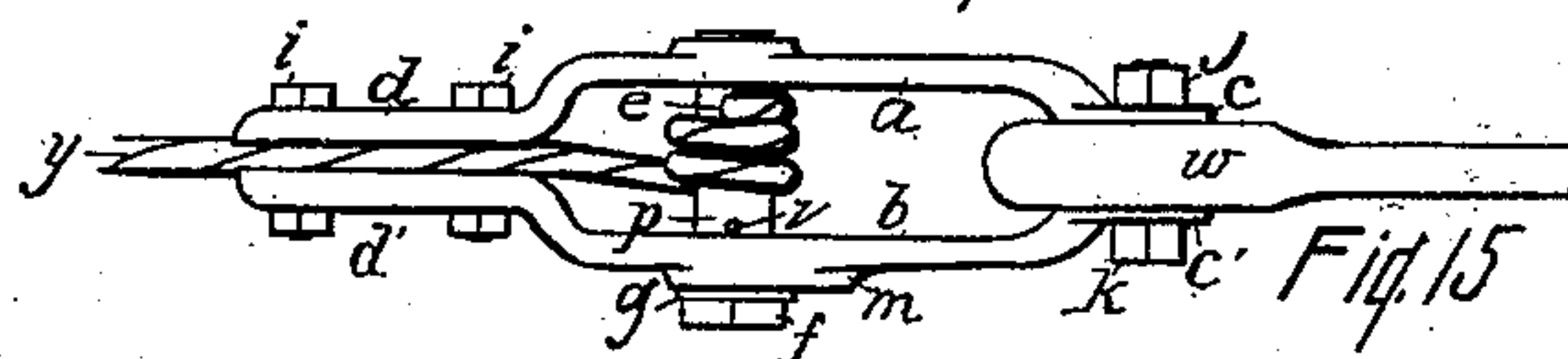
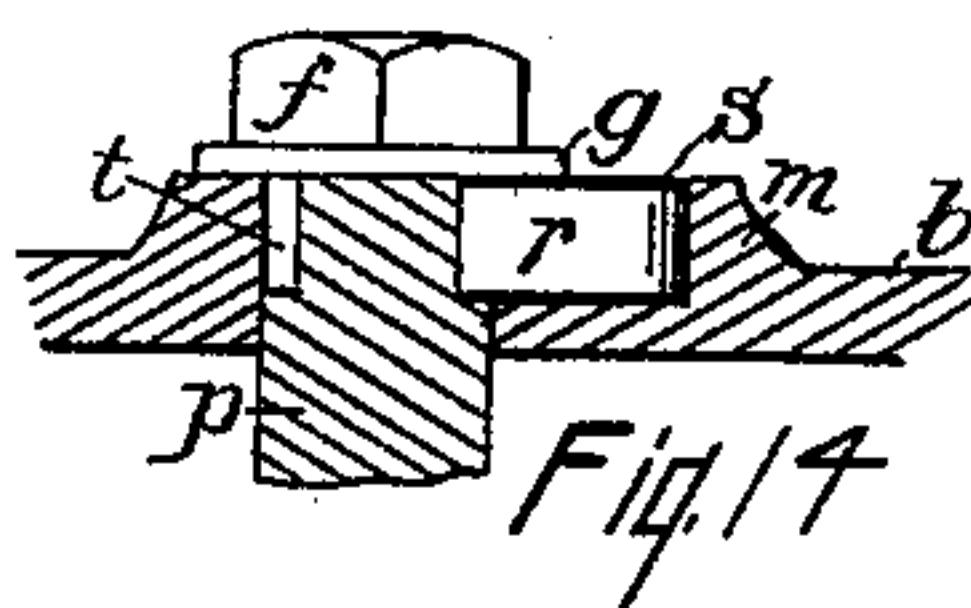
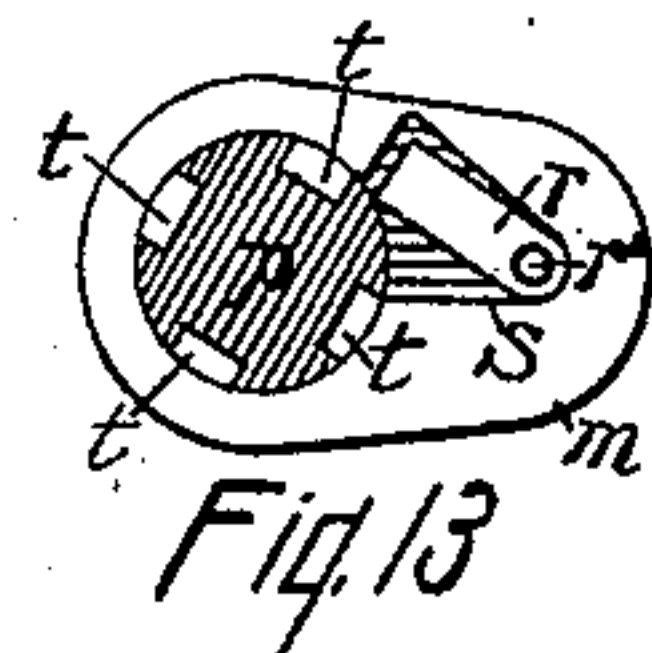
