

No. 814,576.

PATENTED MAR. 6, 1906.

E. T. TREFETHEN.
LIFTING JACK.
APPLICATION FILED NOV. 4, 1905.

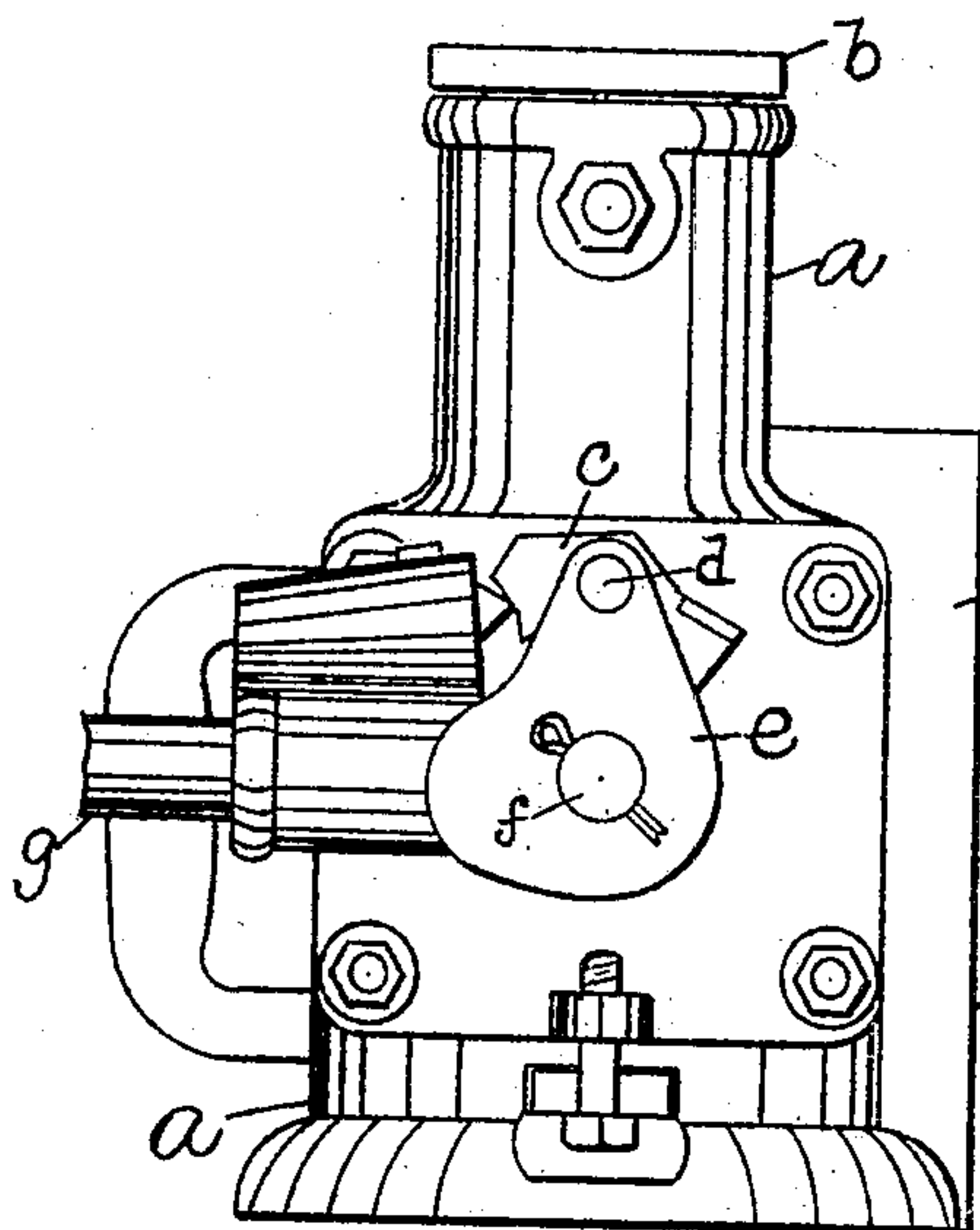


Fig. 1.

