

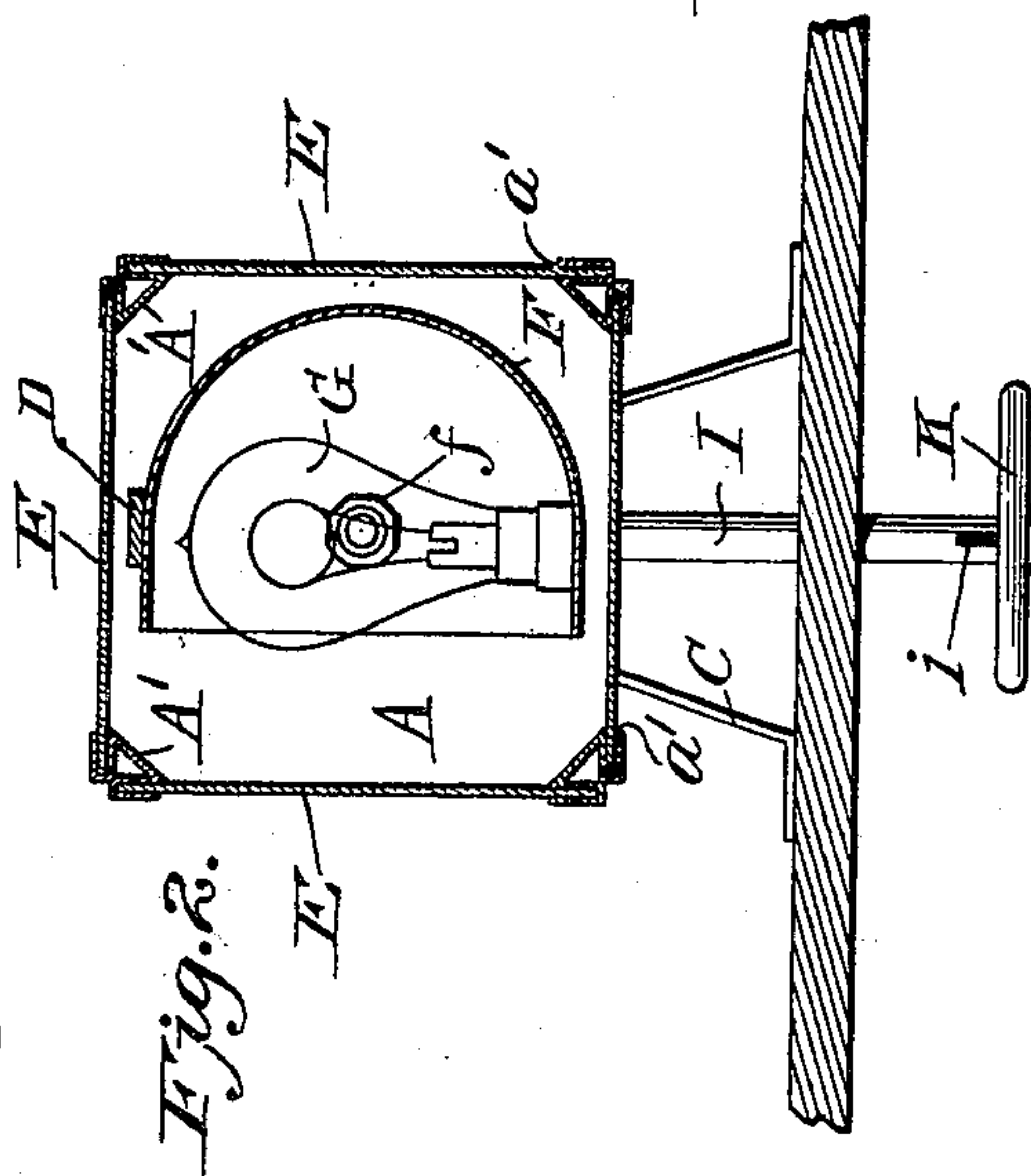
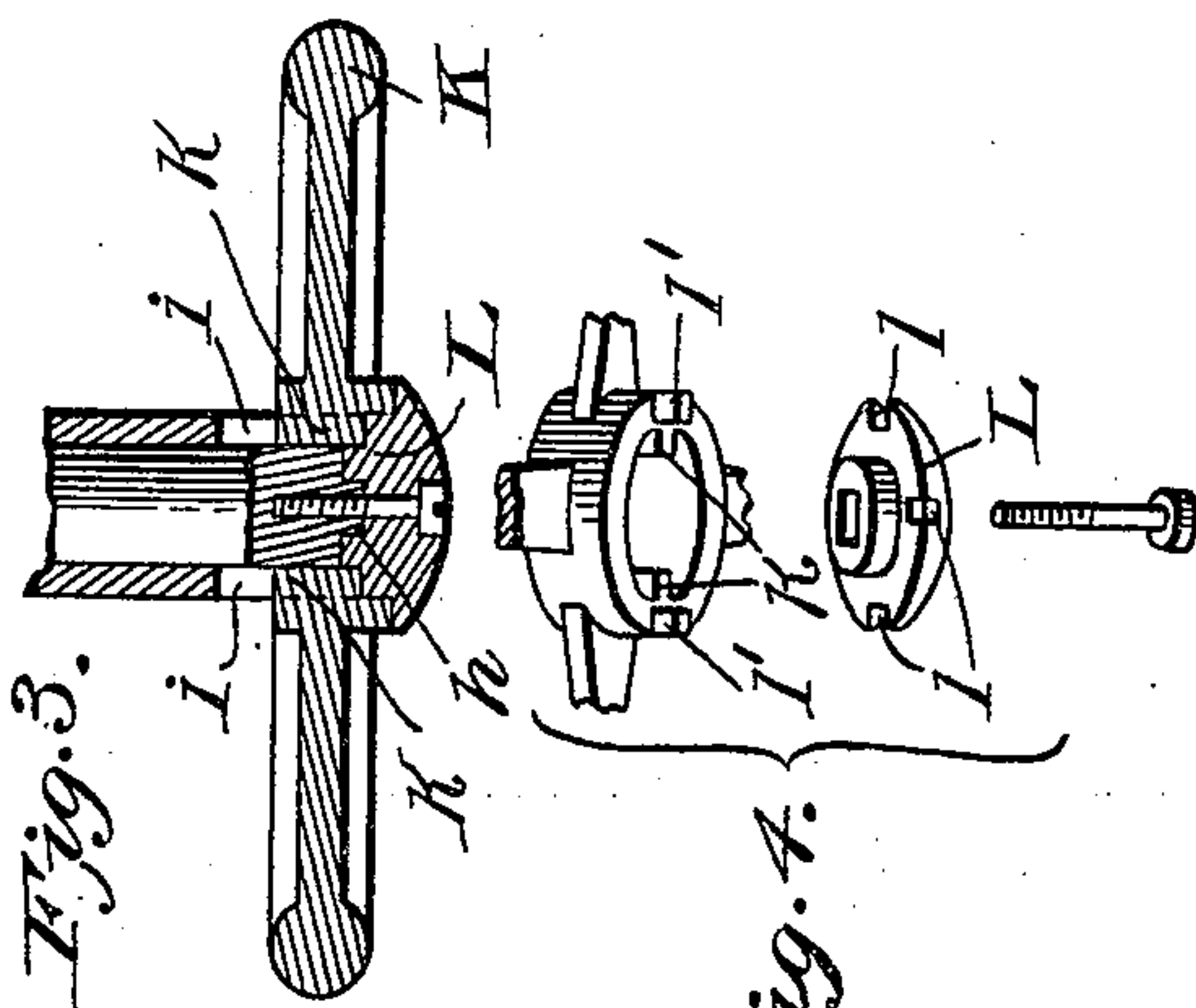
