

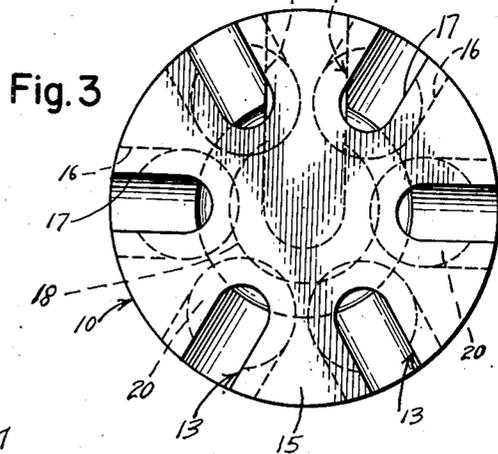
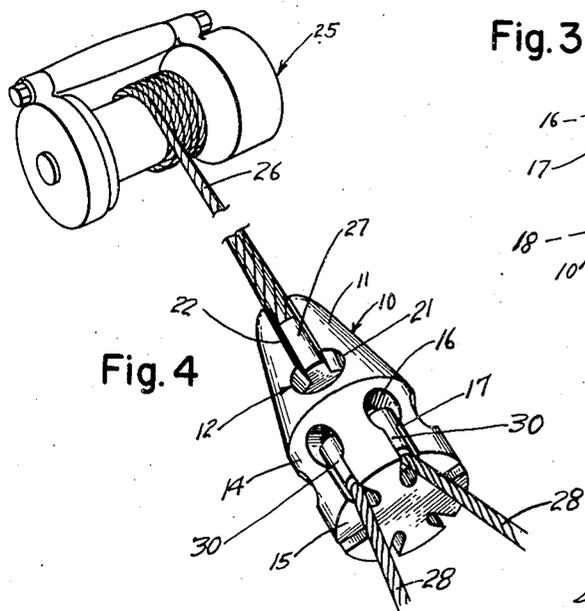
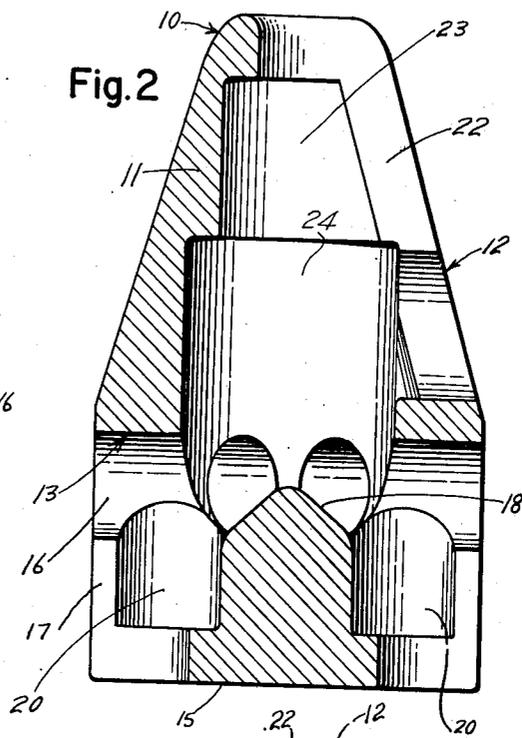
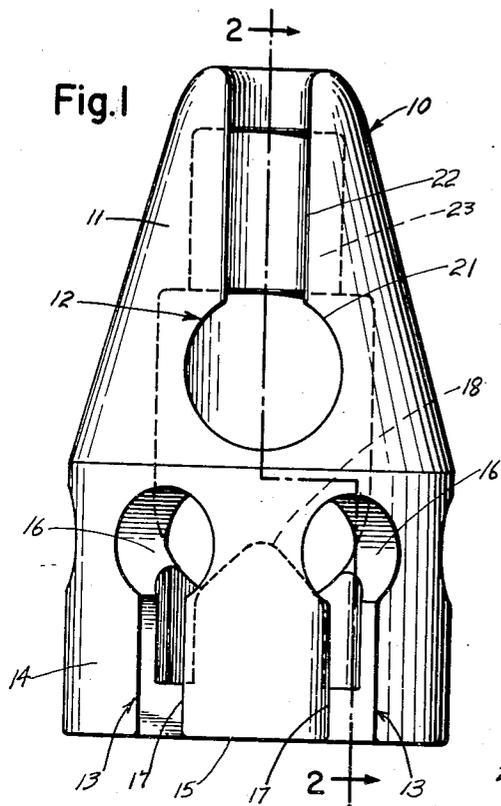
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QUICK-CHANGE RECEIVER

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QUICK-CHANGE RECEIVER

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This invention relates to a central member for interconnecting a main line and a plurality of subsidiary lines whereby the main line by means of this member can increase its usefulness.

