H. L. GORDON.

WIRE STRETCHER.

APPLICATION FILED DEC. 8, 1914.

1,271,564. Patented July 9, 1918.

Fig. 1.

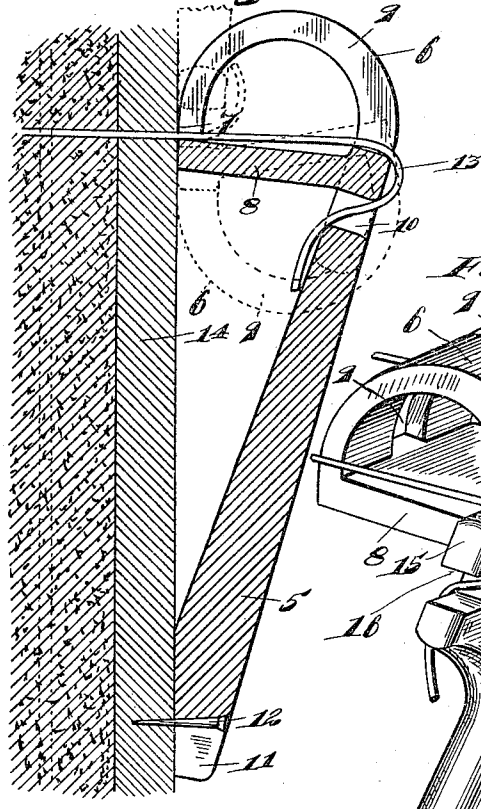


Fig. 2.

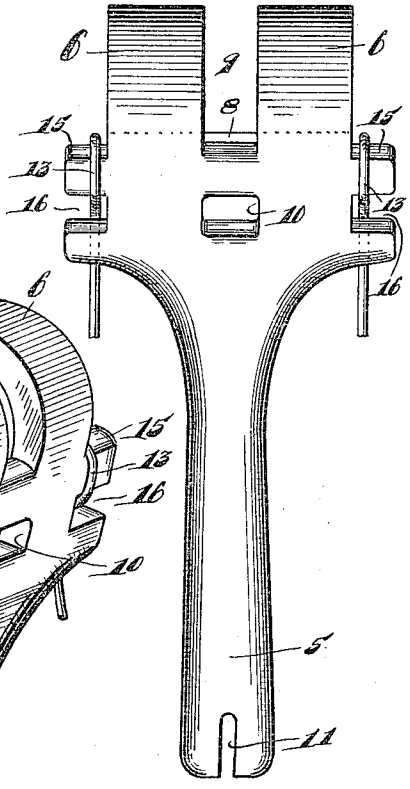


Fig. 3.

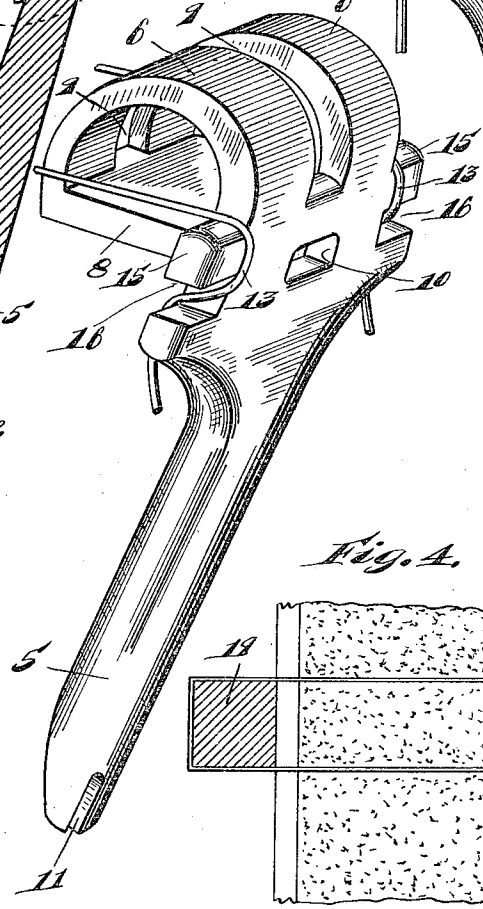


Fig. 4.

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UNITED STATES PATENT OFFICE.

HARRY L. GORDON, OF CHICAGO, ILLINOIS.

WIRE-STRETCHER.

1,271,564. Specification of Letters Patent. Patented July 9, 1918.

Application filed December 8, 1914. Serial No. 876,091.

To all whom it may concern:

Be it known that I, HARRY L. GORDON, a citizen of the United States, and a resident of the city of Chicago, county of Cook, and State of Illinois, have invented certain new and useful Improvements in Wire-Stretchers, of which the following is a specification.

My invention relates to improvements in wire stretchers, and more particularly to wire stretchers employed in conjunction with concrete molds, the object of the invention being to provide a simple and efficient instrument of this character which may be readily used and disconnected after use.

The invention consists in the combinations and arrangements of parts hereinafter described and claimed.

The invention will be best understood by reference to the accompanying drawing forming a part of this specification, and in which,

Figure 1 is a section illustrating an instrument embodying my invention, in one position of use,

Fig. 2, a face view of the instrument illustrating its use in conjunction with a wire loop,

Fig. 3, a perspective view of the instrument illustrating its use in conjunction with a wire loop, and

Fig. 4, a sectional view illustrating the use of the instrument in conjunction with a wire loop.

