

No. 672,792.

H. L. MITCHELL.

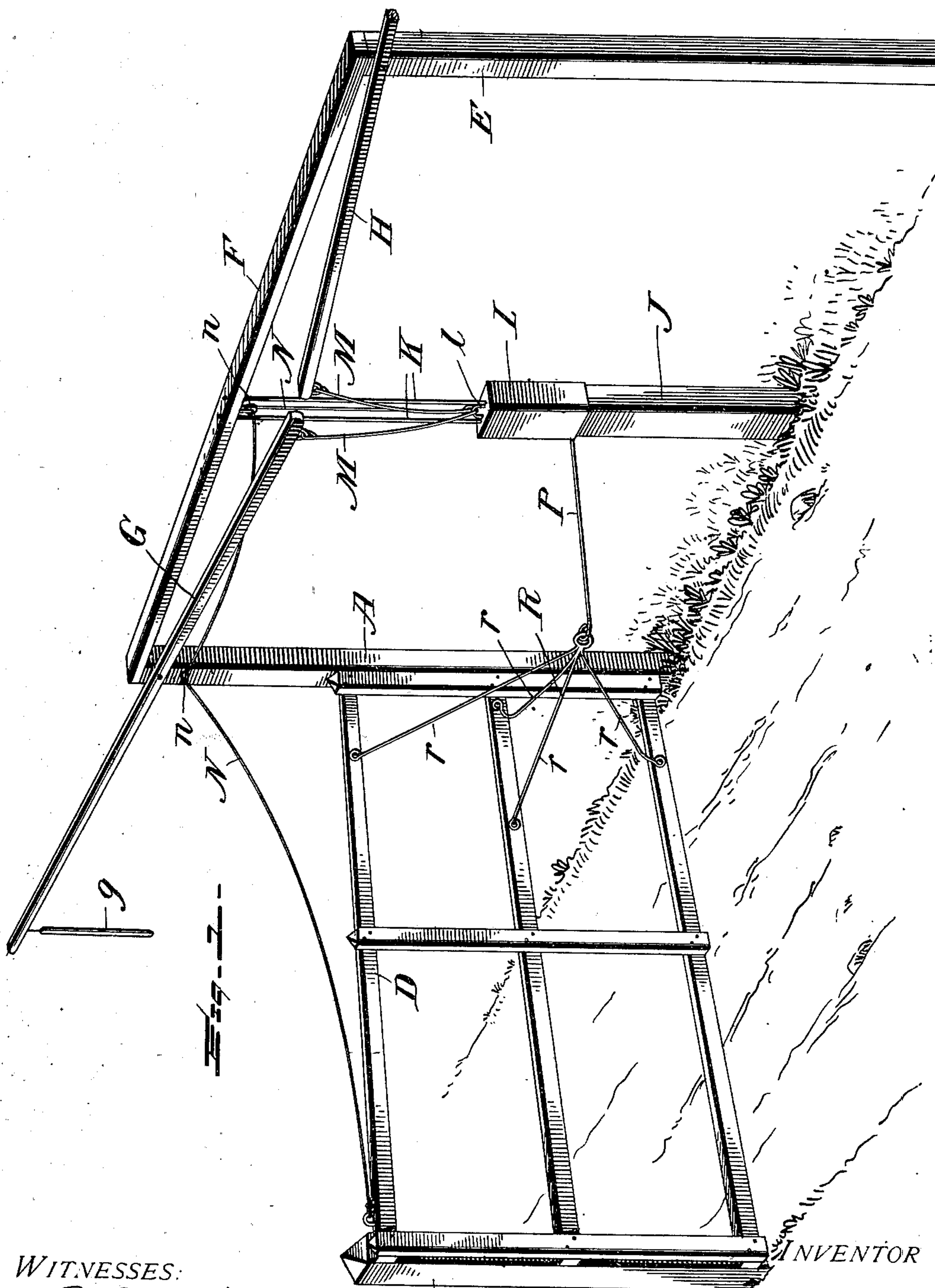
Patented Apr. 23, 1901.

GATE.

(No Model.)

(Application filed Aug. 24, 1900.)

