

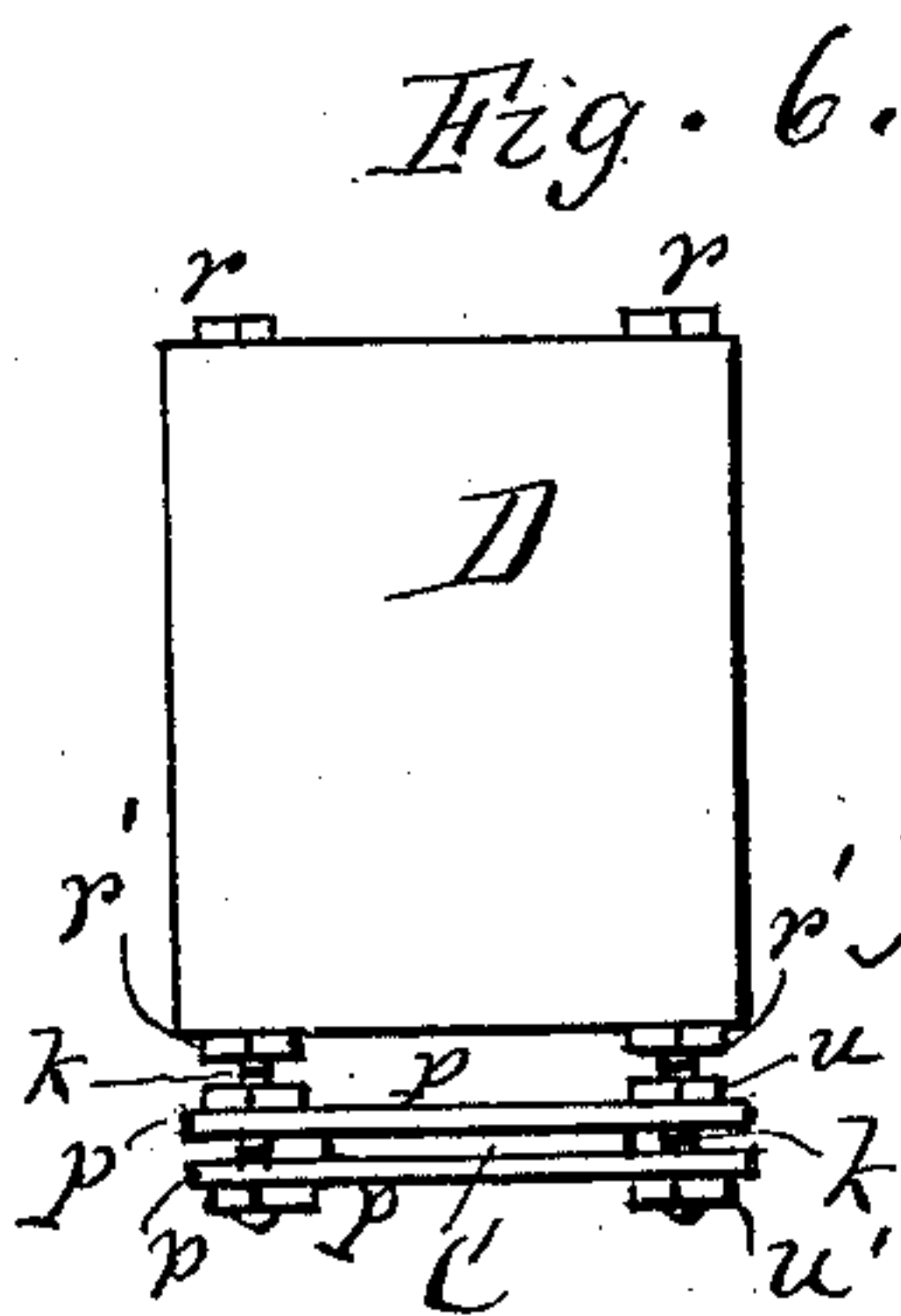
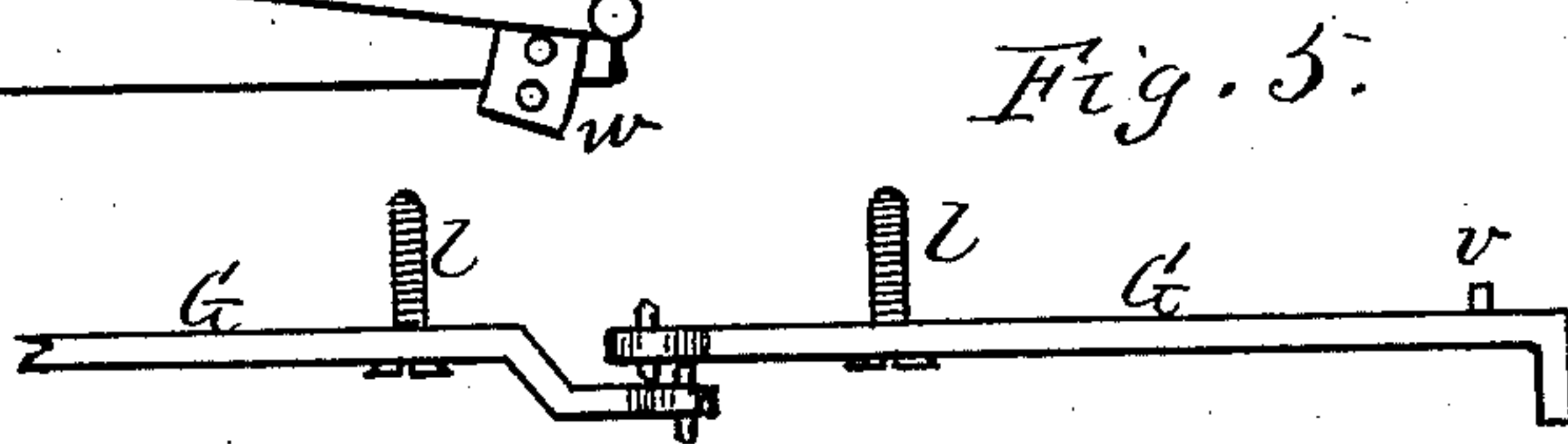
