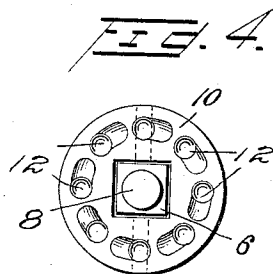
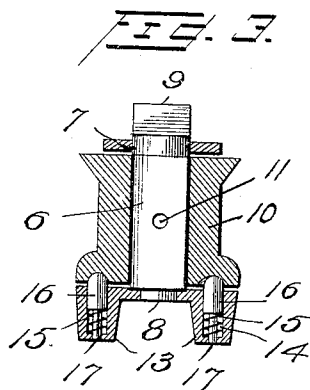
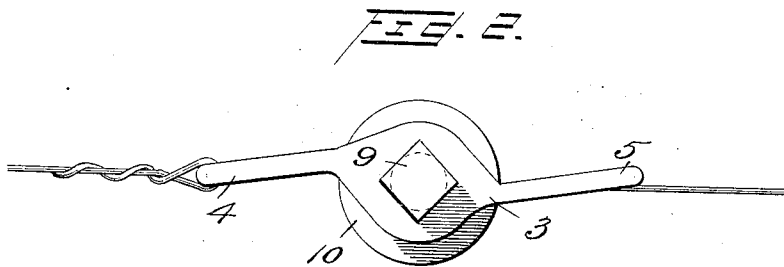
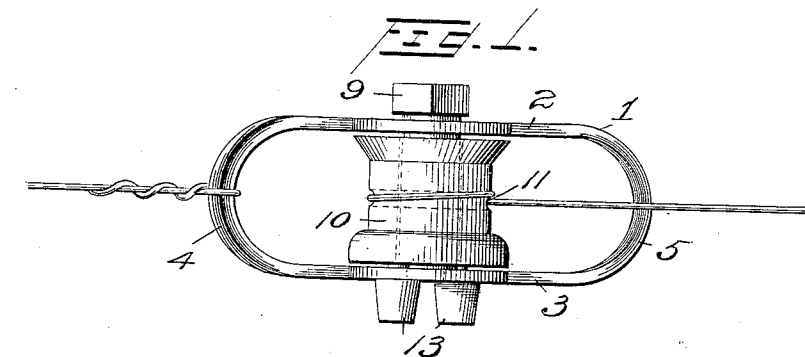


J. F. BUTLER.
WIRE STRETCHER AND REPAIRER.
APPLICATION FILED SEPT. 11, 1912.

1,067,641.

Patented July 15, 1913.



WITNESSES

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UNITED STATES PATENT OFFICE.

JOSEPH F. BUTLER, OF GORDON, TEXAS, ASSIGNOR OF ONE-HALF TO WILLIAM W. JOHNSON, OF GORDON, TEXAS.

WIRE STRETCHER AND REPAIRER.

1,067,641.

Specification of Letters Patent.

Patented July 15, 1913.

Application filed September 11, 1912. Serial No. 719,728.

To all whom it may concern:

Be it known that I, JOSEPH F. BUTLER, a citizen of the United States of America, residing at Gordon, in the county of Palo Pinto and State of Texas, have invented certain new and useful Improvements in Wire Stretchers and Repairers, of which the following is a specification.

This invention relates to wire stretchers and repairers and one of the principal objects of the invention is to provide simple, efficient and reliable means for stretching and repairing broken telephone and telegraph wires and the like.

Another object of the invention is to provide a stretcher for taking up the slack in telephone and telegraph or in fence wires during the operation of stringing them up.

The objects and advantages herein referred to may be attained by means of the construction illustrated in the accompanying drawing, in which:

Figure 1 is a side elevation of the device showing it connected to a telephone wire; Fig. 2 is a top view; Fig. 3 is a vertical section through the device showing the two lugs in section; and Fig. 4 is a bottom plan view of the spool.

