

(No Model.)

F. HOPKINS.
GATE.

No. 482,792.

Patented Sept. 20, 1892.

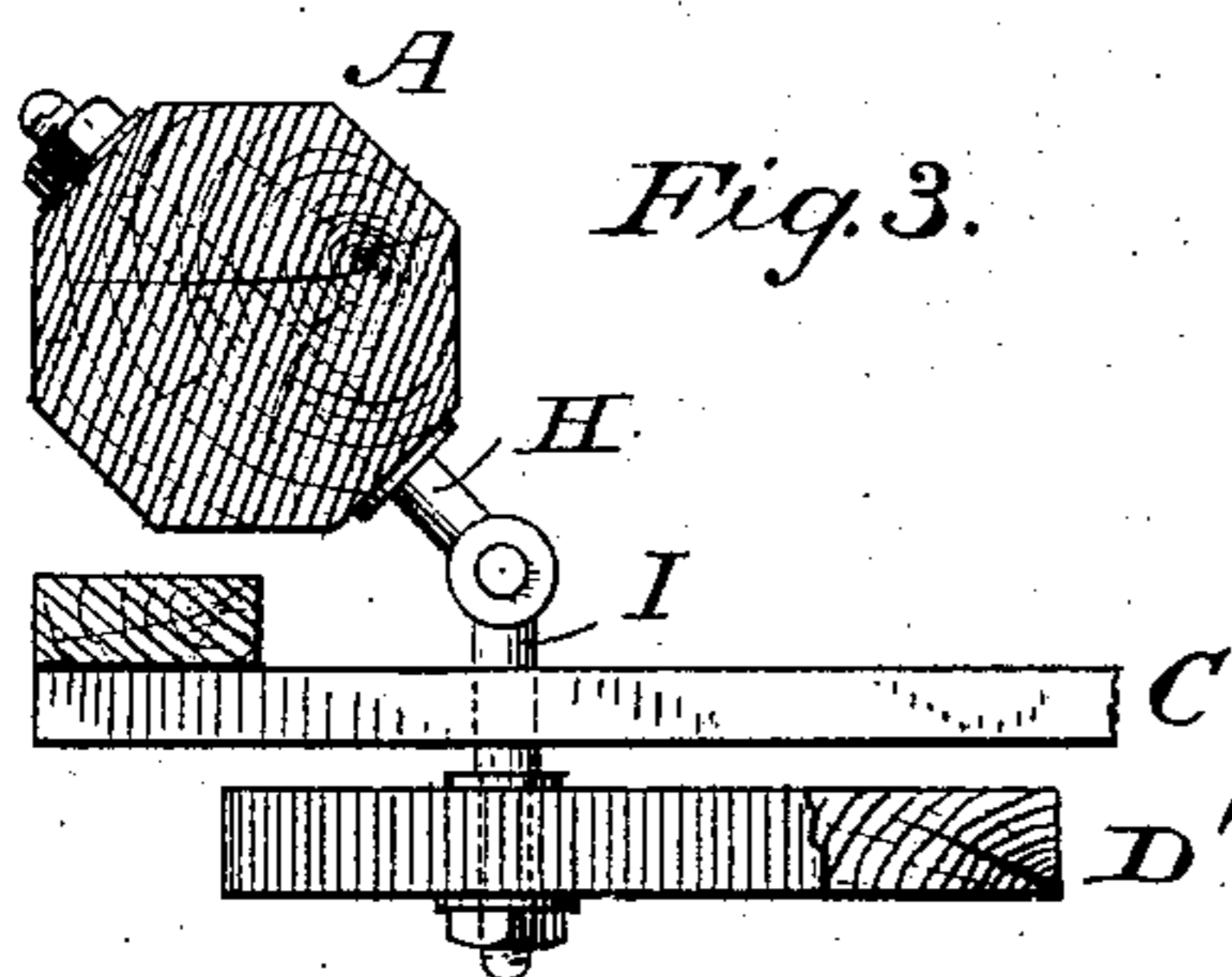
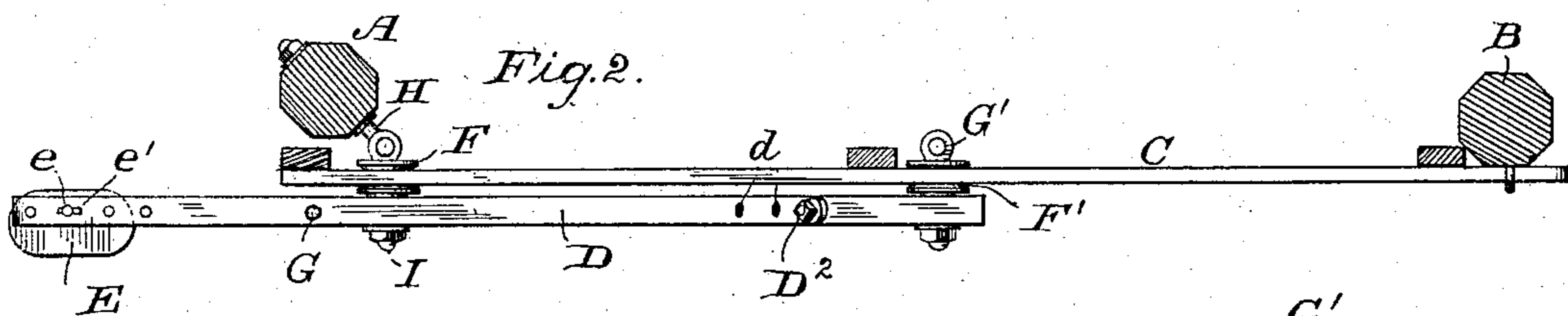
