No. 706,393. Patented Aug. 5, 1902.

T. DARLING.

COUPLING FOR CABLES, ROPES, &c.

(Application filed Jan. 22, 1902.)

(No Model.)

Fig 1

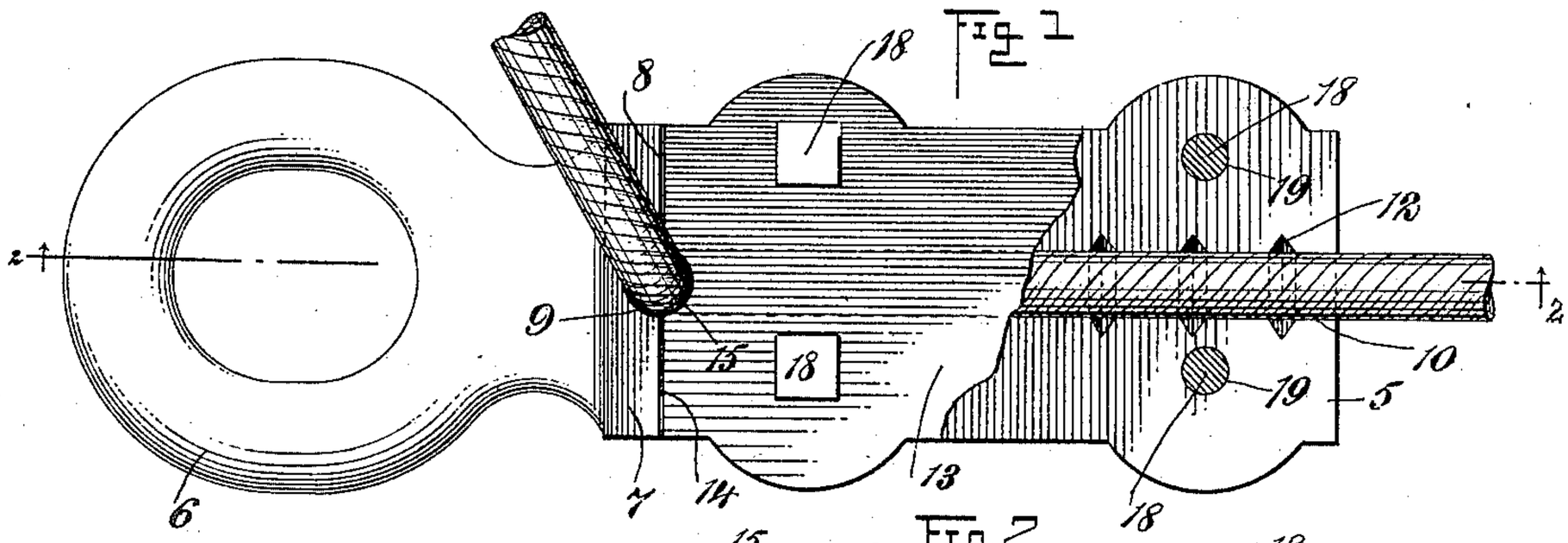


