

May 1, 1945.

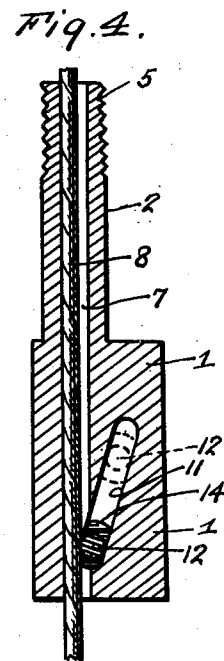
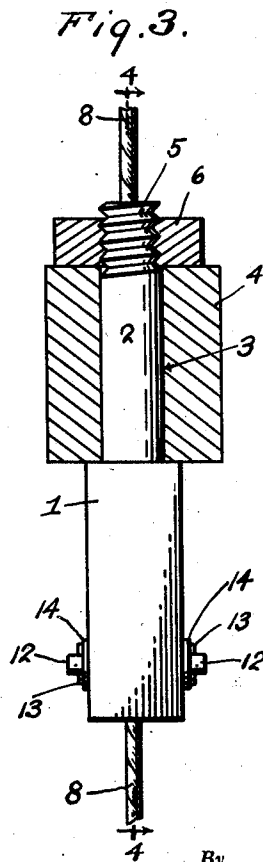
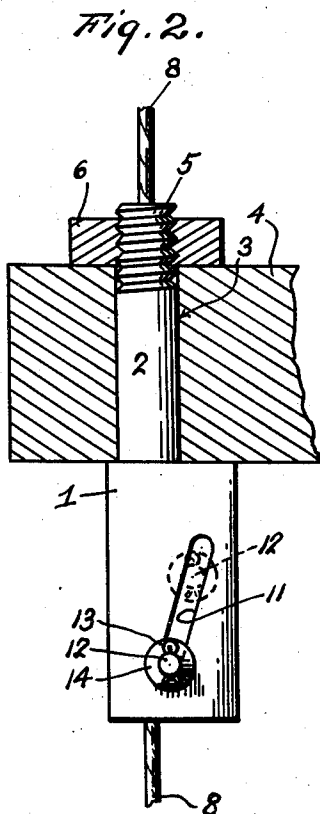
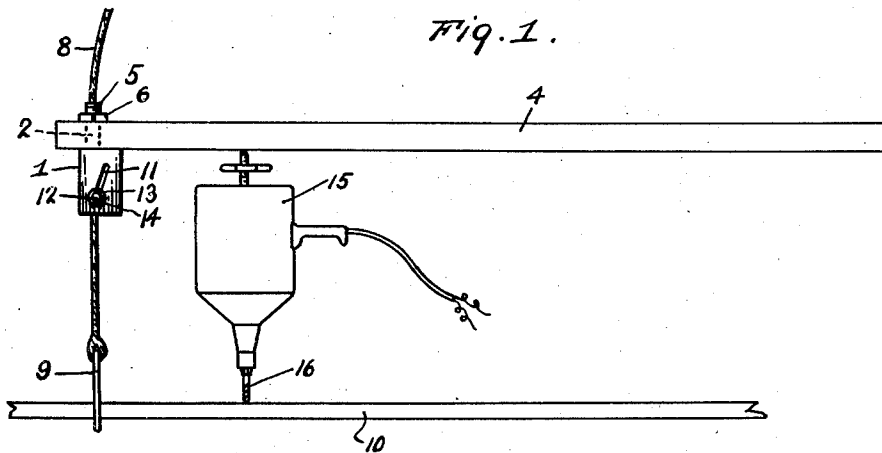
J. A. McMURPHY

2,374,875

CABLE CLAMP

Filed Oct. 19, 1943

2 Sheets-Sheet 1



Inventor

JAY A. McMURPHY

By

Clarence A. O'Brien
and Harvey B. Jacobson
Attorneys

May 1, 1945.

J. A. McMURPHY

2,374,875

CABLE CLAMP

Filed Oct. 19, 1943

2 Sheets-Sheet 2

Fig. 5.

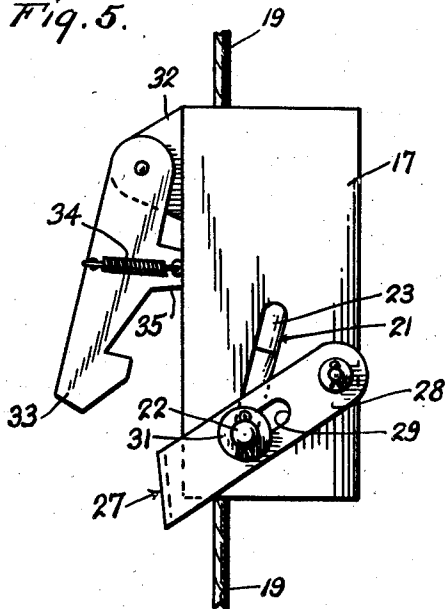


Fig. 7.

