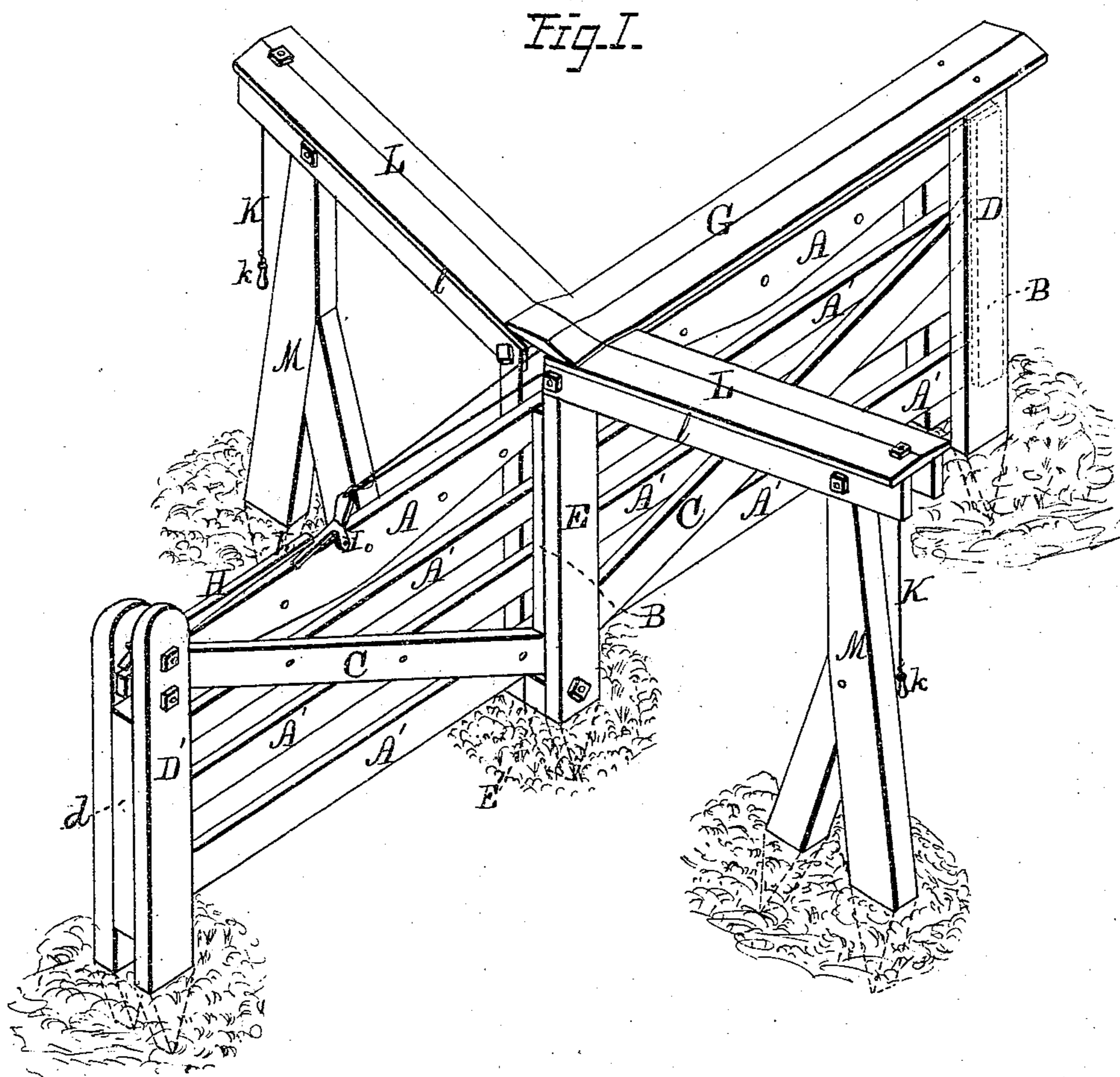


E. E. CHESNEY.  
Automatic Gates.

No. 153,315.

Patented July 21, 1874.



WITNESSES:

Jas. E. Hutchinson  
 John P. Young

INVENTOR.

E. E. Chesney, by  
 Orindle and Beane, his Attys

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Fig. 2.

