

No. 615,715.

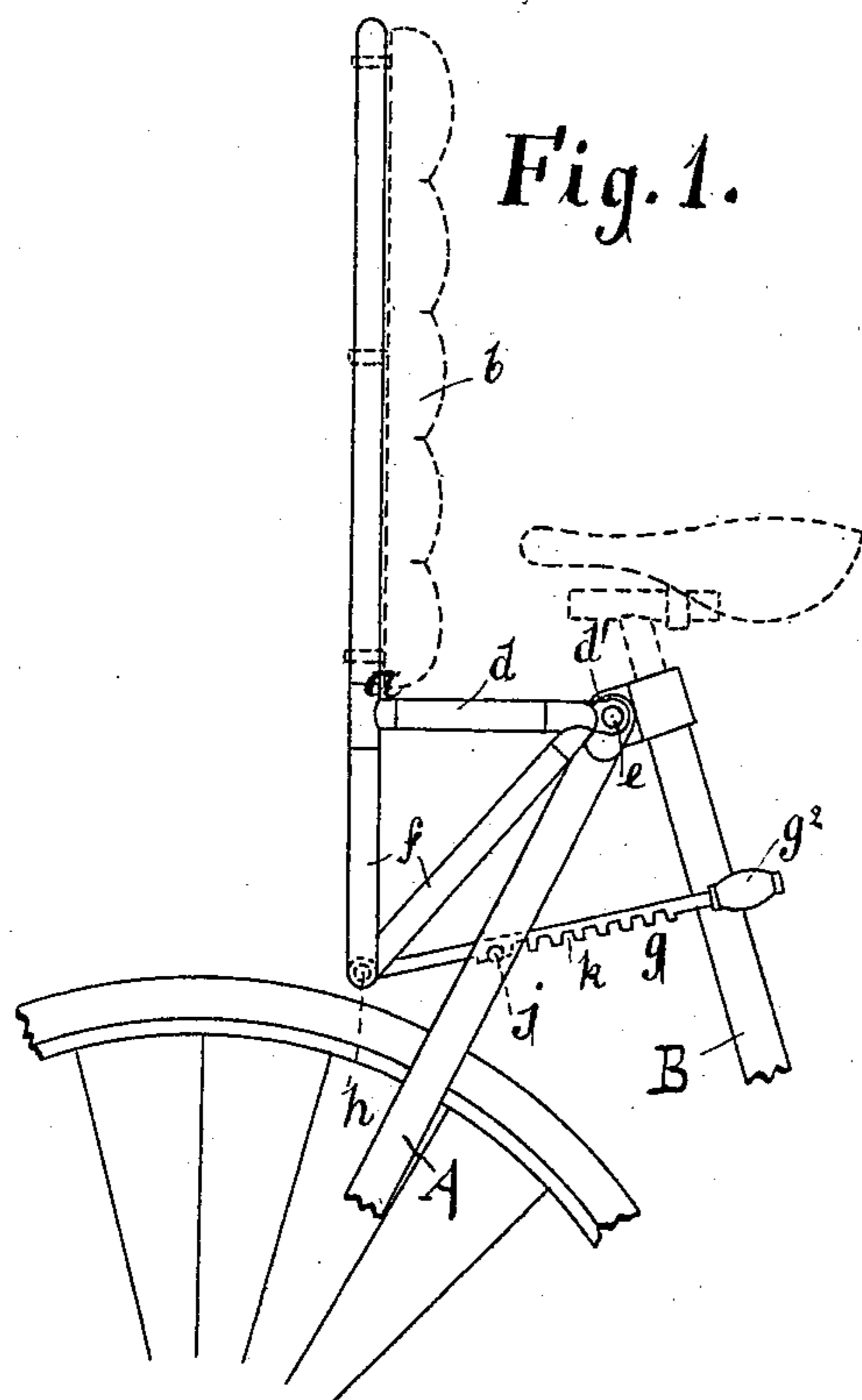
Patented Dec. 13, 1898.

