C. POTHIER.

APPARATUS FOR USE IN SPLICING OR ASSEMBLING CABLES.

APPLICATION FILED SEPT. 19, 1918.

1,333,574.

Patented Mar. 9, 1920.

3 SHEETS—SHEET 1.

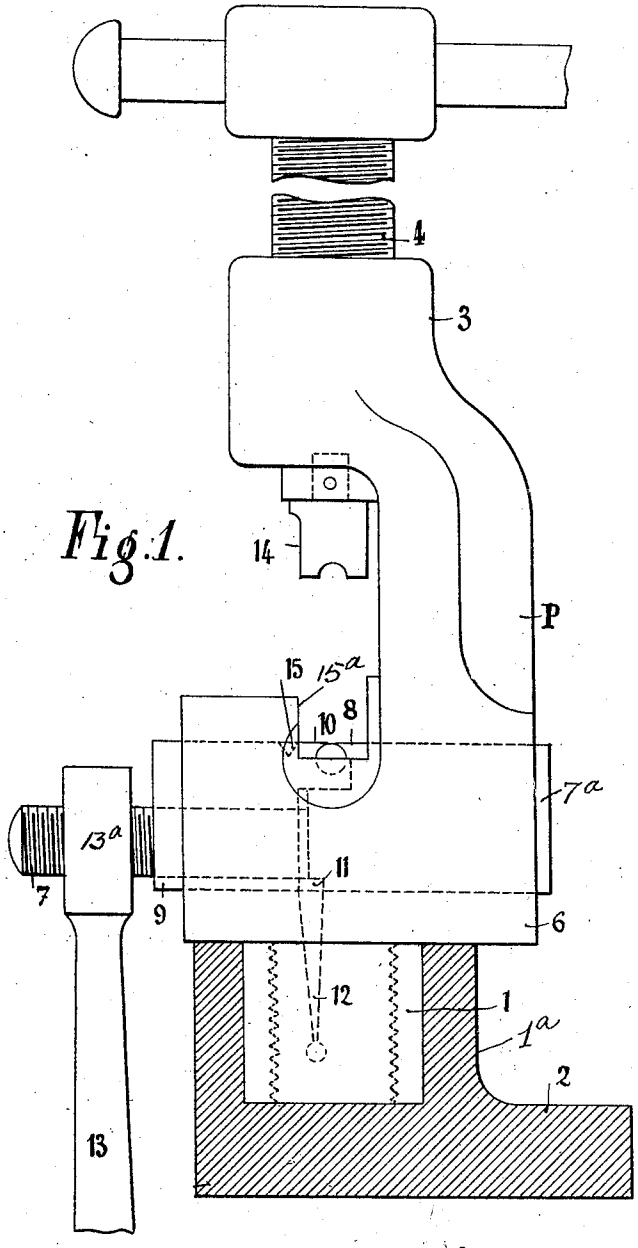


Fig. 1.

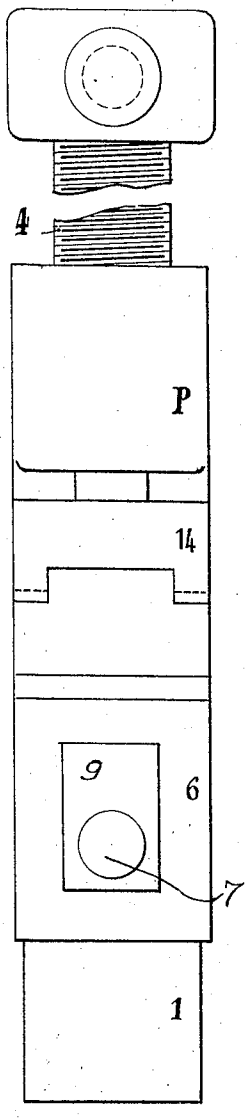


Fig. 2.

