

(No Model.)

W. DONNAN.

FLOOD GATE.

No. 321,697.

Patented July 7, 1885.

Fig. 1.

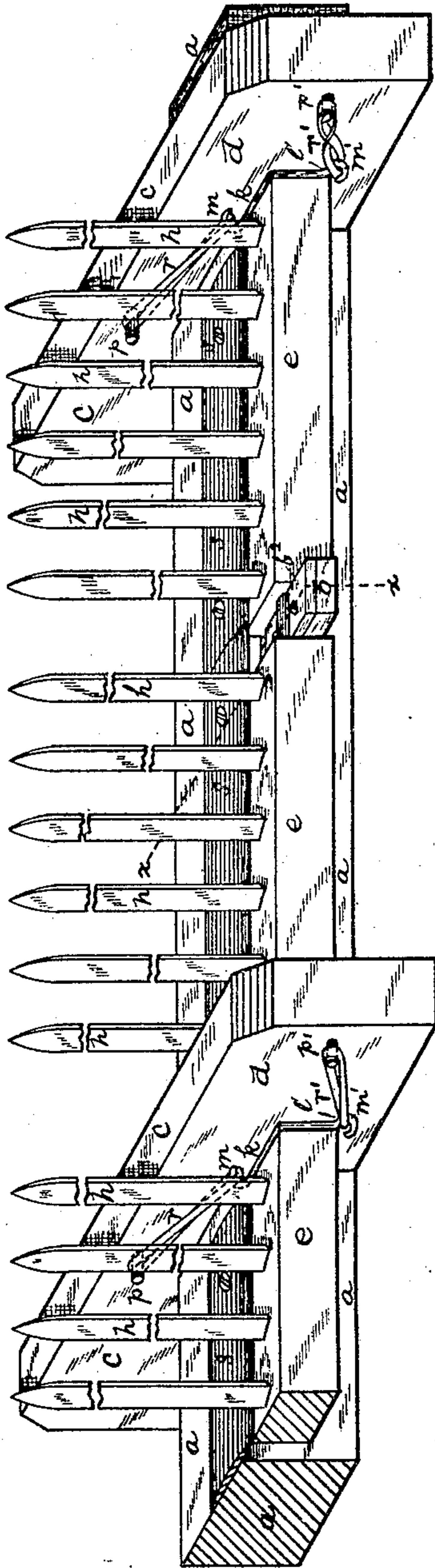


Fig. 3.