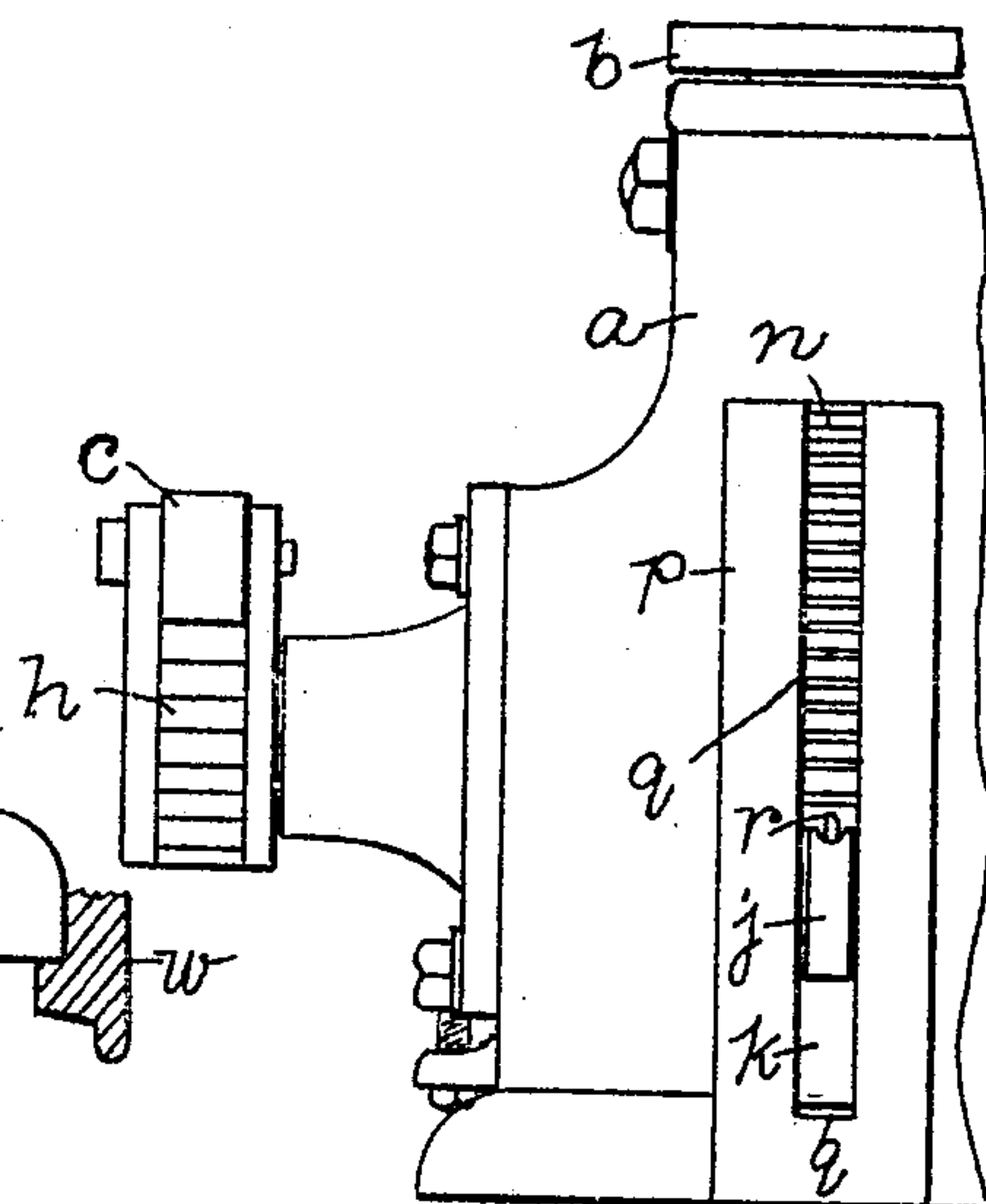


Fig. 2.