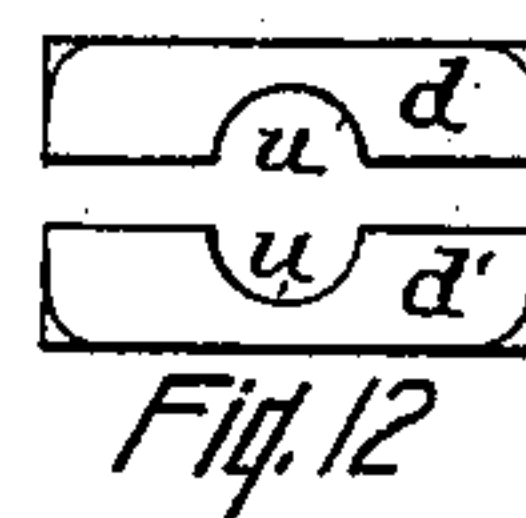
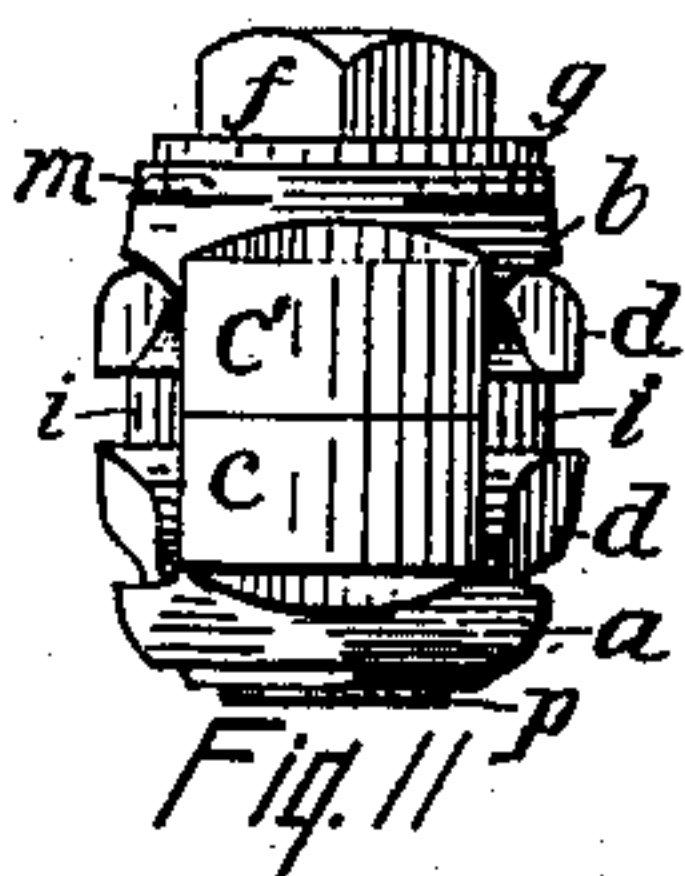