E. B. KILLEN.  
DRIVING BACK FOR CYCLES.

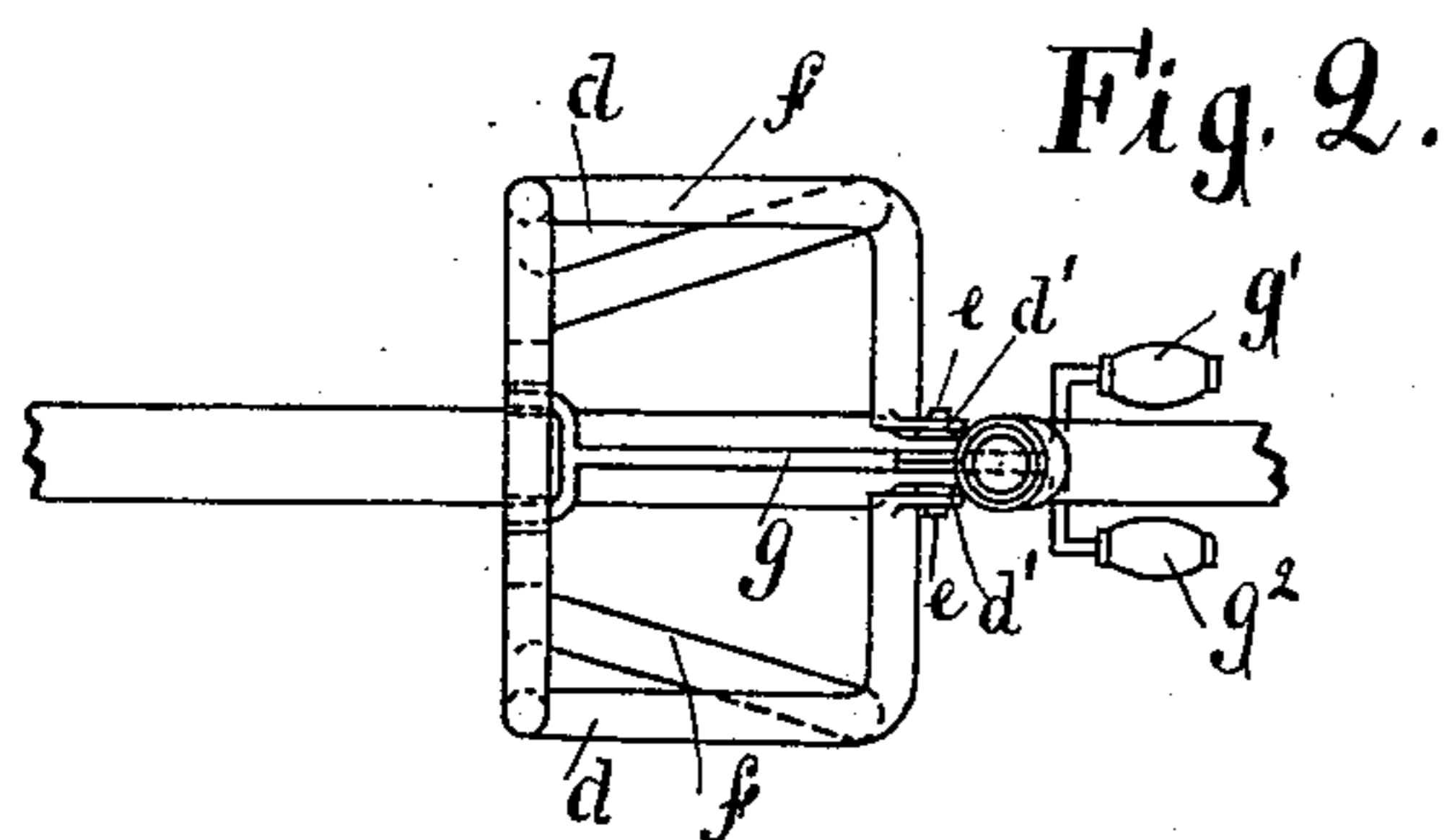
