

Ackerson & Harrah Lifting Gate.

N^o 66,668.

Patented July 16, 1867.

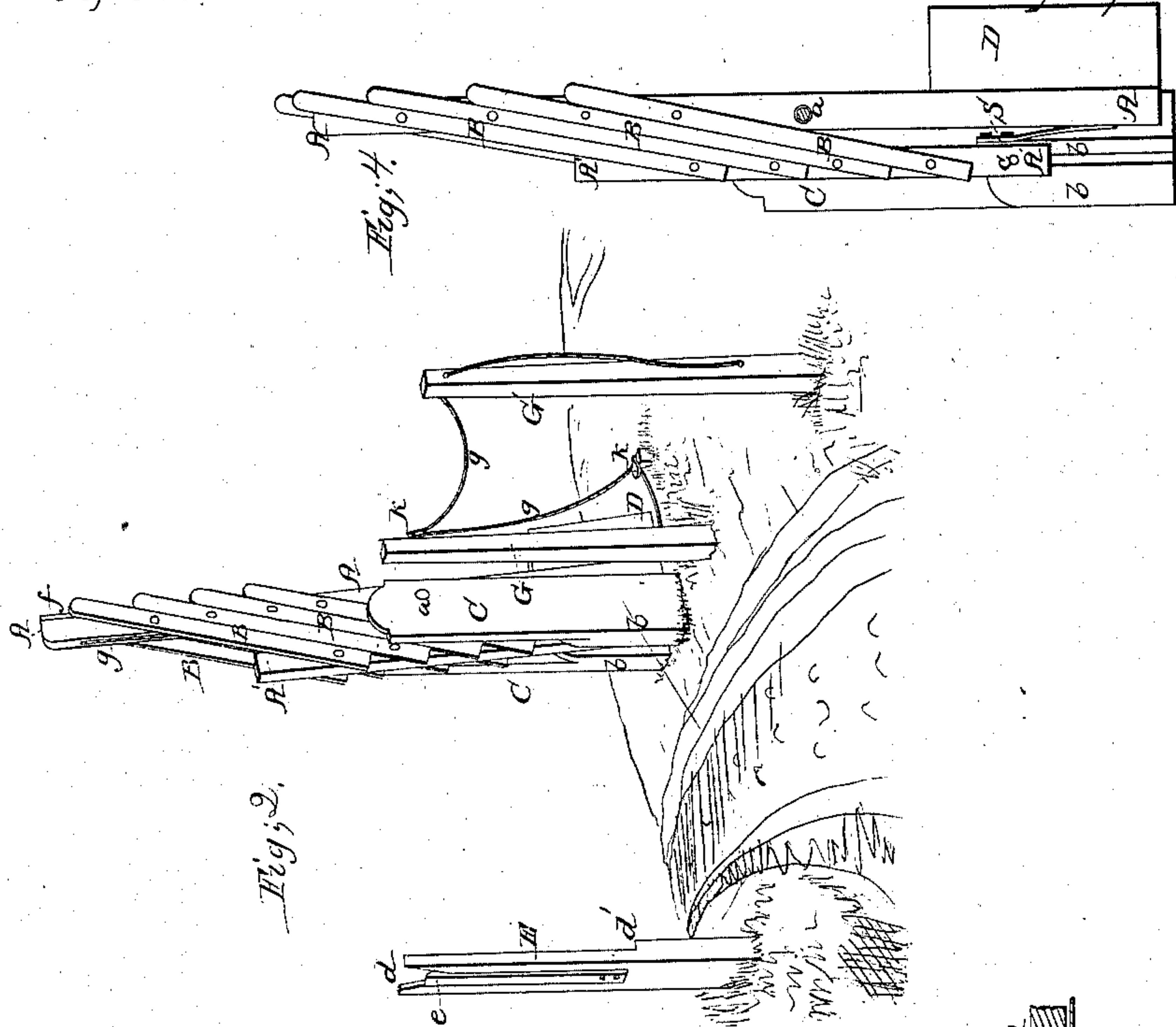


Fig. 3.