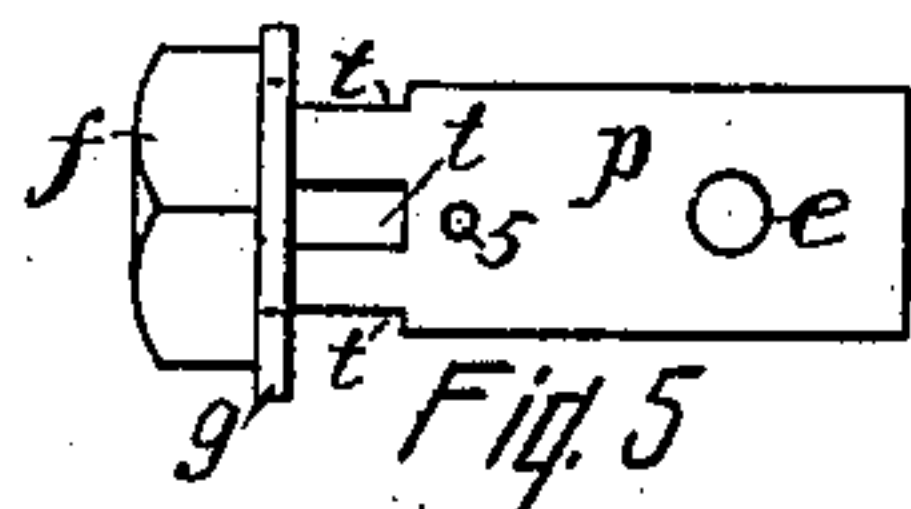
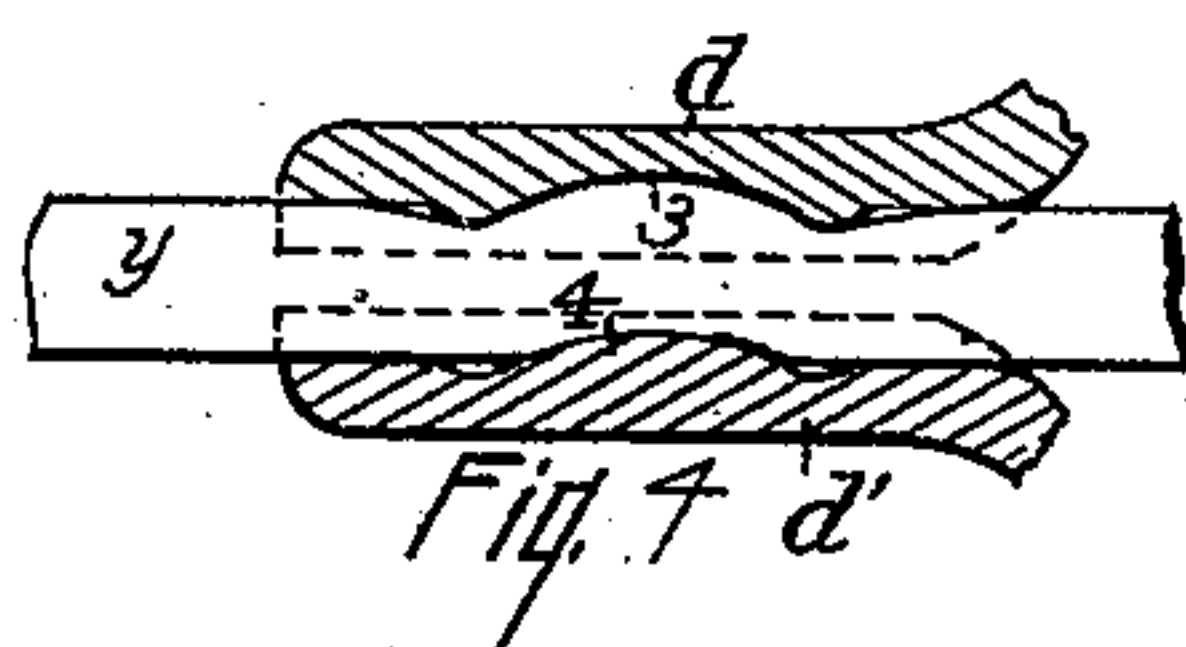
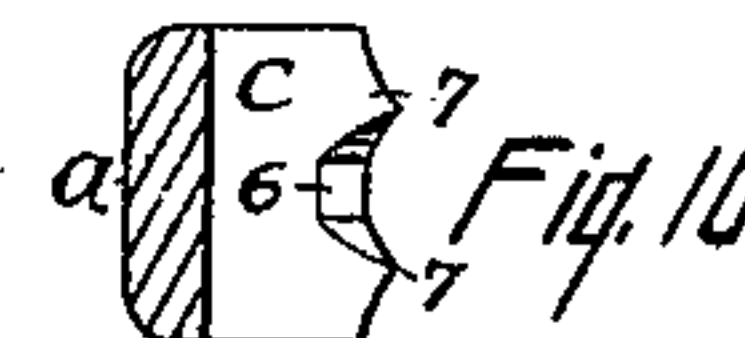