An object of this invention is the provision of a connecting means on a wire cable and which means eliminates the sharp snag ends of wires on the cable that cut flesh and clothes, these snag ends result from the formation of a loop in the cable and the tying-in of the ends of the individual wires comprising the cable into the body of said cable.

A further object is the provision of a one-unit quick-change receiver which eliminates a hook and a shackle on a cable.

Another object is to provide a quick-change receiver which makes it possible to quickly interconnect a main line with secondary lines.

An additional object is the provision of a quick-change receiver which is light-in-weight and therefore easy and less tiring for a workman to use.

Another object is to provide a quick-change receiver which lessens the possibility of the main line and the subsidiary lines becoming twisted as each of these lines are free to spin upon being disconnected from the receiver.

An additional object is to provide a quick-change receiver which makes it possible to use less main line as there is no necessity to form a loop in said main line.

A further object is to provide a quick-change receiver which makes it possible to use less subsidiary line as there is no necessity to form a loop in said subsidiary line.

Another important object is to provide a quick-change receiver which eliminates a C-hook and thereby precludes the pulling-up tight of the C-hook against the bar on a winch with the consequent smashing of the wire cable and the fatiguing of the wire.

A still further object is the provision of a quick-change receiver which makes it possible to reverse the leads on the subsidiary line when one end of the line becomes frayed and with this operation almost double the working life of the subsidiary line.

Another object is the provision of a quick-change receiver which is inexpensive to manufacture and yet enjoys a long working life.

With yet additional objects and advantages in view which, with the foregoing, will appear and be understood in the course of the following description and claims, the invention consists in the novel construction and in the adaptation and combination of parts hereinafter described and claimed.

In the accompanying drawings:

Figure 1 is an elevational view of a preferred embodiment of a quick-change receiver constructed in accordance with the teachings of this invention.

Fig. 2 is a longitudinal, vertical, cross-sectional view on line 2-2 of Fig. 1.

Fig. 3 is a bottom plan view of the quick-change re-

ceiver showing the end of the same for receiving the choker lines; and

Fig. 4, on a reduced scale, is a fragmentary perspective view of a quick-change receiver, a winch line leading out of one end to a winch, and a number of subsidiary lines leading out of the other end.

Referring to the drawings it is seen that the invention is a quick-change receiver 10 and which receiver comprises a casing 11 having a major keyhole opening 12 joining an inverted socket 23 and six minor keyhole openings 13 leading into a set of upstanding sockets 20. The lower part is in the configuration of a right cylinder and the upper part is in the configuration of a frustrum of a right angular cone.

In the lower part are the minor keyhole openings 13, each of which opens into the interior of the casing on both the cylindrical sidewall 14 and the endwall 15. The eye portion 16 of these openings is the size of the sockets 20 and the throat portion 17 is approximately equal in width to the radius of the sockets. Each throat 17 runs vertically down the sidewall and cuts into the endwall or circular base for a distance equal to about one-fourth the diameter of said endwall. Arising from the center part of the endwall and into the interior of the casing between sockets 20 is a cylindrical partition 18. This partition, about one-third the diameter of the endwall, is in the configuration of a right cylinder to approximately the top of the throat portions 17, at which elevation it begins to taper to a guide cone, the apex of the cone being approximately the elevation of the center of the eyes 16 and defining the floor of a central chamber 24.

In the upper part of the casing or that part in the configuration of a frustrum of a cone there is the major keyhole opening 12. The throat portion 22 of this opening follows the contour of the cone and extends through the nose thereof. Its eye portion 21 is at the level of the mouth of the socket 23 and intersects the central chamber 24 which extends downwardly as an enlarged prolongation of the socket 23. At its lower end the chamber 24 is connected to the eyes 16 of the keyhole slots 13.

A specific, and very useful, application of this receiver is in the logging industry, wherein a crawler-type tractor is employed to pull logs through the forest to a loading station. To be more particular, there is attached to a crawler-type tractor a winch 25 having wound thereon a winch line 26. On the outer end of this line is a winch line ferrule or knob 27. This line and ferrule are of such sizes that both of them can be slipped through the eye 21 and into the large chamber 24. Then the ferrule is drawn into the socket 23 with the line 26 passing through the throat 22. Leading out of the slots 17 on the other end of the receiver are a number of choker lines 28, each of which on its outer end runs around a log and can be cinched tightly around the same. On the inner end of each of these choker lines is a choker line ferrule or knob 30. As in the situation of the winch line and complementary ferrule a choker line and accompanying ferrule are inserted through an eye 16 and into a respective socket 20. It is readily appreciated that in this manner it is possible to workably interconnect six choker lines with one winch line for dragging heavy loads. And, if need be, the receiver can be manufactured with provision for interconnecting a larger number of choker lines with one winch line.

