This invention relates to combination tie clasps and chambered holders for devices such as pencils and the like.

Among the objects of the present invention it is aimed to provide an improved combination tie clasp and chambered holder for such devices as pencils and the like whereby the clip is rigidly maintained in position adjacent to the holder to form an enduring frictional tie clasp.

With combination tie clasps and chambered holders heretofore used, it has been the practice to extend the tail of a clip through the chambered holder with an opening in the tail in registration with an opening in the plug or cap for the holder and then position a pin rivet through the registering openings and upset the inner end of the rivet. This combination, while anchoring the clip in place, frequently would become loose with wear and then the clip would rock on the rivet and impair its frictional gripping relation with a tie. In view thereof, the present invention aims to provide an improved two-prong rivet connection that cooperates with recessed edges in the clip whereby not only effectively to anchor the clip in place but also against rocking without the pin rivet connection.

It is still another object of the present invention in a combination tie clasp and chambered holder to supplement a pin rivet connection with a two-prong rivet connection in which case the two-prong rivet connection serves mainly to anchor the clip against rocking and the pin rivet connection is still relied upon mainly to anchor the clip against accidental removal.

These and other features, capabilities and advantages of the present invention will appear from the subjoined detailed description of specific embodiments thereof illustrated in the accompanying drawings, in which

Fig. 1 is a perspective substantially full size view of a combination tie clasp and pencil.

Fig. 2 is a transverse section enlarged of the chambered holder for a pencil with a removable pencil shown therein.

Fig. 3 is a section on the line 3—3 of Fig. 2.

Fig. 4 is a section on the line 4—4 of Fig. 3.

Fig. 5 is an exploded edge view showing a clip in endwise, a plug or cap in perspective, a chambered holder in section, and a mandrel partly broken away adapted for upsetting the two prongs of the plug over the tail of the clip.

Fig. 6 is a transverse section similar to Fig. 3 of a modification in which a two-prong rivet connection supplements a pin rivet connection.

Fig. 7 is a section on the line 7—7 of Fig. 6.

In the embodiment shown in Figs. 1 to 5, inclusive, a chambered holder constituting a part of the combination is shown as associated with, and adapted to receive, a removable pencil. The holder 1, in the present instance, is substantially rectangular in cross-section and provided with a bulged portion 2 at one end to form a frictional grip for the removable pencil 3. The pencil 3 is merely typical of any removable pencil, in the present instance having a main body portion 4, a diminished eraser portion 5 extending from its inner end, and a cone-shaped lead supporting member 6 which is rotateably associated with the body portion 5 to feed the writing element, such as the lead 7, into or out of writing position. The supporting member 6, in the present instance, extends beyond the body portion 5 to form the shoulder 8 to abut against the outer end of the bulging portion 2.

The connection between the clip 9 and the holder 1 now to be described constitutes the main part of the present invention. The clip 9 consists of a tail 10, a U-shaped intermediate portion 11 and a tie engaging tongue or finger 12. In the end 13 of the holder 1, there is positioned a plug or cap 14, in the present instance consisting of a polygonal shaped head 15, a cylindrical portion 16 and two lips or prongs 17 and 18 spaced from one another a distance corresponding to, and snugly fitting, the width of the tail 10. The holder 1, see Figs. 3 and 5, has an opening 19, positioned to register with the space between the prongs 17 and 18, and in size just large enough snugly to receive the tail 10.

With the embodiment shown in Figs. 1 to 5, inclusive, the tail 10 preferably is provided with two indentations 20 and 21 and the prongs 17 and 18 with two corresponding projections 22 and 23, respectively.

To assemble the several parts, the tail 10 is first inserted into the opening 19 in the position shown in Fig. 3, thereupon the plug 14 is inserted with its two prongs 17 and 18 extending to and beyond the tail 10, and thereupon a riveting machine is used to upset the prongs 17 and 18 into the position shown in Fig. 3. If the riveting machine is provided with a mandrel 24 having a concave face 25, the latter will engage the outer curved faces of the prongs 17 and 18 and force them over the tail 10 when the indentations 20 and 21 will cooperate with the projections 22 and 23 to anchor the clip against removal from the holder 1, and the prongs 17 and 18 cooperating with the tail 10 will of course anchor the plug 14.
against removal and also cooperate to anchor the tail 18 against rocking.

The indentations 20 and 21 and projections 22 and 23 may be omitted, when, however, it is desirable to form registering openings 26 and 27 in the plug 28 and tail 29, respectively, as shown in Figs. 6 and 7, to receive the pin 30, the inner end 31 of which being upset in the usual way by a riveting machine.

It is obvious that various changes and modifications may be made to the details of construction without departing from the general spirit of the invention as set forth in the appended claims.

I claim:

1. A connecting means for securely fixing against movement the tail of a clip extending into a cylindrical chambered holder through an opening in the side wall of the chambered holder open at one end, said connecting means having a cylindrical plug extending into the open end of the holder and having a snug fit therein, said plug having a head forming an abutment or limiting stop to engage the open end of the holder, the inner end of said plug disposed adjacent to, but just clear of, the opening in the side wall of the chamber, said inner end of the plug being plane and extending perpendicular to the inner face of the holder and the full distance transversely from one side to the other of the inner face of the holder, means for anchoring the tail against movement laterally relative to said plug, and prongs extending from said inner end with a space between the same to receive the tail of the clip between them and anchor the tail against rotation relative to said plug, the prongs being clinched over the tail and anchoring the tail securely against the plane surface of the inner end of the plug.

2. The combination set forth in claim 1 in which the means for anchoring the tail against movement laterally includes projections on said prongs and recesses at the sides of the tail to receive the projections.

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