2 Sheets—Sheet 1.



WITNESSES:

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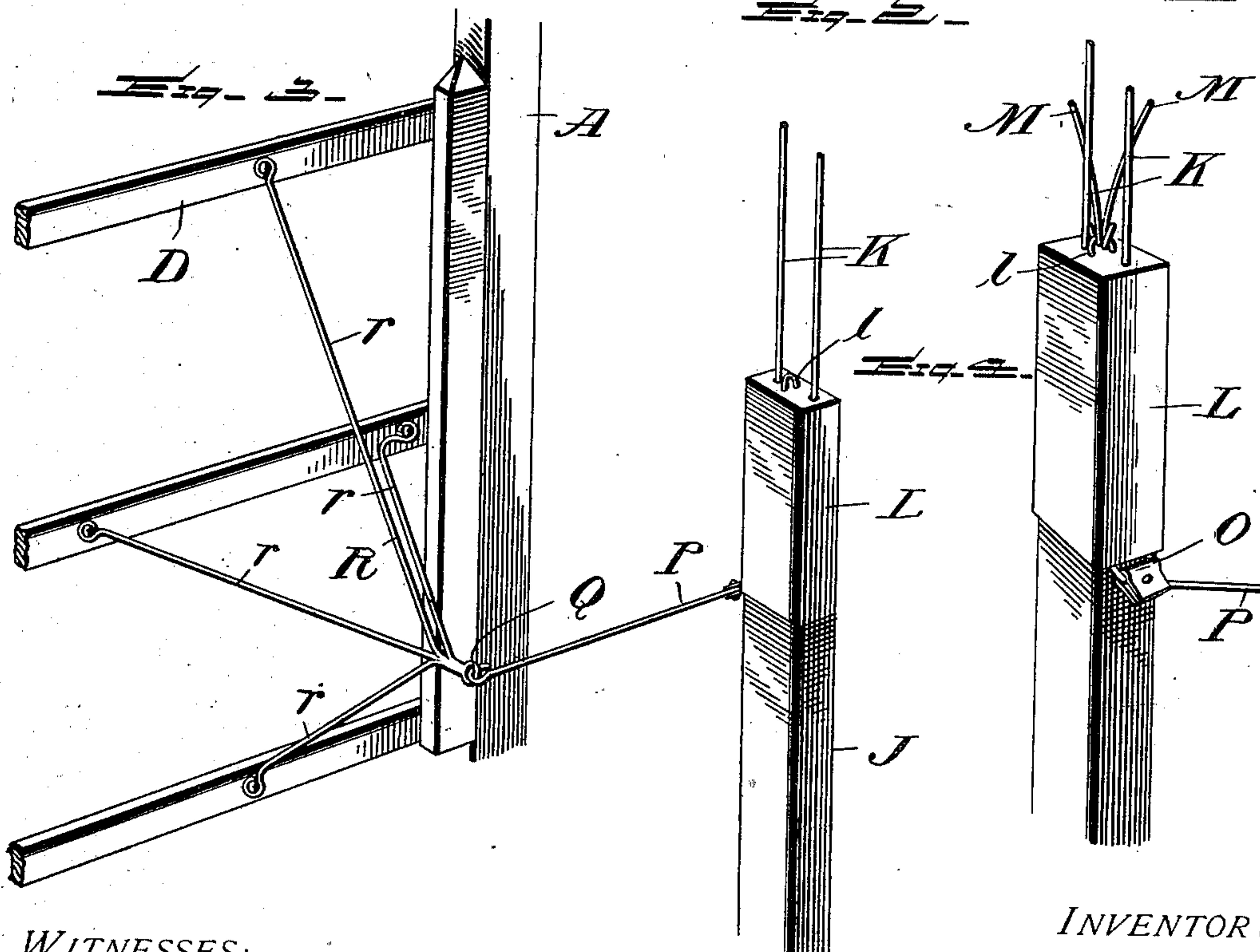
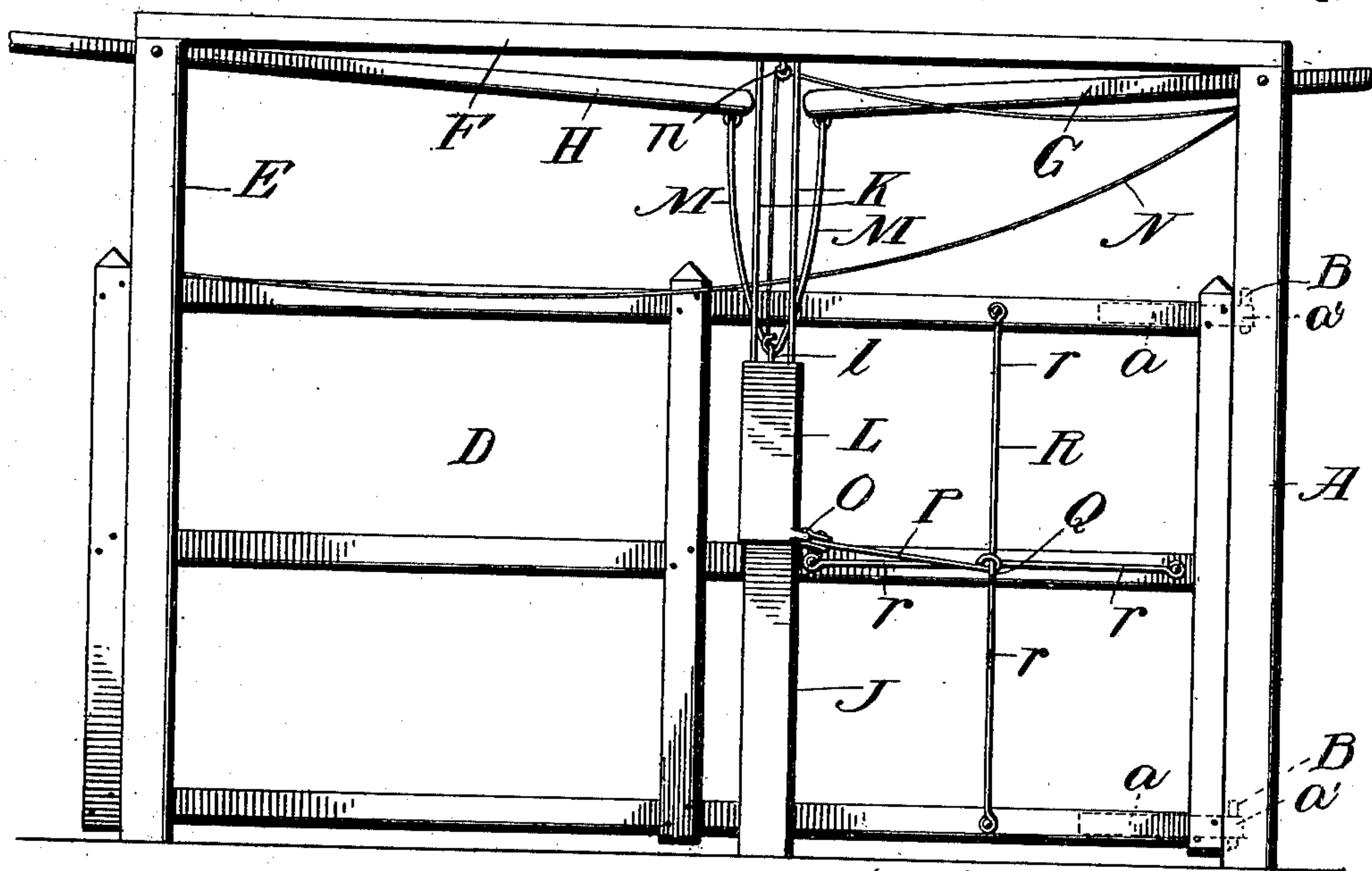
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UNITED STATES PATENT OFFICE.

