

(No Model.)

F. J. PRIBYL.  
TROLLEY.

No. 550,059.

Patented Nov. 19, 1895.

Fig. 2.

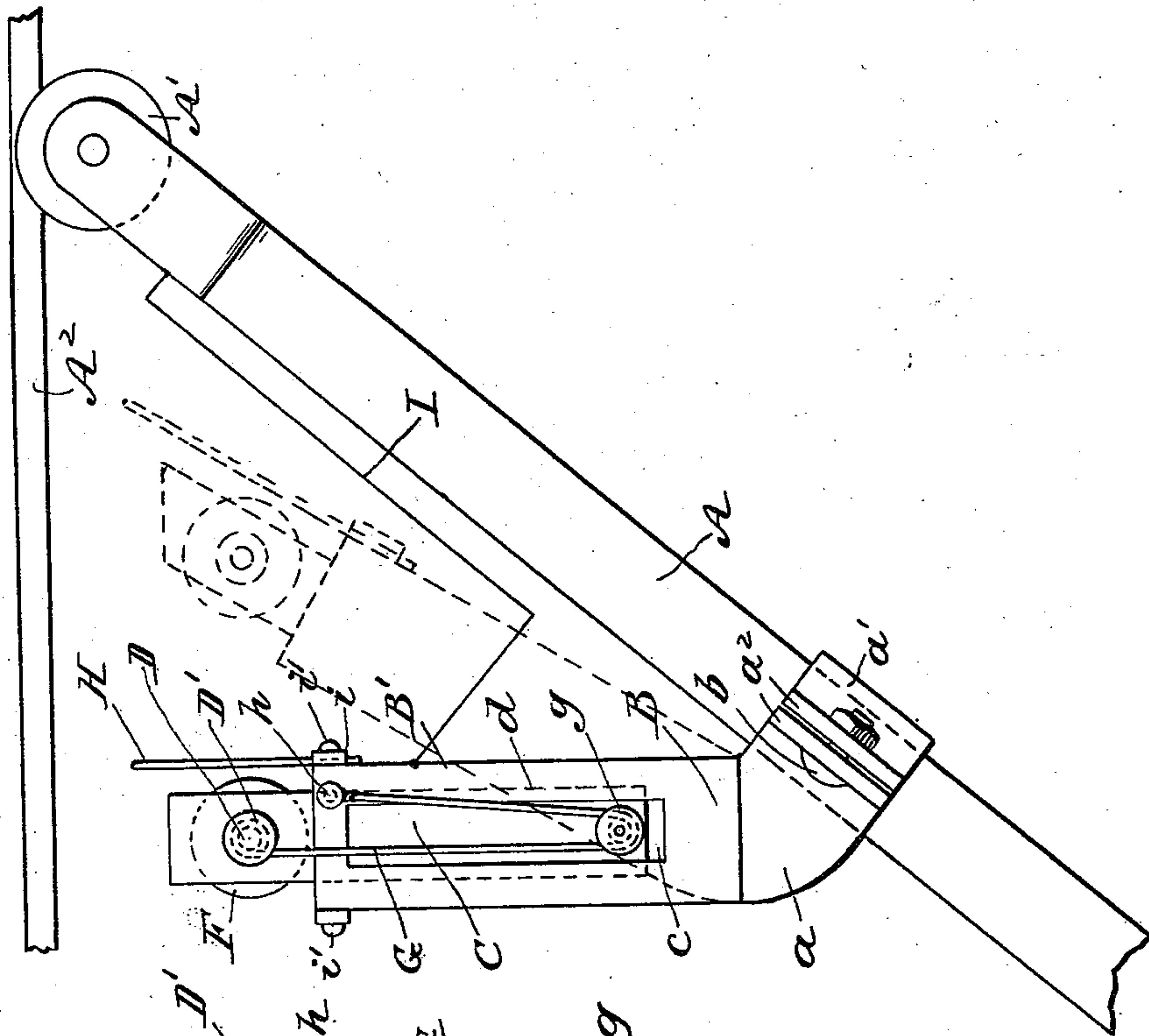
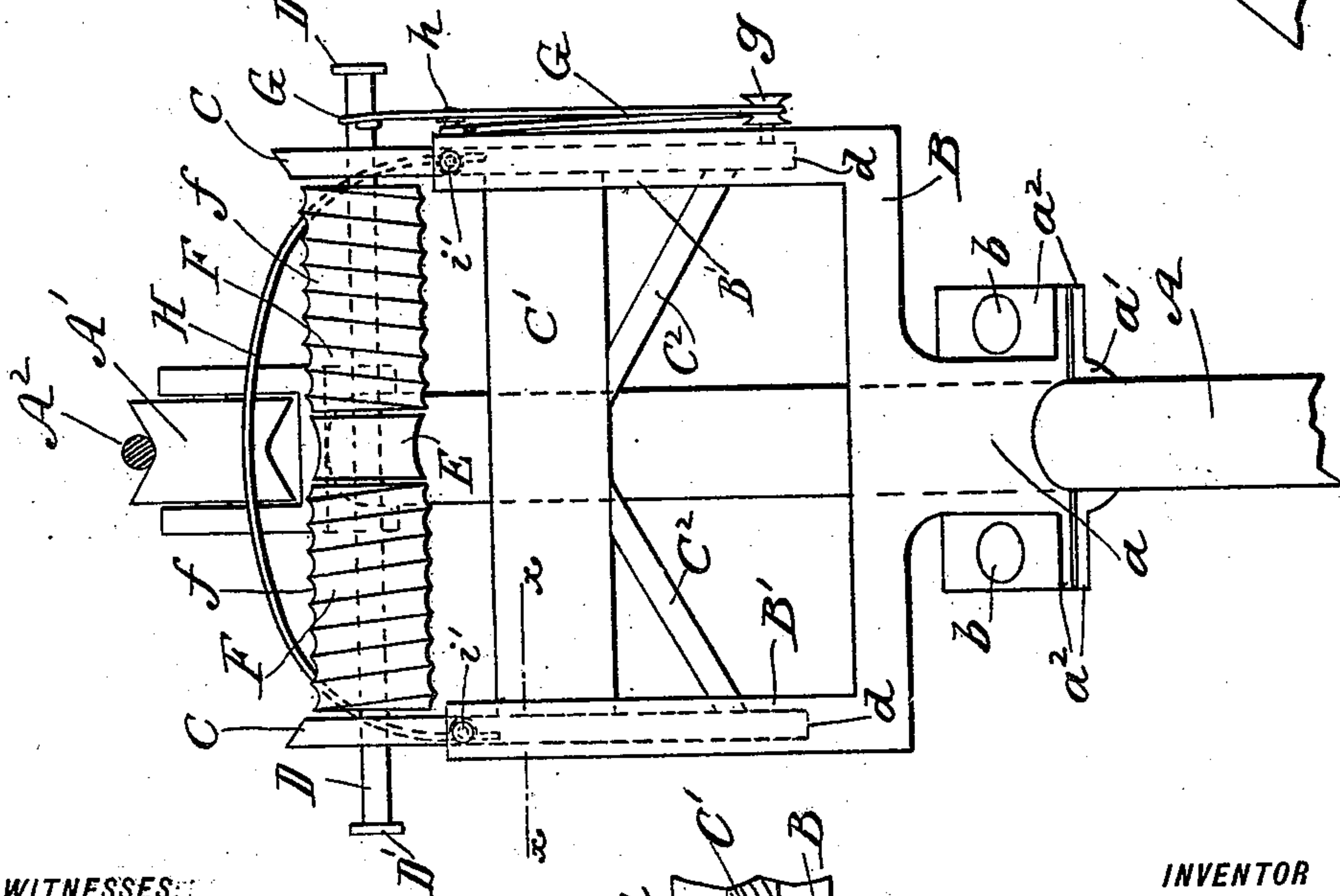