The manner of attaching a ferrule onto a wire cable is quite easily brought about by inserting the line through the ferrule and then unwinding, for the length of one or two inches, the individual wires at the end of the cable. The unwinding of these wires or the fraying of the end of the cable increases the space occupied by the end of said cable and thereby prevents the same from passing through the opening in the base of the ferrule. How-

ever. as a safety factor the end of the cable is drawn into the ferrule so that no frayed ends protrude out of said ferrule and then liquid babbitt metal or liquid lead is poured into the ferrule. With this treatment there is practically no possibility of the cable slipping through the ferrule.

Although the advantages of this receiver have previously been brought to the fore it is now possible in the light of the invention to more clearly point out some of these advantages. More specifically, a main advantage is the elimination of frayed individual wires where these have been spliced into the cable to form a loop. The elimination of these frayed ends precludes the possibility of a logger tearing his flesh and clothes on such wire ends. Also, the receiver is lighter in weight and smaller in bulk, as compared with the presently employed logging equipment such as C-hooks and the like, there is much less strain on the logger handling such equipment. Since both ends of the winch line are the same, i. e., similar ferrules are on each end, then when one end shows wear and tear from being dragged on the ground and having logs roll on the line it is possible to interchange the ends to present a comparatively unused line for wrapping around and for dragging the logs. This interchange makes it possible to approximately double the life of the winch line. Also, it will be noted that the design of the receiver prevents the ferrules from contacting one another even if slack should develop in one of the lines. In this regard, endwise movement of the winch line ferrule is limited by the cone face 18 and endwise movement of each choker line ferrule is limited by the overlying wall of the eye portion 16 of the respective keyhole opening 13.

The advantages of the invention, it is thought, will have been clearly understood from the foregoing detailed description. Minor changes will suggest themselves and may be resorted to without departing from the spirit of the invention, wherefore it is my intention that no limitations be implied and that the hereto annexed claims be given a scope fully commensurate with the broadest interpretation to which the employed language admits.

What I claim is:

1. A quick-change receiver for a winch line and a plurality of choker lines all having enlarged terminal knobs, said receiver having a generally cylindrical base portion formed with a plurality of upstanding choker sockets which are separated from one another throughout their length

and are adapted to seat the choker line knobs, each said choker socket having its outer side wall formed with a keyhole slot which has its throat portion extending down through the seat of the socket and the foot of said base portion and which has its eye portion merging directly with the mouth of the socket throughout the entire areal extent of the latter, the eye portion of each said keyhole slot being of a size to pass the terminal knob of a choker line, and the throat portion of each such slot being of a size to pass a choker line and not the terminal knob thereof, and said receiver having a tapered head portion formed with a centered inverted winch socket having its outer side wall formed with a keyhole slot which has its throat portion extending up through the seat of the winch socket and the nose of the head portion and which has its eye portion merging directly with the mouth of the winch socket throughout the entire areal extent of the latter, the eye portion of the said keyhole slot in the head portion being adapted to pass the terminal knob of the winch line and the throat portion of such slot being of a size to pass the winch line and not the terminal knob thereof, said receiver having a central cavity merging with the eyes of all of the aforesaid keyhole slots inwardly of the outer side walls of the respective sockets for receiving the outer end portions of the terminal knobs during the act of inserting the knobs endwise through the eyes of the keyhole slots and pivoting the same to seat them in the respective sockets.

2. The structure of claim 1 in which the keyhole slot for the winch socket is spaced toward the head of the receiver from the keyhole slots for the choker sockets.

3. The structure of claim 1 in which the base wall of said cavity has a tapered nose which projects above the mouths of said choker sockets and part way only through the height of the eye portions of their respective said keyhole slots.

References Cited in the file of this patent

UNITED STATES PATENTS

1,636,090	Erickson	July 19, 1927
1,651,081	Bardon	Nov. 29, 1927
1,656,676	Mills	Jan. 17, 1928
1,699,381	Stewart	Jan. 15, 1929
1,853,291	Wickes	Apr. 12, 1932
1,897,920	Wilson	Feb. 14, 1933
2,537,326	Brawand	Jan. 9, 1951