HENRY LAWSON MITCHELL, OF ST. AUGUSTINE, ILLINOIS.

GATE.

SPECIFICATION forming part of Letters Patent No. 672,792, dated April 23, 1901.

Application filed August 24, 1900. Serial No. 27,926. (No model.)

To all whom it may concern:

Be it known that I, HENRY LAWSON MITCHELL, a citizen of the United States, residing at St. Augustine, in the county of Knox and State of Illinois, have invented certain new and useful Improvements in Gates; and I do hereby 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.

This invention relates to certain new and useful improvements in gates, and more particularly to the means for operating the same.

The invention has for its objects, among others, to provide a simple and inexpensive gate that may be easily operated and which shall be held securely either in its open or closed position without the employment of a latch. I provide hand-levers by which the gate may be opened or closed, and also a cord or analogous device by means of which the gate may be operated without manipulation of such levers. A vertically-movable weight is provided, operated either by the levers or the cord, and which serves to keep the gate firmly in either its open or closed position, prevents the gate from standing ajar or stopping on a dead-center, yet allows it to be operated with ease.

Other objects and advantages of the invention will hereinafter appear, and the novel features thereof will be specifically defined by the appended claims.

The invention is clearly illustrated in the accompanying drawings, which, with the letters of reference marked thereon, form a part of this specification, and in which—

Figure 1 is a perspective view of a gate and operating mechanism constructed in accordance with my invention. Fig. 2 is a rear view showing the gate open. Fig. 3 is an enlarged perspective view of the bracket on the gate and the weight and its connection with said bracket. Fig. 4 is an enlarged detail of the weight and the links connected therewith.

Like letters of reference indicate like parts throughout the several views.

