Aug. 12, 1952 H. FRENCH 2,606,350

CABLE STRAIN CLAMP

Filed July 5, 1949

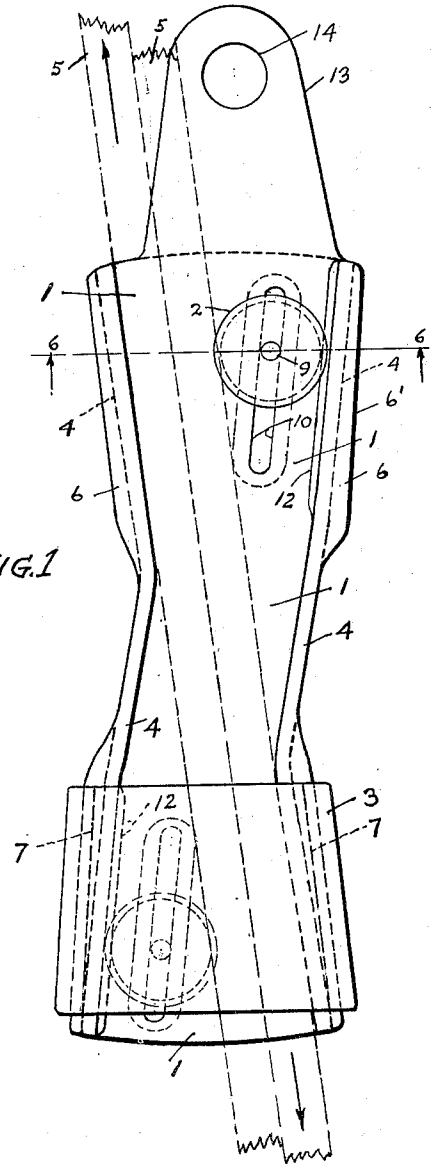


FIG. 1

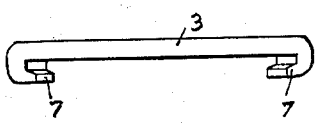


FIG. 4

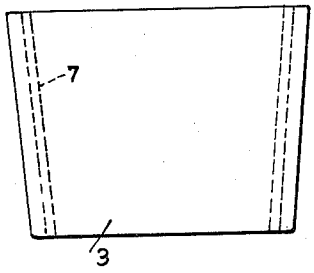


FIG. 3

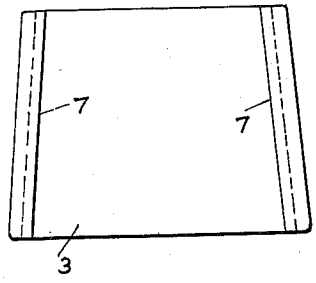


FIG. 5

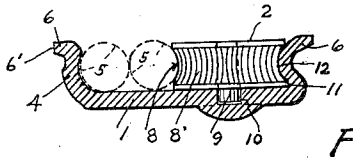


FIG. 6

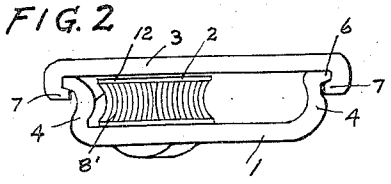


FIG. 2

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2,606,350

CABLE STRAIN CLAMP

Humboldt French, Oakland, Calif.

Application July 5, 1949, Serial No. 103,120

1 Claim. (Cl. 24—126)

1

This invention relates to cabin strain clamps of the general type shown in the patents to Kemper 1,811,942 and Everley 2,401,418 and the objects of the present invention are to provide a simpler and cheaper construction than former devices of this kind while providing a device more easily assembled for use, yet of equal effectiveness. Other advantages of the improvement will appear in the following description and accompanying drawings and which drawings are substantially shown full size for use with a cable or cables of ⅜ inch diameter. Of course the device may be made to suit any size cable.

In the drawings:

Fig. 1 is a plan view of the device with two bights of cable shown dotted in place and with one of the two cover plates removed to more clearly show one of the gripping roller mountings.

Fig. 2 is a lower end view of Fig. 1.

Fig. 3 is a plan view of the outer side of the removed cover plate.

Fig. 4 is an end view of the removed cover plate.

Fig. 5 is a plan view of the inner side of the cover plate of Fig. 3.

Fig. 6 is a cross sectional view of Fig. 1 taken along the line 6—6 of that figure.