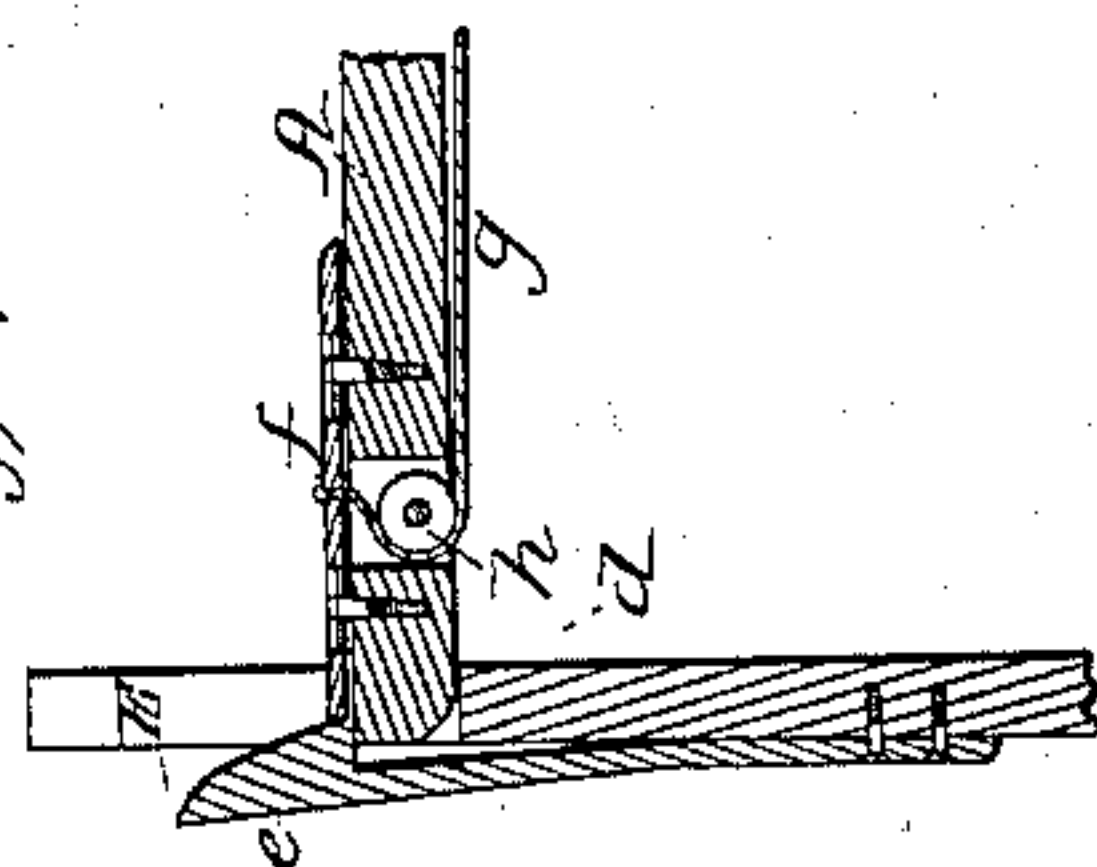
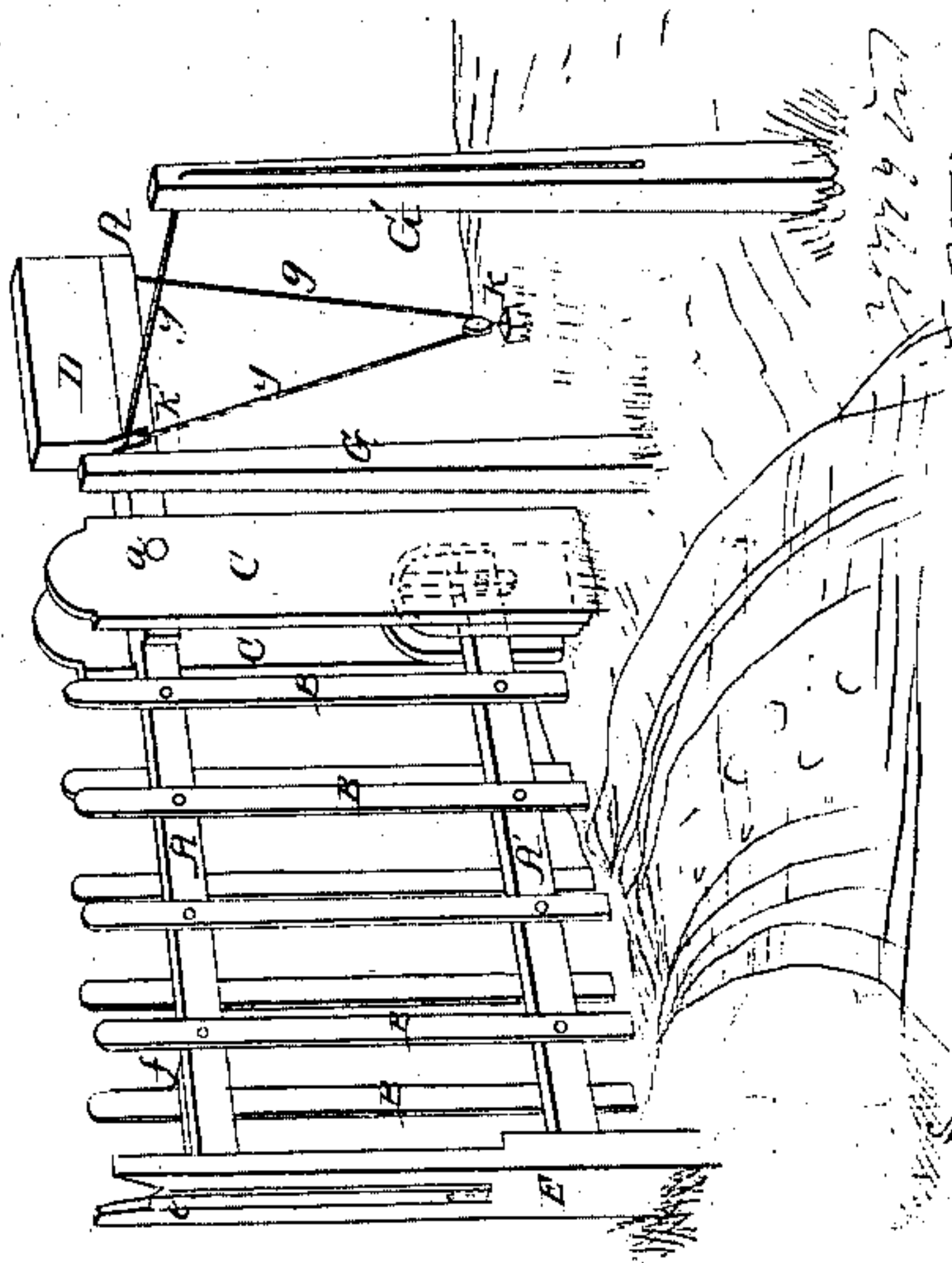


