(No Model.)

A. A. SHOBE & W. EMBLEY.

CABLE RAILWAY.

No. 388,081. Patented Aug. 21, 1888.

Fig. 1.

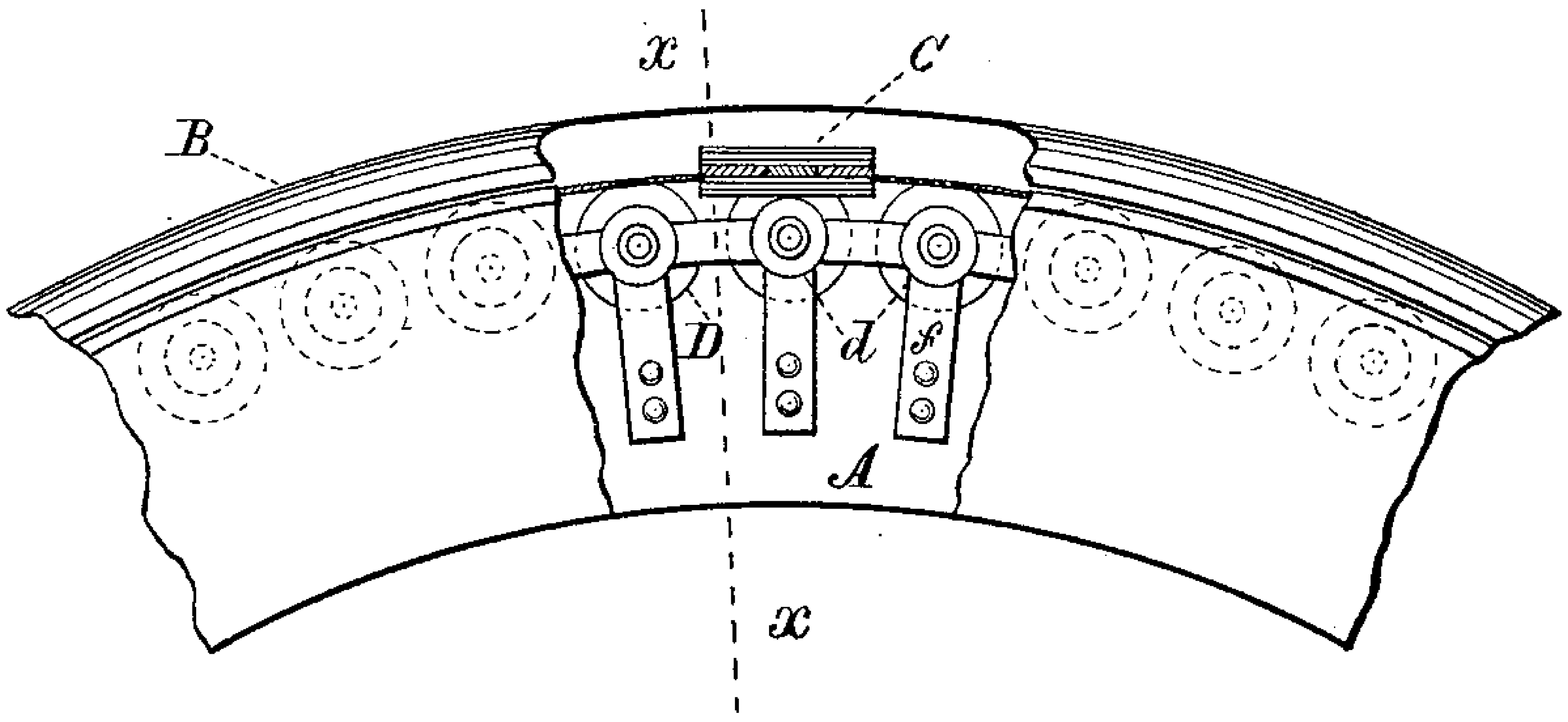