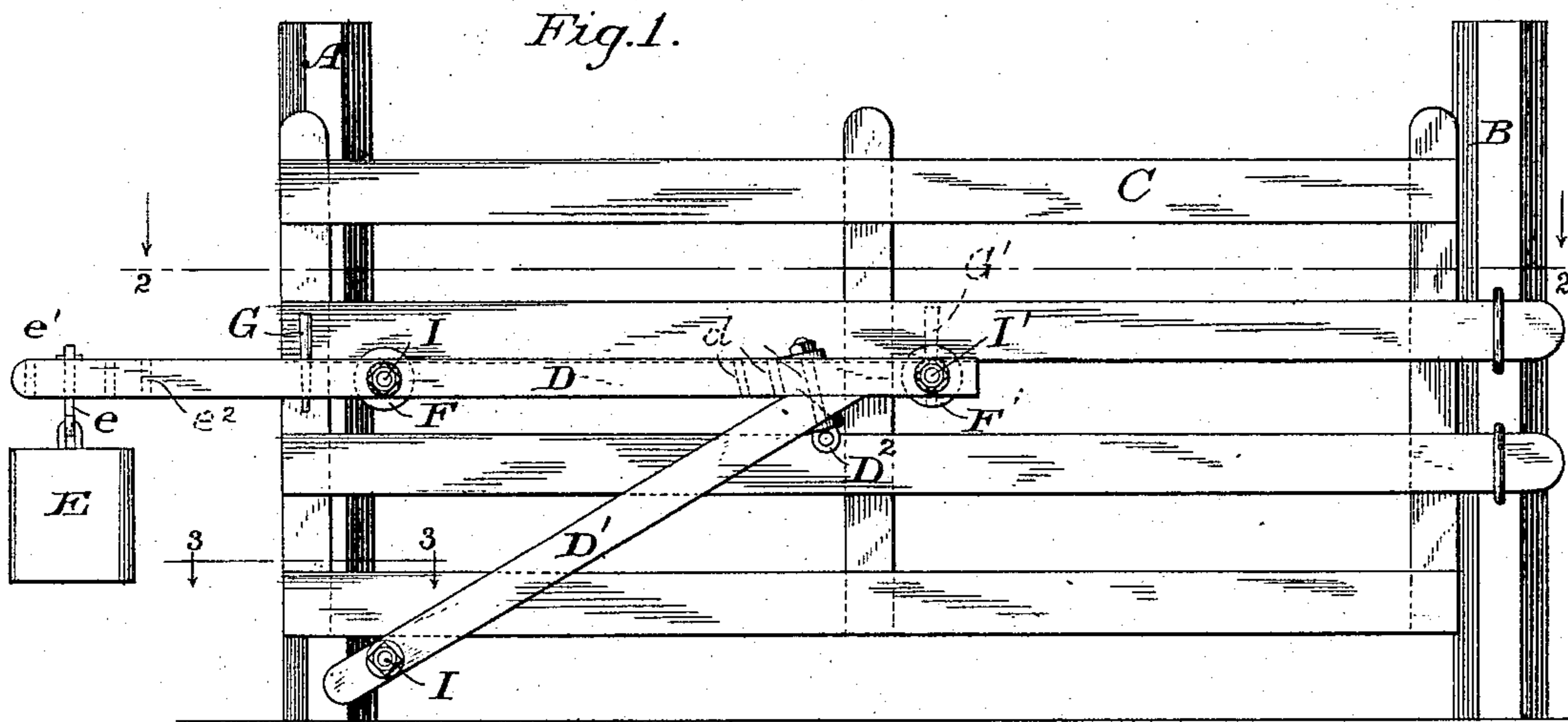
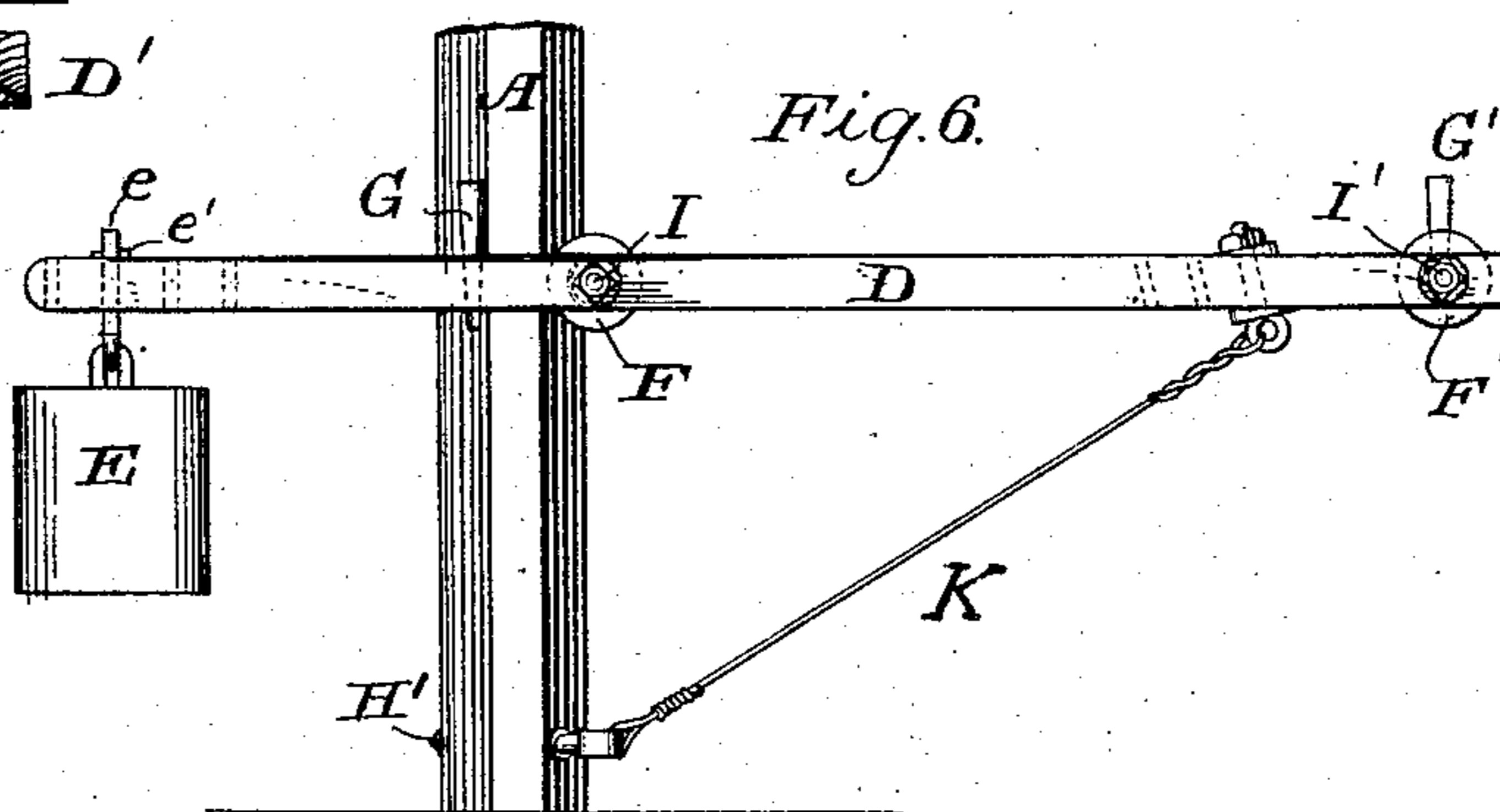
