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Patented May 28, 1901.

J. A. BARBER & F. A. ADAMS.

FELLY EXPANDER.

(Application filed Feb. 26, 1901.)

(No Model.)

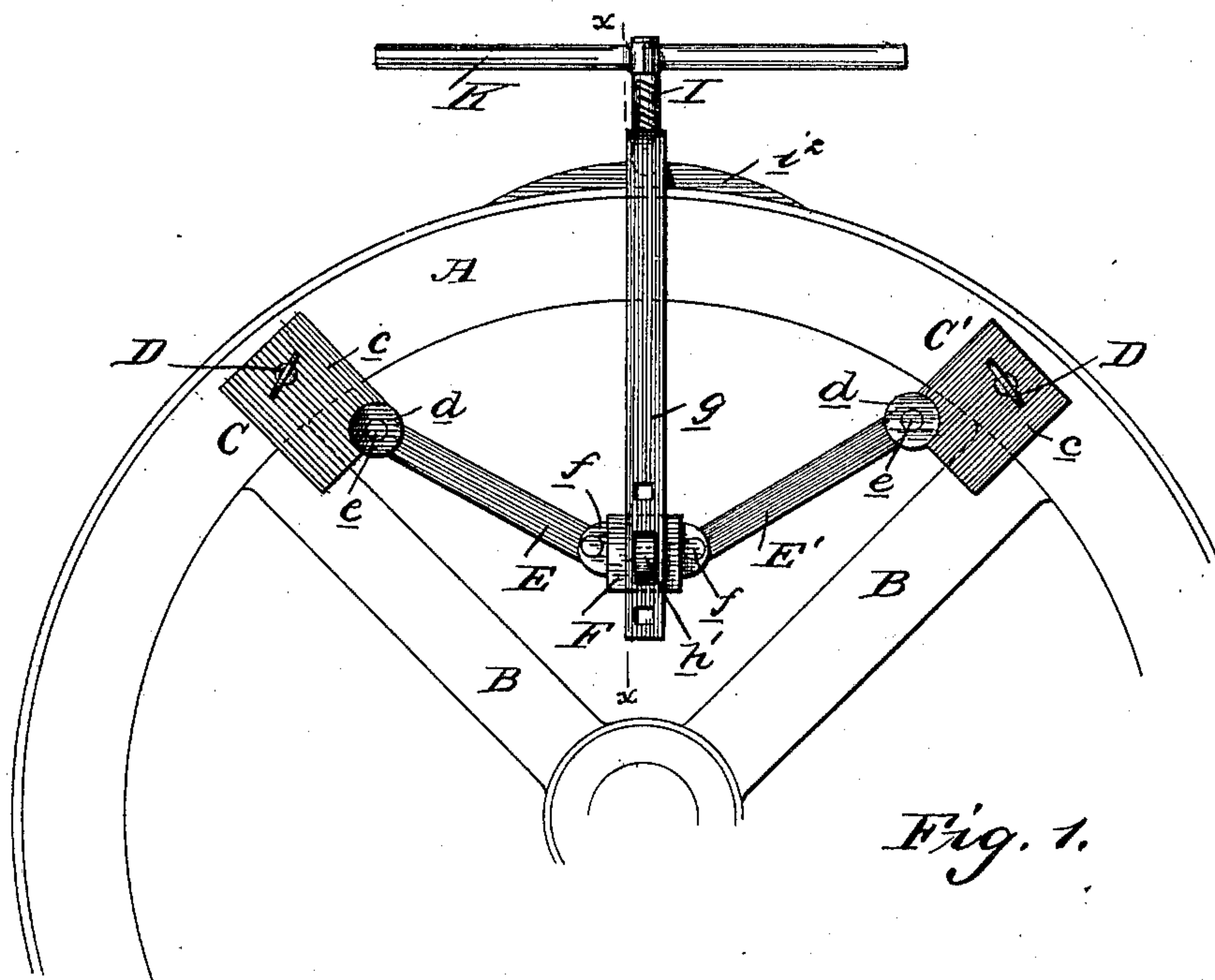


Fig. 1.

