

(No Model.)

2 Sheets—Sheet 1.

W. A. WRIGHT.  
CABLE CONDUIT.

No. 335,553.

Patented Feb. 2, 1886.

Fig. 1.

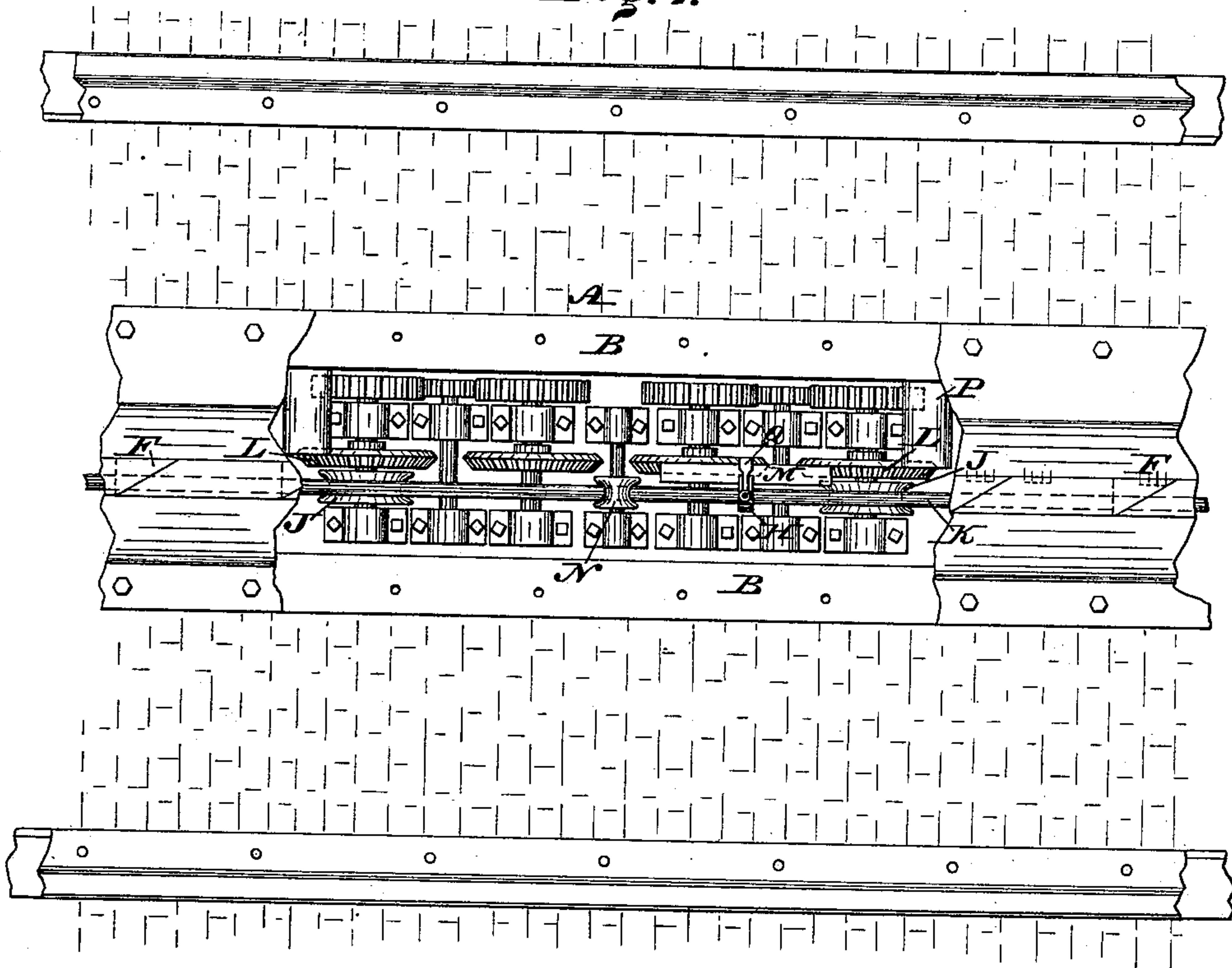


Fig. 2.