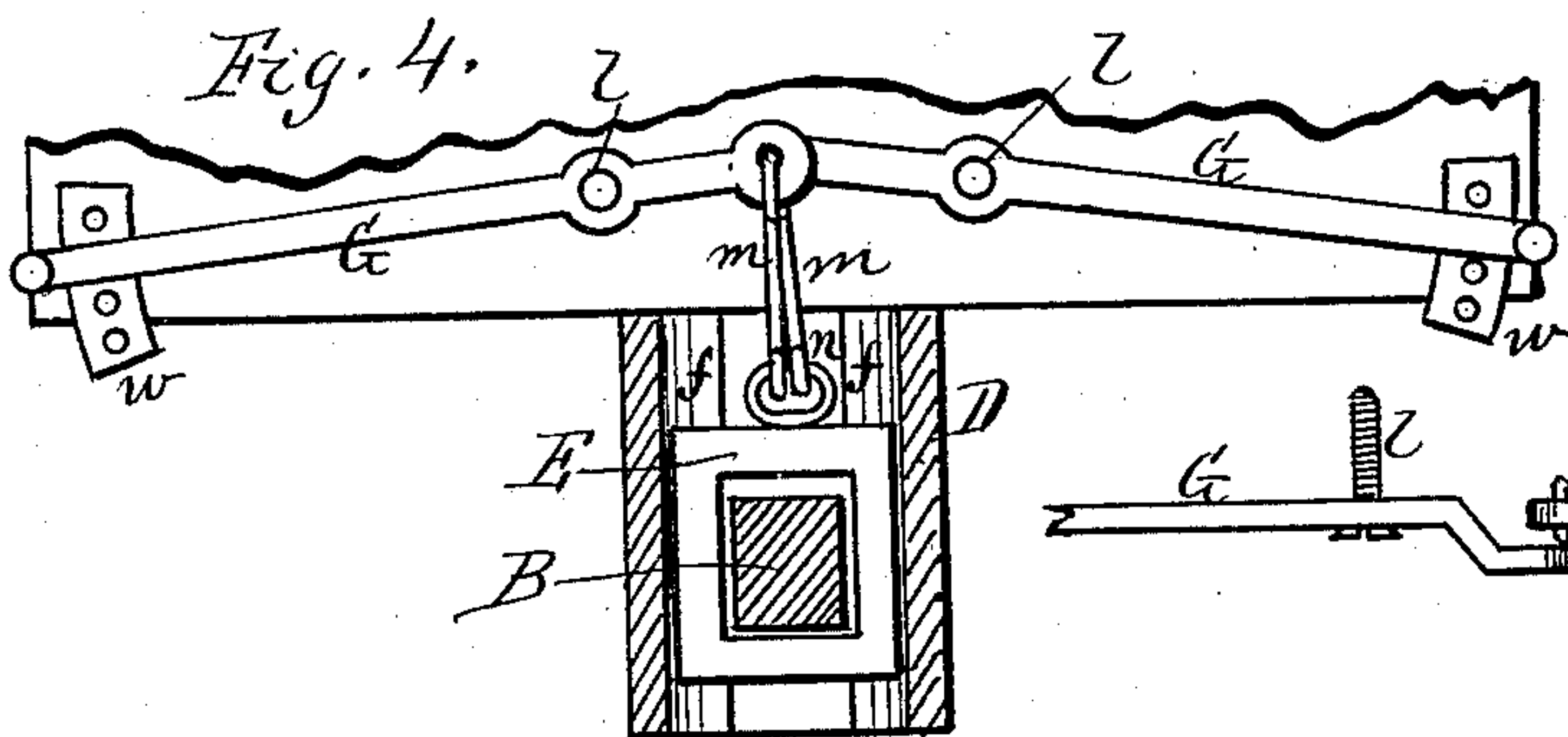