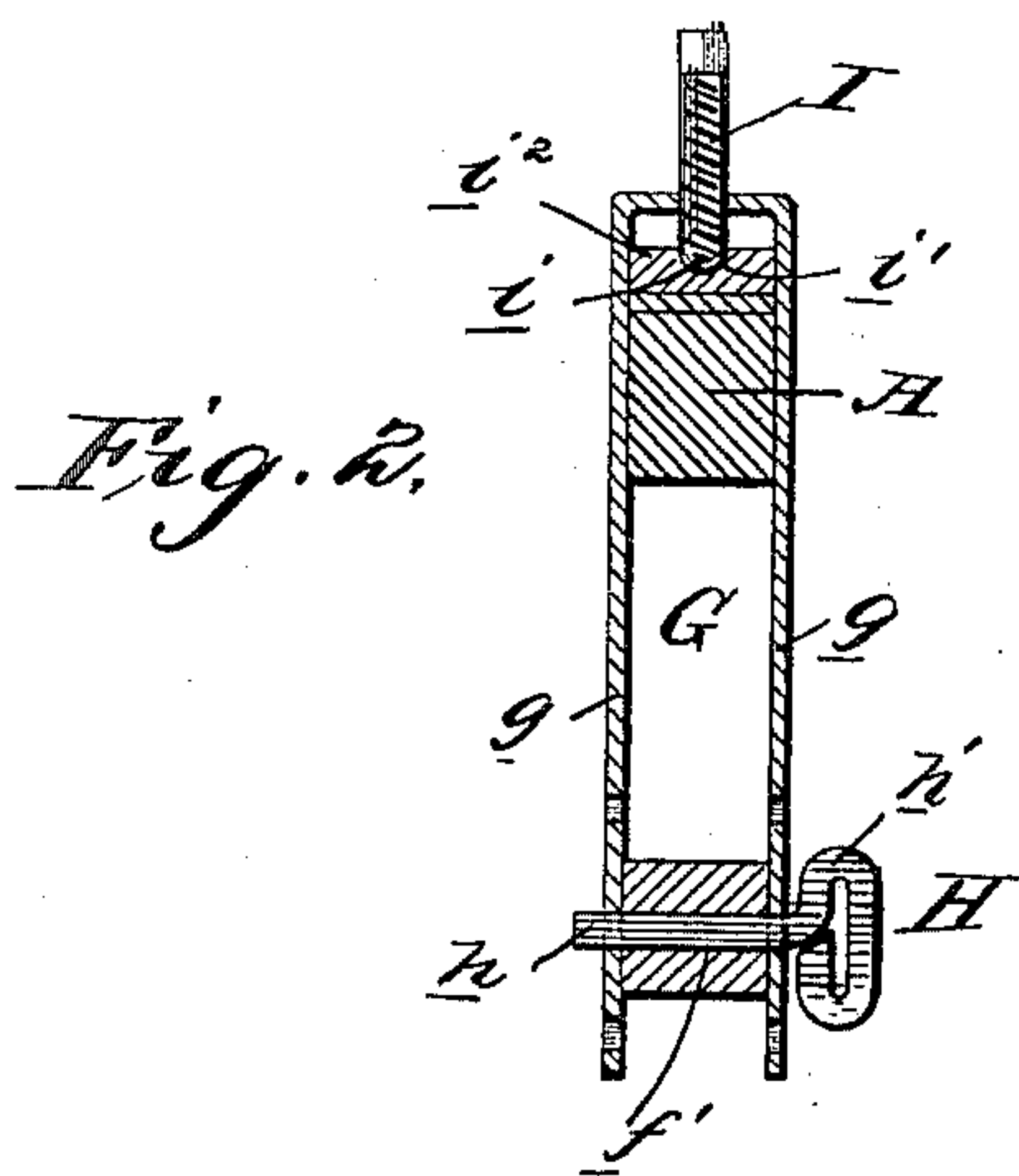