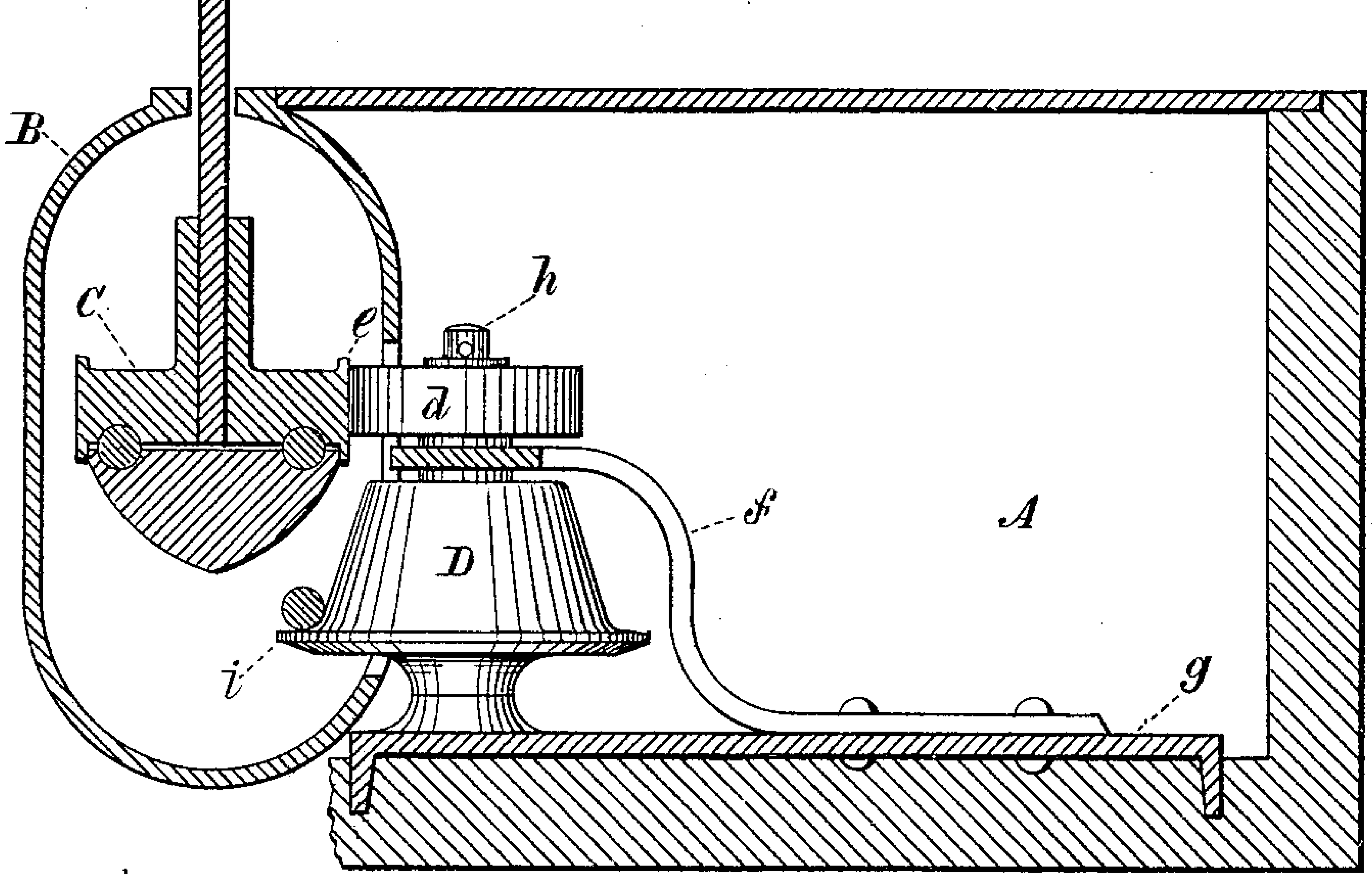


Fig. 2.



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UNITED STATES PATENT OFFICE.