Fig 2

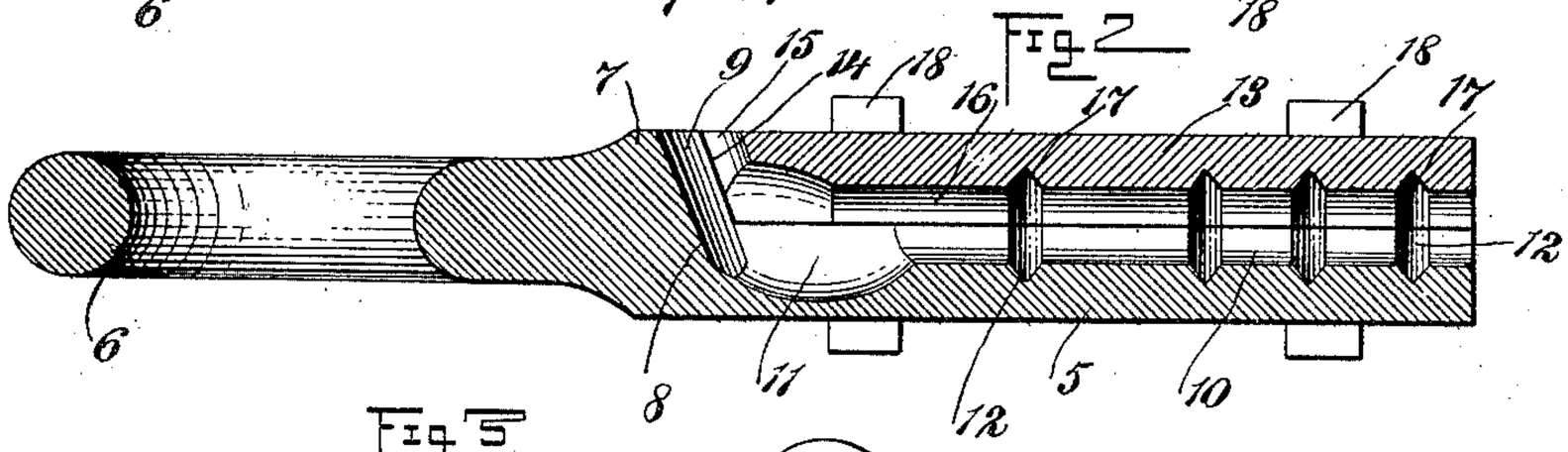


Fig 3

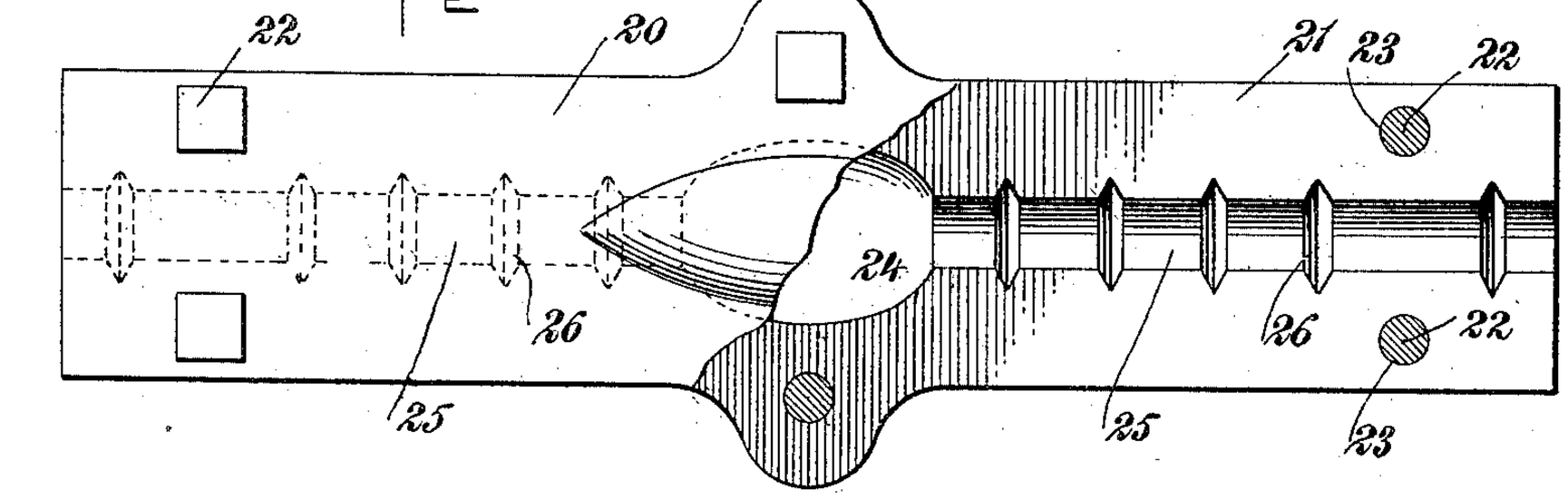


Fig 4

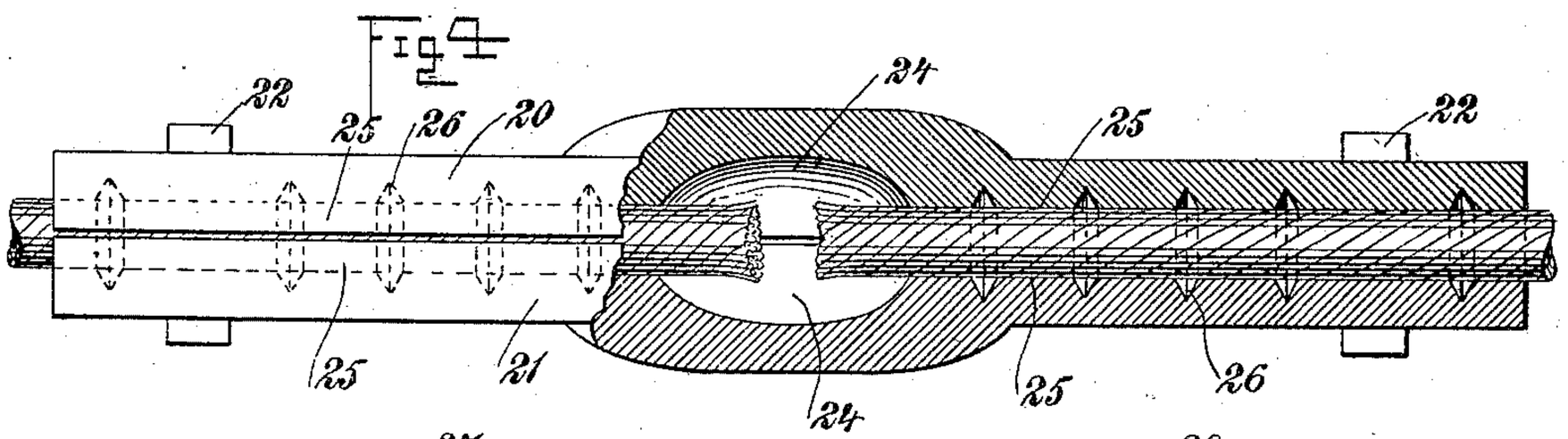