Fig. 4.



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CHARLES N. ACKERSON, OF BATH, NEW YORK, AND W. D. HARRAH, OF DAVENPORT, IOWA, ASSIGNORS TO J. C. DELANY, OF PHILADELPHIA, PENNSYLVANIA.

Letters Patent No. 66,868, dated July 16, 1867.

IMPROVEMENT IN FOLDING GATES.

The Schedule referred to in these Letters Patent and making part of the same.

TO ALL WHOM IT MAY CONCERN:

Be it known that we, CHARLES N. ACKERSON, of Bath, in the county of Steuben, State of New York, and W. D. HARRAH, of Davenport, in the county of Scott, and State of Iowa, have invented an Improvement in Folding Gates; and we do hereby declare the following to be a full, clear, and exact description thereof, reference being had to the accompanying drawings, making part of this specification, in which—

Figure 1 is a perspective view of the improved gate when closed.

Figure 2 is a similar view of the gate when open.

Figure 3 is a sectional view of the latch and unlatching device.

Figure 4 is a view showing one of the spring abutments and slotted guides upon one of the supporting posts.

Similar letters of reference indicate corresponding parts in the several figures.

This invention relates to certain novel improvements on the construction and operating of the folding picket gate which was secured by Letters Patent to W. D. Harrah, on the 20th day of September, 1864; the main object of which improvement is to afford a more substantial and durable support for such a gate when it is open and also when it is closed, and to provide for sustaining the gate against lateral strain, and protecting it against injury by passing and repassing objects, as will be hereinafter described.

Another object of our invention is to provide for relieving the gate from jar and injury, when suddenly opened, by the employment of springs or elastic cushions, so arranged as to form abutments for the loaded end of the top rail, when this rail is thrown up to a vertical or nearly vertical position, as will be hereinafter described.

Another object of our invention is to employ self-opening and closing contrivances, in conjunction with a folding picket gate, for the purpose of allowing a person riding upon a horse or in a vehicle to open the gate upon approaching it, or to close the gate after passing through the opening, as will be hereinafter described.

To enable others skilled in the art to understand our invention, we will describe its construction and operation.