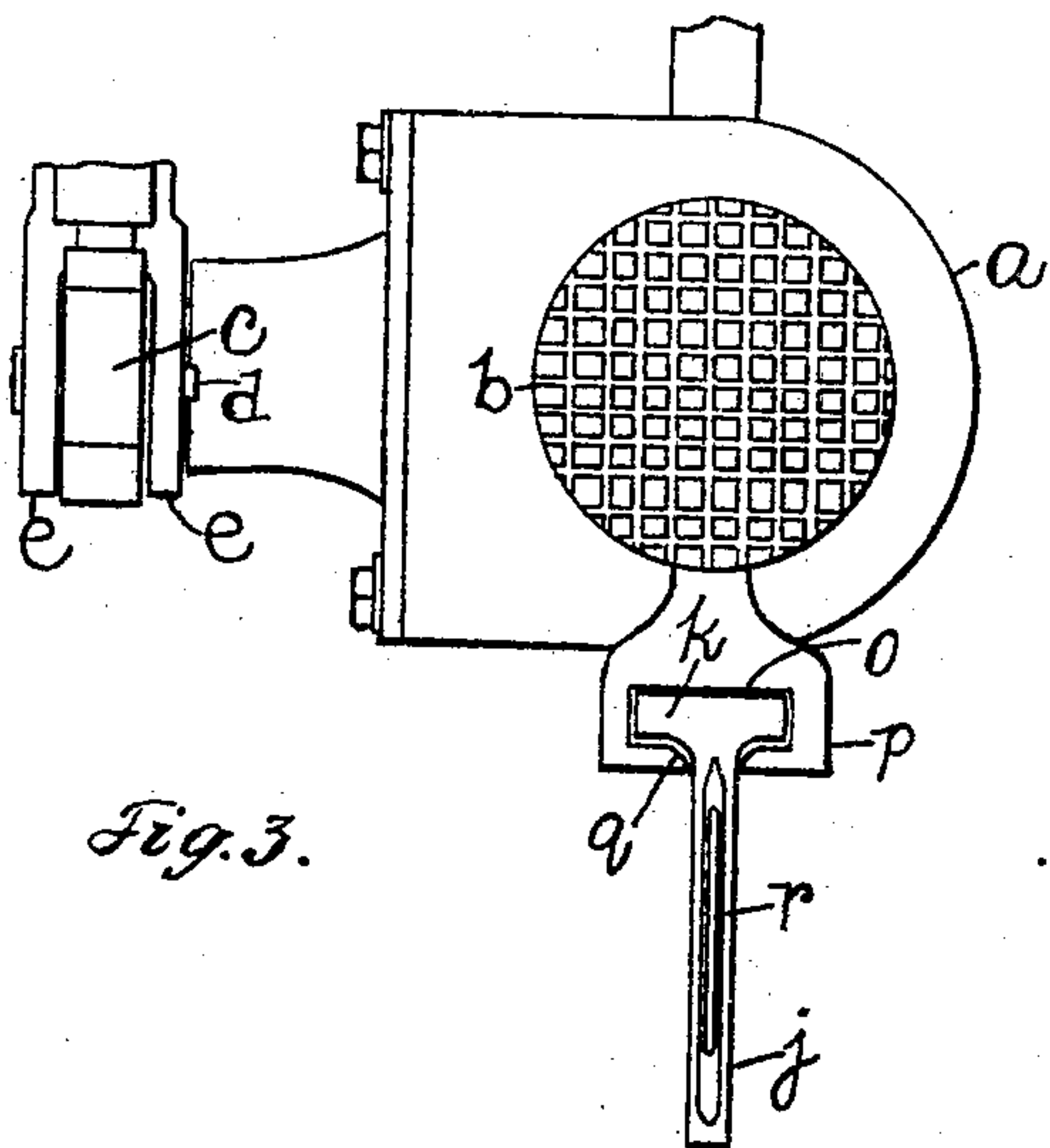


Fig. 3.