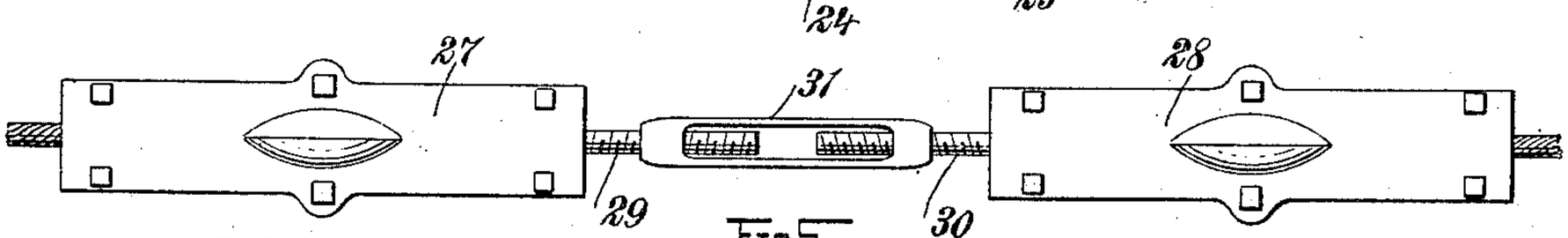


Fig 5



WITNESSES:

INVENTOR

Thaddeus Darling

BY

ATTORNEYS

UNITED STATES PATENT OFFICE.

THADDEUS DARLING, OF MARIETTA, OHIO.