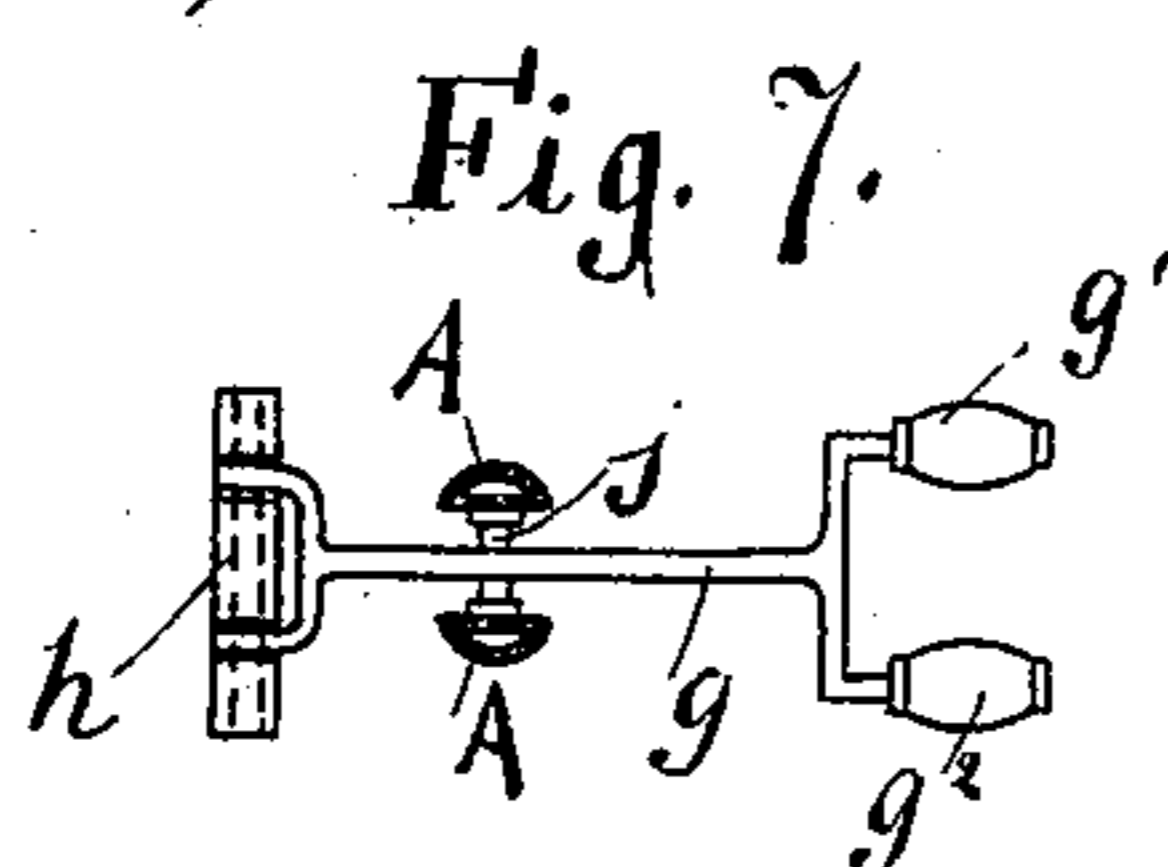
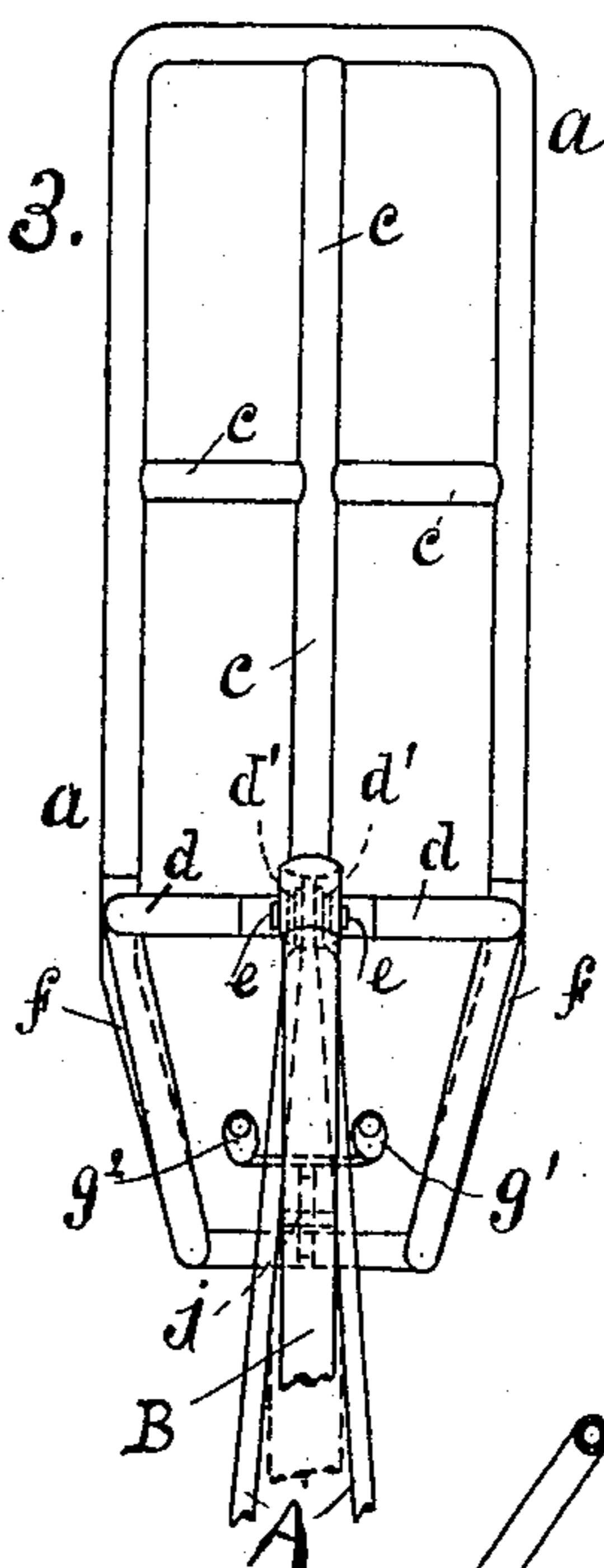
(Application filed July 11, 1898.)