Referring to the drawings, the numeral 1 designates a double yoke member consisting of parallel spaced side members 2 and 3 connected together at both ends by integral yoke members 4 and 5. The yoke members 4 and 5, as shown more readily in Fig. 1, are curved and have their inner sides beveled or rounded. The side members 2 and 3 are enlarged centrally thereof to provide bearings for a winding shaft 6. As shown in Fig. 3, the winding shaft 6 is rounded at the points 7 and 8 to allow easy rotation in the bearings, the portion 8 being reduced and smaller than the portion 7. The shaft is provided upon its upper end with a squared head 9 for the accommodation of a crank or wrench, not shown, to rotate the shaft. Mounted on the shaft between the side members of the double yoke member is a winding spool 10. As seen in Fig. 3, the shaft is squared between the side members of the double yoke member and the spool is provided with a squared bore which loosely fits the squared portion of the shaft for a purpose to be hereinafter described.

The spool and shaft are provided centrally with a round bore 11 which is slightly

larger in diameter than the diameter of the wire to be stretched and this bore runs from a point in the outer periphery of the spool through the spool and the shaft to a point diametrically opposed to the first named point. As shown in Fig. 4, the spool 10 is provided upon one end thereof with a series of recesses 12. These recesses are circular and concave at one end and are provided with sloping concave floors which run from the deepest end upwardly until they merge with the surface of the end of the spool. It is clearly seen that the recesses are placed in a circular series near the outer periphery of the spool.

Provided upon the enlarged portion of the side member 3 are two depending lugs 13. These lugs are diametrically opposed to each other with respect to the rounded end 8 of the shaft 6 and are provided with circular bores 14 which extend from the inner surface of the enlarged portion of the side member 3 downwardly to a point near the bottom surface of the lugs where they are reduced and extend through to the bottom surfaces of the lugs. Provided in these recesses 14 are helical springs 15 which bear at their lower ends upon shoulders formed where the reduced portions of the recesses 14 merge with those recesses and bear at their upper ends upon the under surfaces of locking pins 16. These pins are circular to fit the recesses 14 and are rounded upon their upper ends to fit the recesses 12 in the spool 10 and are provided with shafts 17 which are of a size to fit the reduced portions of the recesses 14 and slide up and down therein. It will be understood that the springs 15 tend to normally push the locking pins upwardly. The spool 10, as seen in Fig. 1, is provided at either end with flanges to keep the wire from slipping off the spool. As seen in Fig. 2, the yoke members 4 and 5 extend in opposite directions at nearly a tangent to the enlarged portions of the side members.

The operation of my invention may be briefly described as follows: One end of the broken wire is fastened to one of the yoke members (4 as shown) and the other end of the wire is inserted in the bore 11. A crank or wrench is secured upon the squared head 9 of the winding shaft 6 and the shaft is then turned and by reason of the shaft being slightly smaller than the squared bore of the

spool, the end of the wire is pinched between the inner edge of the bore of the spool and the outer edge of the shaft and is prevented thereby from slipping out. The shaft is rotated until all of the slack has been taken up and it is readily seen that the wire is wound up on the spool as the spool rotates with the shaft. As the spool rotates, the notches 12 come into alinement with the locking pins 16 and in turn are engaged by these pins by reason of the springs 15 bearing up against the under surfaces of the pins and when the slack has been taken up in the wire, it is readily seen that the spool is held against reverse rotation by reason of the engagement of the pins 16 with the walls of the recesses 12.

My invention is of simple construction, may be manufactured at a low cost, is very efficient in its operation.

I claim:

A wire stretcher and repairer comprising a double yoke member consisting of parallel side members connected at their ends by integral curved yoke members, said side members being enlarged centrally thereof to provide bearings for a shaft, said shaft being

squared at one end and squared between the side members and provided with rounded bearings to allow easy rotation in the enlarged portions of the side members, the end of said shaft opposite the squared end being reduced, a spool provided with a squared bore, said squared bore being larger than the squared portion of the shaft between the side members, said shaft and spool provided centrally thereof with a bore extending diametrically through the shaft and spool, said bore adapted to receive the broken end of the wire, said spool and shaft adapted by reason of the bore and spool being larger than the squared portion of the shaft to pinch the wire and prevent its disengagement from the spool, said spool adapted to rotate in one direction, and means for holding it against rotation in an opposite direction.

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

JOSEPH F. BUTLER.

Witnesses:

WILL. J. DYER,
SIMEON WILSON.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."