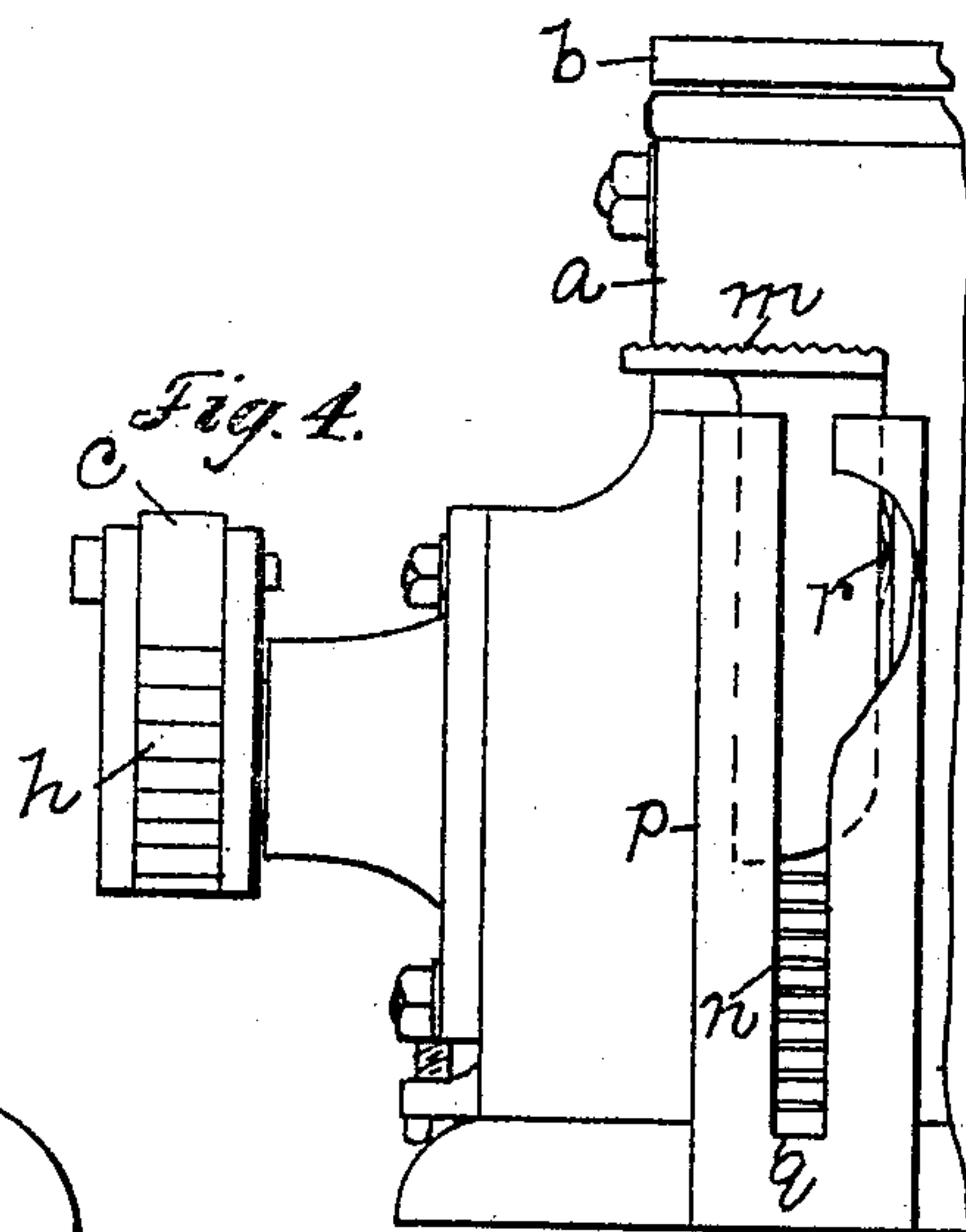


Fig. 4.

