(No Model.) 2 Sheets—Sheet 1.

C. H. GERSCH.

CABLE COVERING MACHINE.

No. 383,353. Patented May 22, 1888.

Fig. 1.

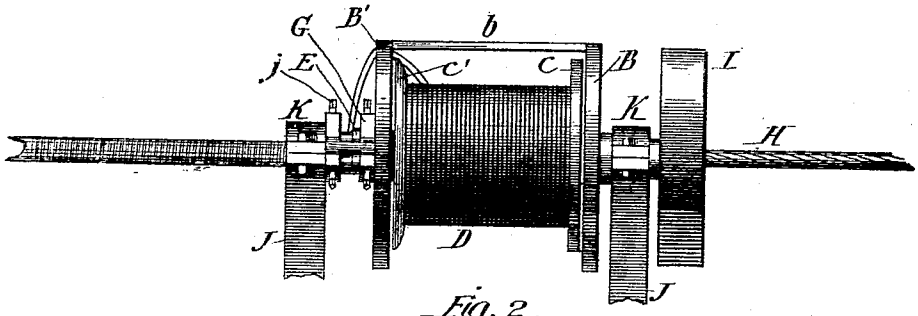


Fig. 2.

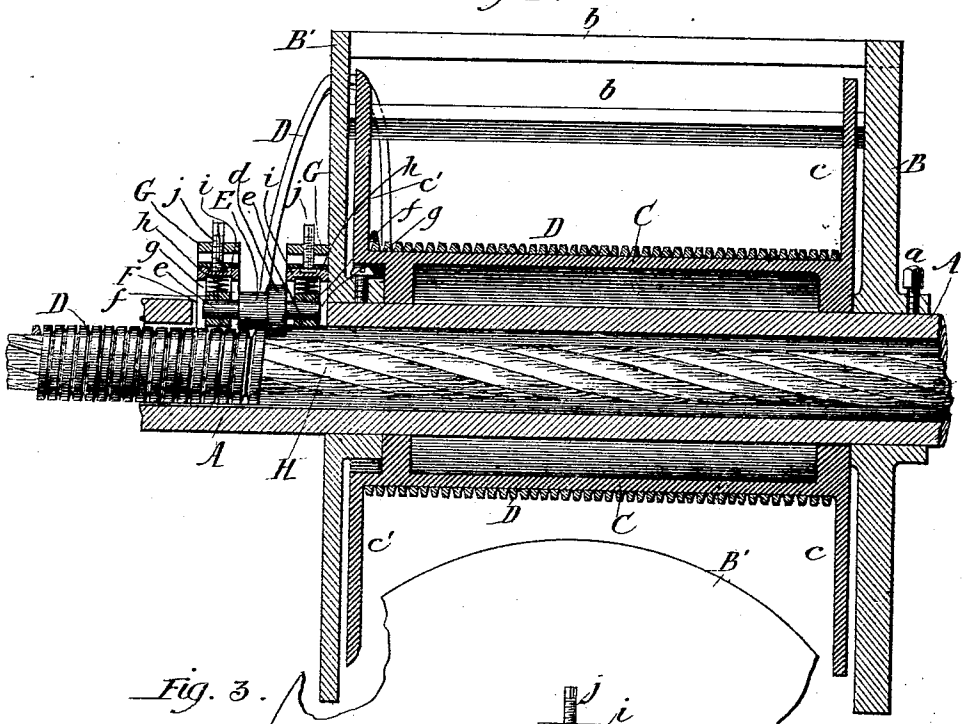
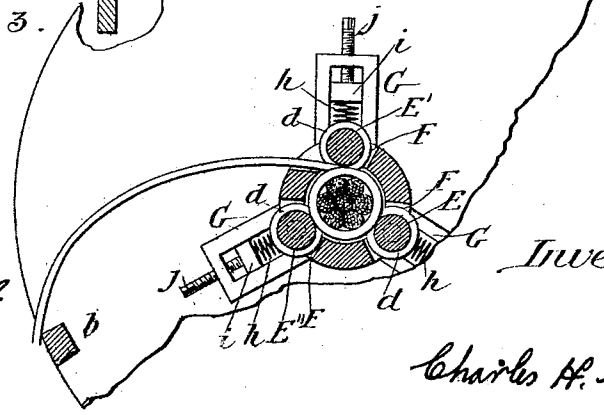


Fig. 3.



Witnesses:
Albert K. Adams
Harry T. Jones

Inventor:
Charles H. Gersch.

(No Model.) 2 Sheets—Sheet 2.

C. H. GERSCH.

CABLE COVERING MACHINE.

No. 383,353. Patented May 22, 1888.

Fig. 4.

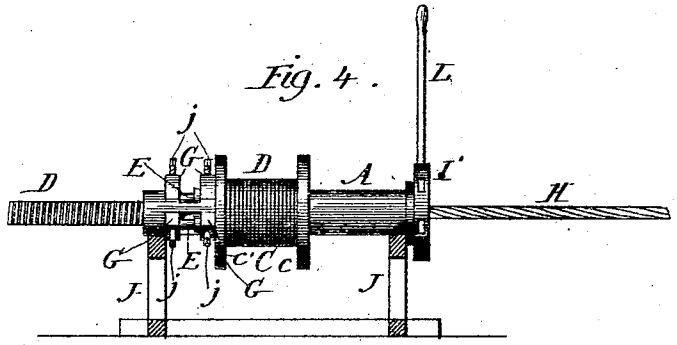


Fig. 5.