ABRAHAM A. SHOBE AND WILLIAM EMBLEY, OF JERSEYVILLE, ILLINOIS.

CABLE RAILWAY.

SPECIFICATION forming part of Letters Patent No. 388,081, dated August 21, 1888.

Application filed December 27, 1887. Serial No. 259,157. (No model.)

To all whom it may concern:

Be it known that we, ABRAHAM A. SHOBE and WILLIAM EMBLEY, of Jerseyville, in the county of Jersey and State of Illinois, have invented a new and useful Improvement in Cable Railways; and we do hereby declare that the following is a full and exact description of the same, reference being had to the accompanying drawings, and to the letters of reference marked thereon.

Our invention relates to an improvement in cable railways, our object being to provide a substitute for the ordinary guide-rail, adapted to reduce to a minimum the friction attending the resistance to the centripetal pressure of the cable upon the gripper as the latter travels round the curved parts of the track; and, further, to provide means for sustaining the cable in such position below the gripper that it may, if necessary, be picked up and clamped as readily while the car is upon a curve as upon any other part of the road.

With these ends in view our invention consists in certain details of construction and combinations of parts, fully explained in the following specification and illustrated in the accompanying drawings, in which—

Figure 1 is a plan view of the curved part of an ordinary cable railway provided with our device, a portion of the top of the cable tube or tunnel being shown as broken away in order to exhibit the gripper and anti-friction rollers. Fig. 2 is a transverse sectional view of the same, taken in the line *x x*, Fig. 1, enlarged.

Referring to the drawings, A represents a pit located on the concave side of the curved part of the cable tube or tunnel B.

C represents the gripper, and *g* a foundation-plate, which may be secured upon masonry or cement in the bottom of the pit; or it may, if so preferred, be secured to the cable tube or frame, connecting the latter with the rails.

Secured vertically in a socket near the inner end of the base-plate *g* is a fixed spindle or stud, *h*, strengthened vertically by a yoke, *f*, the lower end of which is bolted to the foundation-plate *g*, and the upper part formed with an eye, through which the stud *h* projects sufficiently far to form a journal for the reception of an anti-friction roller, *d*, the diameter of which is such that its peripheral face will impinge upon the flat side *e* of the grip-jaw.

Immediately below the yoke *f* is a cable-carrier or guide-wheel, D, having the form of a truncated cone, and provided at the base with a flange, *i*. The peculiar form of this cable-carrier is such that when the cable is cast off over the edge of the lower grip-jaw it will, after leaving the latter and reaching the flange *i*, travel upon a curve of the same radius as when it is within the grip-jaws, and be sufficiently far under the gripper to be readily picked up by any of the devices employed for that purpose. A further advantage attending the preservation of the magnitude of the curve upon which the cable travels, whether engaged with the gripper or not, is that its tension is never importantly relaxed.

By reference to Fig. 1 it will be seen that the concave side of the cable-tube is flanked with a series of the cable-carriers and anti-friction rollers above described, located in such proximity to each other as the curve may require, each cable-carrier and anti-friction roller projecting to the required distance within the cable-tube through an opening provided for that purpose in the concave side thereof. By these details and the peculiar combination of parts, as above described, the ordinary guide-rail is dispensed with, and the waste of power by friction incidental to its use, as well as much of the wear and destruction of parts, is obviated, and the gripper, notwithstanding the centripetal pressure of the cable, is made to sweep smoothly round the curve by rolling contact, instead of frictional contact, with the guiding parts.

Having fully described our invention, what we claim, and desire to secure by Letters Patent, is—

In a cable railway, the combination of a conical cable-carrier with an anti-friction roller, the latter adapted to impinge upon the side of the grip-jaw, both being journaled upon the same stud or spindle, as set forth.

In testimony that we claim the foregoing we have hereunto set our hands this 3d day of November, 1887.

ABRAHAM A. SHOBE.
WILLIAM EMBLEY.

Witnesses:
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