(No Model.)

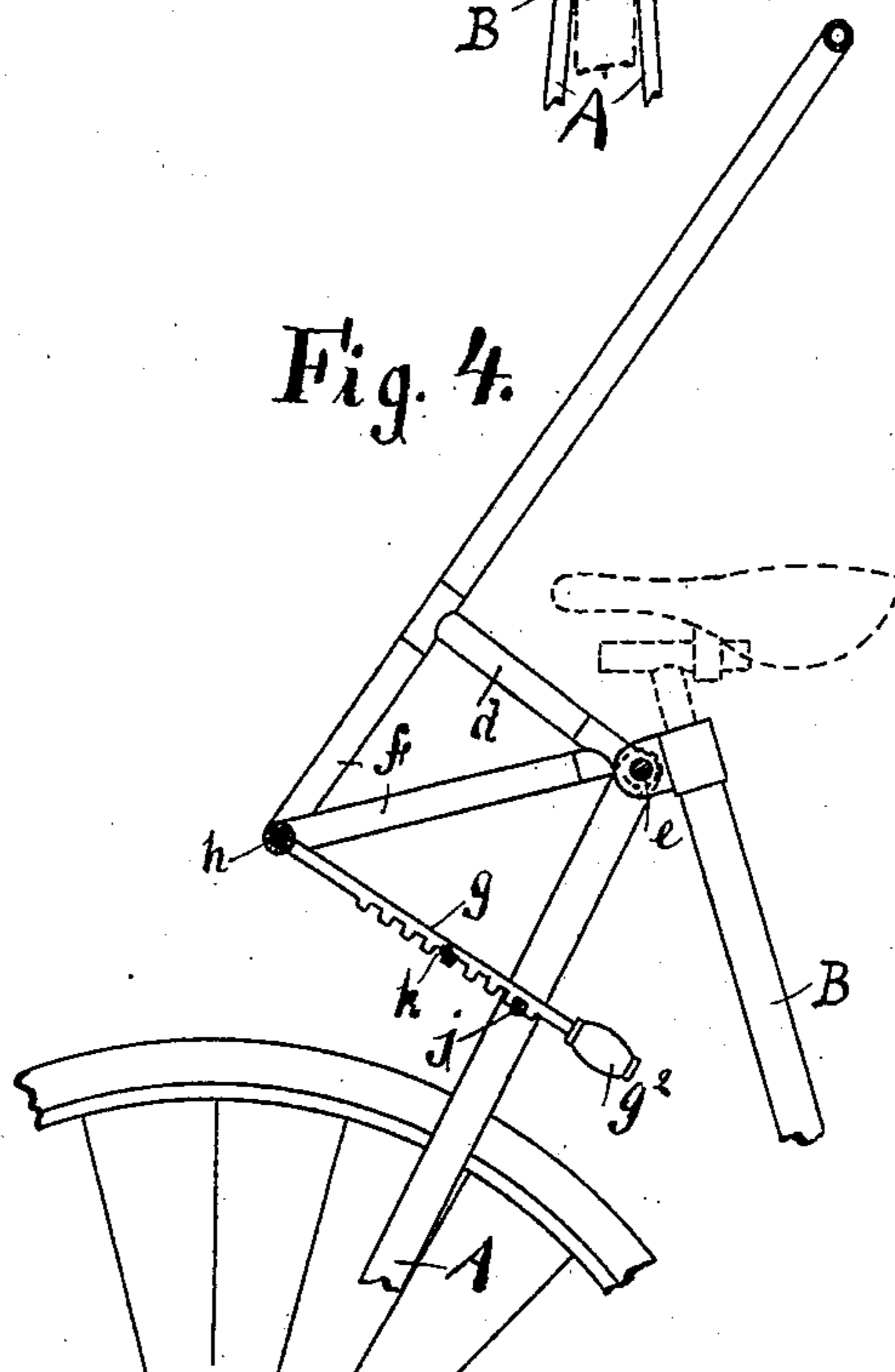
2 Sheets—Sheet 1.



*Fig. 3.*



*Fig. 4.*



Witnesses:

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No. 615,715.