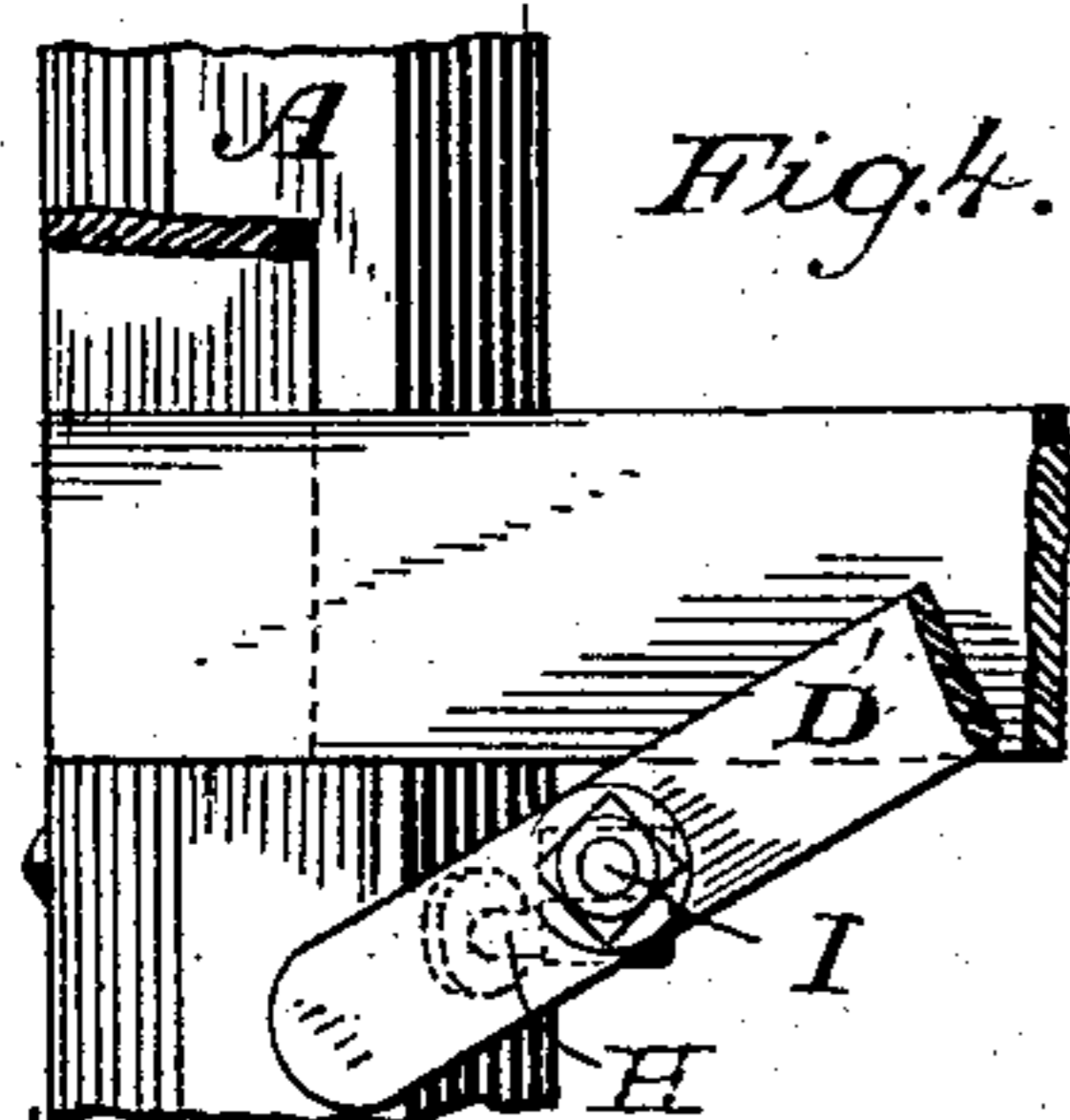
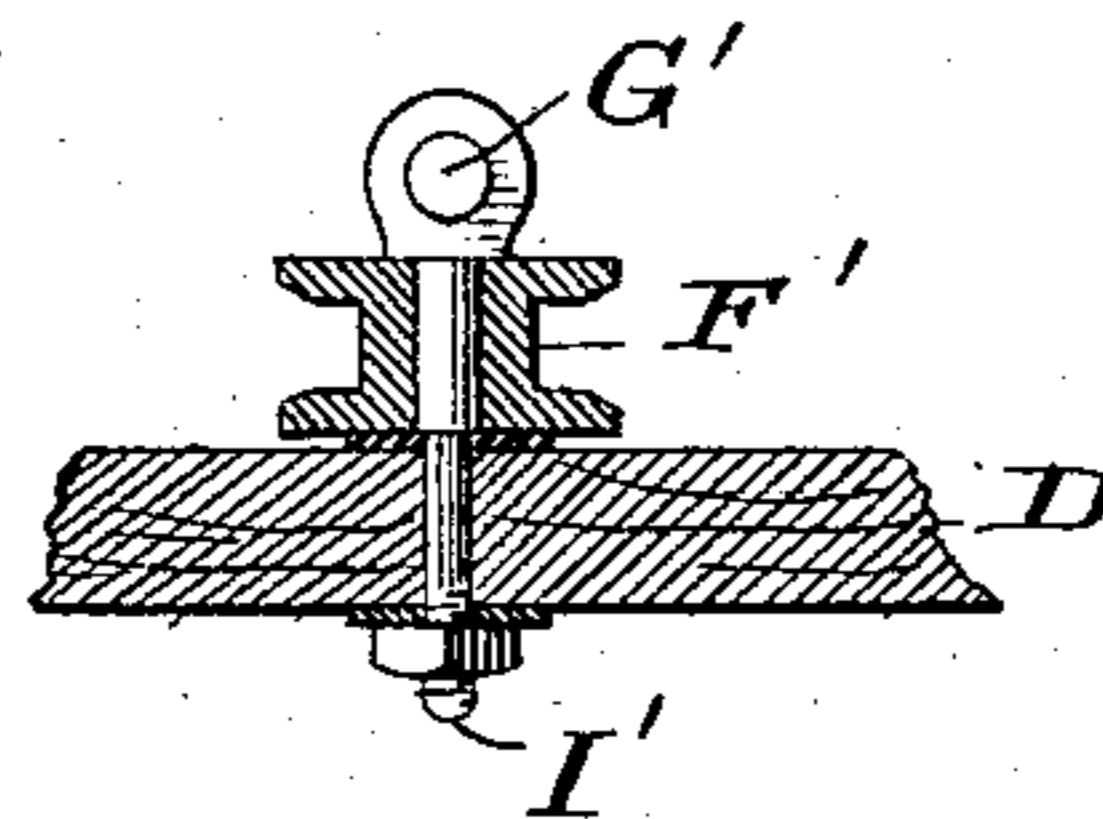


