CABLE BENDERS AND SLACK PULLER

DESCRIPTION AND USE

CONTENTS PAGE

1. GENERAL

1.01 This section describes hand-operated tools used to bend cables and stub cables for the purpose of setting up cables for splicing operations and racking in manholes.

1.02 This section is revised to add the F cable bender and the G slack puller, which have been developed for use with coaxial cable. They also can be used with other large, stiff cables where forming and racking are necessary. The D and E cable benders cannot be used with coaxial cable. The title of this section has been changed from "Cable Benders". Since these changes constitute a general revision, arrows ordinarily used to indicate changes have been omitted.

1.03 The use of the D and E cable benders, racking jacks, and the cable bending strap is covered in Section 632-305-015. The use of the F cable bender and the G slack puller for racking coaxial cable in pull-through manholes is covered in Section 628-200-210.

2. DESCRIPTION

2.01 The F cable bender is about 28-1/4 inches long, 6 inches wide, and 7-5/8 inches high. It consists of a cast aluminum head, two aluminum plate arms that pivot at the head, and two aluminum shoes mounted on nylon straps which hold the cable. The straps are adjustable and are fitted with a metal latch. The cable bender makes a 60-degree bend per application and maintains approximately a 21-inch bend radius, which is suitable for coaxial cable. Stops on the cable bender prevent overbending. A 1-1/2 ton E chain hoist is used to operate the cable bender. Figure 1 illustrates the F cable bender.

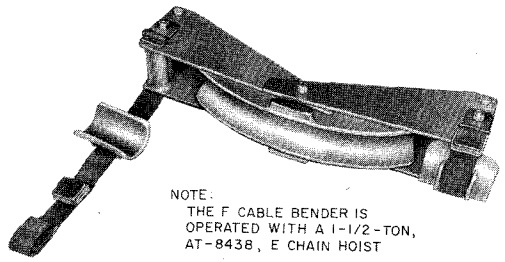

Fig. 1—F Cable Bender

2.02 The E cable bender is about 15 inches long, 7 inches wide, and 11-1/2 inches high. It consists of an oval steel frame with three curved shoes that bear against the cable. The center shoe can be moved in relation to the end shoes by a rack and pinion mechanism operated by a hand wrench to produce the opposing force required to bend the cable. The end shoes are swivel-mounted to conform to the bending movement. Ball stops are provided on the ends of the pinion shaft to keep the wrench from falling off. A latch on one of the racks prevents accidental detachment of the center shoe.

2.03 The D cable bender is basically the same in design and construction as the E cable bender, except the D-type has smaller size shoes and frame.

The D cable bender is 15 inches long, 6-5/8 inches wide, and 8-1/2 inches high. It is satisfactory for most applications on paired cable sized up to 2-5/8 inches in diameter. Figure 2 illustrates the basic design of the D and E cable benders.

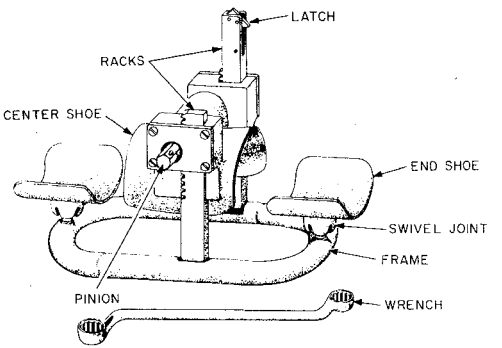

Fig. 2—E Cable Bender

2.04 The G slack puller (Fig. 3) is about 36 inches long, 3-1/2 inches wide and, with the strut adjusted to its shortest length, 22-1/2 inches high. It consists of an aluminum frame with two pivoting aluminum shoes, an adjustable length strut to accommodate variations in manhole width, and a chain lock to hold the chain of an E chain hoist, which is required to operate the G slack puller. Two heavy-duty elastic bands are provided to aid in positioning the slack puller on the cable.

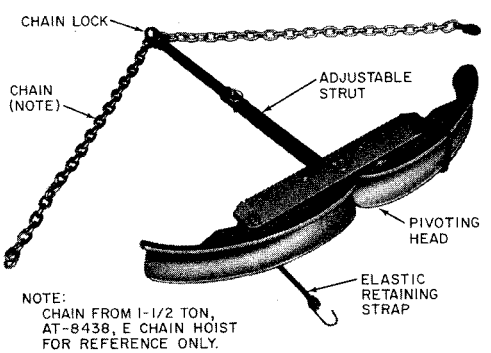

Fig. 3—G Slack Puller

2.05 The cable bending strap consists of a length of 3-ply cotton belting 6 feet long and 2 inches wide. A self-locking buckle is attached to one end, and the other end is metal-tipped to prevent unraveling and for insertion through the buckle.

3. USE

3.01 The F cable bender was designed to bend full-size coaxial cable without damaging the cable. The tool can be used for bending and forming any large, stiff cable (up to 3.1 inches outside diameter) in manholes, cable entrance facilities, and central offices.

3.02 The E cable bender is used for bending and setting up large or maximum size lead-sheathed cables and stubs (up to 3 inches in diameter) in manholes or cable vaults in order to properly rack and secure the cables. It also may be applied to large elliptical cable cross sections encountered in the coiled stubs of large loading coil cases.

3.03 The D cable bender is used for the same operations as the E cable bender, except its use is restricted to cable sizes up to 2-5/8 inches in diameter.

3.04 The G slack puller is used with a 1-1/2 ton chain hoist and cable luffing grips to develop the slack required for racking cable in pull-through manholes. Once slack is developed, the F cable bender and cable racking jacks are used for bending the cable to its final shape for racking. The G slack puller is the only tool recommended for developing slack in coaxial cable. Other racking procedures have been found to cause damage to coaxial cable.

3.05 The cable bending strap is used with a 2- by 4-inch board for bending cable by using the methods covered in Section 632-305-015.

4. MAINTENANCE

4.01 ***F Cable Bender:*** The nylon belts and latches should be washed occasionally with hot water to remove grime. Replacement belts and latches are available as a spare parts kit. Apply a light coating of grease as required to bearing surfaces around the pivot bolt.

4.02 ***D and E Cable Benders:*** The rack, pinion, and latch bearings should be lubricated occasionally with motor oil.

4.03 ***G Slack Puller:*** The adjustable strut should be lubricated occasionally with motor oil.

4.04 ***Cable Bending Strap:*** Wash occasionally with warm water and mild soap or detergent to remove grime.

5. REPLACEMENT PARTS

5.01 The following parts are available:

Order Wording

(Qty) Spare Parts Kit for F Cable Bender

(Qty) Wrench, No. 8030 Williams, Box (For D and E Cable Benders).