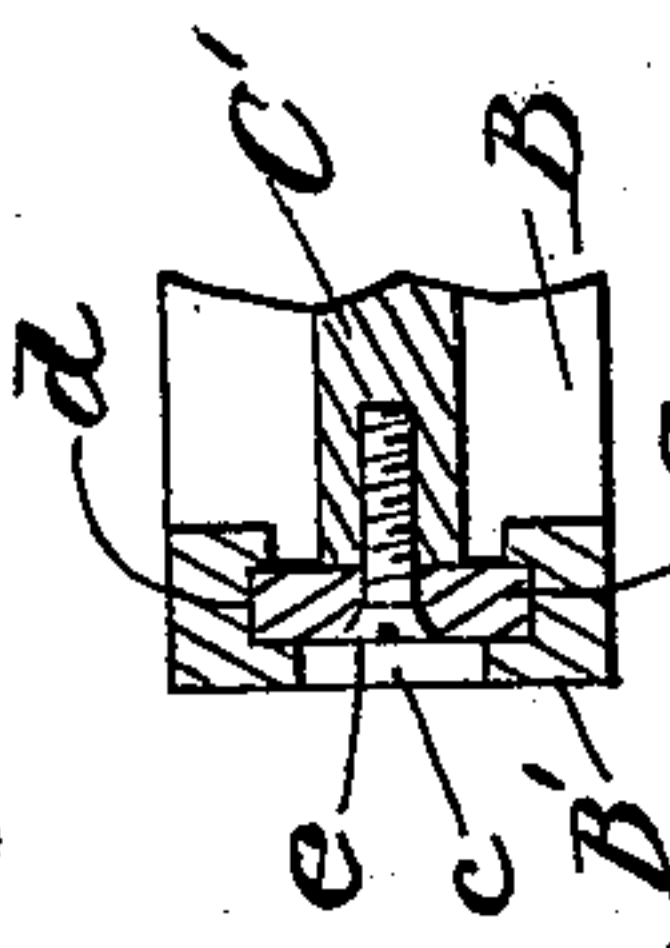
Fig. 1.



