W. H. JOHNSON.

FLOOD-FENCE.

No. 192,765. Patented July 3, 1877.

Fig. 1.

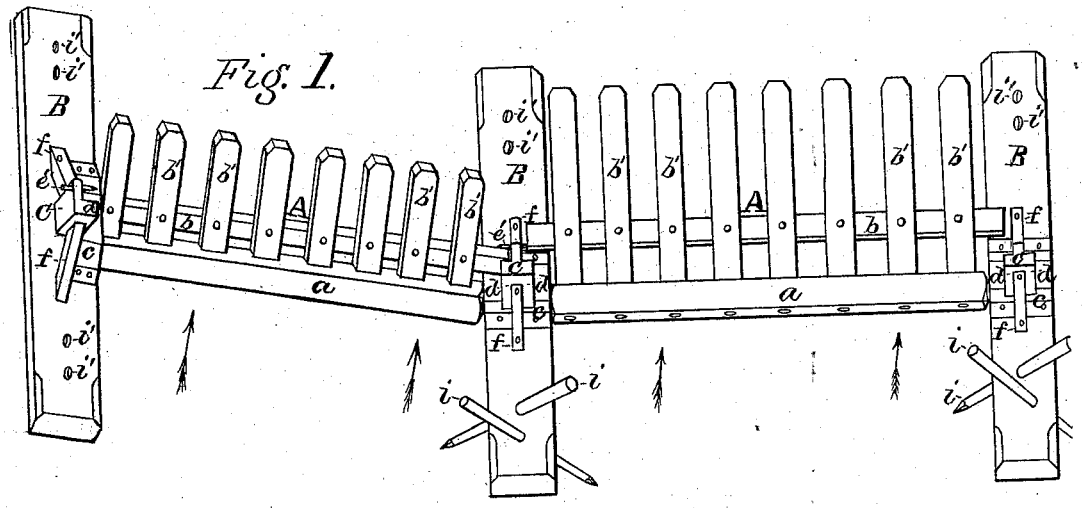


Fig. 2.

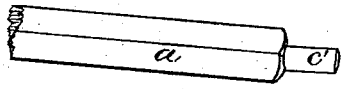


Fig. 3.

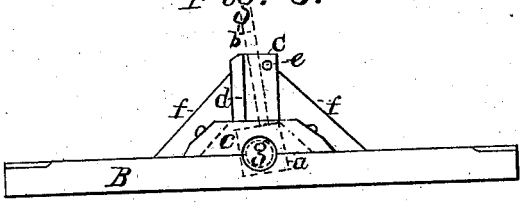


Fig. 4.

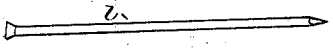
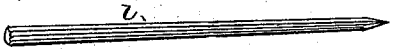


Fig. 5.



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UNITED STATES PATENT OFFICE.

WILLIAM H. JOHNSON, OF MADISON COUNTY, OHIO, ASSIGNOR OF ONE-HALF HIS RIGHT TO H. P. USTICK.

IMPROVEMENT IN FLOOD-FENCES.

Specification forming part of Letters Patent No. **192,765**, dated July 3, 1877; application filed December 11, 1876.

To all whom it may concern:

Be it known that I, WILLIAM H. JOHNSON, of the county of Madison and State of Ohio, have invented a new and useful Improvement in Flood-Gates, which improvement is fully set forth in the following specification:

My invention relates to that class of flood-gates used across water-courses to connect sections of fencing, and to prevent stock from passing over the same.

The objects of my invention are cheapness of construction, durability, the construction of a flood-gate giving the least resistance to the water, and which is hung so as to fall and rise with the same—in other words, being a diving flood-gate; also, which shall be an effectual barrier against the passage of stock in either position.

Figure 1 is a view of two connected sections of my diving flood-gate, one section raised and the other down. The left section is inclined with the bank. Fig. 2 is a section of one of the pivot beams or stringers. Fig. 3 is a side elevation of one of the posts with its mud-sill and corbel-block. The position of the flood-gate is shown in dotted lines. Fig. 4 is a view of an iron bolt, for securing the mud-sills. Fig. 5 is a view of one of the wooden pins used for the same purpose.