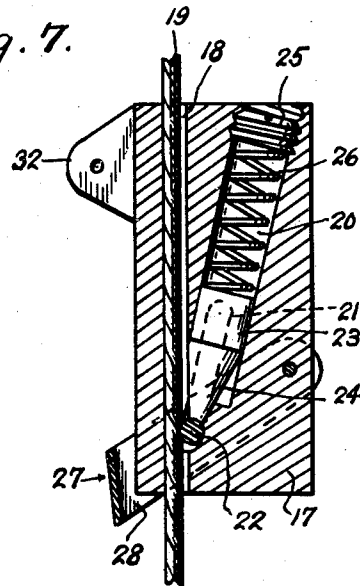


Fig. 6.

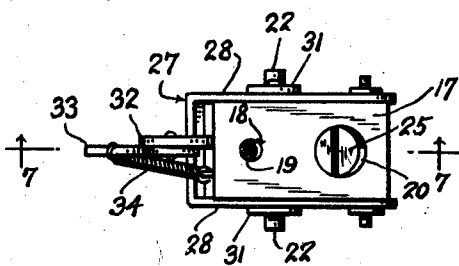


Fig. 8.

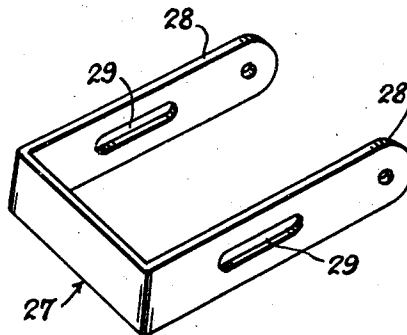
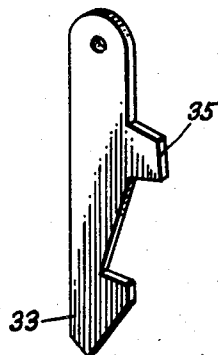


Fig. 9.



Inventor

J. A. McMURPHY

By

Alvin A. O'Brien
and Harvey B. Jackson
Attorneys

UNITED STATES PATENT OFFICE

2,374,875

CABLE CLAMP

Jay A. McMurphy, Sonoma, Calif.

Application October 19, 1943, Serial No. 506,895

3 Claims. (Cl. 24-126)

The present invention relates to new and useful improvements in cable clamps of the friction type, and has for its primary object to provide, in a manner as hereinafter set forth, a device of this character comprising a novel construction and arrangement whereby the grip will be increased or tightened in proportion to the strain or load on the cable.

Another very important object of the invention is to provide a cable clamp of the aforementioned character which embodies unique means for mounting the device on a lever or other support.

Still another very important object of the invention is to provide a cable clamp of the character described which comprises novel means for releasably securing the cable gripping roll in inoperative position when desired.

Other objects of the invention are to provide a cable clamp of the character described which will be comparatively simple in construction, strong, durable, highly efficient and reliable in use, compact, and which may be manufactured at low cost.

All of the foregoing, and still further objects and advantages of the invention will become apparent from a study of the following specification, taken in connection with the accompanying drawings wherein like characters of reference designate corresponding parts throughout the several views, and wherein:

Figure 1 is a view in side elevation, showing a cable clamp constructed in accordance with the present invention in use on one end portion of a pressure lever for an electric drill.

Figure 2 is a view in side elevation of the device, showing the end portion of the lever in longitudinal section.

Figure 3 is a view in front elevation of the device, showing the lever in cross section.

Figure 4 is a view in vertical section through the cable clamp, taken substantially on the line 4-4 of Figure 3.

Figure 5 is a view in side elevation of another form of the invention.

Figure 6 is a top plan view of the modification.

Figure 7 is a view in vertical section, taken substantially on the line 7-7 of Figure 6.

Figure 8 is a detail view in perspective of the swinging roll elevating yoke.

Figure 9 is a detail view in perspective of the yoke securing latch.

Referring now to the drawings in detail, and to Figures 1 and 4, inclusive, thereof in particular, it will be seen that reference character 1

designates a vertically elongated metallic block. Rising from the block 1 is an integral shank 2 which is adapted to be inserted through an opening 3 provided therefor in one end portion of a lever 4, for example, for mounting the block therebeneath. The upper end portion of the shank 2 is threaded, as at 5, to receive a securing nut 6.

The block 1 and the shank 2 have formed therein a bore 7 which slidably accommodates a cable 8. A hook or the like 9 is provided on the lower end of the cable 8 for detachably connecting said cable to a piece of work, as at 10.