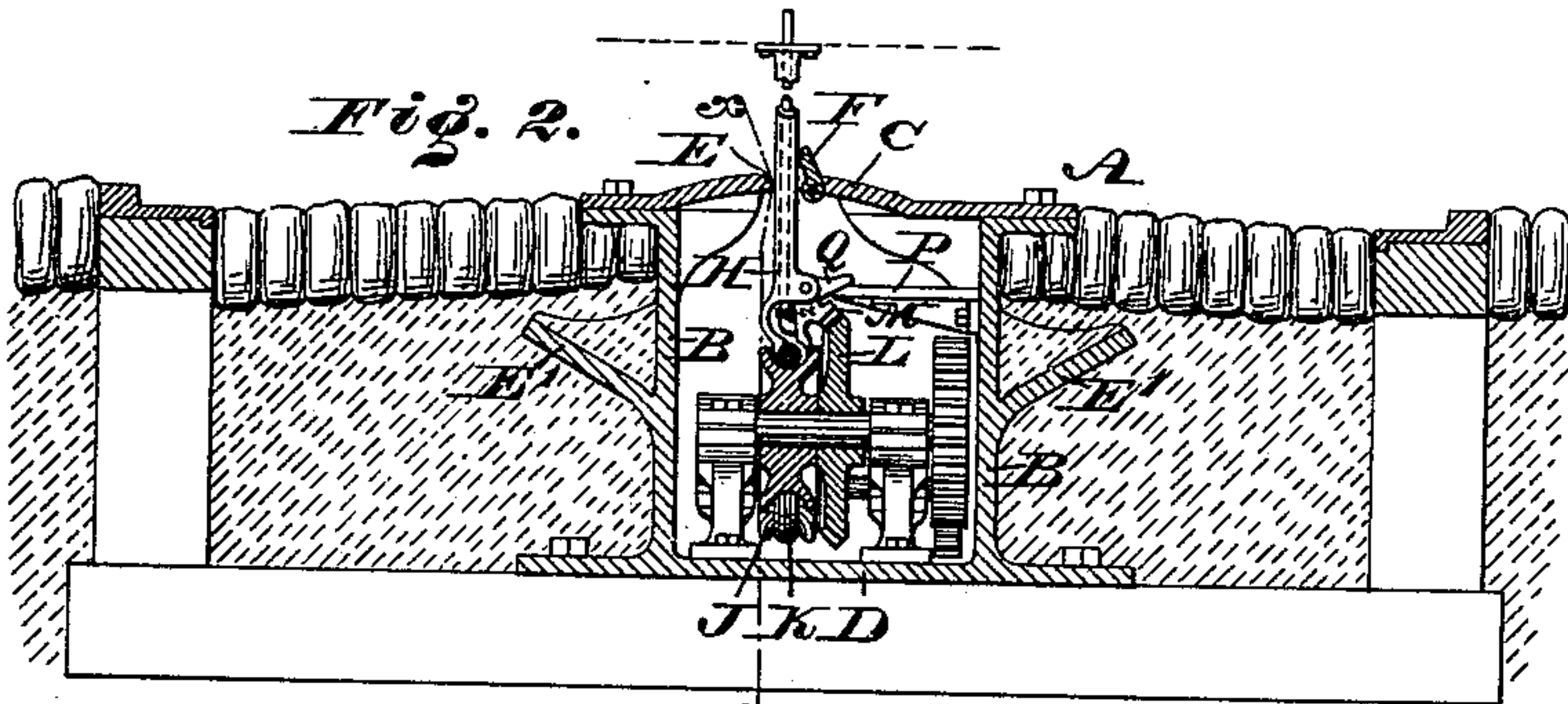