COUPLING FOR CABLES, ROPES, &c.

SPECIFICATION forming part of Letters Patent No. 706,393, dated August 5, 1902.

Application filed January 22, 1902. Serial No. 90,773. (No model.)

To all whom it may concern:

Be it known that I, THADDEUS DARLING, a citizen of the United States, and a resident of Marietta, in the county of Washington and State of Ohio, have invented a new and Improved Coupler for Cables, Ropes, and the Like, of which the following is a full, clear, and exact description.

My invention relates to improvements in couplers for cables, ropes, or the like, and the primary object is to provide a simple, cheap, and efficient construction adapted to firmly grip the cable and to be easily and quickly applied or removed.

Those familiar with the use of well-drilling machinery are aware that the operating-engine is often located remote from the scene of operations and that an intermediate cable is employed between the engine and the drilling apparatus. The attachment of the cable to the several parts or the union of lengths of the cable must be performed with exactitude to secure the best results. In my invention a construction is provided which permits the cable to be quickly adjusted according to the necessary or required length, and several adjustments may easily be made in order to attain this end.

With these ends in view the invention consists in the peculiar construction, arrangement, and adaptation of parts, as will be hereinafter fully described and claimed.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar characters of reference indicate corresponding parts in all the figures.

Figure 1 is a plan view of the preferred form of my cable-coupler, one of the clamping members being partly broken away and the cable being shown as extending through the coupler. Fig. 2 is a longitudinal section of the coupler shown in Fig. 1, the plane of the section being indicated by the dotted line 2 2 in Fig. 1. Figs. 3 and 4 are respectively a plan view, partly broken away and in section, and a partial longitudinal section of another embodiment of the invention adapted to the work of splicing wire cables together; and Fig. 5 is a plan view illustrating another embodiment of the invention in which two couplers are adjustably united for the purpose of taking up slack in the cables.

I will first proceed to describe the construction shown by Figs. 1 and 2, referring to which 5 designates the base member of the coupler, which is provided at one end with an eye or loop 6 and with a raised flange or shoulder 7. This base member is made or cast in a single piece of metal, so that the eye and the raised shoulder are integral with the plate of the member. The shoulder extends transversely across the member between the plate and the eye, and this shoulder is provided with an inclined face 8 and with a semicircular recess 9, said inclined face 8 sloping from the exposed top edge of the shoulder down to the face of the plate which forms a part of the member. The recess 9 is located centrally in the raised shoulder, and one end of said recess opens through the top face of the shoulder. The plate of the base member is provided with a central longitudinal groove or channel 10, which extends from the shoulder 7 to the opposite end of the plate, the inner end of the longitudinal channel terminating in an enlargement 11, which has communication with the lower inlet end of the recess 9, as shown by Fig. 2. The enlargement 11 between the channels 9 10 is adapted to receive the doubled or folded portion of the cable when the latter is bent at an angle in order to carry it from the channel 10 to the outside of the coupling by extending said cable through the opening which is formed by the channel 9 in one member and the channel 15 in the other member of the coupling, as will hereinafter appear. The longitudinal channel is intersected by a series of transverse short channels 12, which are arranged in parallel series practically throughout the length of the plate. 13 designates a removable clamping-plate which forms a companion member to the plate of the base member, because it conforms to the size and shape thereof. This clamping plate or member 13 is provided at one end with a beveled edge 14, which is adapted to abut against the inclined face 8 of the shoulder, thus fitting the parts compactly together. In the beveled edge of the removable clamping plate or member 13 is provided a recess 15, which is adapted to register or coincide with the recess 9 in the shoulder 7 of the base member, said registering recesses forming an opening through which an end portion of the cable may protrude, as shown by Fig. 1. Said clamping plate or member

13 is furthermore provided on its inner face with a longitudinal groove or channel 16 and with transverse recesses or grooves 17, that intersect with the longitudinal channel. When the plate 13 is assembled in matching relation to the plate of the base member, the channels or grooves of the two members are in coincident relation, thus allowing the members to firmly grip or clamp a rope or cable between themselves. These members are secured together firmly and adjustably by a series of bolts 18, which pass through suitable openings 19 in the members and may be provided with heads and nuts adapted to bear on said members and to draw them firmly together.