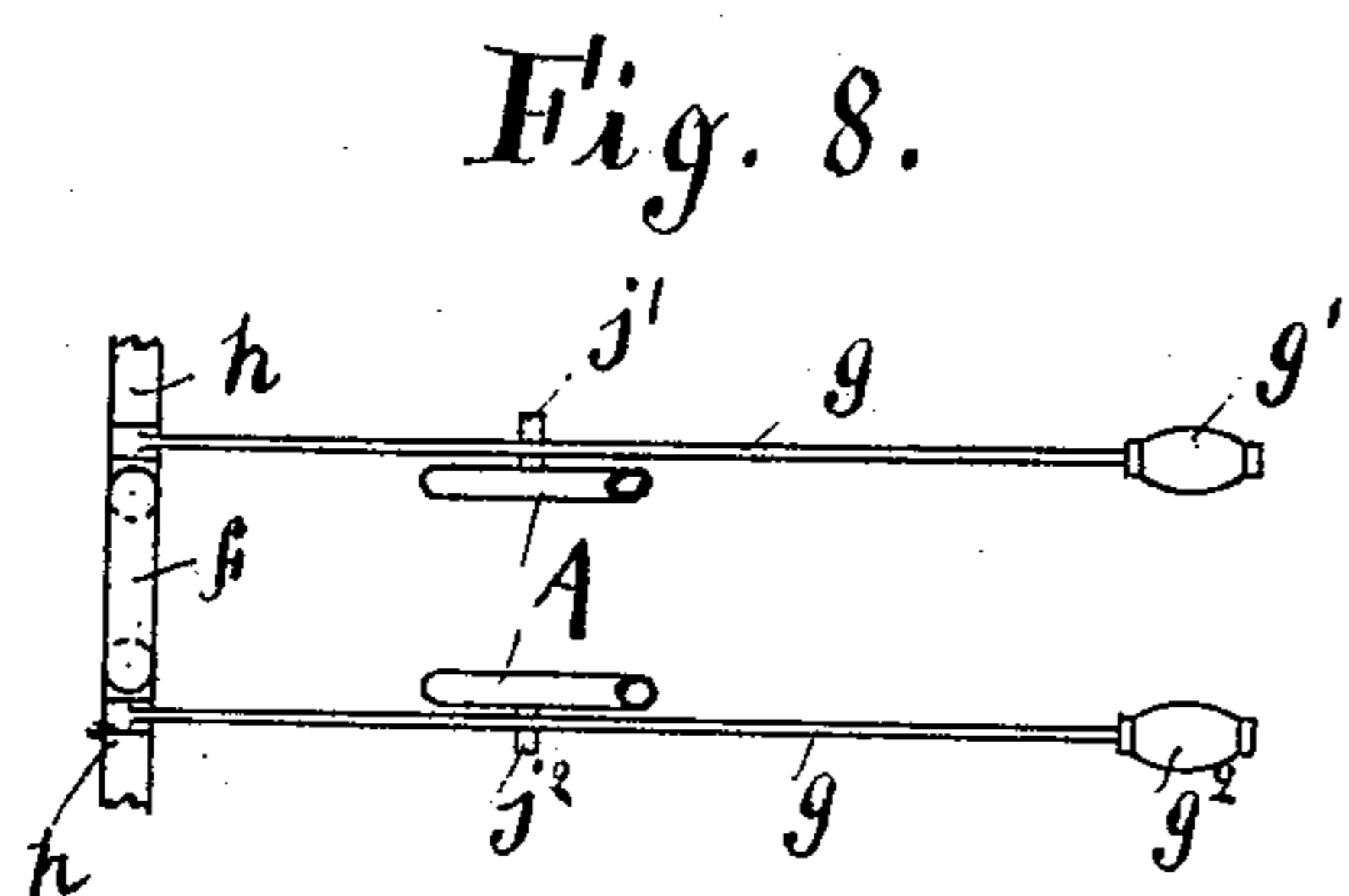
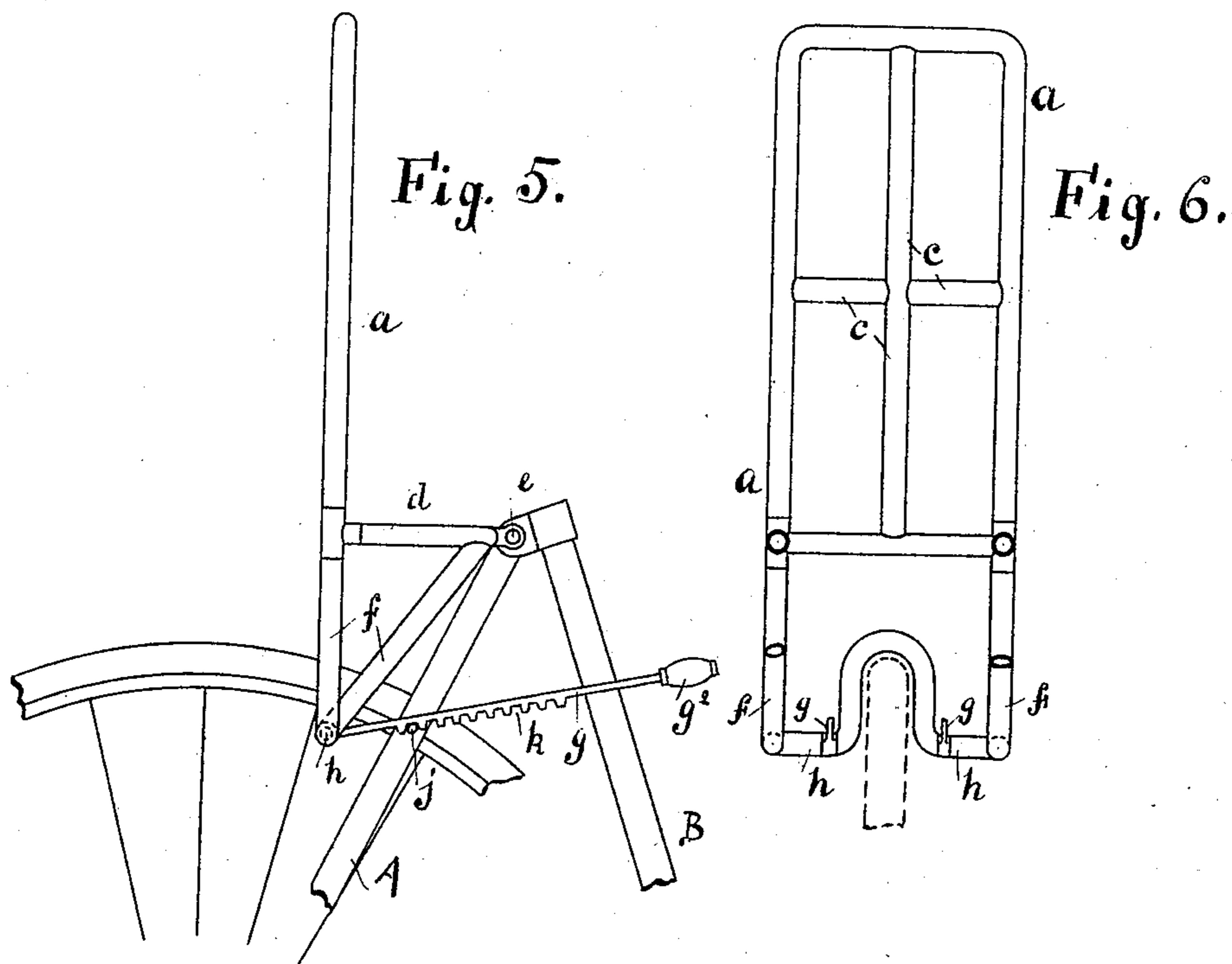
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(Application filed July 11, 1898.)

