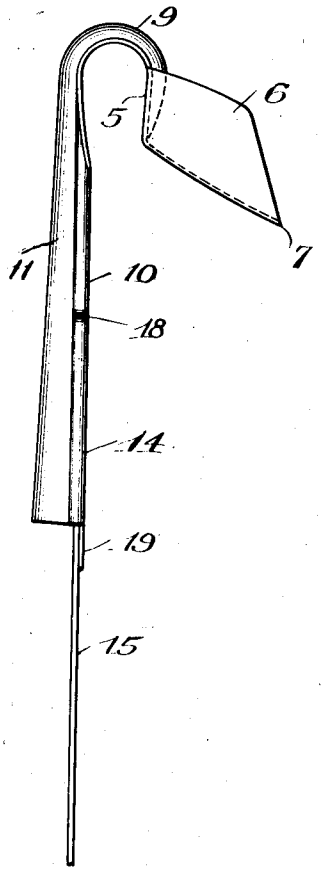


Fig. 2

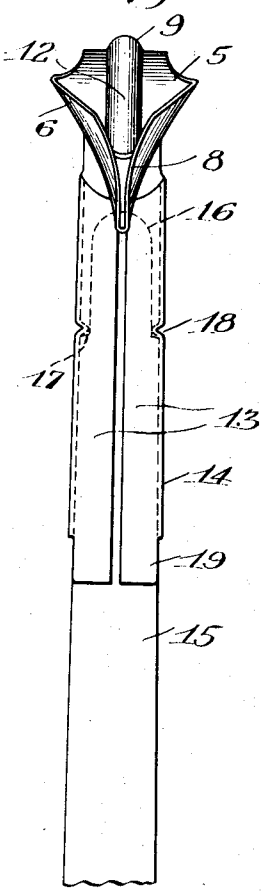


Fig. 3

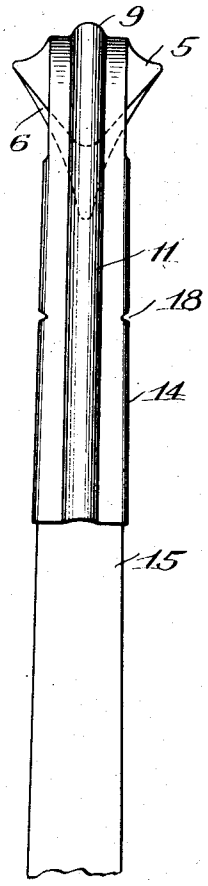
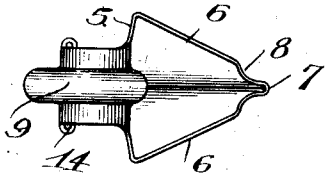


Fig. 4



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UNITED STATES PATENT OFFICE.

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PEN FOR RECORDING APPARATUS.

Application filed October 29, 1923. Serial No. 671,456.

To all whom it may concern:

Be it known that I, HENRY W. HEESCH, a citizen of the United States, residing at Rochester, in the county of Monroe and State of New York, have invented certain new and useful Improvements in Pens for Recording Apparatus; and I do hereby declare the following to be a full, clear, and exact description of the same, reference being had to the accompanying drawings, forming a part of this specification, and to the reference numerals marked thereon.

This invention relates to pens particularly adapted for recording apparatus such for example as pressure or temperature recording instruments, one object of the invention being to provide a pen of simple and efficient construction capable of being manufactured at a low cost. More specifically stated, it is an object of the invention to provide a pen of improved ink retaining and marking qualities and of a rigid and durable construction adapted to be readily attached to and removed from a pen arm.

To these and other ends the invention resides in certain improvements and combinations of parts all as will be hereinafter more fully described, the novel features being pointed out in the claims at the end of the specification.

In the drawings:

Fig. 1 is a side elevation of a pen embodying the present invention and shown as attached to a pen arm.

Fig. 2 is a front elevation of the same.

Fig. 3 is a rear elevation of the same and

Fig. 4 is a top plan view.

Similar reference numerals throughout the several views indicate the same parts.

The embodiment of the invention herein disclosed by way of illustration comprises improvements in the ink receiving or reservoir portion of the pen and also in the means for supporting the same on the pen arm and in the present instance the device is stamped up integrally from a single blank of sheet metal with the advantages of economy in manufacture and durability in use. The portion of the blank for the reservoir is suitably shaped and stamped inwardly or dished as shown to provide for the reservoir a rear wall 5 integrally joined with side walls 6. The latter converge toward the front and bottom of the pin to form a writing point 7 and enclose between them a channel which, adjacent the writing point, is reduced to capillary dimensions by folding the metal closely upon itself at the bottom of the channel with the sides curving upwardly and outwardly as shown at 8, in Fig. 2. The forward edges of the side walls 6 are cut at an angle preferably somewhat acute with the bottom of the channel to render the latter pointed at its forward writing end. There is thus produced a reservoir portion of substantial capacity with integrally joined walls and an ink feeding channel of capillary size at the point of the pen adapted to apply the ink in a fine line without excessive flow.