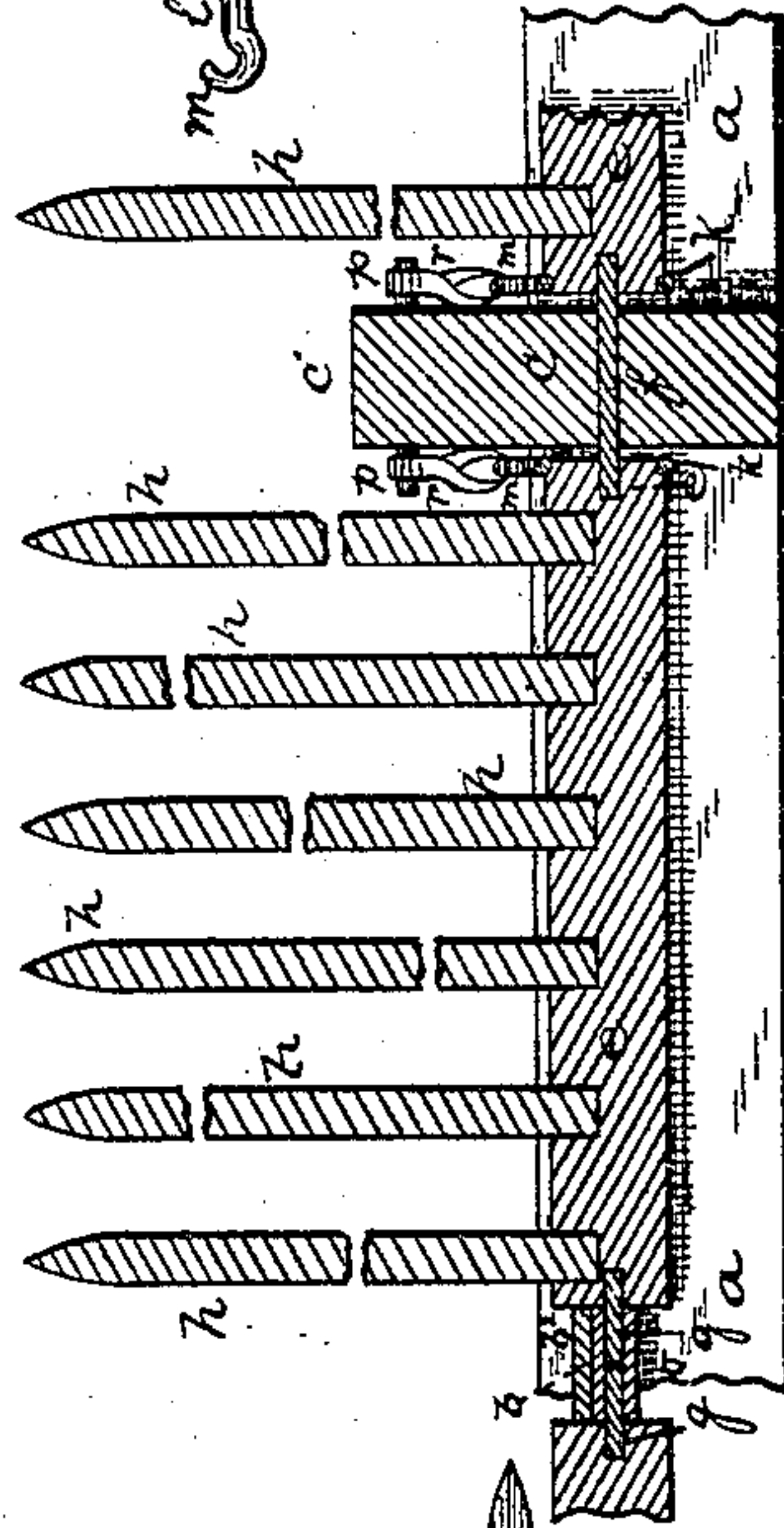


Fig. 4.

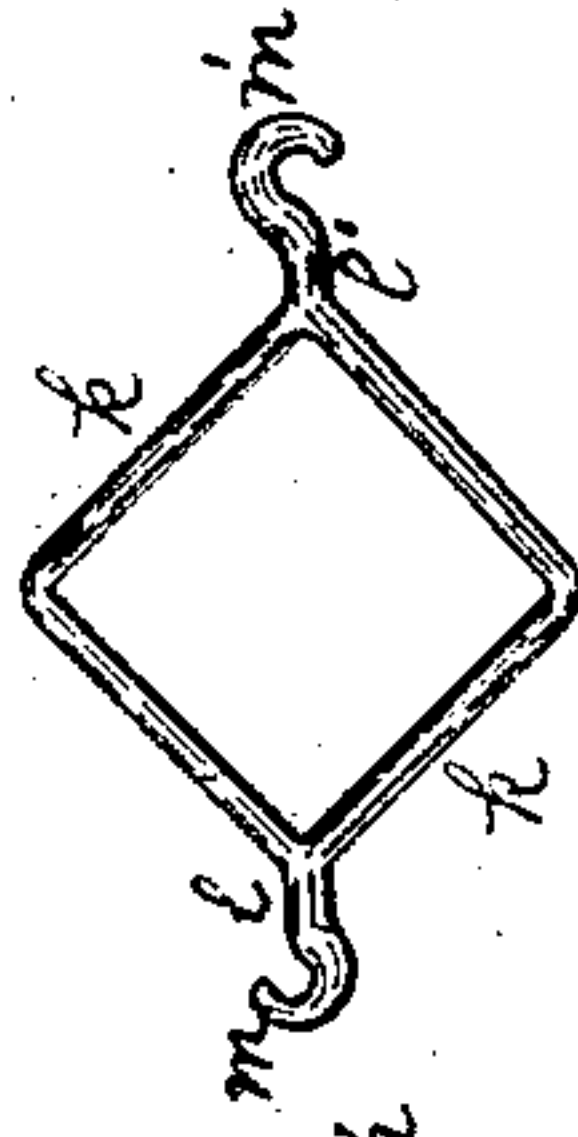
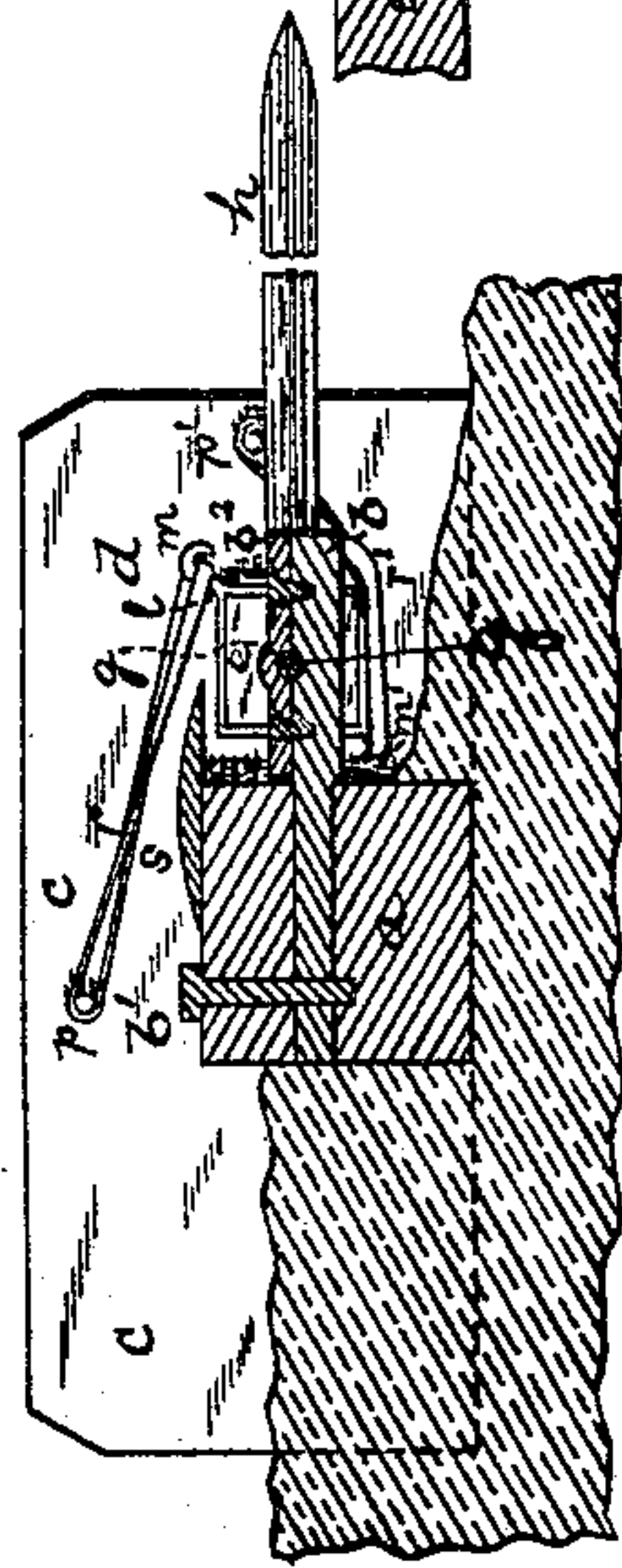