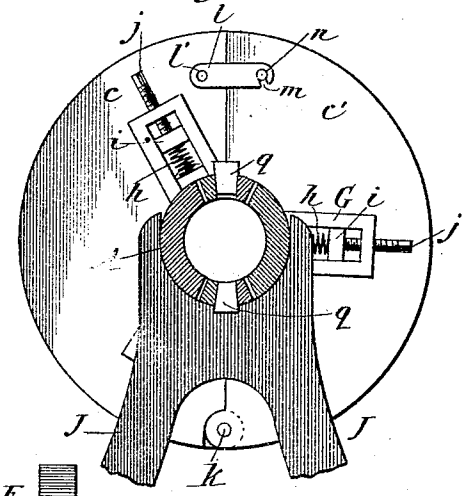


Fig. 6.

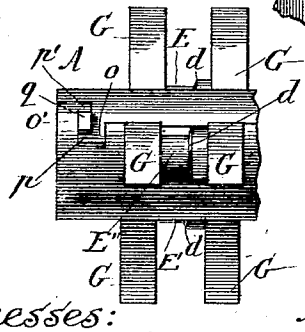


Fig. 8

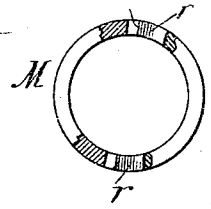
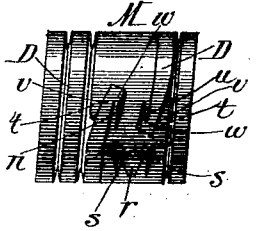


Fig. 7



Witnesses:
Albert H. Adams.
Harry T. Jones.

Inventor:
Charles H. Gersch.

UNITED STATES PATENT OFFICE.

CHARLES H. GERSCH, OF CHICAGO, ILLINOIS.

CABLE-COVERING MACHINE.

SPECIFICATION forming part of Letters Patent No. 383,353, dated May 22, 1888.

Application filed January 30, 1888. Serial No. 262,3 0. (No model.)

To all whom it may concern:

Be it known that I, CHARLES H. GERSCH, residing at Chicago, in the county of Cook and State of Illinois, and a citizen of the United States, have invented a new and useful Improvement in Cable-Covering Machines, of which the following is a specification, reference being had to the accompanying drawings, in which—

Figure 1 is a side elevation of my improved machine. Fig. 2 is a longitudinal section. Fig. 3 is an end elevation, partly broken away, with the sleeve or spindle in section. Figs. 2 and 3 are enlarged. Fig. 4 is a side elevation showing the machine arranged for winding the covering at the splice of the cable. Fig. 5 is an end elevation with the sleeve or spindle in section. Fig. 6 is a detail, being a top or plan view of the spindle and the pressure-rollers. Fig. 7 is a side elevation showing a clasp for connecting the covering at the splice of the cable. Fig. 8 is an edge view, partly broken away, of the clasp.

It is desirable to provide traction-cables for propelling purposes with a covering to prevent wear of the strands of the cable, and the object of this invention is to construct a machine by which a covering for a traction-cable can be wound thereon in an expeditious and firm manner; and its nature consists in the several parts and combinations of parts hereinafter described, and pointed out in the claims as new.

In the drawings, A represents the spindle or sleeve, having an interior diameter to receive the traction-cable on which the covering is to be wound. This spindle is adapted, as shown, to receive a spool for carrying a cable-covering.

B B′ are circular plates or disks secured to the spindle A by set-screws *a*, or in any other firm manner, so that the disks will revolve with the spindle, and, as shown, the disks B B′ are connected by bars *b*, between which the covering runs out.

C is a spool having end flanges, *c c′*, and, as shown, the end flange, *c′*, has its edge rounded off to allow the covering to pass readily thereover. This spool C is mounted on the spindle A, between the disks B B′, and is locked against end movement by the disk, and is secured to the spindle sufficiently firm to revolve with the spindle, and at the same time have a backward rotation with the unwinding of the covering to produce the required slack in the covering for the winding of the covering on the cable.

D is the covering, formed, as shown, of a continuous strip having beveled side edges and wound on the spool C to pass therefrom and be wound onto the cable.

E E′ E″ are the pressure-rollers for compressing the covering onto the cable. Each roller is of two diameters to form a shoulder, *d*, which shoulder, as shown, is beveled to fit the bevel of the covering, and each roller is mounted upon a shaft, *e*. The shoulders *d* are not in line, and the ratio of difference between the shoulders is equal to the width of the covering, so that the shoulders will track on the covering as the spindle revolves around to press it into place.

F are slots formed in the spindle A to receive the rollers E E′ E″, and, as shown, the slot F for the roller E is widened on one side to leave an opening for the entrance of the covering, as in Fig. 3.