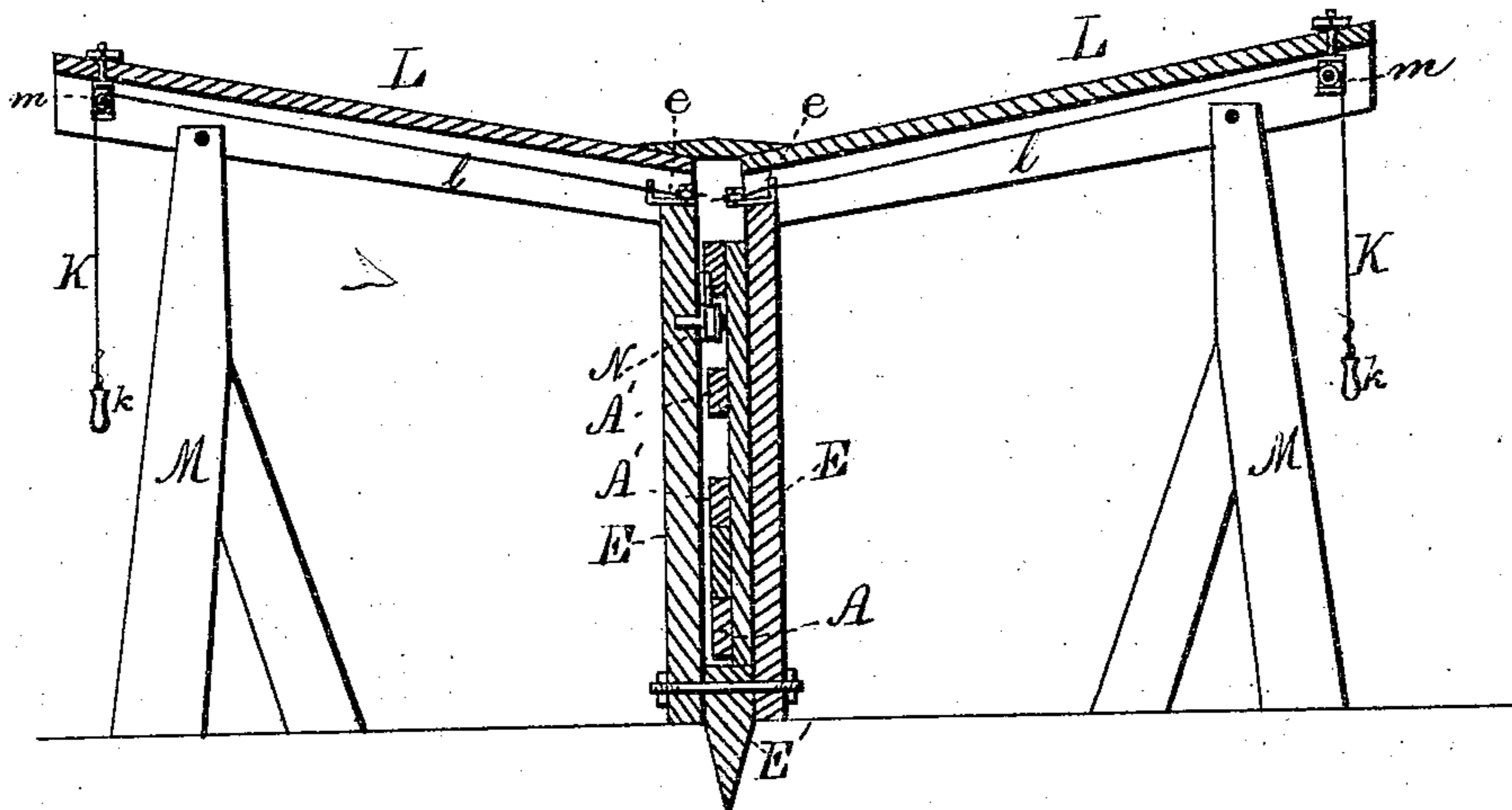


Fig. 3.