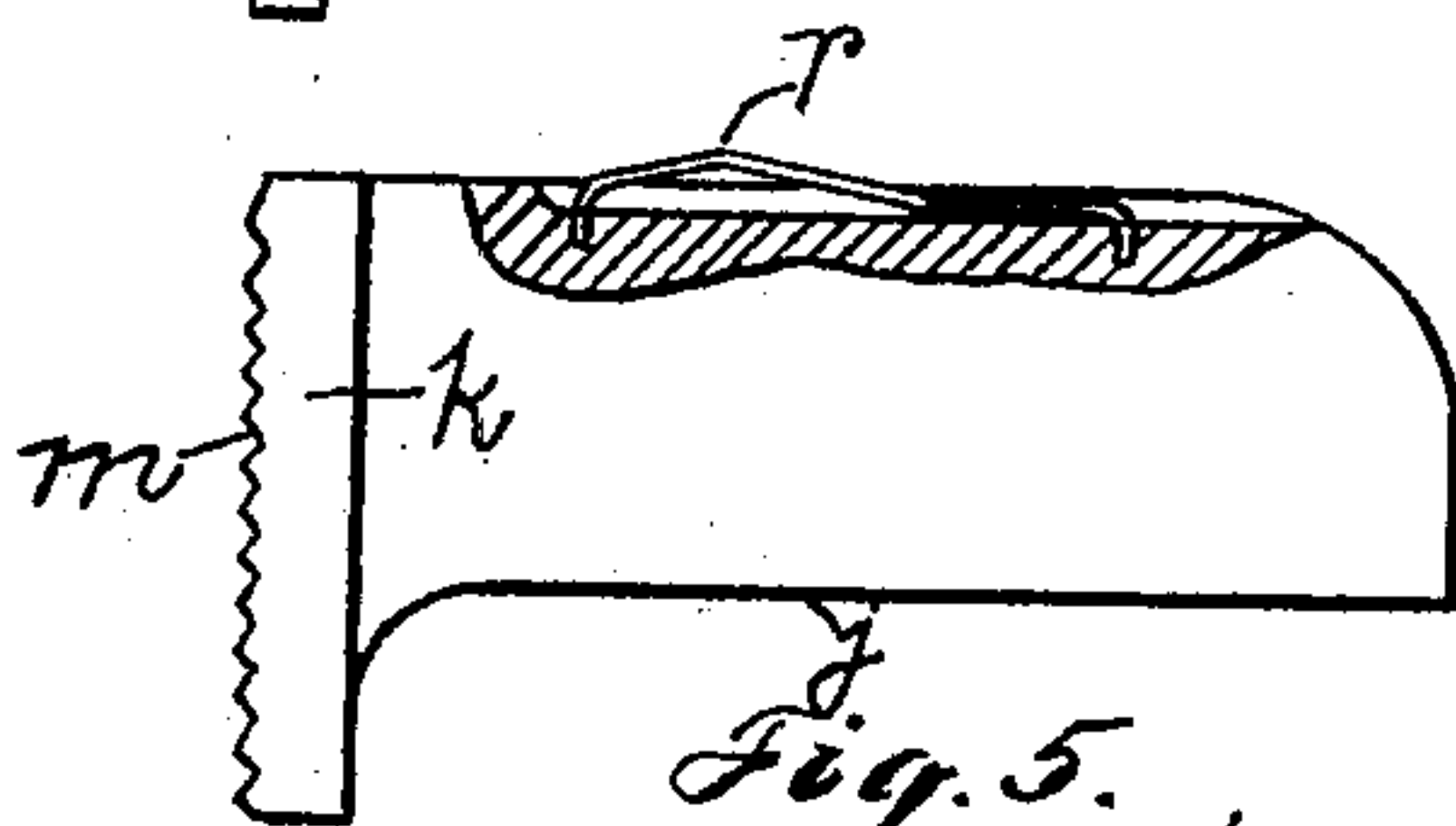


Fig. 5.