G are frames supporting the pressure-rollers. Each frame carries a sliding box, *f*, in which is journaled the end of the shaft *e* of the roller, and this box is movable in a slot, *g*, formed in the support G, and, as shown, the box *f* is held down to press the rollers respectively onto the covering by a spring, *h*, located between the box *f* and a plate, *i*, which plate is adjusted by means of a screw, *j*, to give the proper pressure for the spring *h* to hold the box *f* in place. The supports G are arranged in pairs, and each support is provided with a journal-box, bearing-spring, pressure-plate, and adjusting-screw, and as many pairs of supports are provided as there are rollers.

H is the traction-cable, formed of wire strands in the usual manner.

I is a pulley or driving-wheel secured to the rear end of the spindle A, and receiving power from any suitable source to drive the spindle.

J are standards supporting the spindle.

K are journal-boxes on the standards J, in which the spindle A is mounted.

The parts shown in Figs. 1, 2, and 3, and so far described, are for a power-machine for run-

ning the covering onto the cable, and in use the cable H is stationary, and the spindle A rotates around the cable and carries with it the disks B, spool C, and pressure-rollers E, and the covering D is unwound from the spool and passes into the mouth of the slot F for the roller E to be wound on the cable, as shown in Figs. 2 and 3, and in winding the pressure-rollers E E′ E″ act to force the covering down, winding it around the cable by the rotation of the spindle A and the pressure-rollers, and these pressure-rollers, by their shoulders *d*, coil the covering snugly on the cable with one coil against the other, and at the same time act to feed the cable forward with a speed coinciding with the speed of the winding.

The cable, after being wound with the covering D, is ready for use, and in use is to be strung in its conduit, as usual, and after being strung the two ends are to be joined one to the other, and the joint is covered by the covering D, and for this purpose a hand-machine embodying the features of the power-machine, but of a size to be placed within the cable-conduit, is employed, and such machine is shown in Figs. 4, 5, and 6.

This machine has a spindle, A, on which is mounted a spool, C, having end flanges, *c c′*, to receive a section of the covering D, and the spindle A carries pressure-rollers E E′ E″, mounted in supports G, and the spindle is mounted in journal-boxes on standards J, and these parts in their general construction and operation are the same as the corresponding parts of the machine of Figs. 1, 2, and 3, differing in respect that the parts A and C are made in halves, so that the halves can be placed onto the cable ends, and, as shown, the half-flanges of the spool are hinged to each other on one side by a pin or pivot, *k*, and one half has pivoted thereto a latch, *l*, by a pin or pivot, *l′*, and this latch has a notch, *m*, to receive a pin, *n*, on the other half of the disk, as shown in Fig. 5. The half-sections of the spindle A are provided with a hook, *o p*, for one section, and a hook, *o′ p′*, for the other section, and between these hooks is driven a wedge, *q*, as shown in Figs. 5 and 6, by which the half-sections are locked to each other.

The hand-machine has a disk, I′, attached to the rear end of the spindle A, with recesses or sockets to receive the end of a lever, L, by which the spindle can be turned. This machine is placed in the conduit for the cable with the halves disconnected, and in use the halves are placed on opposite sides of the cable, so as to inclose the cable end, and are locked by the devices shown or in any other suitable manner, and by turning the spindle A through the lever L the cable-covering D will be unwound from the spool C and pressed onto the cable by the action of the rollers E E′ E″, as already described. The terminal end of the main covering is connected to a clasp, M, to which clasp is also connected the end of the covering that is to be wound by the hand-machine over the cable-joint. This clasp M, as shown, is formed of a metal band joined together by an arrow-head, *r*, with which are engaged catches *s*, the arrow-head being on one end of the clasp and the catches on the other, as shown in Fig. 7, and this clasp M has cut in each edge a recess to form a lip, *t*, with an inclined edge, and a catch, *u*, and the end of the covering is formed with an inclined face, *v*, to correspond to the face of *t*, and with a hook, *w*, to engage the catch, *u*, as shown in Fig. 7. The clasp M is used by hooking the terminal end of the main covering into one notch, so that the lip *t* will lie against the wall *v*, and the catch *u* will engage the hook *w*, the clasp M being secured around the cable. The end of the strip of covering to cover the joint or splice has its end caught in the opposite recess of the clasp, as shown in Fig. 7, and the covering is then wound around the cable at the splice until the splice is covered, when another clasp, M, is used to connect the main covering with the splice-covering, and after the covering of the splice is completed the halves of the winding device can be separated and removed from the cable and the hand-machine taken from the conduit with the cable in position and duly spliced.

What I claim as new, and desire to secure by Letters Patent, is as follows:

1. The combination, with the hollow spindle A and disks B B′, of the pressure-rollers E E′ E″, each mounted upon a shaft, and each having a bevel shoulder, *d*, to fit the bevel of the cable-covering, substantially as specified.

2. The spindle A, in combination with the pressure-rollers E E′ E″, carried by the spindle, and each having a shoulder, *d*, substantially as described.

CHARLES H. GERSCH.

Witnesses:
ALBERT H. ADAMS,
HARRY T. JONES.