Fig. 2.



Witnesses.

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# UNITED STATES PATENT OFFICE.

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## FLOOD-GATE.

SPECIFICATION forming part of Letters Patent No. 321,697, dated July 7, 1885.

Application filed July 31, 1884. (No model.)

*To all whom it may concern:*

Be it known that I, WILLIAM DONNAN, of Burgettstown, in the county of Washington and State of Pennsylvania, have invented a new and useful Improvement in Flood-Gates for Creeks; and I do hereby declare the following to be a full, clear, and exact description thereof.

My invention relates to flood-gates employed in runs or creeks to separate fields, these gates extending across the creeks, and so doing away with the necessity of fencing on each side thereof, where the property on both sides is owned by the same person, thus enabling him to use the ground which was necessarily left outside the fence along the creek.

The object of my invention is to provide a cheap and durable flood-gate, which can be constructed by unskilled persons.

It consists, essentially, in a log or beam extending from side to side of the creek, and having cross-planks at suitable intervals thereon, and a bearing between these cross-planks, and bars or blocks carrying wickets pivoted to said cross-planks and bearing, and having braces fitting over one end and connected to rubber springs for holding the wickets in an upright position, the bars or blocks being thus firmly supported, and being turned in their bearings by any pressure on the wickets, so that in case of a flood in the creek any logs, drift, or like heavy substance coming in contact with the wickets will press them down, and as soon as the weight or pressure is removed from them the springs will draw them back to their upright position.

It also consists in certain improvements in the construction of the different parts of the flood-gate, as hereinafter specifically set forth.

To enable others skilled in the art to make and use my improvement, I will describe the same, referring to the accompanying drawings, in which—

Figure 1 is a perspective view. Fig. 2 is a sectional view on the line *x x*, Fig. 1. Fig. 3 is a longitudinal section of the bar or block, showing its pivotal bearings; and Fig. 4 is a view of the brace.

Like letters of reference indicate like parts in each.