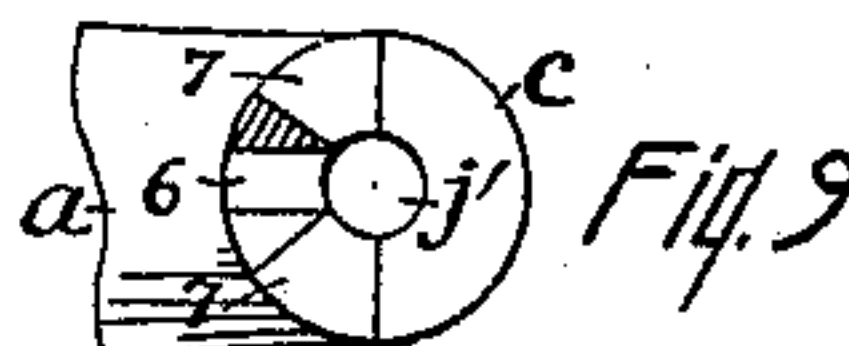
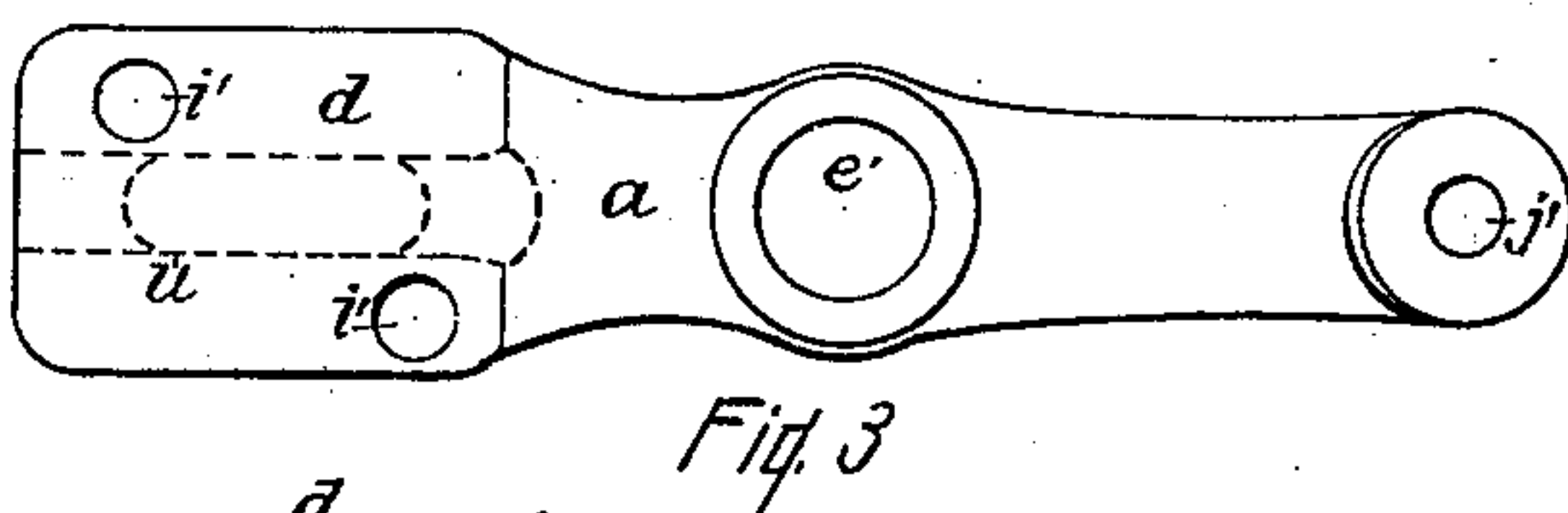