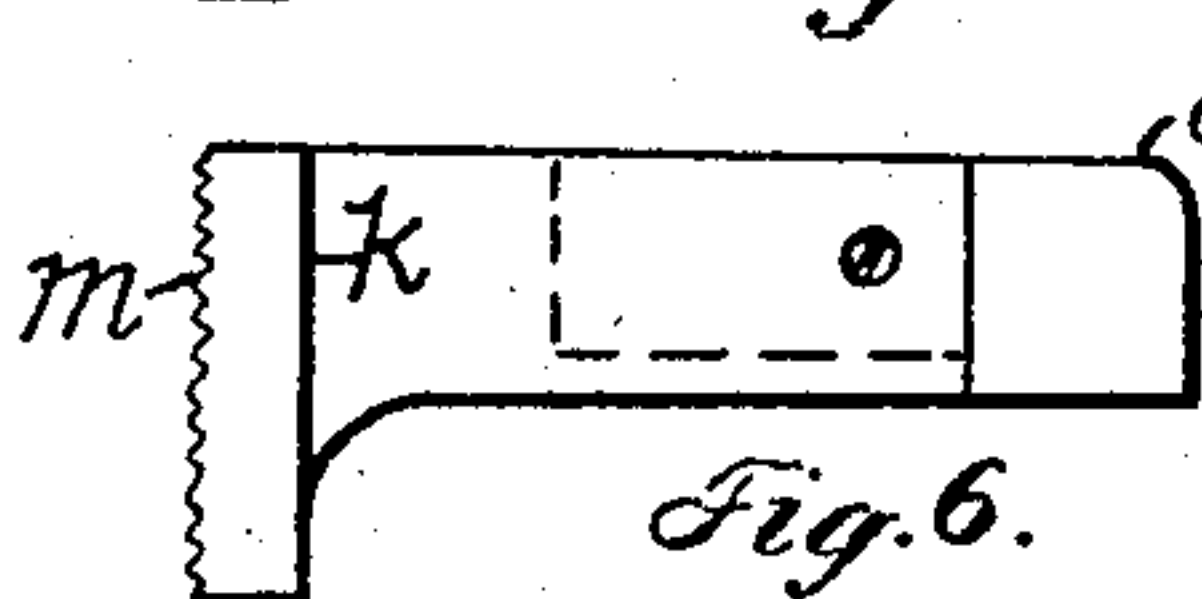


Fig. 6.

Witnesses.
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UNITED STATES PATENT OFFICE.

ERVIN T. TREFETHEN, OF BOSTON, MASSACHUSETTS, ASSIGNOR TO
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LIFTING-JACK.

No. 814,576.

Specification of Letters Patent.

Patented March 6, 1906.

Application filed November 4, 1905. Serial No. 285,805.

To all whom it may concern:

Be it known that I, ERVIN T. TREFETHEN, a citizen of the United States, residing in Boston, in the county of Suffolk and State of Massachusetts, have invented an Improvement in Lifting-Jacks, of which the following description, in connection with the accompanying drawings, is a specification, like letters on the drawings representing like parts.

10 This invention relates to a lifting-jack, and has for its object to provide the same with means for holding down one object while another object is being raised by the jack.

15 The improved lifting-jack is especially adapted, among other uses, to be employed in connection with railway-cars, and more particularly with the axle-boxes, whereby the latter may be quickly and easily lifted or raised without raising the car-wheel and its axle, which latter is held stationary, thereby facilitating separation of the bearing-box and axle and enabling the bearings to be quickly and easily removed.

25 These and other features of this invention will be pointed out in the claims at the end of this specification.

30 Figure 1 is a front elevation of a lifting-jack embodying this invention; Fig. 2, a side elevation of the jack shown in Fig. 1 looking toward the left; Fig. 3, a plan view of Fig. 2; Fig. 4, a side elevation of the jack with the holding device in its inoperative position; Fig. 5, a detail to be referred to, and Fig. 6 a modification to be referred to.

35 The lifting-jack, comprising the stationary member *a* and the movable member *b*, which latter is raised and lowered by a pallet-bar *c*, pivoted at *d* to a lever *e*, mounted on a shaft *f* and provided with the handle *g*, may be of any suitable or usual construction. The pallet-bar *c* coöperates with a ratchet-wheel *h* fast on the shaft *f*, which is operatively connected through suitable internal mechanism (not shown) with the movable member *b* of the jack, so that the said movable member may be raised and lowered by oscillating the handle *g*.