A is the flood-gate; B, the mud-sills; C, the posts, rising from the same; *c*, the corbel-block; *c'*, the round journal cut on the end of the pivot-beam or bottom rail *a* of the gate A. *b* is the tie-rail on the lower side of the uprights *b'*. It is bolted to them a little below their middle line, and has its ends extending beyond the uprights, so as to catch against the projecting flange *d* of the post C, the latter being provided with a hole, *e*, at the top for the wooden pin *e'* to secure the gate in its erect position. (See left section of A, Fig. 1.) The post C (see Fig. 3) is mortised into the mud-sill B, is firmly braced by the braces *f*, and is further strengthened against any lateral strain by the corbel-blocks *c*, which are spiked or bolted against the lower end of the post to the mud-sill. All the posts connecting sections of the gate have two corbel-blocks, one on each side spiked to their mud-sills, the braces *f* extending down between them.

The object of this corbel-block is not only to strengthen the parts but to admit of the main stringers or pivot-beams *a* being placed in position after the mud-sills B are prepared to receive them without the necessity of moving the latter to introduce the rounded ends *c'* of the same. For this purpose one-half only of the circular mortise or hole *g* is cut out of the top of the mud-sill and the journal *c'* of *a* laid into it. The other half is cut out of the corbel-block *c*, which is then laid over it, and is spiked or bolted to the mud-sill. The mud-sills B are firmly bedded and secured by the pins *i*, (see Fig. 1,) which are driven through the holes *i'* in each end, at an outward angle, into the earth in the bottom of the channel.

These pins, when made of wood, as shown in Figs. 1 and 5, are about four feet long and two inches diameter. When the stream has a rock bottom iron pins or bolts are used, which can be made smaller, as shown in Fig. 4.

It will be noticed by reference to Fig. 3 that the hole *g* is made a little to the right or below the middle of post C, so that when standing the gate A leans a little up stream, as seen in Fig 3, dotted lines; also in left section, Fig. 1, the arrows indicating the direction of the water. This will allow the gate to remain erect, even should the pins *e'* be removed until thrown down by the water. The pins *e'* are intended to keep the gate upright only till the water rises enough on the gate to break them—acting therefore as safety-pins.

In the construction of the gate A the uprights *b'* are driven into mortises in the stringer *a* to a sufficient depth to firmly secure them. They can be further fastened, if desired, by spikes or pins, though this is not required, unless for dry streams, where the gate may be exposed for long intervals of time to the sun and air after submersion. The pieces *b'* are usually about four inches wide, and are placed at about the same distance apart. The holes *g* are made large enough to allow the round end *c'* to fit loosely in them, and the shoulders of stringers *a* are cornered off or rounded to allow the gate-section to fall freely, even when set inclined in the bed or on the banks of the stream. The flanges *d* of post C are

spiked on, and extend out far enough laterally to give the ends of the tie-rail *b* a sufficient bearing, the pin *e'* being inserted on the lower side of them.

Any ordinary workman can construct my diving flood-gate. The holes *g* in the mud-sill and corbel-block can easily be cut out with an ordinary chopping-ax.

Any number of gate-sections can be connected together, the length of each section being governed by the topography of the ground upon which it is placed, and the amount of pressure at the maximum height of the water which it is desired to have it sustain.

I claim as my improvement—

1. The flanged post C, with braces *f* and corbel-block *c*, in combination with the mud-sill B with its pins *i i*, as and for the purpose hereinbefore set forth.

2. In a flood-gate the mud-sill B, provided with the corbel-block *c*, in combination with the posts C, having braces *f*, flanges *d*, and holes *e*, together with the safety-pin *e'* to retain the rail *b*, as and for the purpose hereinbefore set forth.

3. The bottom hinge, so located with reference to the flanges *f* that the gate is supported during low water in a position slightly inclined from the vertical in the up-stream direction, as described.

WILLIAM H. JOHNSON.

Attest:

JOHN MILLIKEN,

ELIHU BURNETT.