The log or beam *a* is sawed or trimmed to

substantially rectangular shape in cross-section, and is mortised at intervals to receive the bearings *b*, which are fitted in mortises and secured therein by means of a spike or pin, *b'*. The cross-planks *c* are then fastened by bolts or pins to the log *a*, midway between the bearings *b*. These planks *c* extend above the log and in front of it, as at *d*, to form bearings for the pivoted bars or blocks *e*. The log *a* is secured or embedded across the run or creek, along the bed thereof, in any suitable manner. The blocks *e* are formed of wooden bars about four inches in diameter and of any desired length, and at one end a hole is bored to fit over the pivot-pin *f*, extending out from the plank *c*, this pin being generally driven through the plank, and forming the pivot for the roller on each side thereof. The pivot-pin *g* is secured in the other end of the block *e*, and rests in the bearing *b*, being held therein by the cap *b'*. Two of these blocks are thus pivoted between each cross-plank, one end of each fitting over a pin, *f*, in the plank, and the pivot-pin *g* at the other end of the block resting in the bearing *b* between the planks. The blocks *e* carry any desired number of wickets *h*, and at the end next to the planks *c* is secured the iron brace *k*, the brace being of proper size to fit the block tightly, and being driven firmly thereon, and thus strengthening the block at the point where it is most subject to strain. The brace *k* has the arms *l* and *l'* extending out therefrom, these arms being provided at the end with the hooks *m* and *m'*, and one arm, *l*, extends out from the rear upper corner and the other arm, *l'*, from the forward lower corner of the block. On the cross-plank *c* above and back of the block is the pin or spike *p*, and the rubber band *r* fits around the upper hook, *m*, and the pin *p*, the pressure or draft of the spring holding the wickets *h* of the block in an upright position; but when any pressure stronger than the spring comes against the wickets they are pressed down thereby, and as soon as this pressure is removed the spring-band *r* draws the wickets back to their normal upright position. To increase the force to draw the block back to its proper position, the pin or spike *p'* is driven into the cross-plank *c* in front of the block, and the rubber band *r'* passed over the hook



*m'* and this pin *p'*, the two rubber bands acting together, and in case either breaks the other band having sufficient strength to retract the block when turned by pressure on the wickets.

5 I have found that these rubber bands have advantages over the ordinary metal spring, as they can be more easily secured in place, and, though metal springs are liable to rust and lose their strength, I find that the rubber  
10 spring when covered by water remains unaffected for a long time.

Secured to the log or beam *a* above the block, and extending out against the wickets when in an upright position, are the shields  
15 *s*, these shields being formed of planks spiked or screwed to the log. These shields serve as stops to the blocks as the drawing pressure of the springs holds the wickets against them when in an upright position. They also serve  
20 to direct any drift, dirt, &c., carried down by the current over the opening or space between the blocks and the beam, and so prevent the clogging of the blocks by these substances. As the blocks and their bearings are sup-  
25 ported and held in proper line by the beam, the flood-gate is not liable to get out of order or be twisted out of true line by any flood-current passing over it, and though cheaply built is firm and substantial. In case of flood-  
30 waters any heavy logs, drift, &c., carried down thereby will strike against the wickets and press them down, but as soon as they pass over the rubber spring or springs, through the brace  
35 *k*, draws them back to their normal upright position, so that they are not injured thereby.

The shields *s* prevent the wickets from being pressed over in case any animal comes against the front thereof, and if it comes against the back thereof the spring-bands draw the wickets against it and cause them to  
40 strike it, and thus drive it off.

What I claim as my invention, and desire to obtain by Letters Patent, is—

1. In flood-gates, the combination of the log or beam extending across the creek and carrying bearings *b* and cross-planks *c*, the blocks  
45 or bars *e*, carrying wickets and mounted between said bearings and cross-planks, and rubber springs connected to hooks on the blocks and pins *p* on the cross-planks, substantially  
50 as and for the purposes set forth.

2. In flood-gates, the combination of the block or bar *e*, carrying wickets *h* and pivoted in suitable bearings, the brace *k*, fitting there-  
55 on and having the arm *l* and hook *m*, and the rubber springs *r*, substantially as and for the purposes set forth.

3. In flood-gates, the combination of the log or beam *a*, blocks *e*, mounted in bearings supported by said log, and shields *s*, extending  
60 over said blocks, substantially as and for the purposes set forth.

In testimony whereof I, the said WILLIAM DONNAN, have hereunto set my hand.

WILLIAM DONNAN.

Witnesses:

J. P. DONNAN,  
D. M. PRY.