Fig. 5.



Witnesses

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Inventor

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UNITED STATES PATENT OFFICE.

FLOYD HOPKINS, OF BELVIDERE, ILLINOIS.

GATE.

SPECIFICATION forming part of Letters Patent No. 482,792, dated September 20, 1892.

Application filed January 11, 1888. Serial No. 260,421. (No model.)

To all whom it may concern:

Be it known that I, FLOYD HOPKINS, a citizen of the United States, residing at Belvidere, in the county of Boone and State of Illinois, have invented certain new and useful Improvements in Gates; 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 the letters of reference marked thereon, which form a part of this specification.

My invention relates to that class of gates in which the gate proper is adapted to slide on a hanger hinged to a hanger-post, the hanger serving as a support for the gate in the operation of opening and closing it.

It has for its object the provision of simplified means for adjusting the pulleys or gate-supporting surfaces on the hanger relatively to each other, and also the counterbalancing the hanger to obviate excessive strain on its hinges as well as on the hanger-post.

The invention consists in the various combinations expressed in the claims.

Figure 1 is a side elevation of a gate embodying my invention. Fig. 2 is a top or plan view of the same, taken on line 2 2. Fig. 3 is a horizontal sectional view on an enlarged scale, taken on line 3 3 of Fig. 1, parts of the gate and hanger being broken away. Fig. 4 is an elevation, on an enlarged scale, of the lower hinge portion of the gate, parts of the gate, hanger, and hanger-post being represented as broken away. Fig. 5 is a detail view showing a portion of the hanger, in connection with the pulley secured thereto by a bolt forming a part of the upper hinge. Fig. 6 is a view in elevation of a modification of the hanger, in connection with the hanger-post.

A and B are ordinary gate-posts, represented as set in the ground, the former serving as a hanger-post.

C is the gate proper, adapted to slide in the act of opening and closing and to be swung on a hinged hanger.