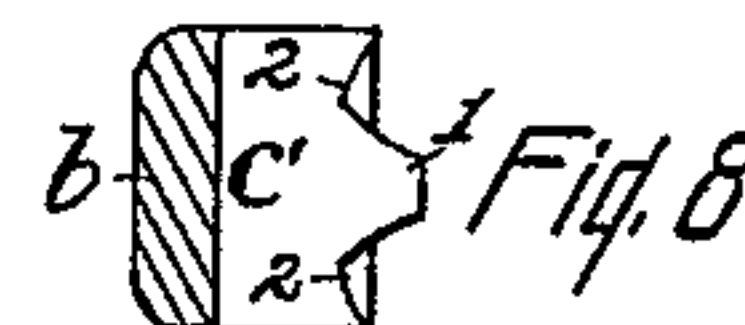
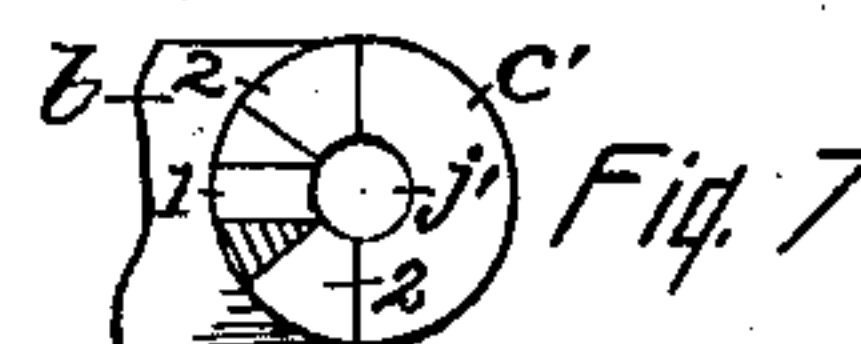
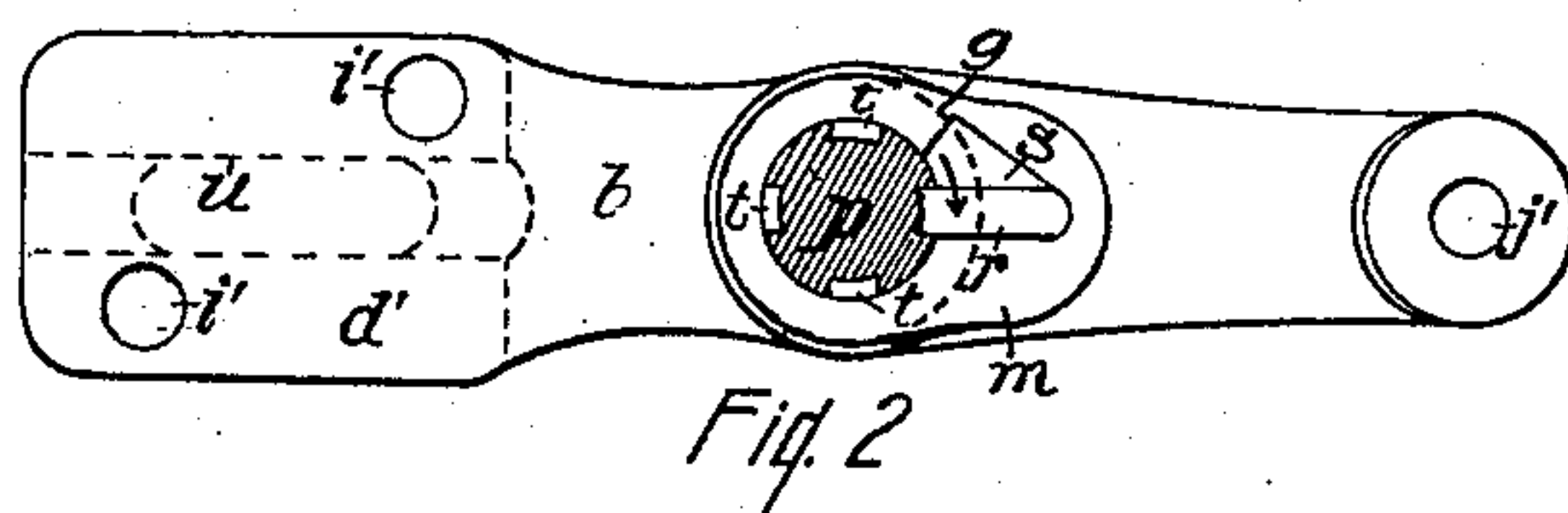