In the accompanying drawings, A A' represent the two parallel rails of the gate, and B B are the pickets, which are pivoted to the rails in planes parallel to each other, and arranged, alternately, on both sides of these rails, so as to admit of their being set as close together as possible. The upper rail A is pivoted by a transverse pin, *a*, between two wide uprights C C, which form the gate-post proper, and this rail extends outward some distance from the pickets, and has a weight, D, secured upon it, as shown in the drawings. That portion of rail A which is between the uprights C C, and also that portion which carries the weight D, is considerably wider or thicker than that portion having the pickets pivoted to it. The thickness of this portion of the rail between the uprights C C should be such as will afford all the strength required for sustaining the other parts of the gate, and also admit the pickets to move freely between said uprights when the gate is opened, as shown in fig. 2. The rail A should fit snugly between the uprights C, so that they will afford good lateral stays and braces to the entire gate, whether it be open or shut. It will be seen that the uprights C C are made of an equal width from their lower to their upper ends, and that the lower part of the gate is brought between these uprights, when it is folded up, as shown in fig. 2. This mode of construction affords greater strength and a better lateral support for the gate than is the case in the patent above referred to, where the pickets do not fall between the uprights forming the post. By having the rails and pickets supported between the post-uprights, when the gate is opened, the uprights can be made of any desired height, and of such width as will completely protect the gate against injury by the force of the wind, or by vehicles passing through the opening. And by this arrangement the stationary supernumerary pickets which are found to be necessary in the patented gate above referred to are in my gate unnecessary.

The lower rail A' is made of an equal thickness throughout its length, and it is of such length as to extend from the fastening-post E into the space between the two post-uprights C C, where it is guided by a pin, *c*, working up and down in vertical slots which are formed by the narrow cleats *b b*. These cleats *b* are secured upon the inner surfaces of the post-uprights, and at their lower ends, as shown in the drawings, so as to contract the space at this point, and thereby afford firm lateral supports for the lower rail A', as well as guides

therefor. The free ends of the gate rails are supported laterally as well as vertically between the crotched guides *d d'* of the gate-post E, and on the outer side of this post, near its upper end, a vertical spring-latch, *e* is secured, so that its bevelled nose will catch over the end of the upper rail A, when the gate is shut, and thus fasten it down in place. This spring-latch is made so that the rounded end of rail A will force it back, and then allow it to spring over the rail by simply bringing the gate down in place upon the post E. When the upper end of the latch *e* is pressed outward by hand the gate can be thrown up to a vertical position. On top of the rail A, and near its free end, is a longitudinally sliding plate, *f*, the object of which is to enable a person to unlatch the gate by drawing or striking upon the cord *g* between the posts G G'. This cord is attached to the slide *f*, and passed forward over a roller, *h*, which is enclosed in a recess formed in the rail A beneath said slide, as shown in fig. 3. From this roller the cord passes along through metal eyes, which are secured to the lower edge of the rail A, and is carried downward and passed through a pulley-block, *k*, thence upward and passed through a pulley-block, *k'*, on post G, and finally secured to the post G', as shown in the drawing, figs. 1 and 2. The pulley-block *k* should be attached loosely to some fixed object at the base of the fence, a proper distance from the gate-post C C; and the pulley-block *k'* should be attached loosely to the post G, at such height from the ground as will allow of a person reaching that portion of the cord which extends between the two posts G G'. When the cord *g* between the posts G G' is quickly pulled, it will move the slide *f* forward against the latch *e*, and release the gate therefrom. If the cord is pulled with sufficient force the gate will not only be released from its latch, but it will be thrown entirely open, as shown in fig. 2. Then, by again giving the cord between parts G G' a steady pull, the gate may be closed and latched. In one case the cord draws the gate downward, and in the other case the loaded end of the gate rail A receives an impulse outward and upward. Thus by the movement of a single cord the gate may be unlatched and opened, or shut and latched. When the gate is opened quickly the weight D will acquire such momentum that it would strike the post-uprights C C with considerable force upon being suddenly arrested, were it not for the springs S, one of which we have shown in fig. 4. These springs are secured in such positions that they receive and break the shock caused by the sudden descent of the weight D, and thus allow the gate to assume its upright folded position without strain upon its joints, and without jar or injury or liability of breaking off the weight. On the gates for use we make a groove or gutter in the lower edge of the rail of sufficient size to carry the cord, which is confined in the groove by means of straps across the groove or wire staples, or any mechanical construction answering the purpose.

Having described our invention, what we claim as new, and desire to secure by Letters Patent, is, as an improvement on W. D. Harrah's patent gate, dated September 20, 1864—

1. The construction and arrangement of the several parts of the within-described folding gate, all operating together as herein set forth.
2. The combination of slide *f* and latch *e* with a cord, *g*, arranged substantially as and for the purposes described.
3. The slide *f* in combination with the spring-catch *e*, the said slide serving as a means whereby to force the spring *e* out of contact with the gate, substantially as described.

C. N. ACKERSON,
W. D. HARRAH.

Witnesses:

C. F. KINGSLEY, as to C. N. ACKERSON.
J. C. DE LANY,
C. A. RENNENSNYDE, } as to W. D. HARRAH.