An especial advantage of the construction illustrated by Figs. 1 and 2 is that the end of a rope or cable may be carried through the opening formed by the recesses 9 15 in the abutting edges of the two members, thus making provision for the secure and adjustable connection of one end of a cable to the coupler. The eye 6 of the coupler permits another cable or any other suitable device to be easily attached to the coupler. It is evident that the members 5 13 may be relaxed somewhat in order that a cable may be drawn through the channels and the lateral opening provided in the members, thus allowing the cable to be easily adjusted to the required length.

I will now proceed to describe the construction shown by Figs. 3 and 4 of the drawings. In this embodiment of the invention the coupler consists of the complemental members 20 21, each of which is cast in a single piece of metal in form and size corresponding to the other member and adapted to be secured adjustably together by the bolts 22, the latter passing through suitable openings 23, provided in the members. Each member is provided on its inner face with a central cavity 24 and with a longitudinal groove or channel 25, which is arranged centrally with respect to the member and is adapted to open into the cavity 24, the latter thus serving to interrupt the continuity of the channel. Said channel opens at its ends through the end portions of the coupler plate or member, and each channel is intersected by the transverse short grooves 26. It is evident that the adjacent ends of the two cables or ropes which it is desired to couple may be introduced into the channels 25 so that the extreme end portions of the cables will occupy the chamber formed by the cavities 24 of the members in the manner shown by Fig. 4. The cables are received in the longitudinal channels of the members, and said members are clamped firmly upon the cables by tightening the bolts 22, whereby the coupler is adapted to serve efficiently as a means for splicing the cables or ropes.

In the embodiment of the invention shown in Fig. 5 I employ two couplers, (indicated at 27 28,) each coupler being substantially of the character heretofore described and shown by Figs. 1 and 2 and by Figs. 3 and 4. From the adjacent inner ends of the couplers extend the screw-threaded rods 29 30, and these rods are threaded to receive a turnbuckle 31. The cables or ropes to be united are individually gripped in the couplers 27 and 28, and these couplers are united adjustably together by the threaded rods and the turnbuckle, whereby the distance between the couplers may be regulated by the adjustment of the turnbuckle, and the slack in the cables may thus be taken up.

Although I have shown and described one member of the coupling as having a closed eye, as at 6 in Figs. 1 and 2, I do not desire to limit myself strictly to this form of the eye, because it is evident that an open eye or a hook may be used in lieu of the closed eye, and in some instances I may substitute a swivel for the closed eye, all as will be readily understood by those skilled in the art.

Having thus described my invention, I claim as new and desire to secure by Letters Patent—

1. A coupler of the class described comprising separable members provided on their opposing faces with longitudinal channels, transverse grooves, and cavities of larger cross-sectional area than the channels and intersecting the same.

2. A coupler of the class described comprising separable members provided on their opposing faces with longitudinal registering channels, cavities of larger cross-sectional area than said channels and in communication therewith, said cavities in the members being disposed in matching relation, and grooves intersecting with the channels independently of the cavities.

3. A coupler of the class described comprising a member provided with a shoulder having a cavity which opens through one face of the member, another member having a cavity arranged to coincide with the cavity of the first-named member, channels in said members and in communication with the cavities therein; and means for clamping said members together.

4. A coupler of the class described, comprising a base member having an eye and a shoulder, the latter provided with a recess, a longitudinal channel in said member and having communication with said recess, a companion member provided with a channel and with a recess arranged to coincide respectively with the channel and recess in the base member, and means for laterally clamping the two members together.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

THADDEUS DARLING.

Witnesses:
W. J. HOGE,
BERT CAPRON.