Sept. 3, 1946. A. TARAMASCHI 2,407,040

CABLE STRAIGHTENER

Filed July 18, 1944

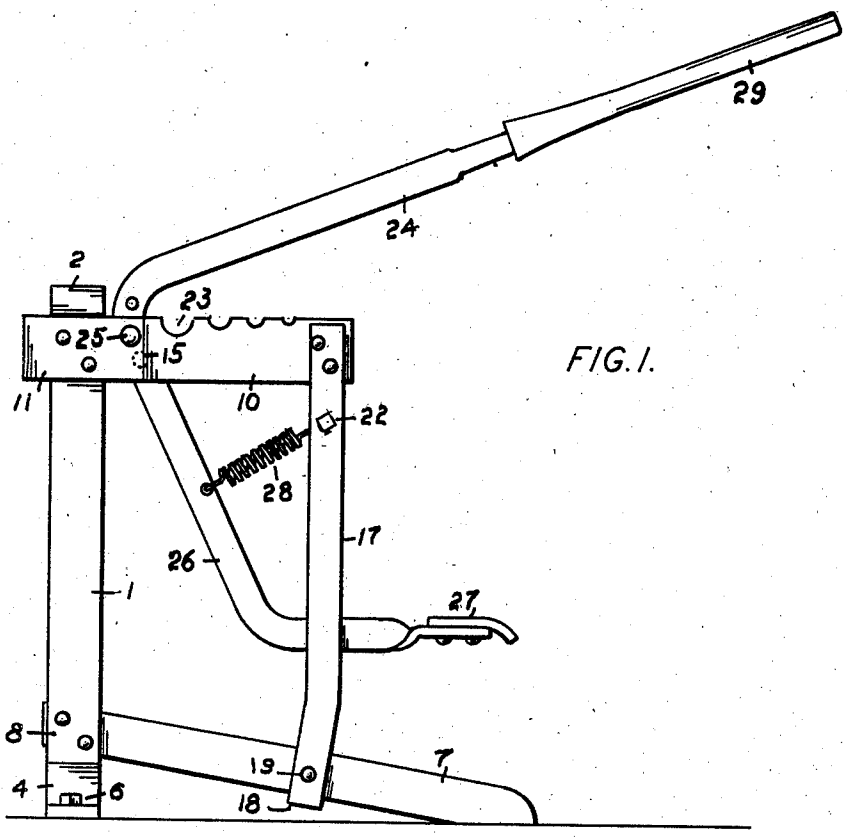


FIG. 1.

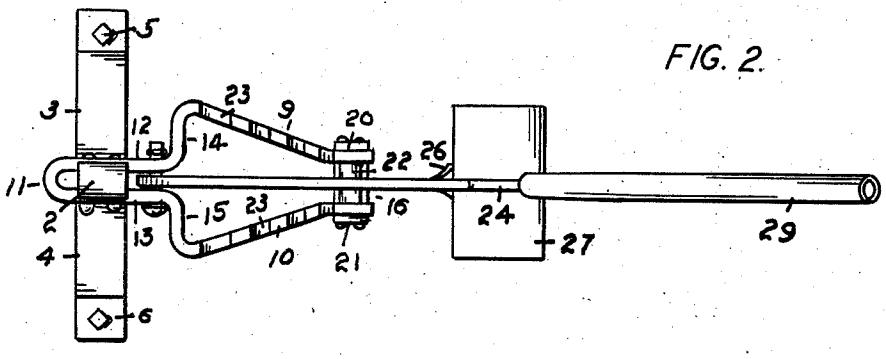


FIG. 2.

INVENTOR.
ANGELO TARAMASCHI.
BY Bradwell Yale
ATTORNEY.

Patented Sept. 3, 1946

2,407,040

UNITED STATES PATENT OFFICE

2,407,040

CABLE STRAIGHTENER

Angelo Taramaschi, San Carlos, Calif.

Application July 18, 1944, Serial No. 545,478

1 Claim. (Cl. 153—39)

1

This invention relates to cable straighteners and more particularly to an apparatus for manually removing kinks from wire cable.

Another object is the salvaging of sling cables and other lengths of cable that have lost their tensile continuity by bends, kinks and other distortions.

A further object is to provide a portable apparatus in the class described, that is simple, easily operated and adapted to function on a variety of cable sizes.

Other objects and advantages will appear as the description progresses.

In the specification and drawing the invention is disclosed in its preferred form. But it is to be understood that it is not limited to this form; because it may be embodied in modifications within the spirit of the invention as defined in the claim following the description.

