

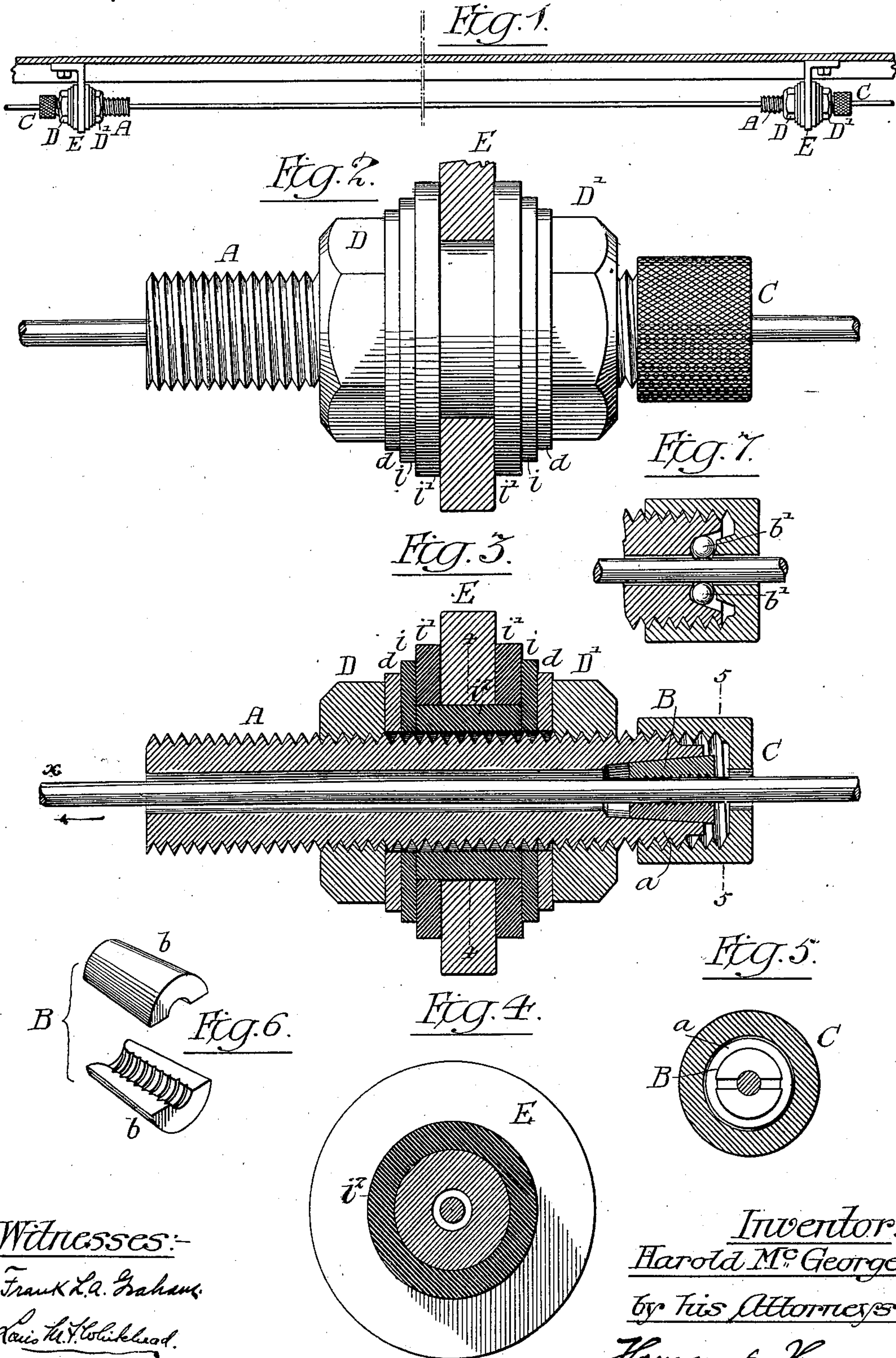
No. 674,244.

Patented May 14, 1901.

H. McGEORGE.
WIRE STRETCHER.

(Application filed July 3, 1900.)

(No Model.)



UNITED STATES PATENT OFFICE.

HAROLD McGEORGE, OF CLEVELAND, OHIO, ASSIGNOR TO THE ELECTRIC CONTROLLER AND SUPPLY COMPANY, OF SAME PLACE.

WIRE-STRETCHER.

SPECIFICATION forming part of Letters Patent No. 674,244, dated May 14, 1901.

Application filed July 3, 1900. Serial No. 22,426. (No model.)

To all whom it may concern:

Be it known that I, HAROLD McGEORGE, a citizen of the United States, and a resident of Cleveland, Ohio, have invented certain Improvements in Wire-Stretchers, of which the following is a specification.

The main object of my invention is to improve the construction of wire stretchers or retainers, whereby the wire can be stretched and secured prior to its being cut from the coil; and a further object of the invention is to so construct the device that it will automatically grip the wire in one direction and will allow for the free movement of the wire through the stretcher in the opposite direction until secured.