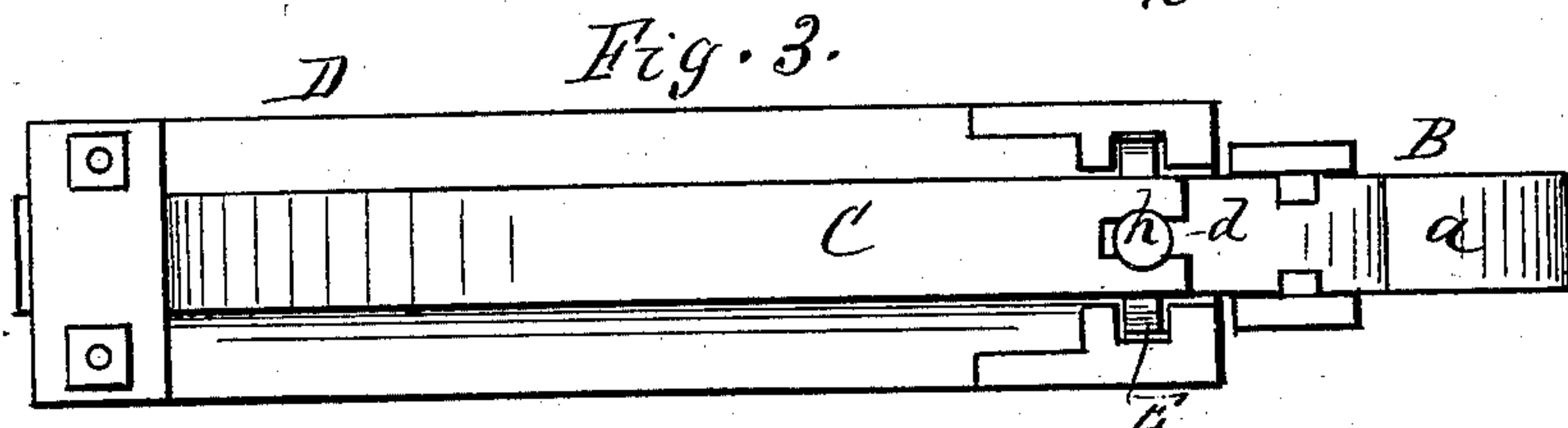
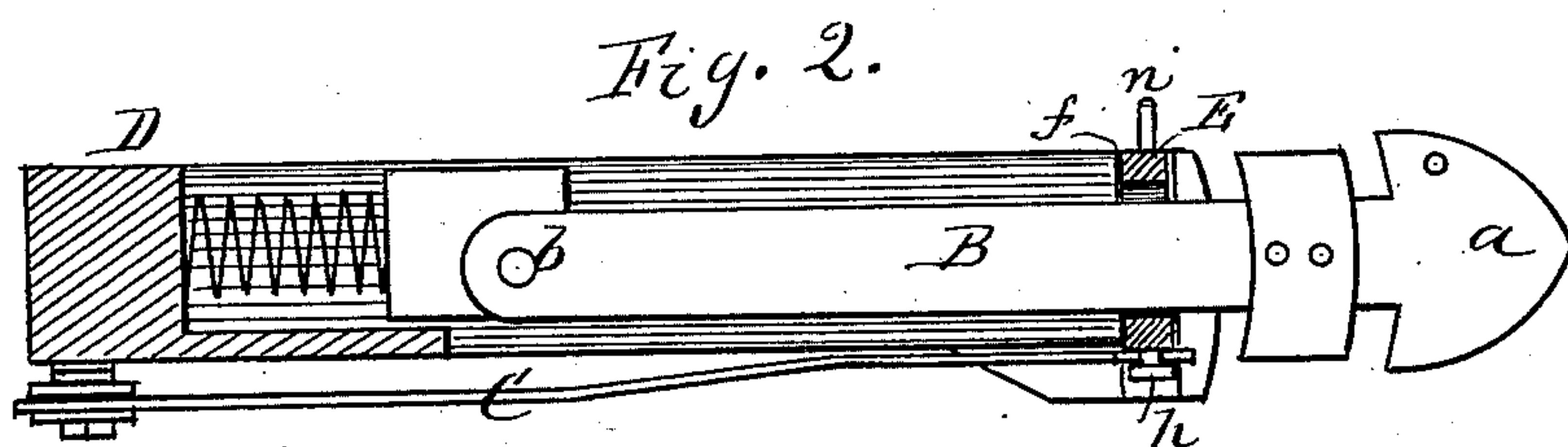