In the one sheet of drawings:

Fig. 1 is a side elevation of a cable straightener constructed in accordance with this invention.

Fig. 2 is a plan view from above of the same.

In detail the structure shown in Fig. 1 comprises the standard 1, preferably composed of a single strip of flat steel bent back upon itself at 2 and flared outwardly at 3, 4 to form a wide base for the standard. The standard may be bolted to the floor at 5, 6 for permanent installation. The front foot 7 is riveted or welded between the uprights of the standard at 8, and extends well forward thus forming a supporting tripod to give stability to the standard.

The interspaced jaws 9, 10 are preferably formed from a single length of flat steel having the return bend at 11, forming a U-shaped leg looped around a foot of said tripod with the parallel portions 12, 13. These portions straddle the standard beneath the looped bend at 2 and are fastened thereto by bolting, riveting or welding. From the offsets 14, 15 the jaws 9, 10 converge to their separated ends at 16.

These ends are supported and braced by the leg 17, preferably formed of a strip of flat steel having the return bend at 18, from which the parallel lengths of the leg extend upwardly on the opposite sides of the foot 7 to which they are attached by the transverse rivet or bolt 19. The separated ends of this leg are attached to their respective ends of the jaws 9, 10 at 20, 21 and cross braced by the bolt 22, passing through a spacer sleeve in the leg 17.

This structure described forms a rigid frame, which having a tripod base 5, 6, 7 will stand upright upon an uneven floor. If a stanchion is available the frame assembly may be further stabilized in the larger sizes by passing a bolt through the return bend at 2 for attachment to the stanchion. In the smaller sizes of the apparatus the jaw assembly 9—13 may be attached directly to the stanchion, instead of the standard 1. In which instance the supporting frame assembly 1—17 may be omitted.

2

The straightening elements include the notches, such as 23, graduated in depth to take the various sizes of cables, laid across the tops of the jaws 9, 10, and the lever 24, pivoted at 25, between the parallel portions 12, 13 and operating between the jaws 9, 10. This lever has the lower extension 26, slidably guided between the sides of the leg 17, and having the foot tread 27 on its outer end. The lever 24 is held normally elevated by the tension of the springs 28. For comfort the outer end of the lever 24 may have the pipe extension 29.

This invention operates substantially as follows: The kinked cable is laid across the top edges of the jaws 9, 10 with the apex of the kink upward. The lever is then forced downwardly against the cable until the kink is forced downwardly between the jaws a distance sufficient to cause the cable to assume a true longitudinal line when it springs back as the lever pressure is lifted. The spiral flexibility of the cable is such that it readily responds to the bending stress applied, which permits the various strands to assume their original compact formation.

The distance between the jaws is proportioned to the cross section of the cable, the larger sizes requiring a greater distance between the jaws 9—10 permitting the cable to bend wtihout being crushed by the lever 24. This condition is accomplished by setting the jaws oblique to the lever, as in Fig. 2. The larger sizes of cable are placed in the notch 23, nearest the fulcrum pivot 25, where the compounding of the leverage is greatest. The various sizes of cables are laid in their appropriate notches 23.

The resiliency of the spring 28 is such that the lever 24 can be kept in more or less constant vibration in working out the kinks in the smaller cables, which can be fed across the jaws and the cable rotated to bring the apex of the kinks uppermost, by one hand of the operator while his other hand operates the lever 24.

Or the lever may be operated by the foot treadle 27 and both hands used to manipulate the cable. For the larger sizes of cable both the handle 29 and the foot treadle may be used to increase the power applied.

Where the various parts of the structure have been described as riveted or welded together for cheaper construction, obviously such parts could be bolted together for convenience in knocked down shipping or storing the apparatus.

The same procedure could be used for straightening or bending reinforcing bars or the like.

The lever **24** is in effect a movable jaw cooperating with the pair of stationary jaws **9, 10.** The pivoted lever is preferred because it is simpler to construct and operate in combination with the stationary jaws.

Having thus described this invention and its mode of operation, what is claimed and desired to secure by Letters Patent is:

A cable straightener comprising a supporting tripod having an upright standard; a pair of stationary jaws composed of a length of rigid material bent back upon itself, offset laterally and having converging end portions, with said standard fixed between said bent back portions; a U shaped leg looped around a foot of said tripod and attached to the opposite ends of said jaws respectively; a lever pivoted between said jaws adjacent said offset portions; and a lower extension of said lever, guided in said leg and having a foot treadle thereon.

ANGELO TARAMASCHI.