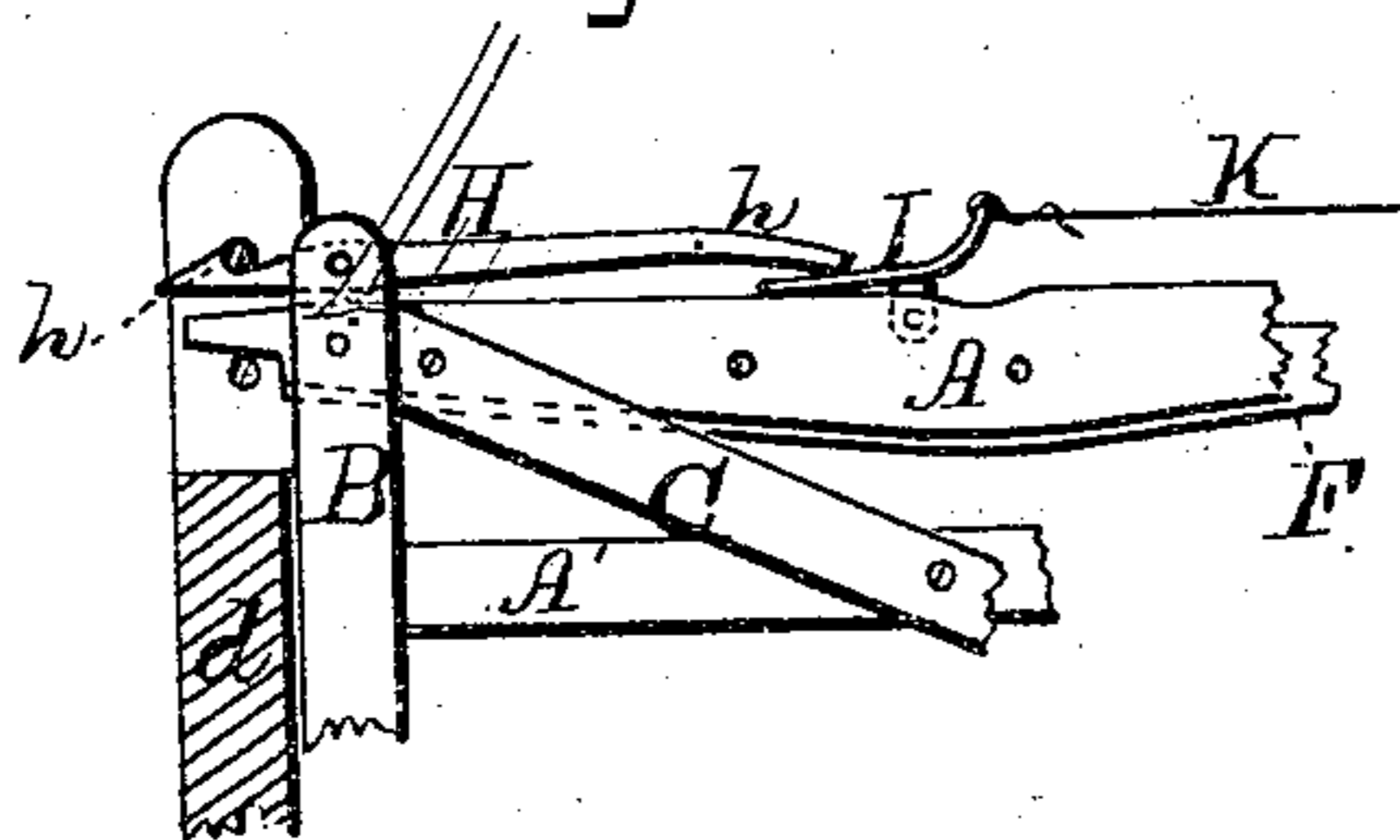
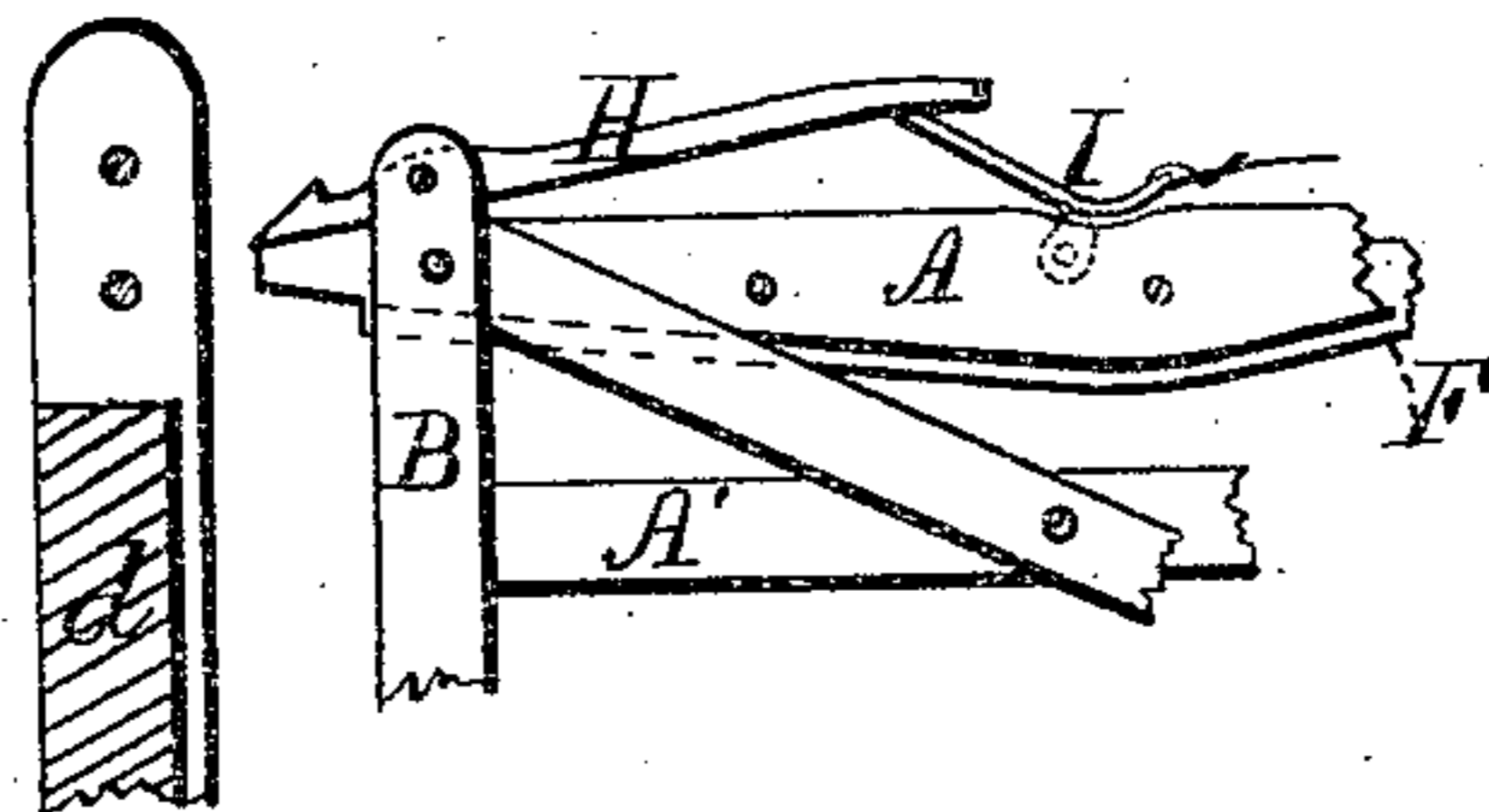