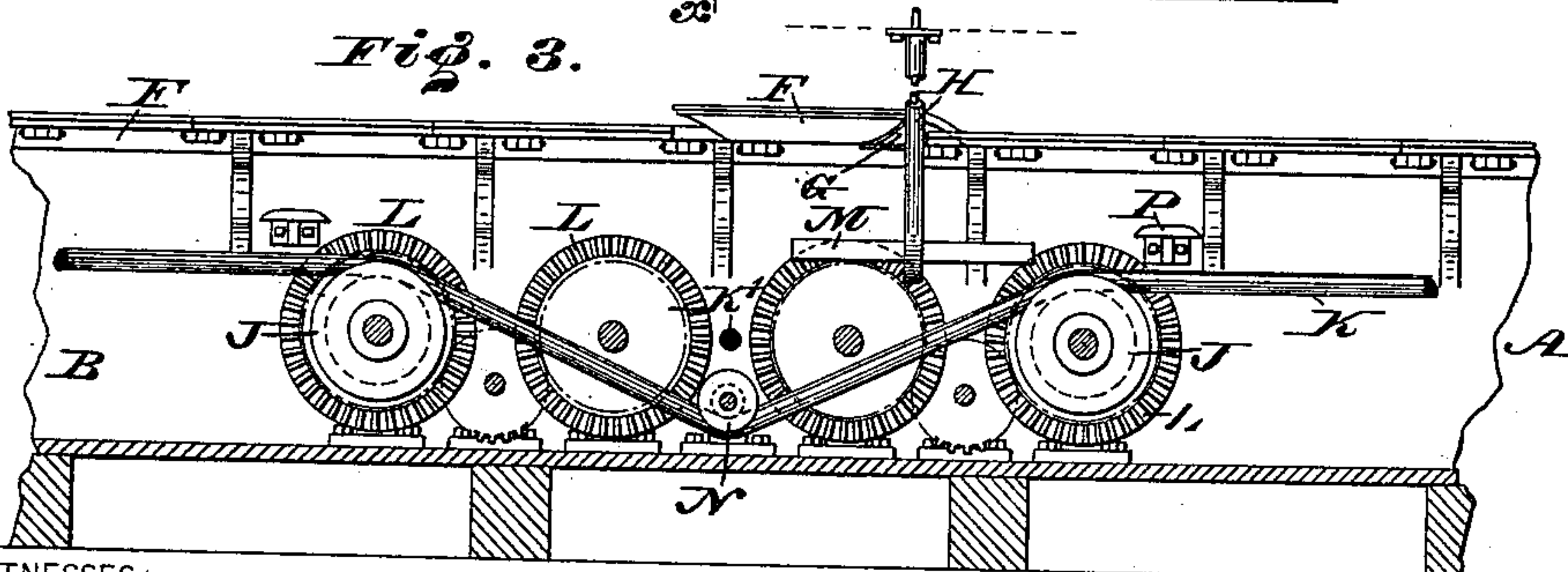


