

No. 798,505.

PATENTED AUG. 29, 1905.

W. GORDON.  
LEVER ATTACHMENT.  
APPLICATION FILED OCT. 31, 1903.

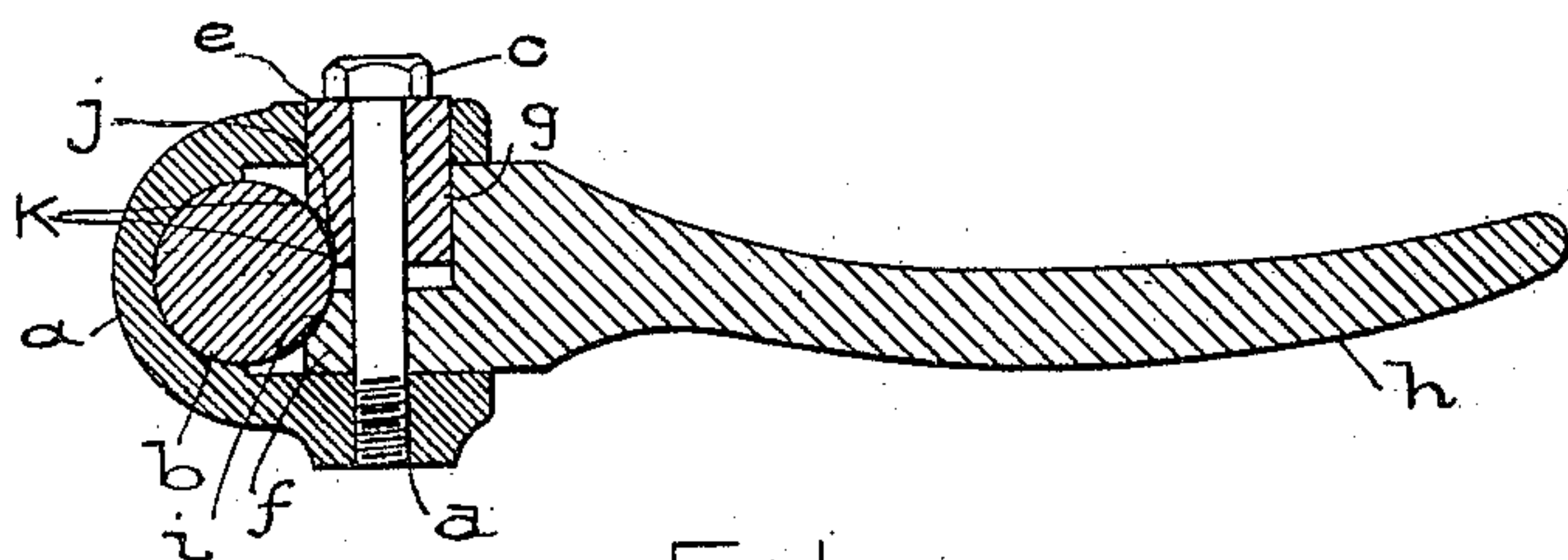


FIG. 1.

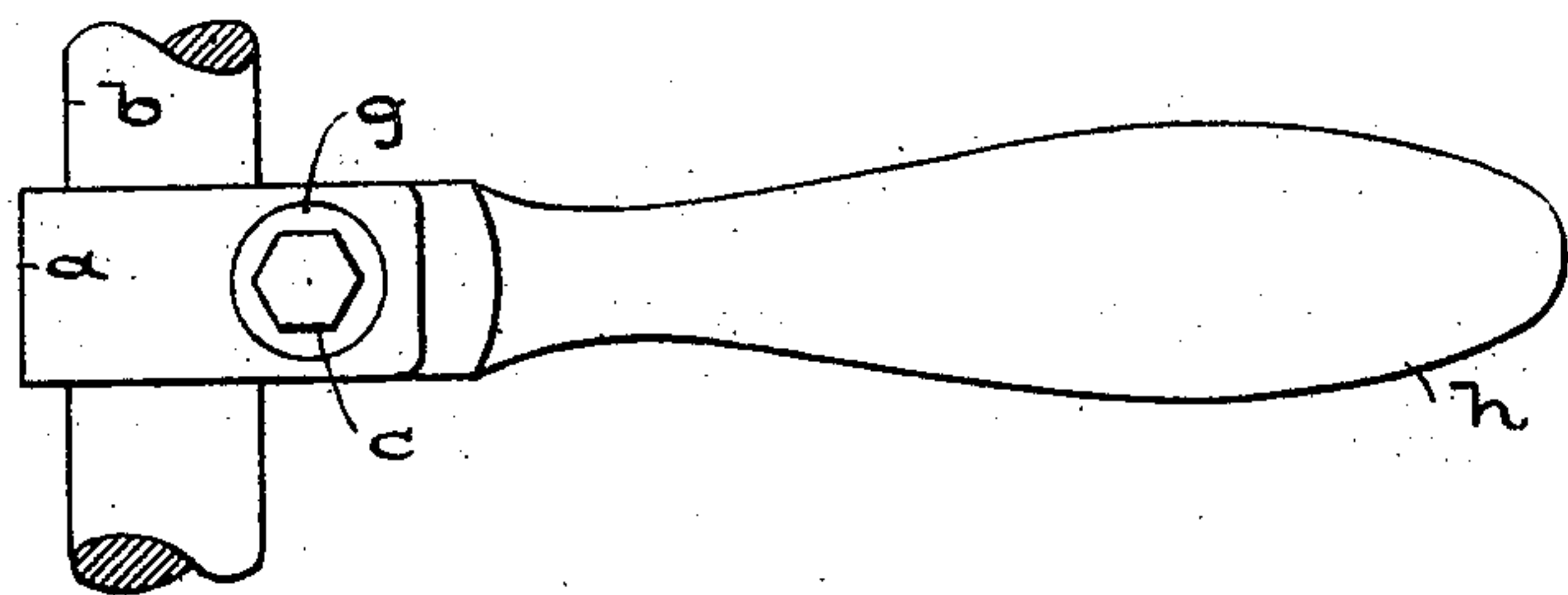


FIG. 2.