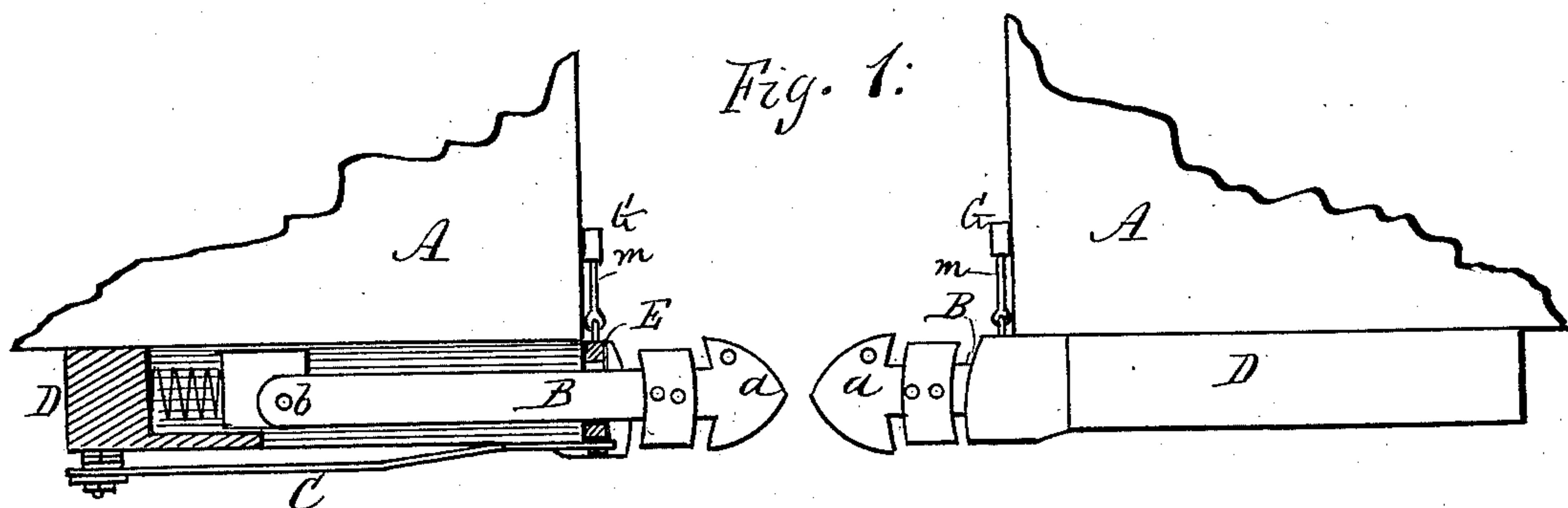
(No Model.)