D D' represent two parts or bars that are adjustably connected to each other and hinged to the hanger-post, the two forming a swinging hanger for supporting the gate.

D² is a bolt provided with a nut and washer for adjustably securing the two parts D D' together, dotted lines *d* indicating holes in which the bolt may be placed.

E is a weight secured by a bolt *e* and pin *e'* in either one of a series of holes *e*², indicated by dotted lines in the rear end of bar D.

F is a flanged roller placed on bar D, at the side thereof and adjacent to the hanger-post.

F' is a flanged roller placed near the front end of bar D, at the side thereof.

G is a pin on bar D, projecting upwardly to prevent the gate from being thrown off the hanger D D' in one direction.

G' is a pin for the same purpose, projecting upwardly from within an eye of the bolt on which pulley F' is hung and turns.

H H are two pintle-bolts secured to the hanger-post A, and I I are two eyebolts secured to hanger D D' near the top and bottom of said hanger and projecting horizontally, the upper eyebolt being provided with the flanged roller F.

I' is a horizontally-projecting eyebolt near the front end of bar D, it being provided with the flanged roller F' and the vertically-projecting pin G'.

The gate proper is constructed of boards connected together in the ordinary manner. Either of the uppermost three horizontal gate-boards may rest upon and pass freely over the flanged rollers F F'; but the one shown as resting thereon is preferred.

In some instances the bar D' of the hanger D D' may be omitted and a wire, chain, or rope K be substituted therefor. In such case the weight E should be sufficient entirely to counterbalance the hanger and gate when the latter is at or near its limit of movement when slid in the direction of post B in closing the gate.

The hanger may be adjusted so that the gate shall be parallel with the surface of the ground between the posts A and B, this being done by removing the bolt D² from one of the holes *d* in bar D and placing and securing it in another thereof. In such case the bar D' turns on its eyebolt to the extent required. In the modification shown in Fig. 6 the lower pintle-bolt is omitted in the post A, the eyebolt H' being substituted therefor, the wire having its lower end fastened in said eye.

It will be understood that provision of other antifriction devices instead of the flanged rollers may be made without departing from my invention, any of the usual antifriction devices in such cases being substituted—as, for instance, the eyebolts of the principal form of the device may be made to present wide bearing-surfaces on their upper sides and be case-hardened or otherwise rendered durable, smooth, and comparatively frictionless in supporting the part or parts of the gate bearing and sliding thereon.

To open the gate, it is merely necessary to slide it back on the rollers F F', the gate at all times, if desired, being wholly supported on said rollers, until the end bar of the gate nearest post B comes in contact, or nearly so, with roller F', when the gate may be opened to its widest extent by swinging around the hinged hanger with the gate.

Any wear or settling of the gate is provided for in the means for adjusting the hanger, as heretofore indicated, and the weight E may also be adjusted on the hanger to correspond with the weight of the gate for suitably counterbalancing the latter.

Having thus fully described my invention, what I claim is—

1. A gate, a supporting-post therefor, a bar having a pivotal connection with the post, rollers on the bar, upon which the gate rests, a counterbalance-weight for the gate, and an adjustable diagonal brace for supporting the outer end of the bar.

2. A gate, a supporting-post therefor, a pintle offset from the post, an arm having an eye

for said pintle, the arm bearing a flanged roller and a bar, a like roller on the bar, one of the bars of the gate resting upon the rollers, and a counter-balance for the gate.

3. A gate, a supporting-post therefor, a bar pivoted to the post, two rollers secured to said bar, upon which rollers the gate rests, a counter-balance for the gate secured to the bar, and a diagonal brace pivoted to the supporting-post and adjustably connected to the bar.

4. A gate, a supporting-post therefor, a horizontal bar having an eyebolt extending therefrom, a flanged roller on the eyebolt, said eyebolt extending over a pintle on the supporting-post, a second roller on the horizontal bar, upon which rollers a bar of the gate rests, a brace-bar having an eyebolt engaging a pintle on the post near its lower end, an adjustable connection between the horizontal bar and the brace-bar, and a movable counterbalancing-weight on the horizontal bar.

5. The combination of a gate, a hanger, and a hanger-post, the hanger being provided with antifriction-bearings for a part of the gate to slide upon and extended to the rearward of its hinges, said extension being provided with a counterbalance-weight, substantially as and for the purpose described.

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

FLOYD HOPKINS.

Witnesses:

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