WITNESSES  
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INVENTOR  
*William Gordon*  
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*Phillips Van Coven & Fish*

# UNITED STATES PATENT OFFICE.

WILLIAM GORDON, OF BOSTON, MASSACHUSETTS.

## LEVER ATTACHMENT.

No. 798,505.

Specification of Letters Patent.

Patented Aug. 29, 1905.

Application filed October 31, 1903. Serial No. 179,305.

*To all whom it may concern:*

Be it known that I, WILLIAM GORDON, a citizen of the United States, residing at Boston, in the county of Suffolk and State of Massachusetts, have invented certain new and useful Improvements in Lever Attachments; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

The present invention relates to improvements in lever attachments.

The object of the present invention is to provide improved means for removably securing levers to shafts, and more particularly improved means for removably securing handles to the actuating-rods of street-car fare-registers.

With this object in view the present invention consists in the improved lever attachment hereinafter described, and defined in the claims.

The drawings represent the preferred embodiment of the invention, Figure 1 being a vertical section, and Fig. 2 a plan view thereof, showing also the lever and a portion of the shaft to which it is secured.

The illustrated embodiment of the invention is constructed as follows:

A strap *a*, adapted to embrace the shaft *b*, carries a screw *c*, which engages a threaded hole *d* in one end of the strap and passes through a hole *e* in the other end. Mounted upon the screw are two gripping members *f* and *g*, one of which, *f*, is in the form of a head forming a part of the lever *h*. These members have oppositely-disposed bearing-faces *i* and *j* to engage the shaft *b*. When the screw is tightened, the gripping members are drawn together and the bearing-faces are drawn firmly against the shaft, which is thus gripped between the gripping members and the strap. The member *g* is in the form of a sleeve, and it extends through the hole *e* and is engaged by the head of the screw, so that the member *g* can be forced against the shaft by the screw without bending the strap. The shaft is firmly gripped between the strap and the member *g*, so that the lever *h* is held from moving longitudinally or rotating on the shaft by these parts.

The attachment is designed, primarily, for securing handles to the actuating-rods of street-car fare-registers, in the embodiment of the invention illustrated in the drawings the lever *h* being a handle and the shaft *b* the

actuating-rod of a register. These handles are usually of brass, and in order to render the attachment more efficient in operation, as well as more durable, the gripping member *g* is preferably made of steel. Also in order to increase the gripping effect the bearing-face *j* of the member *g* is preferably of greater curvature than the surface of the shaft, so that two points *k* are formed at the extremity of the bearing-surface, which are slightly embedded in the shaft.

The attachment above described forms a simple and efficient means for securely clamping a handle to the actuating-rod of a street-car fare-register. By removing the screw the parts may be separated and removed without passing them over the end of the rod, so that by means of the attachment a handle can be secured to a rod in any desired position and can be adjusted or removed when necessary without removing the rod from its bearings.

It will be understood that while the specific form of attachment illustrated in the drawings and above described embodies my invention in the best form at present known to me the invention may be otherwise embodied and except as defined in the claims is not limited to any specific construction or arrangement of parts.

Having thus described my invention, I claim as new and desire to secure by Letters Patent of the United States—

1. An attachment for securing a lever to a shaft comprising a shaft-embracing strap, a screw passing through the ends of the strap, and two gripping members mounted on the screw and having oppositely-disposed bearing-surfaces for engaging the shaft, the screw being arranged to draw the gripping members together to cause them to grip the shaft, substantially as described.

2. An attachment for securing a lever to a shaft comprising a shaft-embracing strap having holes in its ends, a screw passing through the holes, and a gripping member mounted on the screw and engaging one of the holes in the strap, the gripping member having a bearing-face to engage the shaft and the screw being arranged to draw the gripping member against the shaft to grip the same, substantially as described.

3. An attachment for securing a lever to a shaft comprising, in combination with the lever, a shaft-embracing strap having holes in its ends, a screw passing through one of said holes and engaging threads in the other, a



- sleeve mounted on the screw and engaging the first said hole, and a head forming a part of the lever mounted on the screw between the ends of the strap, the sleeve and head having
- 5 oppositely-disposed bearing-surfaces to engage the shaft, and the screw-head bearing upon the sleeve so as to draw the latter against the shaft when the screw is tightened, substantially as described.
- 10 4. An attachment for securing a lever to a shaft comprising a shaft-embracing strap having holes on its ends, a screw passing through the said holes and engaging the strap, and a gripping member loosely mounted on the
- 15 screw and having a bearing-surface for engaging the shaft, the said member being moved when the screw is tightened so as to be forced

firmly against the shaft, substantially as described.

5. An attachment for securing a lever to a 20 shaft comprising a shaft-embracing strap, a screw passing through the ends of the strap and engaging the strap and a gripping member mounted on the screw, the gripping member having a bearing-face provided with points 25 which are embedded in the shaft when the gripping member is drawn against the shaft by the screw, substantially as described.

In testimony whereof I affix my signature in presence of two witnesses.

WILLIAM GORDON.

Witnesses:

FRED O. FISH,

ALFRED H. HILDRETH.