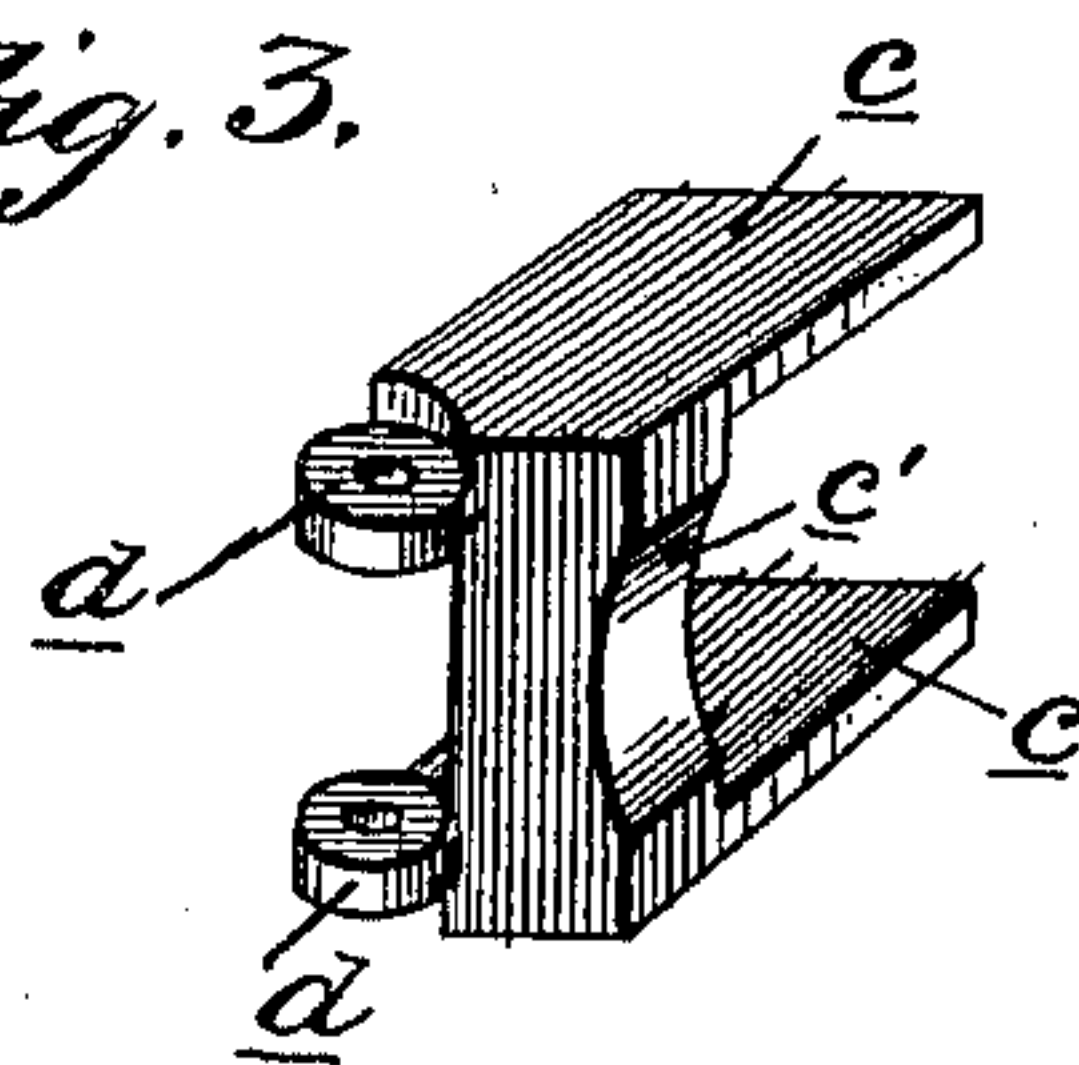