45 A lifting-jack such as above described is especially useful in raising the boxes of a car-axle, and the present invention has for its object to provide the jack with means for preventing the car-axle from being lifted with the bearing-box when it is desired to renew the journal-bearing in said box.

In the present instance I have shown one 55 form of means for accomplishing this result. For this purpose a device is employed which is adapted to engage the car-wheel and is also engaged with the stationary member of the jack, so that when the movable member *b* is 60 elevated to lift the bearing-box the car-wheel and its axle will be held down and prevented from being lifted with the bearing-box.

The holding device may be made as herein shown, and consists of a bar or shank *j*, provided with a head *k*, the said bar and head being substantially T-shaped and the said head being preferably provided with teeth or serrations *m*, which are adapted to engage corresponding teeth *n* on the inner wall of a 70 pocket or receptacle *o*, (see Fig. 3,) which is formed by casting a projection or housing *p* on the side of the stationary member *a* of the jack. The projection or housing *p* is left open at its top for the reception of the head 75 *k*, and its front wall is provided with a vertical slot *q*, through which extends the shank or bar *j*, as represented in Figs. 1 and 3, when the said shank or bar is in its operative position. 80

When the holding device is not in use, it may be conveniently affixed to the stationary member of the jack by passing the shank or bar *j* down into the receptacle or pocket *o*, as represented in Fig. 4, and it may be secured therein against accidental displacement by a spring *r*, affixed to the bar *j* and adapted to engage a side wall of said receptacle or pocket. When the holding device is to be used, it is withdrawn from the receptacle or pocket *o* and the head *k* is inserted therein with the bar or shank *j* extending through the slot *q*, as represented in Figs. 1 and 3. In practice the bar or shank *j* is designed to engage the rim of the car-wheel *w*, 95 as represented in Fig. 1, and when the movable member *b* is elevated the teeth *m* on the head *k* will be engaged with the teeth *n* on the stationary member, and the car-wheel thereby prevented from following the bearing-box, which in this manner may be elevated from the car-axle sufficiently to enable the bearings to be easily and quickly removed and replaced by new ones. While it may be preferred to use the teeth *m n*, it is not desired to limit the invention in this respect. 105 Furthermore, it may be preferred to make the holding device separate from the jack, as

such construction enables the holding device to be adjusted to different car-wheels; but it is not desired to limit the invention in this respect.

5 The holding-down device is herein shown as applied to one form of lifting-jack; but it is not desired to limit the invention in this respect.

10 The shank or bar *j* may be made in one piece, as shown in Fig. 5, or in two or more pieces secured together, as shown in Fig. 6, so that the said shank or bar may be lengthened or shortened to adjust it to the work.

I claim—

15 1. In a lifting-jack, in combination, a stationary member and a movable member, a housing attached to the stationary member and provided with a pocket or receptacle and with a vertically-arranged slot, and a holding
20 device provided with a head located in said pocket or receptacle and with a shank or bar extended through said slot, substantially as and for the purpose specified.

25 2. In a lifting-jack, in combination, a stationary member and a movable member, a housing attached to said stationary member to form a pocket or receptacle, said housing having a vertically-arranged slot in its front
30 wall and having teeth or serrations on the wall opposite said slot, and a holding device having a head provided with teeth to engage the teeth within the pocket or receptacle and

having a shank or bar extended through said slot, substantially as described.

3. In a lifting-jack, in combination, a sta- 35
tionary member and a movable member, a housing attached to said stationary member, said housing being open at its top and provided with a slot in its front wall intermediate the sides of said housing, and a holding
40 device consisting of a bar or shank extended through said slot and having a head movable in said housing and engaging the rear side of said front wall, substantially as described.

4. In a lifting-jack, in combination, a sta- 45
tionary member and a movable member, a housing attached to said stationary member, said housing being open at its top and provided with a slot in its front wall, a holding
50 device consisting of a bar or shank extended through said slot and having a head movable in said housing, and a spring attached to said shank and adapted to engage an inner wall of said housing to secure said holding device in
55 said housing when not in use, substantially as described.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

ERVIN T. TREFETHEN.

Witnesses:

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