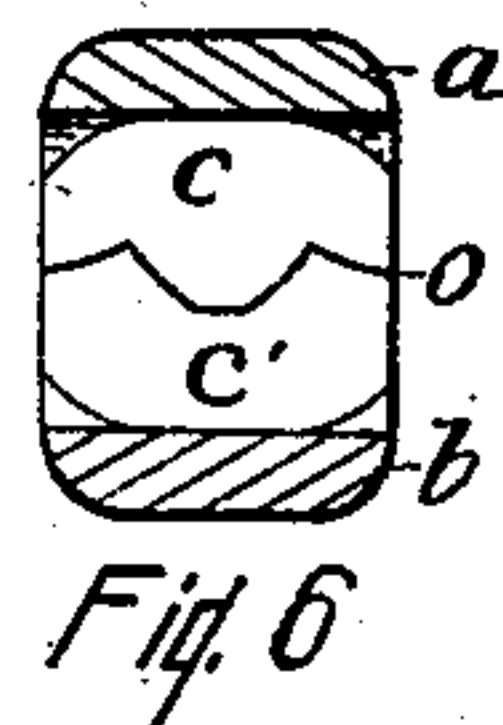
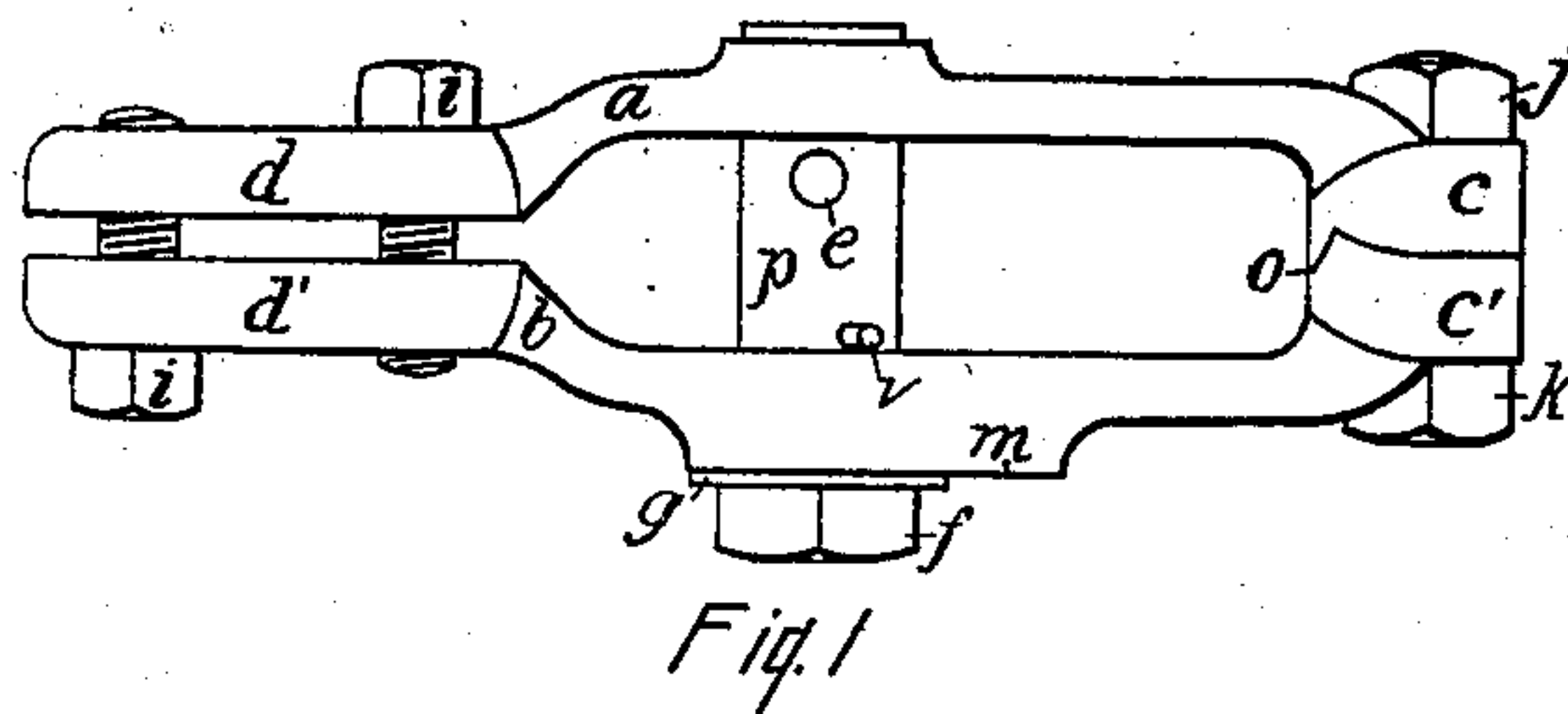