Before describing the drawings in detail it may be explained that the present device consists of only three distinct or different pieces to manufacture, an elongated flat open-faced metal shell 1 with shallow opposite side walls or flanges, a gripping roller 2 with its fixed center pin, and a relatively short cover-plate 3 with shallow side walls, the whole device when assembled including one shell, two rollers and two cover plates.

In the drawing the side walls are designated 4 and are of a depth to just suit the diameter of the cable 5 for which the device is to be used, and these walls 4 also diverge respectively towards opposite ends of the shell to provide wedging walls for the rollers to grip the cables. Also the walls are each formed at opposite ends of the shell with outwardly directed lips or flanges 6, adapted to be embraced by or engaged by complementarily formed reentrant flanges 7 formed along the opposite longitudinal edges of the cover plates 3.

The cover plates are substantially a third the length of the shell and the lips 6 on the shell are about the same or a trifle longer, and the lips of the shell and embracing flanges of the plates are arranged at an angle diverging toward the outer ends of the shell and plates when in position so

2

that the plates may be urged along the shell in opposite directions to wedge tightly in place as indicated for the plate at the lower end of the shell in Figs. 1 and 2.

The lips 6 of the shell terminate at their inner ends in spaced relation sufficient to permit applying the cover plates to the shell one at a time at the narrowest portion of the open faced shell and sliding them respectively towards the outer ends of the shell and striking them at their inner ends with any implement to drive them to firmly locked position.

To aid in locking the cover plates in place, the edges 6′ of the lips of the shell may be knurled or otherwise roughened, and if desired the cooperating bottom of the recess 7′ formed by the reentrant flanges 6 may be knurled.

The gripping rollers 2 which roll respectively along the angularly disposed side walls of the shell 1 to force or clamp the cables 5, 5′ together against the opposite side wall, when tension is applied to the cables (in direction of the arrows) are of hardened steel and formed with a concave periphery 8 to fit against the cable and preferably provided with sharply milled teeth 8′ to engage the cables.

The rollers are of a thickness to just roll freely between the shell and cover plate and are retained from rolling too far or getting out of place by means of a central pin 9 pushed tightly into a central hole in the roller and extending at one end beyond the roller to be guided in a groove 10 formed in the shell 1, while the lower edge of the roller engages in a small groove 11 formed in and at the base of the adjacent side wall of the shell, and which side wall is also preferably curved inwardly as at 12 to fit within the concavity of the roller so as to be engaged by its milled teeth 8′. The pin is preferably pushed into the hole in the roller after the roller has been placed in position with its edge in the groove in the side wall, tho the pin may be first fitted tight into the roller and the assembled roller and pin sprung into the required position if the fit of the parts is not too tight.

While the above described construction is all that is necessary for locking two cables or two bights of the same cable together and to the housing shell, it is obvious that the shell may be made of a breadth to pass one cable only and which single cable will be locked to the shell upon pulling the cable and the shell relatively in opposite directions, and to this end the shell may be anchored by any suitable means, or as by one or more extension lugs as shown at 13 in Fig. 1

apertured as at 14 to receive an anchoring bolt or loop of an anchoring cable or stay cable. This lug 13 may of course be omitted where the device is used for clamping two cables together as in Fig. 1.

It should be noted that the taper of the shell side walls to make the gripping rollers operate quickly, is preferably greater than the taper of the locking edges of the cover plates and shell edges 6, as these may be substantially parallel or just enough taper to insure a tight fit to lock the cover plates against displacement.

The above description and mode of operation of the parts is thought clear so that no further description of the device would seem necessary as its action in locking the bights of cable to each other and to the housing shell by the action of the wedging rollers is common to earlier devices of this kind, the present invention relating to the construction of the parts, adapted to be made of metal stampings.

I therefore claim:

In a cable strain clamp of the type having an elongated open ended shell longitudinally through which a cable to be clamped is adapted to be extended, said shell comprising an elongated plate with standing walls along opposite edges to receive a pair of adjacent cables between them, said walls diverging towards opposite ends of the shell, a pair of cable gripping rollers within and respectively adjacent each end

of the shell and rollable along one of its side walls, means retaining the rollers to the shell comprising an indented groove formed in the side wall of the shell adjacent each roller and the roller formed with a concave face with one of its edges projecting into the groove, a pin projecting axially from one side of the roller into an indented guiding groove formed in the inner side only of the shell plate for holding the roller against said wall.

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