Fig. 3.



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INVENTOR:

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(No Model.)

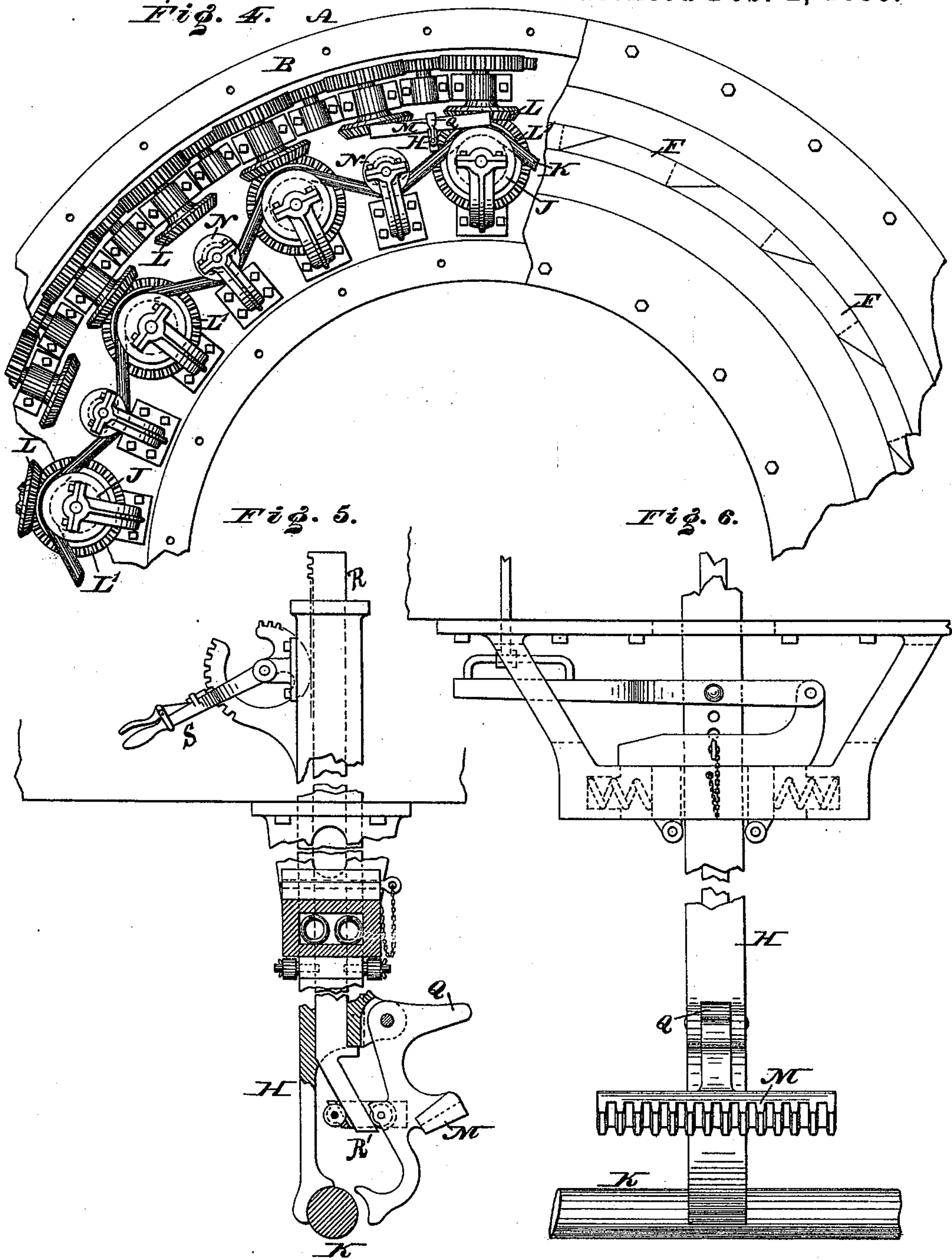
2 Sheets—Sheet 2.

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No. 335,553.

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# UNITED STATES PATENT OFFICE.

WILLIAM A. WRIGHT, OF CENTRETON, N. J., ASSIGNOR OF ONE-HALF TO J. McC. CREIGHTON AND B. K. JAMISON, BOTH OF PHILADELPHIA, PA.

## CABLE-CONDUIT.

SPECIFICATION forming part of Letters Patent No. 335,553, dated February 2, 1886.

Application filed July 7, 1885. Serial No. 170,887. (No model.)

*To all whom it may concern:*

Be it known that I, WILLIAM A. WRIGHT, a citizen of the United States, residing at Centreton, in the county of Burlington, State of New Jersey, have invented a new and useful Improvement in Cable Conduits, which improvement is fully set forth in the following specification and accompanying drawings, in which—

Figure 1 represents a top or plan view of the interior of a cable-conduit embodying my invention. Fig. 2 represents a transverse vertical section thereof. Fig. 3 represents a vertical section in line *x x*, Fig. 2. Fig. 4 represents a top view of a modification. Figs. 5 and 6 represent views of the grip employed for the conduit embodying my invention.

Similar letters of reference indicate corresponding parts in the several figures.

My invention relates to improvements in cable-conduits; and it consists in a new construction of sectional doors for covering the slot.

It also consists in providing means for securing the cables at the crossings or on curves, so that power may be readily communicated to the car.

It also consists in providing the grip and side walls of the conduit with devices whereby said grip is automatically operated at the commencement of the crossing and a rack thrown into engagement with devices communicating power to the car; and, further, in such details in the construction of the several parts thereof as hereinafter are fully set forth and described.

Referring to the drawings, A represents a cable-conduit which is formed of side walls, B, a top, C, and a bottom, D, said top having a slot, E, which is normally closed by doors F.