(No Model.)

2 Sheets—Sheet 2.



Witnesses:

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Inventor:

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By *Edward R. Killen*

# UNITED STATES PATENT OFFICE.

EDWARD BRICE KILLEN, OF BELFAST, IRELAND.

## DRIVING-BACK FOR CYCLES.

SPECIFICATION forming part of Letters Patent No. 615,715, dated December 13, 1898.

Application filed July 11, 1898. Serial No. 685,672. (No model.)

*To all whom it may concern:*

Be it known that I, EDWARD BRICE KILLEN, a subject of the Queen of Great Britain, residing at Belfast, in the county of Antrim, Ireland, have invented an Improved Driving-Back for Cycles and such Like, (for which I have filed an application in Great Britain, No. 11,729, dated May 24, 1898,) of which the following is a specification.

10 This invention relates to driving-backs for velocipedes and such like—that is, to back rests or supports against which the rider can press at the same time as he operates the pedals or treadles, so as to give additional  
15 driving power.

The back constituting the invention is so made that it can be adjusted to any desired angle and can also be easily attached to or detached from the cycle in a few minutes.

20 In order that my said invention may be properly understood, I have hereunto appended two explanatory sheets of drawings, whereon—

Figure 1 is a side view of a part of a cycle, 25 showing the driving-back attached thereto and as being used in an upright position. Fig. 2 is a plan view. Fig. 3 is an end view of same. Fig. 4 is a side view, partly in section, showing the back being used in the inclined  
30 position. Figs. 5 and 6 are respectively side and end views of a modified form of the back. Fig. 6 is partly in section. Fig. 7 shows a plan view of the hand-lever *g* of the arrangement shown in Figs. 1 to 4. Fig. 8 shows a plan  
35 view of the hand-levers of the modified arrangement shown in Figs. 5 and 6.