The block 1 is further provided with a transverse diagonal slot 11 which communicates at one end with the bore 7. A gripping roll 12 is operable in the slot 11 and frictionally engageable with the cable 8 in the bore 7. The end portions of the roll 12 project from the sides of the block 1 and have mounted therein cotter pins 13 for retaining said roll in position in the block. Washers 14 are provided between the cotter pins 13 and the block 1.

It is thought that the operation of the device will be readily apparent from a consideration of the foregoing. Briefly, the roll 12, which is freely operable in the slot 11, permits the cable 8 to be readily inserted upwardly in the bore 7. However, the roll 12 contacts the cable 8 by gravity and any movement of said cable in the opposite or downward direction immediately wedges the roll 12 between the cable and the outer wall of the slot 11 for frictionally gripping and retaining said cable. The construction and arrangement is such that the cable, passing upwardly through the lever 4, may be conveniently adjusted as desired. A portable electric drill is shown at 15 in Figure 1 of the drawings. The lever 4 forces the drill 15 downwardly on the work 10. By pulling the cable 8 upwardly through the clamp, the lever 4 may be readily adjusted as the tool 16 of the drill 15 passes through the work.

In the embodiment of Figures 5 to 9, inclusive, of the drawings, reference character 17 designates a vertically elongated block having a vertical bore 18 therein which accommodates a cable 19. The block 17 is further provided with an inclined bore 20 which communicates, at its lower end, with the bore 18. The block 17 is still further provided with a transverse, diagonal slot 21 which parallels the bore 20 and which communicates therewith and, at its lower end, with the bore 18.

A gripping roll 22 is operable in the slot 21 and,

when in raised or inoperative position, traverses the bore 20. The roll 22 is frictionally engageable with the cable 19 in the bore 18. A plunger 23 is slidable in the bore 20, said plunger including a substantially conical end portion 24 which is engageable with the roll 22 for engaging said roll with the cable 19. A removable screw plug 25 closes the bore 20 at its upper end. A coil spring 26 in the bore 20 yieldingly urges the plunger 23 downwardly.

Mounted for vertical swinging movement on the lower portion of the block 17 is a yoke 27. The legs 28 of the yoke 27 have formed therein longitudinal slots 29 in which the end portions of the roll 22 are rotatably and slidably engaged. Cotter pins 30 retain the roll 22 in the yoke 27, washers 31 being provided between said cotter pins and said yoke.

Projecting forwardly from the upper portion of the block 17 is an ear 32. A latch 33 is pivotally suspended from the ear 32. A spring 34 engages the latch 33 beneath the yoke 27 when said yoke is swung upwardly.

In operation, the coil spring 26 actuates the plunger 23 for pressing the roll 22 tightly against the cable 19. To release the cable, the yoke 27 is swung upwardly to raised position where it is engaged and secured by the latch 33. Thus, the roll 22 is elevated in the slot 21, said roll traveling in the slots 29 in said yoke. When this occurs, the plunger 23 is forced upwardly in the bore 20 against the tension of the coil spring 26. A stop 35 on the latch 33 is engageable with the block 17 for positioning said latch to be properly engaged by the yoke 27.

It is believed that the many advantages of a cable clamp constructed in accordance with the present invention will be readily understood, and although preferred embodiments of the device are as illustrated and described, it is to be un-

derstood that further modifications and changes in the details of construction may be resorted to which will fall within the scope of the invention as claimed.

What is claimed is:

1. A cable clamp comprising a block having a bore extending therethrough for the passage of a cable, said block further having a diagonal slot therein communicating, at one end, with the bore, and a roll operable in the slot and engageable with the cable in the bore for frictionally gripping and retaining said cable against movement in one direction, said roll being of the same diameter as the slot, whereby the roll may be inserted endwise in said slot and block.

2. A cable clamp comprising a block having a bore therethrough for the passage of a cable, said block further having a diagonal slot therein communicating, at one end, with the bore, said block still further having a second bore therein communicating with the slot and with the first-named bore, a roll operable in the slot and engageable with the cable for frictionally clamping said cable against sliding movement in one direction in the block, a plunger slidable in the second-named bore and engaged with the roll, and a spring in the second-named bore engaged with the plunger for actuating same.

3. A cable clamp comprising a block having a bore therethrough for the passage of a cable, said block further having a diagonal slot therein communicating, at one end, with the bore, a yoke pivotally mounted for swinging movement on the block, a roll rotatably and slidably mounted in the yoke and operable in the slot for engaging the cable in the bore, and a latch on the block engageable with the yoke for releasably securing the roll in inoperative position.

JAY A. McMURPHY.