WITNESSES:

*John H. Deemer*  
*Percy J. Griffith*

Fig. 3.



INVENTOR

*Francis J. Pribyl*  
BY  
*Edgar Tate & Co.*  
ATTORNEYS



# UNITED STATES PATENT OFFICE.

FRANCIS J. PRIBYL, OF HAZLETON, PENNSYLVANIA.

## TROLLEY.

SPECIFICATION forming part of Letters Patent No. 550,059, dated November 19, 1895.

Application filed March 9, 1895. Serial No. 541,139. (No model.)

*To all whom it may concern:*

Be it known that I, FRANCIS J. PRIBYL, a citizen of the United States, and a resident of Hazleton, county of Luzerne, and State of Pennsylvania, have invented certain new and useful Improvements in Trolleys, of which the following is a specification, reference being had to the accompanying drawings, forming a part thereof, in which similar letters of reference indicate corresponding parts in all the figures.

This invention relates to trolleys for electric street and other railway cars, and has for its object to provide perfectly-operating means whereby when the trolley accidentally slips from the conductor or wire the same will be automatically and almost immediately returned to the same.

The invention consists in the novel construction and arrangement of parts whereby the above mentioned and other desirable results are attained, and hereinafter fully described.

Referring to the drawings, Figure 1 is a rear elevation of a device embodying my invention. Fig. 2 is a side elevation of the same. Fig. 3 is a detail section upon the line *y y*, Fig. 1.

In the practice of my invention I secure to the trolley-rod A, appreciably below the top thereof, a forked standard B, having a diagonally-ranging extension or angle-brace *a* upon the lower end thereof adapted to engage the trolley-rod, whereby the standard is supported in the perpendicular position while a trolley is upon the wire, and fastened upon said rod through the agency of an angle-brace *a'*, secured thereto by means of bolts *b* extending through flanges *a<sup>2</sup>* upon both braces.

In the arms B' of the fork B, from slightly below the top almost to the bottom thereof, are formed vertical slots *c*, within which said arms are provided upon the inner edges of said slots with vertical grooves *d*, in which are slidably inserted vertical bars or plates C, as best indicated in the sectional view, Fig. 3, and shown by dotted lines in the remaining figures. The plates C are connected near the center by means of a cross-bar C', secured thereto by means of bolts *e*, inserted through said plates, and further connected to the same by means of braces C<sup>2</sup>.

Journaled in the upper ends of the plates C is a shaft D, upon the center of which is loosely mounted a peripherally-concaved friction-roller E, at each side of which, between the same and the plates C, are rigidly secured upon the shaft elongated rollers or drums F, having formed in the periphery thereof spiral grooves *f*, concaved, and having the direction of each of the same from the outer edge inwardly to the friction-roller E.

Upon the outer end of the shaft D, which is extended beyond the plates C at one or both sides, is secured a cord G, extending downwardly around a pulley *g* upon the lower end of the adjacent plate C, the said cord then extending upwardly and having its end secured to a stud *h* upon the arm B' of the fork B. The end or ends have annular flanges D' thereon to prevent the cord from slipping off the same. Upon the inner side of the fork, or that nearest to the trolley-rod A, I secure a segmental strip H, having its ends inserted through braces *i*, secured to the upper ends of the fork by means of bolts *i'*, extending therethrough. The plates C, when in the normal position shown in the drawings, range upon a substantial level with the under surface of the trolley-wheel A', bearing upon the conductor or wire A<sup>2</sup>, and the segmental strip H in such position projects slightly above said plates. The height of the device may, however, be adjusted through the agency of the angle-braces *a* and *a'* and the bolts *b*.