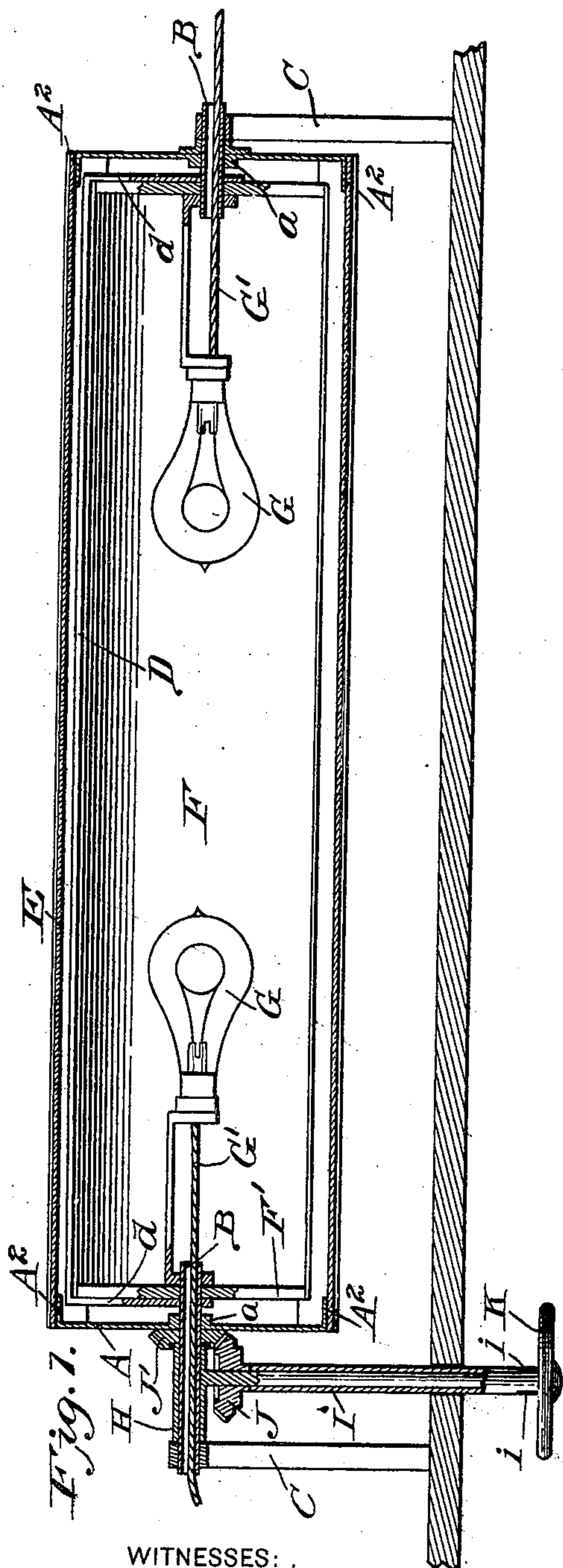
No. 645,641.