Fig. 2.

Fig. 3.



WITNESSES:

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JAMES A. BARBER AND FREDERIC A. ADAMS, OF FAZENDA, TEXAS.

FELLY-EXPANDER.

SPECIFICATION forming part of Letters Patent No. 674,994, dated May 28, 1901.

Application filed February 26, 1901. Serial No. 48,880. (No model.)

To all whom it may concern:

Be it known that we, JAMES A. BARBER and FREDERIC A. ADAMS, citizens of the United States, residing at Fazenda, in the county of Upshur and State of Texas, have invented certain new and useful Improvements in Felly-Expanders; and we 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.

This invention relates to improvements in felly-expanders, and has for its object the provision of a device which will be simple in construction, yet strong and efficient in operation.

The invention will be more readily understood from the detailed description hereinafter when taken in connection with the accompanying drawings and the appended claims.

In the drawings an embodiment of the invention is shown for the purpose of illustration, and when hereinafter referring to the same like letters of reference will refer to corresponding parts in the several views.

Figure 1 is a side elevation of the complete device as applied to a section of an ordinary vehicle-wheel. Fig. 2 is a section taken on the line *xx* of Fig. 1, and Fig. 3 is a detail view of a bearing-block.

Referring more specifically to the drawings, A designates a felly of a wheel of any ordinary construction desired to be expanded, and B the spokes thereof.

The device is adapted to be interposed between the upper ends of two spokes and the felly in the manner shown, and to accomplish this two bearing-blocks C and C' are provided, the same respectively comprising arms *c*, adapted to fit upon the sides of the felly, and the concaved edges *c'*, designed to fit over the spokes. To lock the boxes in proper position upon the felly, binding-screws D pass therethrough and are adapted when screwed home to impinge against the surface of the felly. In some instances it may be found expedient to dispense with the binding-screws, when the boxes may be made imperforate, as shown in Fig. 3. The lower corners of the boxes are cut away to constitute ears *d*, to which connecting-links E and E' are pivoted through the medium of the pins *e*. The op-

posite ends of the links are pivoted to corresponding ears *f* of the coupling F. This coupling is preferably a solid metallic casting provided with the through-opening *f'*, square in cross-section. Adapted to span the felly and project along the sides of the casting F parallel therewith are the arms *g* of a bifurcated member or yoke G. These arms have a series of apertures corresponding in shape to the opening in the casting F, which are adapted to be brought into registration with said opening to facilitate the adjusting of the yoke to various lengths, according to the thickness of the felly being operated upon. The key H, comprising an elongated shank *h*, also square in cross-section, and a hand portion *h'*, locks the yoke and casting in their adjusted positions. Passing through a suitable screw-threaded aperture in the top or connecting piece of the yoke is a screw I, the end of which is beveled, as shown at *i*, and fits into the socket *i'* of the elongated shoe or bearing plate *i''*, of a contour to fit any portion of the periphery of a wheel. The head of the screw I is squared to facilitate the employment of a cross head or handle K, adapted to fit over the same.

From the above description the operation may now be understood. The device being properly applied to the wheel, the bearing-boxes are fastened in their proper positions against the spokes and felly, the casting properly adjusted in the yoke, and the screw I turned in a direction to bind upon the shoe *i''* and elevate the yoke, whereupon the bearing-boxes will be separated through the medium of the links connecting the same with the casting and the felly separated or expanded in an obvious manner.

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

1. A felly-expander comprising a yoke, a casting fitted in said yoke, oppositely-arranged bearing-boxes, links pivotally connecting the bearing-boxes with the casting, and means adapted to bear against the periphery of a wheel to elevate the yoke, substantially as described.

2. A felly-expander comprising a yoke, means adapted to bear against the periphery of a wheel to raise and lower the yoke, and

bearing-boxes movably connected to the yoke, each comprising oppositely-disposed members adapted to overlies the sides of the felly, and portions adapted to engage the edge of
5 the spoke, substantially as described.

3. A felly-expander comprising a yoke, means adapted to raise and lower the same, comprising a screw working through the upper portion thereof, and a shoe located be-
10 neath the screw and adapted to receive the end thereof, oppositely-disposed bearing-boxes adapted to engage the felly and spokes respectively, and means for movably connecting said boxes with the yoke, substantially as
15 described.

4. A felly-expander comprising a yoke,

means for raising and lowering the same, a casting adapted to be adjustably secured in said yoke, oppositely-disposed bearing-boxes respectively adapted to contact with the felly 20 and spokes, means for locking said boxes in position, and links pivotally connecting the bearing-boxes and the casting in a manner substantially as shown and described.

In testimony whereof we affix our signatures in presence of two witnesses. 25

JAMES A. BARBER.
FREDERIC A. ADAMS.

Witnesses:

J. W. HARRISON,
J. D. WILLIAMS.