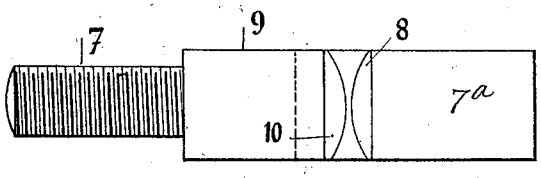


Fig. 3.

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Camille Pothier
By:- B. Singer. Atty.

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3 SHEETS—SHEET 2.

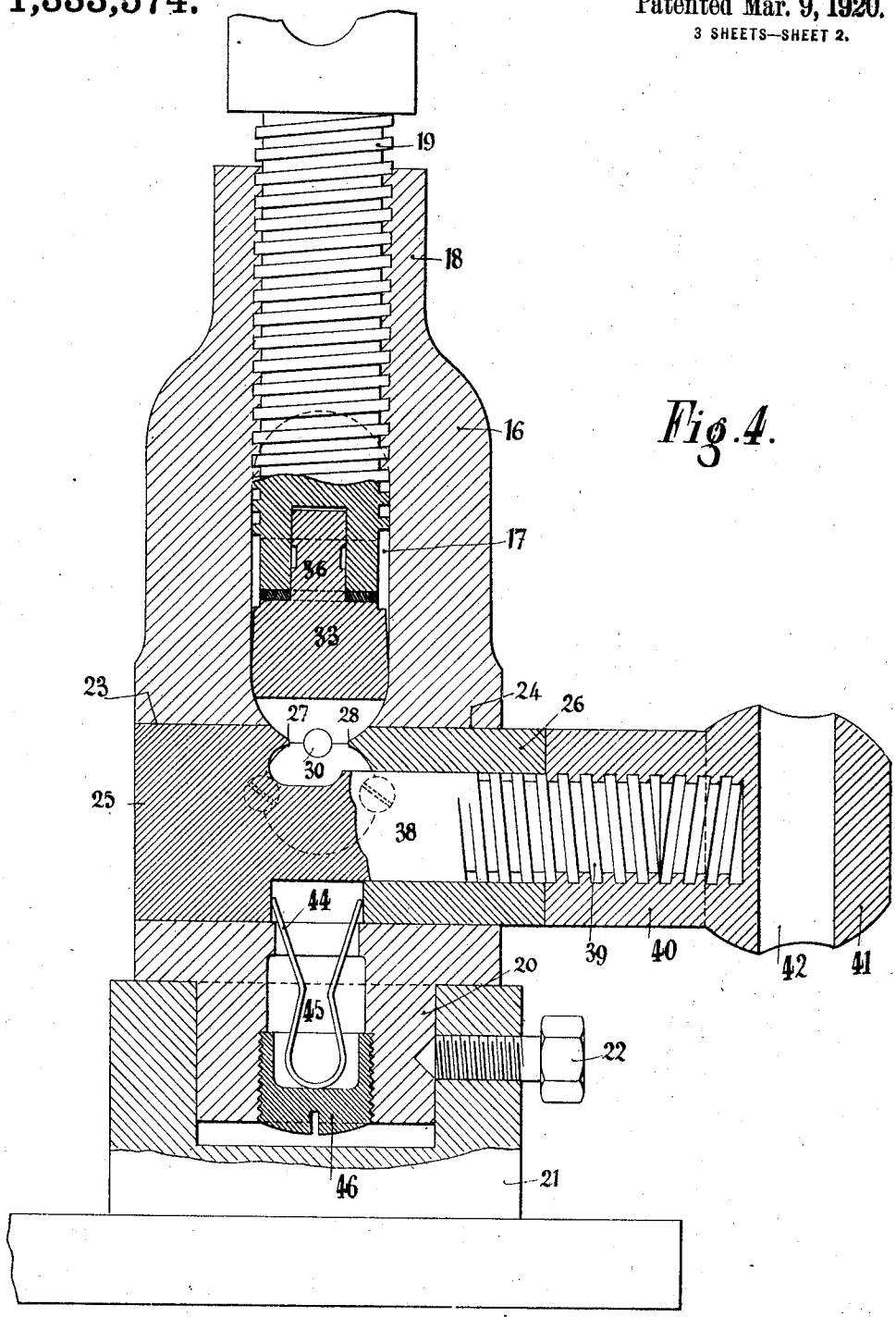


Fig. 4.