Patented Mar. 20, 1900.

G. J. FERGUSON.  
ILLUMINATED SIGN.

(Application filed June 5, 1899.)

(No Model.)



WITNESSES:

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# UNITED STATES PATENT OFFICE.

GEORGE J. FERGUSON, OF OLYPHANT, PENNSYLVANIA.

## ILLUMINATED SIGN.

SPECIFICATION forming part of Letters Patent No. 645,641, dated March 20, 1900.

Application filed June 5, 1899. Serial No. 719,456. (No model.)

*To all whom it may concern:*

Be it known that I, GEORGE J. FERGUSON, a citizen of the United States, and a resident of Olyphant, in the county of Lackawanna and State of Pennsylvania, have invented certain new and useful Improvements in Illuminated Signs; and I do 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, reference being had to the accompanying drawings, and to letters of reference marked thereon, which form a part of this specification.

Figure 1 of the drawings is a representation of a central vertical longitudinal section of the invention. Fig. 2 is a central vertical transverse section of the invention, showing the lamps arranged vertically. Fig. 3 is a section of the hand-wheel and adjacent parts, said wheel being shown in its lower position and locked against turning. Fig. 4 illustrates the construction of the hand-wheel hub and adjacent parts in detail.

This invention is designed to provide an illuminated sign of novel, practical, and durable character for electric cars and other public vehicles; and it consists in the novel construction and combination of parts, all as hereinafter described, and pointed out in the appended claims.

Referring to the accompanying drawings, the letter A designates the rotatable sign-carrying frame, which in the present instance is of four-sided form, but which may have three or more than four sides, as may be desired. The said frame is mounted upon short shafts B B, which pass loosely through its end portions, which are provided with the interiorly-located bosses *a* therefor. The outer ends of said shafts are secured against rotation in posts or brackets C, which are fastened to the roof of the car, or, it may be, in any other desired position on the vehicle. In the drawings, however, the device is shown as mounted on the roof of the car, and the operating devices are correspondingly arranged; but the latter can be readily adjusted to a changed position of the sign by slight mechanical modifications.