As already stated, the means for supporting the pen, or, in other words, the shank portion, is constructed integrally with the reservoir portion, comprising, preferably, a strip 9 curving rearwardly and downwardly as shown from the top of the rear wall 5, in forms of the device where the pen is supported from below, although of course the shank may extend in other directions as desired. The strip has a straight end portion 10 and is preferably stamped up with a central reinforcing rib 11 which extends in the present instance longitudinally of the strip and downwardly across the rear wall 5 of the reservoir, as at 12, adjacent the bottom of the channel, for giving to the rear wall and the shank portion the desired strength and rigidity.

The end 10 of the shank is preferably provided with laterally extending marginal portions 13 on either side of the stiffening rib 11 which marginal portions are folded as at 14 to form a socket for the reception of a support or arm. The latter being in the present instance in the form of the well known spring strip 15, the marginal portions are accordingly folded parallel with and in close proximity with the main body of the strip adjacent the rib to provide a narrow socket adapted to closely fit the supporting arm 15. The latter may be conveniently constructed with a rounded end 16 of reduced width providing shoulder portions 17 and the sides of the socket may be slightly indented as at 18 to limit the insertion of the supporting arm which snugly fits the socket and securely holds the pen. To facilitate the insertion of the arm in its socket one side of the latter, as for example, the folded marginal portions 13, may be slightly extended as at 19 to guide the rounded end of

the pen arm into registry with the socket opening during attachment of the pen.

While the rib 11 serves as stated to stiffen the shank as a whole, it has the additional function of supplying a resilient connection between the marginal folds forming the sides of the socket so that the latter yieldably receive and frictionally grip the supporting arm.

The invention thus provides a pen having a reservoir portion of an efficient character with a durably connected supporting member or shank of a strong and rigid nature formed to provide an effective means for attaching the same to a supporting arm, the whole being economically stamped up from a single blank of sheet metal in a simple manner capable of being accomplished by practical manufacturing equipment and methods.

I claim as my invention:

1. In a pen, a reservoir portion comprising a rear wall and converging side walls forming between them an ink feeding channel having a writing point at the forward end thereof, and a shank extending from the rear of said reservoir comprising a strip bent marginally upon itself to provide a socket for the reception of a pen support.

2. In a pen, a reservoir portion comprising a rear wall and converging side walls forming between them an ink feeding channel having a writing point at the forward end thereof, and a shank extending from the rear of said reservoir comprising a strip having a central stiffening rib with the margins of the strip at the sides of said rib bent inwardly upon themselves to form a socket for the reception of a pen support.

3. In a pen, a reservoir portion comprising a rear wall and converging side walls forming between them an ink feeding channel having a writing point at its forward end, and a shank portion extending integrally from said rear wall and formed to provide a socket for the reception of a pen support.

4. In a pen, a reservoir portion comprising a rear wall and converging side walls forming between them an ink feeding channel having a writing point at its forward end and a shank portion comprising a strip extending integrally from said rear wall with a central stiffening rib and marginal portions on either side thereof folded upon themselves to provide a socket for detachably receiving a pen support.

5. A pen constructed of a single blank of sheet metal formed to provide a reservoir portion having a rear wall and side walls enclosing therebetween an ink feeding channel having a pointed writing end, and a shank strip extending from the top of said rear wall and formed to provide a socket for detachably receiving a pen support.

6. A pen constructed of a single blank of sheet metal formed to provide a reservoir portion having a rear wall and side walls enclosing therebetween an ink feeding channel having a pointed writing end, and a shank strip extending from the top of said rear wall and having a longitudinal stiffening rib with the marginal portions at the sides thereof folded upon themselves to provide a socket for a pen support.

7. A pen constructed of a single blank of sheet metal having a portion thereof dished to form a reservoir comprising a rear wall and converging side walls forming between them at the bottom a capillary ink feeding channel with a writing point at its forward end, and a shank strip extending from the top of said rear wall having a longitudinal stiffening rib formed therein and in said rear wall with marginal portions of said strip folded to produce a socket for the reception of a pen supporting arm.

8. A pen constructed of a single blank of sheet metal having a portion thereof dished to form a reservoir comprising a rear wall and converging side walls forming between them at the bottom a capillary ink feeding channel with a writing point at its forward end, a shank strip curving rearwardly and downwardly from the top of said rear wall with a straight extension having the marginal portions thereof folded inwardly to provide a socket for a supporting arm, and a rib formed across said rear wall and longitudinally of said shank strip to stiffen the same and provide a resilient connection between said marginal socket portion.

HENRY W. HEESCH.