Referring now to the details of the drawings by letters, A designates the gate-post, to which the gate is hinged or pivoted in any suitable manner, in this instance shown as provided with the straps α , the vertical eyes

α' of which are engaged over the vertical pins or analogous devices B.

C is the post against which the gate is designed to swing when closed. It corresponds to the latch-post of an ordinary gate; but in this instance no latch is employed.

The gate D may be of any well-known form of construction.

E is a lever-post, and the top of this post is connected with the top of the gate-post, which is extended vertically by a cross bar or plate F. On the upper portions of these posts A and E are pivoted the levers G and H, the outer ends of which may be provided with the usual pull device g , or the latter may be omitted, if desired.

A short post J is disposed between the posts A and E and supports the vertical rods K, which extend up to and are secured in the cross-bar F. Mounted to slide freely on these rods is the weight L, which is provided with vertical openings for this purpose, the said weight being free to be moved up and down by the connections with the inner ends of the levers and to seat itself on the top of the short post J when the weight is in its lowermost position. The weight is provided at the center of its upperface with an eye or analogous device l , to which are pivotally connected the lower ends of the links or rods M, the upper ends of which are pivotally connected with the inner ends of the hand-levers G and H, as shown.

N is a cord or rope attached at one end to the eye of the weight, and after passing over pulleys n on the under face of the upper cross-bar and on the gate-post extends to the outer end of the gate, where it serves to operate the weight to raise the same to actuate the gate without the employment of the hand-levers, if occasion should require.

Hinged to the lower edge of the weight is an arm or plate O, the outer end of which is shown as bifurcated, and in this bifurcation is pivotally attached one end of the rod or link P, the other end of which is pivotally connected with the loop or eye Q of the bracket R, which is attached to the adjacent face of the gate. This bracket may be of any suitable form, that shown being considered at this time preferable on account of its great strength. It comprises the four arms r , se-

cured to the longitudinal rails or bars of the gate and united at their outer ends to form the loop, the bracket being preferably composed of two rods, the bends of which are tied
5 or twisted together, as shown.

With the parts constructed and arranged substantially as shown and as above described the operation is as follows: Supposing the gate to be closed, as seen in Fig. 1, the weight
10 is down and the rod or link P is horizontal, thus forming a lock which keeps the gate securely closed against movement. Now by pulling down upon either of the levers or by pulling upon the cord N the weight will be
15 raised, and as the weight is raised it will break the lock formed by the rod P by pulling the same upward, and as the lock is broken the further movement of the weight upward will bring the said rod into an inclined and then into nearly a vertical position,
20 pulling the gate open, as will be readily understood. After the rod P passes the vertical line it begins to assume a horizontal position again, pulling the weight down with
25 it, and as the weight descends until it seats itself upon the top of the short post the rod again forms a lock, and the gate is firmly held against movement. To close the gate, the same movement occurs. The lever or cord
30 is pulled upon, which first serves to bring the rod P from its horizontal or locking position, and as the weight moves upward the rod is brought into substantially vertical position and the gate thrown into its closed position, the weight falling as the rod passes the vertical
35 line, and the rod is brought into its normal horizontal position, locking the gate against movement until the lever or cord is again actuated.

40 Modifications in detail may be resorted to

without departing from the spirit of the invention or sacrificing any of its advantages.

What I claim is—

1. The combination with a swinging gate, of a vertically-sliding weight, means for moving the weight, a bracket on the gate, and a connection between the bracket and weight serving to actuate the gate and to lock the same in either position, as set forth.

2. The combination with a swinging gate 50 and a vertically-movable weight, of guides for the weight, pivoted levers, pivotal connections between the same and the weight, a cord passing over pulleys and attached to the weight, and a locking-arm pivotally connected 55 with the weight and with the gate, as set forth.

3. The combination with a swinging gate, and a vertically-movable weight, of guides for the weight, pivotal connections between the weight and gate, embodying a locking- 60 arm, and means connected with the weight to raise and lower the same, as and for the purpose specified.

4. The combination with a latchless swinging gate, of a post, guides extending upward 65 therefrom, a weight mounted to slide on said guides, rods pivotally connected with the upper end of the weight, pivoted levers pivotally connected with said rods, a cord passing over pulleys and attached to weight to operate 70 same independent of said levers, a bracket on the gate and a rod pivotally connected therewith and with the lower end of the weight, all substantially as shown and described.

In testimony whereof I affix my signature 75 in presence of two witnesses.

HENRY LAWSON MITCHELL.

Witnesses:

L. F. THARP,

K. R. BABBITT.