The inner end portions of the shafts B are supported and held in the short arms *d* of a

bail-shaped strap D, which lies longitudinally within the sign-carrying frame A. Said frame is composed of the end pieces hereinbefore referred to and the four connecting-pieces A'. These pieces may be formed from strips of sheet metal, each of which is bent into the form best shown by the cross-section, Fig. 2—that is to say, the body portion of the strip is bent into triangular form in cross-section; and the edge portions are then bent over parallel with the adjacent sides of the triangular portion, but separated therefrom by spaces *a'*, which form guide or slide ways for the sign-plates E. The end pieces of the frame are formed with surrounding intumed flanges A<sup>2</sup>, which are firmly secured by solder or riveting to the triangular portions of the connecting-pieces, whose end portions fit neatly the angles formed by said flanges. In this manner is formed a strong and durable frame, which is well adapted to receive and hold the slides E. These slides are of transparent or translucent material (colored glass with white letters being preferred) and may each be in one piece, or each may be composed of several separate pieces, each having one or more letters thereon.

F designates a reflector for the lamps, which is in the form of a segment of a cylinder positioned longitudinally in the frame A, with its open side squarely facing one of the sign-plates. The end pieces F' of the reflector are secured on the inner portions of the shafts B by means of nuts *f*. The bail-strap D may or may not be secured to the reflector.

G designates electric lamps, one or more of which may be employed. These lamps may be supported from one of the shafts B, as shown in Fig. 1, or they may be secured to the reflector, as shown in Fig. 2. The supply-wires G' therefor are led in through one of the shafts B, which is made of tubular form for that purpose.

H designates a T-shaped hanger whose tubular short arm is loosely sleeved on one of the shafts B, exteriorly of the frame A, and whose vertical arm extends down through the roof of the car. I is a sleeve which loosely surrounds the said vertical arm and also extends down through the roof of the car. On the upper end of this sleeve is a bevel gear-wheel J, which meshes with a similar wheel



J', rigidly secured to one end of the frame A around the shaft B.

The lower end of the sleeve I is formed with vertical slots *i*, which receive therein lugs or projections *k* of a hand-wheel K. On the lower end of the vertical arm of the hanger H is a square projection *h*, to which is fitted and secured a washer L, formed with peripheral notches *l*, which are designed to be engaged by projections *l'* on the under side of the hand-wheel K.

It will be readily seen that so long as the projections *l'* remain in engagement with the notches *l* the hand-wheel K and sleeve I cannot be turned, but that by an upward movement of the said wheel (its lugs *k* sliding in the slots *i*) sufficient to disengage the said projections *l'* said wheel and sleeve can be turned to thereby rotate the sign-frame and expose a new sign whenever necessary or desired. As soon as the wheel is released by the hand the projections *l'* become reengaged with the notches *l*, and the sign-frame is locked against movement. In this manner accidental movement of the sign-frame is guarded against.

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

1. In a sign of the character described, a rotatable frame composed of end pieces, and longitudinally-extending connecting-pieces, the latter being formed each of a single strip of sheet metal whose body portion is bent upon itself to form a hollow triangular prism, and whose edge portions are bent into positions parallel with the adjacent sides of the said prism to form therewith guides for the sign-plates, substantially as specified.

2. In a sign of the character described, a rotatable frame composed of end pieces, and longitudinally-extending connecting-pieces,

the latter being formed each of a single strip of sheet metal whose body portion is bent upon itself to form a hollow triangular prism, and whose edge portions are bent into positions parallel with the adjacent sides of the said prism to form therewith guides for the sign-plates, together with interchangeable-sign-plates fitted to be received in said guides, substantially as specified.

3. The combination with the rotatably-mounted sign-carrying frame, the end shafts on which it is mounted, and the bevel gear-wheel fixed to one end portion of said frame, of the hanger having its horizontal arm loosely sleeved on one of said end shafts adjacent to said bevel gear-wheel, the sleeve loosely mounted on the other arm of said hanger and carrying a gear-wheel which meshes with the first-named gear-wheel, means for turning said sleeve, and means for locking the sleeve against turning, substantially as specified.

4. The combination of the rotatable sign-frame, its end bearings, the bevel gear-wheel fixed to said frame, the hanger sleeved loosely on one of said bearings exteriorly of the said frame, the sleeve rotatably mounted on one arm of said hanger and having slots at one end portion, a gear-wheel on said sleeve which meshes with the gear-wheel on the frame, a hand-wheel movable on said sleeve and formed with projections which loosely engage its slots, and a washer-piece secured to the hanger and having notches therein, said hand-wheel having projections adapted for engagement with said slots, substantially as specified.

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

GEORGE J. FERGUSON.

Witnesses:

W. C. MOONEY,  
F. M. LYNCH.