Projecting from the outer sides of the walls B are ledges E', which are inclined from the bottom upwardly and outwardly, whereby the superimposed weight of the earth, paving, &c., bearing against said ledges serves to press the sections of the top C in opposite directions, and prevent the closing of the slot. The doors F are hinged to one section of the top and close on the other section, and are continuous, having diagonal ends, whereby they may be raised without abruptness, the raising being accom-

plished by a shoe, G, which is secured to the grip H of the car, said shoe being so arranged that when the car is propelled it passes under the doors F and successively raises the same, so that the grip may pass through the slot, the doors afterward dropping, so that the slot is closed at all times, excepting at such places where the shoe is operative. On the bottom of the conduit are mounted grooved rollers or pulleys J, which are operated by the running cable K and bevel-wheels L, which are connected with said pulleys and geared together in such manner that the wheels are rotated in the same direction. Connected with the grip is a rack or tooth, M, which is so disposed that when it reaches the first pulley J it is adapted to engage with the adjacent wheel L and receive power therefrom, the same being communicated to the car.

In Fig. 3 the cable K is shown at the place of a crossing cable, K', said cable K being depressed and guided under a pulley, N, the gearing L and pulleys J having horizontal axes. In this case when the grip of the car reaches the first pulley J, the rack meshes with the adjacent wheel L, the grip having been duly loosened from the cable. The rack M, owing to its length, is carried along to the next wheel L and successively to the other wheels L. When the rack clears the last gear-wheel, the grip is tightened, and the car is again propelled by the cable, it being noticed that the grip has been carried over the crossing cable without stopping the car.

In Fig. 4 the cable is shown adapted for a curve, corner of a street or road, &c. In this case pulleys N are interposed between the pulleys J, the cable extending in zigzag directions. The axes of the several pulleys are vertical, and the pulleys are geared with the wheels L by means of bevel-wheels L', so that the power of the pulleys J is communicated to the wheels L, which, being geared together and successively engaged by the rack of the grip, cause the propulsion of the car around the curve or corner while the grip is disconnected from the cable. The rack or tooth M is connected with the movable jaw of the grip, which latter has a slide, R, provided with a rack and operated by the lever S. The slide has at its lower end an inclined portion, R', which works in a slot-



ted attachment, T, of the jaw, whereby the said jaw may be operated so as to either grip the cable or be released therefrom. In the releasing of the grip the rack M is advanced toward the wheels L and caused to engage with the same for the transmission of power to the car, said jaw being properly held in contact with the wheels by a slide or other suitable mechanism on the grip. Projecting horizontally inward from the side wall of the conduit is an arm, P, somewhat cam-shaped or double inclined, and so disposed that when the grip approaches the first wheel L, should the opening of the grip be neglected, a projection, Q, on the movable jaw of the grip strikes the arm P in such manner that said jaw is forced out and the grip accordingly opened, the rack M, as is evident, being thrown into engagement with the wheel L.

20 If desired, a motor may be employed for operating the wheels L.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—

- 25 1. A cable conduit having a slot, and hinged doors having diagonal ends closing the same, substantially as and for the purpose set forth.
2. A cable-conduit having a slot, and hinged

doors having diagonal ends, in combination with a grip provided with a shoe, substantially as and for the purpose set forth. 30

3. In a cable-conduit, the bevel gear-wheel L and pulleys, in combination with cable K and grip H, having rack M, substantially as and for the purpose set forth.

4. The pulleys J and bevel gear-wheel L, in combination with cable K, pulley N, grip H, having a pivoted jaw carrying rack M, substantially as and for the purpose set forth. 35

5. In a cable-conduit, an inner horizontal arm, P, in combination with grip H, having a pivoted jaw, the latter having a projection, Q, and rack M, substantially as and for the purpose set forth. 40

6. The grip H, having a movable jaw with a slotted attachment, and a slide in said grip having a rack operated by a lever, the said slide being provided with an inclined portion working in the said slotted attachment and adapted to operate the said movable jaw, substantially as and for the purpose set forth. 45 50

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Witnesses:

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