No. 889,490.

PATENTED JUNE 2, 1908.

G. F. SWORTFINGER.
GUY, STRETCHER, AND CLAMP.
APPLICATION FILED JULY 27, 1906.



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UNITED STATES PATENT OFFICE.

GEORGE F. SWORTFINGER, OF NEWARK, NEW JERSEY.

GUY, STRETCHER, AND CLAMP.

No. 889,490.

Specification of Letters Patent.

Patented June 2, 1908.

Application filed July 27, 1906. Serial No. 328,000.

To all whom it may concern:

Be it known that I, GEORGE F. SWORTFINGER, a citizen of the United States, and resident of Newark, in the county of Essex and State of New Jersey, have invented a certain new and useful Guy, Stretcher, and Clamp, of which the following is a specification.

This invention relates to guy stretching and fastening, and its object is to provide a device that shall be simple in its parts, strong in its construction, powerful in its operation, and secure as a means of permanently holding the guy the device having a particular applicability to the guy supports of poles that carry electric circuits. These objects are attained by the means set forth in the specification and the accompanying drawings, in which like letters refer to similar parts throughout the several views.

Figure 1 is a top view of this guy, stretcher and clamp. Fig. 2 is a view of the side on which the device is manipulated. Fig. 3 is a view of the reverse side of the device. Fig. 4 shows the means of clamping the guy. Fig. 5 is a view of the spindle or drum on which the guy is wound. Fig. 6 is an inside view of the right-hand end of Fig. 1. Figs. 7 and 8 show the form of the end of plate *b* that forms an interlocking joint with the corresponding end of plate *a*. Figs. 9 and 10 show the form of the end of the plate *a*. Fig. 11 is an end view of the device without the uniting bolts. Fig. 12 is an end view of the ends of the plates that form a clamp for the guy. Fig. 13 is a view showing the action of the spindle locking mechanism. Fig. 14 is a view in elevation and cross-section of the spindle locking mechanism. Fig. 15 represents the device in use.

This combined guy, stretcher and clamp, as shown in Fig. 1, comprises two plates *a b* united at the right-hand end by an interlocking joint, which is secured by a bolt *k* and nut *j*, the left-hand end constituting a clamp to be bound together by bolts *i i*, and a guy-winding spindle *p* held in place in borings through the plates by a pin *v*. The right-hand end is adapted to be united with in the eye of an eye-bolt anchor or a loop that may afford an anchorage for the guy. The end of the guy is passed between the clamp end of the plates, and is wound on the spindle *p*, as shown in Fig. 15. When the guy is drawn sufficiently tight the clamps are

tightened by means of the bolts through them.

Figs. 2 and 3 show the plates *a b* separately. The inside face of the interlocking end *c'* of the plate *b* is given in Figs. 7 and 8, showing depressions 2 2 on the surface of the part *c'* and a projecting portion 1. That part *c* of the plate *a* that is joined to this part of the plate *b* is given in Figs. 9, 10, showing projections 7 to engage with the depressions 2, and a depression 6 to receive the projection 1. The central hole *j'* in both is to receive the bolt *k*, Fig. 1. A side view of these parts when joined is shown in Fig. 1, an inside end view in Fig. 6, and an outside end view in Fig. 11.

The clamp ends *d d'* of the plates *a b* are grooved longitudinally as shown at *u* Fig. 12, and by broken lines in Figs. 2, 3, also, in cross-section of the clamps in Fig. 4. The grooves are adapted to a size of cable or wire that the device is intended for, and, to enhance the grip on the cable, the expedient common to such clamps of making a depression in one side, as at 3, and a corresponding elevation on the other side, as at 4, is employed. This is not an essential feature in this device but may be used so as to embody in the device every possible means of obtaining security of the guy.