My invention is especially adapted for use in stringing electric wires in short lengths—such, for instance, as on traveling cranes, &c. In the accompanying drawings, Figure 1 is a view showing my invention applied to the beam of a traveling crane. Fig. 2 is a view of my improved wire-stretcher. Fig. 3 is a longitudinal sectional view. Fig. 4 is a section on the line 4 4, Fig. 3. Fig. 5 is a section on the line 5 5, Fig. 3. Fig. 6 is a perspective view showing the wedge-shaped grippers. Fig. 7 is a view showing a modification of the gripping means.

A is a tubular carrier through which the wire x is passed. This carrier has a tapered socket a on one end, and within the socket is the gripper or chuck B, consisting in the present instance, as shown in Fig. 6, of two tapered gripping-jaws b , having their inner parts serrated, so as to grip the wire x , as shown in Fig. 3. These jaws automatically hold the wire when the wire is pulled in the direction of the arrow, Fig. 3; but when the wire is pulled in the opposite direction they will free themselves from the wire.

The periphery of the carrier A is screw-threaded, as shown, and screwed onto the end of the carrier having the tapered socket a is a cap, which when screwed up in contact with the sections of the gripper B holds the sections against the wire, making a positive fastening. By backing off the cap, however, the jaws will be free.

In order to adjust and attach the stretcher to a support and insulate it therefrom, I

mount on the threaded portion of the carrier A two nuts $D D'$, and between the nuts are metallic washers $d d'$, and between these washers and the support E (in the present instance an angle-bracket secured to a beam F, as in Fig. 1) are sections of non-conducting material, preferably washers $i i'$ and a sleeve i^2 , so that the support E is completely insulated from the carrier and the nuts. Thus it will be seen that the carrier can be adjusted longitudinally on the support E.

In place of the wedge-shaped gripping-jaws B B, I may use balls b' within the tapered socket, as shown in Fig. 7, or other device for accomplishing the purpose of gripping the wire when it is drawn in one direction and allow the wire to freely pass through the stretcher when drawn in the opposite direction.

The device is operated as follows: If it is desired, for instance, to stretch a wire along the beam of a crane, as shown in Fig. 1, two angle-supports E are secured to the beam F at the proper distance apart and a wire-stretcher attached to each support. The gripping-jaws are removed from one of the stretchers—that is, the one next the coil of wire—and the wire is passed through this stretcher, then carried to the other stretcher and passed through it, and then drawn in the opposite direction, so that the gripping-jaws of this stretcher will grip the wire. The cap C is then turned, so as to hold the jaws against the wire. The jaws of the other stretcher are then placed in position and the cap screwed on, so that the jaws will allow the wire to be drawn through. Then the wire is pulled taut by hand. As soon as the wire is released the jaws engage the wire and securely hold it. The cap can then be screwed down tightly, so as to force the jaws onto the wire and hold the wire rigid. If it is desired to take up any additional slack, all that is necessary is to back off the nut on the inside of one stretcher and turn up the nut on the outside, causing the stretcher to move longitudinally in its support. The wire need not be cut until after it is tightened and the stretchers clamped, thus avoiding any chance of waste or miscalculation as to the amount of wire required. Thus I am enabled to provide a simple and efficient wire-stretcher

to which the wire can be securely anchored or tightened without making loops or twisting or bending the wire in any way, and the wire can be fed from a coil and cut off to the proper length after it is stretched.

While my invention is especially adapted for stretching electric wires, and particularly those used in crane or short trolley work, it will be understood that this stretcher can be used for any purpose where it is desired to grip and tighten wire or rods.

I claim as my invention—

1. The combination of a tubular carrier having a screw-threaded periphery, gripping mechanism carried by the carrier for engaging the wire, nuts on the carrier, a bearing, and insulating material between the bearing and the nuts and the carrier, substantially as described.

2. The combination of a carrier having threads upon its outside surface, a tapered socket on one end of the carrier, gripping-jaws mounted within the socket, a screw-cap on the carrier arranged to bear against the jaws, a bushing on the carrier and means adjustable on the threaded surface of said carrier for retaining the bushing in any desired position, substantially as described.

3. The combination in a tubular carrier

having threads upon its outside surface, a tapered socket in one end of said carrier, gripping-jaws therein, a screw-cap on the carrier constructed to bear against the said jaws, a support having an opening made to receive the carrier, insulating material in said opening preventing electrical contact between the support and the carrier, and means on the threaded part of the carrier for holding the same to the support, substantially as described.

4. The combination in a wire-stretcher, of a tubular carrier through which the wire passes, means for automatically gripping the wire and means for clamping said gripping means after the wire has been engaged, the body of said carrier having a screw-threaded periphery, a bearing, nuts on the screw-threaded carrier mounted on each side of the bearing and holding the parts of the device together, said nuts also serving as means for adjusting the carrier in the bearing, substantially as described.

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

HAROLD McGEORGE.

Witnesses:

C. W. COMSTOCK,
W. A. JONES.