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3 SHEETS—SHEET 3.

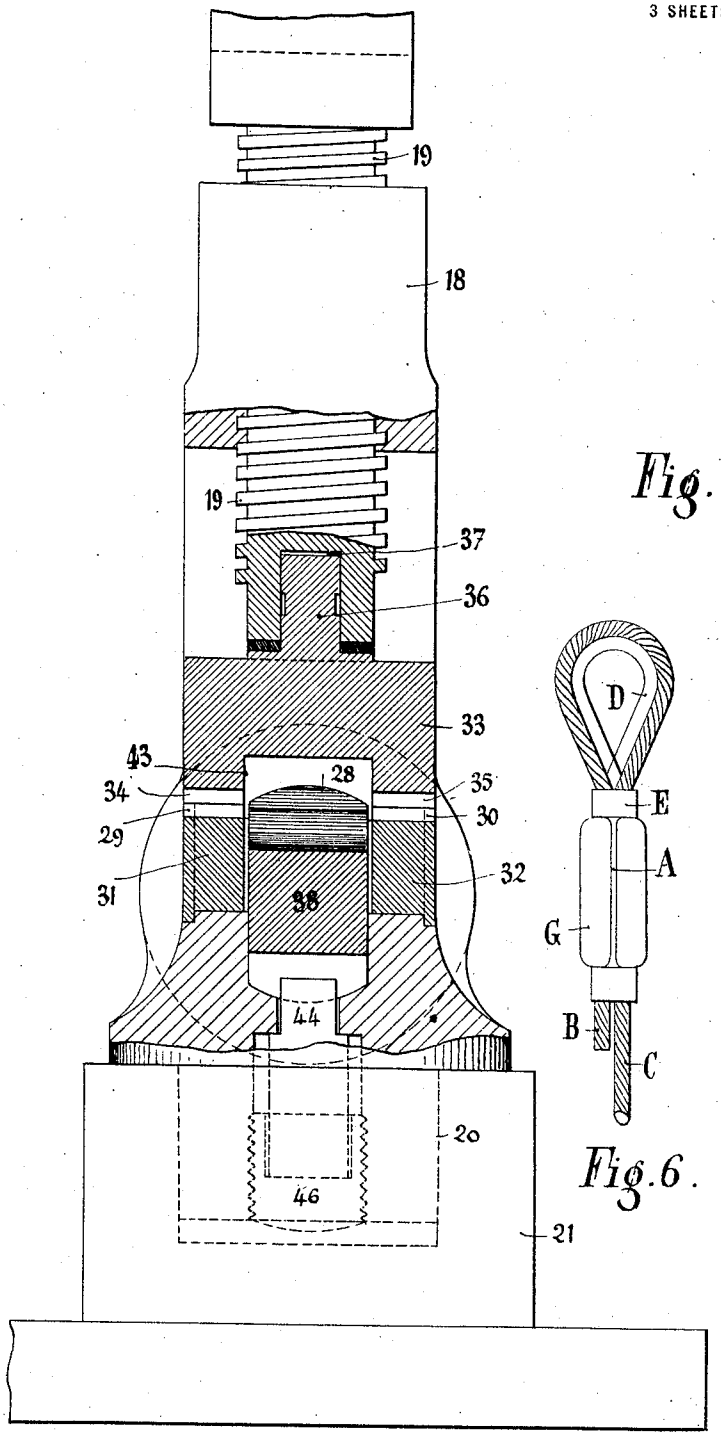


Fig. 5.

Fig. 6.

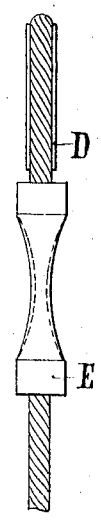


Fig. 7.

Inventor,
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UNITED STATES PATENT OFFICE.

CAMILLE POTHIER, OF PARIS, FRANCE.