Fig. 4.



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# UNITED STATES PATENT OFFICE.

EZRA E. CHESNEY, OF BUSHNELL, ILLINOIS.

## IMPROVEMENT IN AUTOMATIC GATES.

Specification forming part of Letters Patent No. **153,315**, dated July 21, 1874; application filed November 22, 1873.

*To all whom it may concern:*

Be it known that I, E. E. CHESNEY, of Bushnell, in the county of McDonough and in the State of Illinois, have invented certain new and useful Improvements in Farm-Gates; and do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings making a part of this specification, in which—

Figure 1 is a perspective view, showing the gate and all its posts. Fig. 2 is a central section through side and center posts. Fig. 3 is a detached view, showing a portion of the front panel of the gate and the latch closed. Fig. 4 is a like view with latch open.

Letters of like name and kind refer to like parts in each of the figures.

The nature of the present invention consists chiefly in pivoting a latch upon the top and outer end of the gate, in combination with a bent lever operated by a cord, all as will be hereinafter more fully and clearly set out.

In the annexed drawing, A represents the top rail, and A' the lower rails, of my gate, secured together horizontally and in parallel lines by means of three vertical bars, B, one of which is attached at each end of said rails, and the third at their longitudinal center, so as to form a gate having two panels. A brace, C, extending from the upper end of each outer bar or upright B downward to the lower end of the center upright, strengthens said parts, and insures their relative position. The uprights and braces are placed upon one side only of said gate, so that the rails upon its opposite form a plane unobstructed surface. In construction my said gate differs generally from the ordinary gate in being double, as above described, and in having the inner panel a little heavier than the outer, and in having two double inclines on the lower side or beneath the top rail.