The plate *b* has an extended boss *m*, Figs. 1, 2, 11, 13, 14 and 15 through which the spindle *p* is journaled. The extension of metal on one side of the boss is to provide for a chamber *s* for a pawl *r*, Figs. 2, 13, 14. The pawl has a rounded end that lodges in a circular socket at the end of the chamber, the chamber being large enough to permit the pawl to be moved away from the spindle. The spindle *p* is provided with sockets *t* in its periphery, Figs. 2, 5, 13, 14, that will receive the end of the pawl. When the spindle is turned in one direction the pawl is pushed into the chamber free from the spindle as in Fig. 13; but when the spindle is turned in the other direction the pawl will drop into a socket in the spindle as in Figs. 2 and 14, and prevent the farther turning of the spindle in that direction.

The outer end of the spindle is provided with a head *f* for the application of a crank or a wrench for turning it. A washer *g* is placed under the head and has a diameter sufficient to partly cover the chamber *s*, and so retain the pawl in its place. The washer

is shown in Figs. 1, 5, 14 and 15, and in broken lines in Fig. 2. The pawl may be secured by a pivot as at r' , Fig. 13, but in practice the pivot is not used. The inclos-
 5 ing walls of the chamber s are essential only at the point of the thrust of the pawl, but their use makes a neater form of construction, and afford a guard for the pawl that is desirable in some situations.

10 Fig. 15 shows the manner of applying this device. w represents the eye of an anchor bolt. The plates $a b$ are separated by removing the bolts i and k . To connect with the hook w the plates are joined with their
 15 ends $c c'$ within the eye of the anchor-bolt. The plates are then bolted together. The guy y is passed between the clamping plates $d d'$, the end of the guy is inserted through the hole e in the spindle, the slack of the guy
 20 is taken up by turning the spindle, and the pawl by dropping into the notches in the spindle prevent the unwinding of the guy. The clamps are then closed tightly on the guy by the bolts i .

25 The pawl r differs from the ordinary ratchet pawl in that, while the common pawl acts at an angle to the plane of its own pivotal center and that of the ratchet acted upon, this one acts while lying in a plane coinci-
 30 dent with the two axes, that is, of its pivotal center and the center of the spindle. An ordinary ratchet surface on the spindle, of the diameter employed, with the common form of pawl would be of no value in this device,
 35 as the pressures put upon them amount to tons of weight. Only a few deep notches are made in the spindle in order to retain all the metal practicable as a backing against the pawl. In the Fig. 2 it is plain that in put-
 40 ting a strain on the spindle in direction of the arrow there must be a failure of metal at one of three points to cause a giving way of the grip. Either the point of the pawl must
 45 socket must give way, or the metal of the

spindle between the notches must be stripped off by the projection into the notches of the end of the pawl. It is possible to make all of those points as strong as the size of cable
 50 for which the device may be made.

Having described my invention, what I claim and desire to secure by Letters Patent, is:

1. A combined guy, stretcher and clamp comprising two plates joined at one end to
 55 constitute clamps, the other ends terminating in circular heads, at right angles to the plates, that are united by means of projections on one entering notches in the other and a bolt binding them together to form an
 60 eye for an eye-bolt, the central parts of the plates forming a space for a spindle, a guy-winding spindle having bearings in the plates, spindle locking means consisting of a
 65 pawl socketed in a chamber in one of the plates opening into the bearing of the spindle, and sockets in the spindle for engagement with the pawl.

2. In a combined guy, stretcher and clamp the combination of two plates broadened at
 70 one end and grooved to form a clamp, formed at the other end to connect with an eye-bolt and bound together by a bolt, space in the central parts of the plates for a guy-winding
 75 spindle, a guy-winding spindle having bearings in the plates, a chamber in one of the plates opening into the bearing of the spindle, a pawl in said chamber having a socket-bearing in the end of the chamber, sockets in
 80 the spindle for engagement with the pawl, a head on the spindle for the application of a wrench, and a washer under said head to partly cover the chamber for the pawl.

Signed at New York city in the county of New York and State of New York this 14th
 85 day of July A. D. 1906.

GEORGE F. SWORTFINGER.

Witnesses:

W. A. GRAHAM,
 I. HECHT.