The operation of the device will be readily understood from the foregoing description, taken in connection with the accompanying drawings. When the trolley-wheel A' slips from the conductor A<sup>2</sup>, the weight of said wire, and, furthermore, the natural upward tendency of the trolley, will cause the said wire to fall upon the segmental strip H, by which it will be immediately guided to the outer end of either of the rollers or drums F to rest in the groove *f* thereof, and as the momentum of the car will carry the same an appreciable distance the friction of the drum with the trolley-wire will cause the same to revolve, and, by reason of the spiral direction and arrangement of the groove *f*, carry the said wire inwardly to the friction-roller E, on which it will rest, while at the same time



the revolution of the shaft will wind up the cord G and thereby elevate the plate C, and through the cross bars and braces  $c'$   $c^2$  the opposite plate correspondingly, thus carrying  
 5 the friction-roller E up to or beyond the level of the trolley-wheel A'; and said friction-roller E, being in alignment with said trolley-wheel, the wire A<sup>2</sup> will be consequently seated thereupon and the car proceed as ordinarily.  
 10 It is to be noted that as the friction-roller E is loosely mounted upon the shaft, the moment that the wire has been lodged thereon and by the actuation of the shaft raises said roller to seat the wire upon the trolley-wheel,  
 15 the revolution of the shaft will cease, and the weight of the plates C, the rollers and shafts thereon, and also the intervening cross-bars, will cause the said roller E to descend and the shaft unwind, thereby restoring the whole  
 20 device to its normal position. The segmental strip H not only guides the trolley-wire to the rollers, but furthermore directs the same to the outer edge of the roller, whereby the same is revolved sufficiently to raise the plates C  
 25 a uniform distance.

In order that the current may be constantly continued through the trolley-rod C, I connect one of the plates C, or other part of the roller-bearings, with the upper end of the  
 30 trolley-rod by means of a wire or other conductor I, whereby when the trolley-wire A<sup>2</sup> falls from the wheel A' to the roller E the said trolley-rod will still communicate the current to the motor. I may also mount the  
 35 forked standard B upon the rod A at the angle indicated by dotted lines in Fig. 2, whereby the raising of the wire will be effected at less distance from the trolley-wheel A'.

The advantages resultant from the use of  
 40 the invention will be manifest to all who are conversant with the general class of devices to which the same appertains.

I do not confine myself to the exact formation of parts or construction of details herein  
 45 set forth and illustrated.

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

1. The combination, with a trolley rod of  
 50 an attachment secured thereto, having rollers journaled thereon, adapted to receive the wire and carry the same inwardly to align with the trolley wheel, means whereby the revolution of said rollers elevates the same to the height  
 55 of the trolley-wheel, and a segmental strip extending normally above the same to direct the wire thereto.

2. A device for restoring a trolley wire to the wheel, which comprises a standard secured

to the trolley rod, one or more plates or supports sliding vertically in said standard, a shaft journaled in said sliding plates, rollers mounted upon said shaft at either side, and having spiral grooves therein directed inwardly to carry the wire into alignment with  
 60 the trolley-wheel, a cord secured to said shaft and to the standard, and extending around a pulley upon the plate or support, whereby the rotation of the shaft elevates said plate.  
 65

3. A device for restoring a trolley wire to  
 70 the wheel, which comprises a standard secured to the trolley rod, one or more supports sliding vertically in said standard, a shaft journaled therein, a friction-roller loosely mounted upon the center of the shaft in alignment  
 75 with the trolley-wheel, rollers secured to said shaft at either side of said friction-roller, having spiral grooves therein directed inwardly to carry the wire to said friction-roller, a cord secured to the end of the shaft and to the  
 80 standard, and extending around a pulley upon the lower end of the support, whereby the rotation of said shaft elevates the plate, and a segmental strip secured to the standard normally above the rollers, and adapted to direct  
 85 the wire to the outer ends thereof.

4. A device for restoring a trolley wire to the wheel, which comprises a forked standard detachable and adjustably secured to the trolley rod, plates sliding vertically in each arm  
 90 of said standard, a shaft journaled between the same, having a friction-roller loosely mounted thereon, rollers secured to said shaft, having spiral grooves therein directed inwardly to carry the wire to the friction-roller,  
 95 cross-bars and braces connecting the plates, whereby they work in unison, said plates and the rollers being normally depressed below the level of the trolley-wheel, a cord secured to one end of the shaft and to the top of the  
 100 forked standard, and extending around a pulley upon the lower end of the adjacent plate, whereby the rotation of said shaft winds up the cord and elevates the rollers to the level of the trolley-wheel, a segmental strip secured  
 105 to the standard and extending across the same normally above the rollers, whereby the trolley wire is directed to the outer ends of the same.

In testimony that I claim the foregoing as  
 110 my invention I have signed my name, in presence of two witnesses, this 13th day of February, 1895.

FRANCIS J. PRIBYL.

Witnesses:

PERCY T. GRIFFITH,  
 A. M. CUSACK.