The preferred form of construction as illustrated in the drawing comprises a handle member 5 provided with a curved bearing member 6 projecting laterally from one side of said handle member. The bearing member 6 is formed with its outer bearing surface in the form of a circle tangent with the corresponding surface of handle member 5, the extreme end 7 of said bearing surface being flattened and extending in a direction to intersect the extreme end of the handle member, as indicated in Fig. 1. A reinforcing web or flange 8 is extended between the extreme end of bearing surface 6 and the handle 5 and a central slot 9 is formed in bearing member 6, as shown. A central opening 10 is formed in the instrument in the neighborhood of the juncture between bearing member 6 and handle 5 for the reception of the end of a wire. The extreme end of handle member 5 is provided with a slot 11 for the passage of the nail or screw 12 to secure the instrument in position, as indicated in Fig. 1.

In the use illustrated in Fig. 1, the instrument is employed for stretching a single wire through a concrete mold 14, in which use the instrument is reversed from the position shown in full lines in Fig. 1, and placed with the outer face of handle 5 flat against the outer side of the mold 14 and the end of wire 13 is passed through opening 10 and bent upwardly against the corresponding face of handle member 5, as indicated by dotted lines in Fig. 1. Then handle member 5 is drawn downwardly and outwardly through an angle slightly greater than 180 degrees, bearing surface 6 sliding against the face of mold side 14 to the position indicated in full lines in Fig. 1, the bearing surface 6 being finished smooth for this purpose. The stretching action is the result of the cam like action of the surface 6 operating against the mold side. In the position indicated by full lines in Fig. 1, the end of handle member 5 is placed against the outer side of mold side 14 and is held in this position by the tension in wire 13 which thus effects automatic locking of the stretcher in position to hold the stretched wire.

Putting the operation into different words, the wire 13 is thrown past the center of curvature of bearing surface 6 thus effecting the automatic locking of the parts. Nail or screw 12 may be then placed in position to prevent mischievous or accidental disengagement of the instrument. The particular use illustrated in Fig. 1 is that in which it is desired to stretch the wire 13 through the mold 14 and clamp the same in position to hold the sides of the mold firmly in place, and the instrument will be found to be easily operated and highly efficient in use. Lugs or shoulders 15 are projected from each side of bearing member 6, as indicated, and are provided with engaging notches 16 adapted to engage the ends of a wire loop.

The use illustrated in Fig. 4 is one in which it is desired to stretch a wire loop 17 passing through a mold form 18 and around binding or holding beams 19. To this end the instrument is arranged against the face of the corresponding beam 19 and the ends of loop 17 passed through notches 16 and bent upwardly. Then handle mem-

ber 5 is drawn downwardly as before and automatically locked in position by the tension in the ends of wire 17, as will be understood. To release the instrument, all that is necessary is to raise handle 5, as will be readily understood.

While I have illustrated and described the preferred form of construction for carrying my invention into effect, this is capable of variation and modification without departing from the spirit of the invention. I, therefore, do not wish to be limited to the precise details of construction set forth, but desire to avail myself of such variations and modifications as come within the scope of the appended claims.

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

1. A wire stretcher comprising wire gripping means and a sliding cam like bearing surface cooperating therewith to cause stretching of a wire gripped by said gripping means when said surface is slid from one position to another, substantially as described.

2. A wire stretcher comprising an operating handle having a smooth curved sliding bearing cam head extending laterally from the end thereof and having wire gripping means thereon near the juncture of the handle and cam head, substantially as described.

3. A wire stretcher comprising an operating handle and a smooth curved cam like bearing member extending laterally therefrom; wire gripping means locked in the neighborhood of the juncture between said handle and said bearing member, and said handle being provided with an aperture adapted to receive a securing member, substantially as described.

4. A wire stretcher comprising an operating handle and a smooth curved bearing member extending laterally therefrom, there being a central slot formed in said bearing member and a wire engaging opening in the neighborhood of its juncture with said handle; and a lug projecting from each side of said bearing member in the neighborhood of its juncture with said handle, there being a notch in each of said lugs, substantially as described.

5. A wire stretcher comprising an operating handle and a smooth curved cam like bearing member extending laterally therefrom, there being a slot formed in said bearing member extending substantially throughout the operative length of said bearing member and a wire engaging opening in the neighborhood of its juncture with said handle, substantially as described.

6. A wire stretcher comprising an operating handle and a bearing member therefor adapted to operate against the side of an object; and wire engaging means on said handle adjacent said bearing member, the parts being so arranged and combined as to cause the line of tension on said wire engaging means to cross the operative center of said bearing member during operation of said handle to effect automatic locking of said handle in stretching position, substantially as described.

7. A wire stretcher comprising an operating handle and a bearing member therefor adapted to operate against the side of an object; and a slotted lug on each side of said handle adjacent said bearing member, the parts being so arranged and combined as to permit of the swinging of said handle through substantially an angle of 180 degrees and to cause the line of tension on said lugs to cross the operative center of said bearing member during operation of said handle to effect locking of said handle in stretching position, substantially as described.

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

HARRY L. GORDON.

Witnesses:
JOSHUA R. H. POTTS,
HELEN F. LILLIS.

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