APPARATUS FOR USE IN SPLICING OR ASSEMBLING CABLES.

1,333,574. Specification of Letters Patent. Patented Mar. 9, 1920.

Application filed September 19, 1918. Serial No. 254,884.

To all whom it may concern:

Be it known that I, CAMILLE POTHIER, a citizen of the Republic of France, residing at Paris, France, have invented new and useful Improvements in Apparatus for Use in Splicing or Assembling Cables, of which the following is a specification.

This invention is an improved apparatus especially adapted for use in clamping the cable sockets on the overlapping portions of a cable or cables to be spliced or formed with an eye at one end.

The invention consists in the construction, combination and arrangement of devices hereinafter described and claimed.

In the accompanying drawings:—

Figure 1 is a side elevation, partly in section, of one form of apparatus constructed and arranged in accordance with my invention.

Fig. 2 is a front end elevation of the same with the die operating nut removed.

Fig. 3 is a detail side elevation of the dies 8, 10, and associated parts.

Fig. 4 is a vertical central sectional view of a modified form of apparatus constructed in accordance with my invention.

Fig. 5 is partly an elevation and partly a vertical transverse sectional view of the same.

Fig. 6 is a detail elevation of a cable formed with an eye and spliced by means of a cable socket which has been clamped on the overlapping portions of the cable by my improved apparatus.

Fig. 7 is a similar view of the same on a plane at right angles to that of Fig. 6.

Referring first to the form of my invention shown in Figs. 1 and 2 of the drawings, the frame is preferably made of steel and comprises a base 2, a standard 1, a body 6, and an arm P which extends upwardly from one end of the body and is formed on the front side, and at the upper end, with an overhanging head 3. A vertically arranged screw 4 operates in a threaded opening with which the head is provided and said screw has arms 5 at its upper end forming levers which enable said screw to be readily manually turned. A horizontally arranged die 14 is detachably fitted to the lower end of the screw.

The body 6 is provided on its upper side with a transverse groove 15^a to receive the die 14, when the latter is moved downwardly by the screw 4, the bottom of said groove forming a die 15. The body 6 has an opening therein which extends therethrough from front to rear and in the rear portion of said opening is fitted a die block 7^a of oblong rectangular form, the said die block being provided on its upper side with a die 8 which is exposed in the lower portion of the groove 15^a as shown in Fig. 1. The said die block also has a forwardly extending screw stem 7. A movable die sleeve 9 is arranged for sliding movement in the front portion of the opening in the body 6, toward and from the die block 7^a and has an opening through which the screw stem 7 extends, the said die sleeve being freely slidable on said screw stem and in said opening. The rear upper portion of the die sleeve overhangs the front upper portion of the die block 7^a as is clearly indicated in dotted lines in Fig. 1 and said die sleeve has a die 10 which is opposed to the die 8. A U-shaped spring 12 has its bight portion secured to the standard 1^a by means of a suitable pin or the like and has the upper end of its arm respectively engaged with the opposing lower side of the die block 7^a and die sleeve 9, the function of said spring being to move the die sleeve 9 away from the die 8. To cause the die sleeve 9 to be moved rearwardly and thus cause the die 10 to move toward the die 8, I provide a nut 13^a which is in threaded engagement with the screw 7 and is provided with a lever handle 13 as shown in Fig. 1.

When cables are to be spliced together or when an eye is to be formed in one end of a cable, the overlapping cable portions B, C, are first passed through a cable socket A which is a metallic tube of initially substantial oval form in cross section. Where an eye is to be formed in the cable as shown in Figs. 6 and 7, a thimble D is also placed in the loop or eye of the cable and at one end of the socket A. Initially the dies 8, 10, are apart, and the intermediate portion of the cable socket A is arranged between said dies and on the die 15. The die 14 is then moved downwardly by means of the screw 4 and is caused to coact with the die 15 in closing the end E of the cable socket around the overlapping portions B, C of the cable. The screw 13^a is then turned by its lever handle 13 to cause the sleeve 9 with its die 10 to move toward the relatively fixed die 8, said dies 8, 10 engaging the intermediate portion of the cable socket on opposite sides

and flattening and widening the same as at G in Figs. 6 and 7, thus completing the rigid gripping and securing of the cable socket. The two screws are then slackened, to withdraw the dies, and release the cable socket, the latter being then removed from the apparatus, the securing of the said cable socket on the cable being complete.