K. S. BLANCHARD.

CAR COUPLING.

No. 285,789.

Patented Oct. 2, 1883.



Attest.
P. A. Gostick
W. E. Emerson

Inventor.
Kirk S. Blanchard,
per R. F. Osgood,
att'y.

UNITED STATES PATENT OFFICE.

KIRK S. BLANCHARD, OF CLARENDON, NEW YORK.

CAR-COUPLING.

SPECIFICATION forming part of Letters Patent No. 285,789, dated October 2, 1883.

Application filed February 24, 1883. (No model.)

To all whom it may concern:

Be it known that I, KIRK S. BLANCHARD, of Clarendon, Orleans county, New York, have invented a certain new and useful Improvement in Car-Couplings; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the drawings, in which—

Figure 1 is a side elevation, partially in section, showing the ends of two cars with the coupling attached. Fig. 2 is a longitudinal vertical section of one-half of the coupling on an enlarged scale. Fig. 3 is a bottom view of the same. Fig. 4 is a front elevation of the lever-work for raising and lowering the draw-bar. Fig. 5 is a plan of the lever-work for raising the draw-bar. Fig. 6 is an elevation of the rear end of the draw-bar, showing the means for adjusting the spring.

My improvement relates to automatic car-couplings which engage by means of two hooked heads that spring past each other as the cars come together.

The invention consists of a flat spring on the under side of the draw-bar, adjustable up and down by means hereinafter described, in combination with a stirrup which is connected with the spring and which embraces the draw-bar, and a set of levers provided with links, which connect with the stirrup, as will be more fully set forth.

In the drawings, A A show the ends of two cars.

B B are the two draw-bars, provided with double-hooked heads *a a*, as shown. The rear ends of the draw-bars have pivots *b b* resting in boxes, by which means the draw-bar can move up and down vertically, and the boxes rest against springs by which the shock is broken when the couplings strike together.

C is a flat spring, attached permanently at one end to the under side of the draw-bar frame or support D, the opposite end of the spring being free, and provided with an open slot *d* at its end, as shown in the bottom view, Fig. 3.

E is a stirrup or loop, which receives the draw-bar passing through the same, and slides up and down vertically in grooves *f f* in the sides of the draw-bar frame. The bottom of the stirrup is connected with the end of the

spring by a T-headed lug, *h*, which rests in the slot *d* of the spring, so that as the stirrup is moved up or down the spring will be correspondingly deflected or bent, and will tend to bring the stirrup to an equilibrium, and thereby hold the draw-bar in a horizontal position. If desired, the spring may be re-enforced by one or more leaves to give it more stiffness. The spring is adjusted higher or lower by the following means:

k k are two bolts, which pass vertically through the draw-bar frame D, near the rear end.

p p are two cross bars or plates, on the bolts beneath the draw-bar, between which cross-bars rests the rear end of the spring.

r r and *r' r'* are nuts on the bolts at top and bottom of the draw-bar, by which the bolts are held in place.

u u and *u' u'* are nuts on the bolts, respectively above and below the two cross-bars *p p*. By turning these bolts up or down it will be seen that the cross-bars, and with them the spring clamped between them, can be raised or lowered to any desired position.

G G are two levers, pivoted at *l l* to the end of the car, and provided, respectively, with links *m m*, which connect with an eye, *n*, on the top of the stirrup E. Each lever and its link is separate and distinct from the other lever and its link, so that the lever on either side may be operated to raise or depress the coupling-head. The ends of the levers extend out even with the sides of the car, so as to be easily reached, and are held at any adjustment by pins *v* on their back, which engage with holes in segment-plates *w*. By depressing the levers the draw-head will be thrown up, and by raising them it will be thrown down. When the cars come together, the draw-heads will ride one over the other and engage automatically and without any attention. To uncouple the cars, the levers on one car are thrown up, which depresses the draw-head on that car, and the levers on the other car are thrown down, which elevates the draw-head on that car, and in this condition the cars will uncouple when the train is started.

The great advantage in this invention is in the use of the spring on the under side of the draw-bar frame, adjustable to different heights, and connected with the stirrup by the lug *h*,

by which means the spring and stirrup act together to bring the draw-bar to an equilibrium and hold the draw-bar extended, at the same time giving the draw-bar great elasticity, and
5 allowing it the proper range of motion both up and down, to ride over or under the other draw-head in the act of coupling. The tendency of the spring is to always keep the draw-bar extended horizontally. If the draw-bar
10 should sag or get out of place at any time, the spring can be adjusted higher, so as to bring it to the proper position. The spring, adjustable by the means above described, forms an important feature of the invention.

15 Having described my invention, I claim—

1. In a car-coupling, the flat spring C, on the under side of the draw-bar frame, adjustable up or down vertically, in combination
20 and the levers G G, connected with the stir-

rup by links, as shown and described, and for the purpose specified.

2. In a car-coupling, the combination, with the spring C, attached at its front end to the stirrup E, of the bolts *k k*, attached to the
25 draw-bar frame, the cross-bars *p p*, resting on the bolt and clamping the spring between them, and the nuts *u u* and *u' u'*, resting on the bolts above and below the cross-bars, and
30 capable of adjusting the spring vertically, as shown and described, and for the purpose specified.

In witness whereof I have hereunto signed my name in the presence of two subscribing witnesses.

KIRK S. BLANCHARD.

Witnesses:

R. F. OSGOOD,
JACOB SPAHN.