These differences over the ordinary gate, and over those gates having a single double incline in the upper part or under the top bar, are so obvious as to need no further explanation in order to describe the present state of the art. As the above-named features form no part of my invention, I hereby disclaim the same.

By making it double, the inner panel an-

swers for a panel length of the fence, while, by having it made heavier than the outer length, the latter or gate proper is prevented from sagging and remains closed in a firm and secure manner; also, when occasion demands, the whole gate can be run one side or opened by pushing it through the rear post D, and then, by the removal of the uprights from the base of the center-post E, an opening of double the ordinary width of the gate is afforded.

By making one side of the gate plane, as above described, and fastening to the lower part, side, or edge of the top rail of that side the metal plate F, on which the gate moves over the pulleys or rollers N on the inner face of the posts E and D, I am enabled to dispense with the numerous pulleys or rollers heretofore used, and cause the gate to rest firmly on and over and upon only two pulleys or rollers, as above set forth. The gate thus moves more easily, and the friction is reduced to the minimum.

In making or setting the posts through which the gate moves, or by which it is supported, I ordinarily construct the center one by burying a piece of timber, E', of suitable size and length, firmly in the ground, and so as to leave about six inches out. To this exposed part, on either side, I fasten the uprights E, between which the gate moves. The outer and inner posts D and D' are made double—that is, each are made of two posts set about six inches apart in D, sufficiently wide apart to allow the gate to move freely between them. The strip *d* in D' stops the motion of the closing gate. A weather-board, G, may also be fastened to the tops of the center and inner posts, which will likewise constitute a brace or stay to strengthen or make the two firm. On the top of the outer end of the upper rail A, or to the upright to which the longitudinal bars or rails are fastened, I pivot the latch H. Its arm *h* extending along the rail is so much heavier than the jaw of the latch that when at rest it will cause the jaw to remain up and engage with the pin or bar *b* in the top part of the front or outer posts. By making this latch operate up instead of down I provide a fastening that cannot be opened by swine or cattle. The more this gate is pushed or thrown up, by the efforts of cattle or swine

to open it, the more secure and firm the latch becomes. A bent lever, I, is pivoted upon the top rail, one end resting under the rear end of the latch, and to the other is attached two ropes, K, which pass, respectively, over the double pulleys *e* in the one side or the other of the center-post, and thence under the weather-trough L to and over the pulley *m* in the top of the side post M. To the ends of each of these ropes is attached a slight weight, *k*, so that the said ropes are at all times held taut, whether the gate is open or shut, but not enough to open the latch, or the free end may be fastened to the post. A pull upon the said rope operates the lever, and causes the jaw of the latch to fall off, or be disengaged from the pin or bar in the top of the outer post; and when the gate closes the latch-head, passing under said pin or bar, easily and surely engages with it, and is held in place by the weight of its extended arm. The side posts are of the usual kind or description. The weather-boards L extending from the center-post, with the pieces *e e* attached to its edges, constitute inverted troughs, in which each of the said ropes moves, and by which they are securely protected from snow, rain, or ice, and are thus ready for use at any time or season. This construction also insures a great support to the center-post, since said trough and outer post constitute stays or braces, and make the said center-posts firm and solid. Under some circumstances I may choose to make the second bar from the bottom precisely like the top bar,

and place upon its side a metal plate in like manner, and arrange pulleys in the posts, as is done in case of the top bar. Such a duplication of the double-inclined rail will tend to prevent any sidewise swinging of the gate. As thus constructed and ready for use and operation, one quick sharp pull upon the end of the rope, on the side which is approached, serves to move the gate rearward upon its double inclines, on and over the pulleys in the posts, and impart sufficient momentum to force the apex or widest portion of the rail over said pulleys, whence the weight of the gate carries it on and wholly opens it. In like manner it can be closed.

The gate, when properly constructed, and when in usual working order, can be operated by a very small force, so that it can be easily opened or closed by a child.

Having thus fully set forth the nature and qualities of my invention, what I claim as new is—

The latch H, pivoted upon the top and outer end of the gate in combination with the bent lever I, operated by the cord K; passing over pulleys *e e* and *m m*, as set forth.

In testimony that I claim the foregoing I have hereunto set my hand this 27th day of October, 1873.

EZRA E. CHESNEY.

Witnesses:

M. REECE,  
A. B. COCHRAN.