According to Figs. 4 and 5 the apparatus is formed by a part 16 having a central space 17 and a cylindrical head 18 in which is a screw 19 operated by an ordinary tommy passing through the head of the screw. At the lower part a strong tenon 20 fits into a support 21 and a clamping screw serves to fix the whole together.

In the body of the base plate 16 and horizontally arranged are two holes 23, 24 into which can be displaced the parts 25, 26 having vice-jaws 27 and 28 which assure the compression of the tube A intended for the assemblage of the metallic cables when the latter are disposed in the recesses 29 and 30 of the opposed dies 31 and 32 and that are maintained in this position by a die 33 having corresponding recesses 34 and 35. The die 33 is loosely mounted at the end of the screw 19 by a tail piece 36 engaging an axial hole 37 in the screw. When the latter is operated the pressure is received by the die 33 which rigidly maintains in position the cables to be assembled.

In order to allow of the necessary play of the parts of the vice 25 and 26, at the desired moment, the part 25 is provided with a tail piece 38 screw threaded at 39, passing through the part 26 and receiving a nut 40 with a head 41 and hole 42 for the reception of a tommy or operating lever not shown in the figure.

When the nut 40 is actuated, the parts 25 and 26 approach each other with axial displacement only, due to the rectangular form of 43 in the interior of the base and that embraces the parts 25 and 26.

When the closure or binding action is finished and the nut 40 actuated in the opposite direction the parts 25 and 26 are caused to take up or return to their initial position by a suitable plate or blade spring 44 in the form of a V interposed at the lower part of the closing or binding pieces 25 and 26 and maintained in place in the interior of the base in a space 43 by a screw threaded bolt 46 forming an annular ring.

In order to allow of the operation of assemblage or splicing of the metallic cables, Figs. 6 and 7, the cables, previously provided with the oval tube to form the cable socket A, are laid in the recesses or grooves 29 and 30 of the opposed dies 31 and 32; the screw 19 is operated which effects the compression or squeezing action on the cables through the die 33 and the nut 40 is then actuated.

By the latter operation the parts 25, 26 approach each other, the jaws 27 and 28 come into contact with the tube containing the cables to be assembled and under forcible action on the nut 40, the said jaws 27 and 28 squeeze the tube which forms the cable socket.

The apparatus which is simple and of rigid construction allows of operating on metallic cables whatever their diameter and assures the assemblage of metallic cables in such manner that the latter are proof against rupture and the cable socket described is not subjected to being torn off or to deformation.

The cable socket itself or the socket thread may also be used to effect the connection of electric conducting wires, to ligature all threads in general whatever may be the metal employed.

What I claim is:

1. In a machine for securing a cable socket on overlapping cable members, a pair of opposed dies arranged for relative movement toward and from each other and to grip and close the ends of the cable socket, and a second pair of dies arranged for relative movement toward and from each other to grip and press the intermediate portion of the cable socket between them and on the cable members, the plane of relative movement of the last named dies being at an angle to that of the first named dies and intersecting that of the first named dies.

2. In a machine for securing a cable socket on overlapping cable members, a pair of opposed dies arranged for relative movement toward and from each other and to grip and close the ends of the cable socket, and a second pair of dies arranged for relative movement toward and from each other to grip and press the intermediate portion of the cable socket between them and on the cable members, the plane of relative movement of the last named dies being at an angle to that of the first named dies and intersecting that of the first named dies, and a spring to normally move the last named dies apart.

In testimony whereof I affix my signature in presence of two witnesses.

CAMILLE POTHIER.

Witnesses:

VICTOR PRÉVOST,

JOHN F. SIMONS.