Referring to the drawings, the back can be made in the form of a frame *a* or other suitable shape, which may or may not be cushioned or  
40 padded, as shown in dotted lines at *b*, Fig. 1. If a pneumatic cushion is used, said cushion can, if required, be suitably attached to a pneumatic saddle or to any ordinary saddle. The back may be provided with stays or strength-  
45 ening-ribs *c*. The lower end of the back is provided with forwardly-projecting arms or their equivalent *d*, said arms or equivalent being hinged at *d'* to the ordinary pin or bolt  
50 *e*, which is lengthened for this purpose and which also tightens the diagonal tube *B* upon the seat-pillar. If so desired, the back may

be hinged or jointed to the frame of the cycle in any other suitable manner. The back may be made with a strengthening-framework *f* below the arms *d* aforesaid, and a hand-lever 55 *g*, which may have two handles *g'* *g''*, if desired, (see also Fig. 7,) arranged in such a manner that by means of this hand-lever the rider while sitting on the saddle can readily adjust the back with either of his hands to any de- 60 sired position. The hand-lever *g* is preferably connected to the strengthening-framework *f* by means of a pin *h* or the like. A pin *j* is or may be fitted to the backstays *A*, and this pin fits into any one of a series of 65 notches *k* made on the lower side of the hand-lever *g*. With this arrangement of apparatus when the rider desires to alter the angle of the movable back all that requires to be done is to raise the hand-lever *g* out of the 70 notch *k* in which it may be for the time being by either the left or the right hand, and push the lever backward or pull forward, as the case may be, until the framework attains the desired position. When this takes place, the 75 hand-lever *g* is released and allowed to drop on the pin *j*, which will immediately enter another of the notches *k*, thereby locking the back in the new position. The whole arrangement is such that by a simple manipu- 80 lation of the hand-lever the driving-back can be made to assume, at the will of the rider, many different positions. When being shifted, it turns upon its hinge-pin *e*.

In order to make the new driving-back suit- 85 able for machines in which wheels of larger diameter are used and where the saddle-pillar comes nearer to the wheel, the form shown at Figs. 5, 6, and 8 may be used. With this arrangement the cross-bar of the framework is 90 bent, as shown at Fig. 6, so as to clear the wheel, and the hand-levers *g*, of which there may be two, are pivoted at *h* to the lower end of the framework *f* and work on pins *j'* *j''*, fitted to the back-stays *A*. 95

If desired, a spiral or other spring may be fitted in connection with the hand-lever *g* in order to facilitate its action when the driving-back is changed from one position to another. 100

When the back is used, it enables the rider to obtain great additional motive power for

driving his cycle by pressing at the same time against this driving-back and on each pedal or treadle alternately.

It is to be specially noted that this driving-back can be advantageously used on almost all kinds of cycles at present in vogue without altering any important part of the cycles themselves. It must, however, be remembered that in the case of a bicycle the rider cannot mount from behind when the back is fitted to the cycle, so that the ordinary lady's cycle or a low bicycle like the "Bantam" is the most suitable to which to attach the back. It is specially adapted for any cycle having a frame without the usual horizontal top bar or stay.

The back may be made of wood, metal, or other material or a combination of such material, and it may be made of any suitable size and shape.

Some people when riding lean forward very much on the present cycles; but even in this position the driving-back can be taken full advantage of, as it can always be moved into the right position for the rider to press his back against it.

The addition of this driving-back enables the rider when sitting on the saddle to get greater speed out of the cycle both on a level and uphill, as with it he is able in driving to acquire and utilize more motive power than at present, and thereby is able to easily drive a much higher-g geared machine.

This driving-back enables any person to

acquire and utilize greater motive power, especially when it is used in conjunction with suitable sliding slides, seesaw-drives, and moving pedals, and it can not only be utilized to drive cycles at a high speed, but it can also be used to drive light easy-running vehicles and small boats.

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

1. The combination with a velocipede or the like, of a driving-back consisting of a frame having its intermediate portion pivotally connected with the cycle-frame, and a handle-bar pivotally connected to the lower extremity of the back and having a detachable and adjustable connection with the cycle-frame, substantially as described.

2. The combination with a velocipede, of a driving-back comprising a frame provided with forwardly-projecting arms pivotally connected to the frame of the machine, strengthening-braces below said arms, a handle-bar pivotally connected to the lower extremity of said frame and having a toothed portion, and a pin or catch on the frame arranged to be engaged by said teeth, substantially as described.

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

EDWARD BRICE KILLEN.

Witnesses:

JOHN MCQUADE,  
BERNARD PEAKE.