

(No Model.)

I. D. O'DONNELL.  
HEAD GATE.

No. 598,807.

Patented Feb. 8, 1898.

Fig. 3.

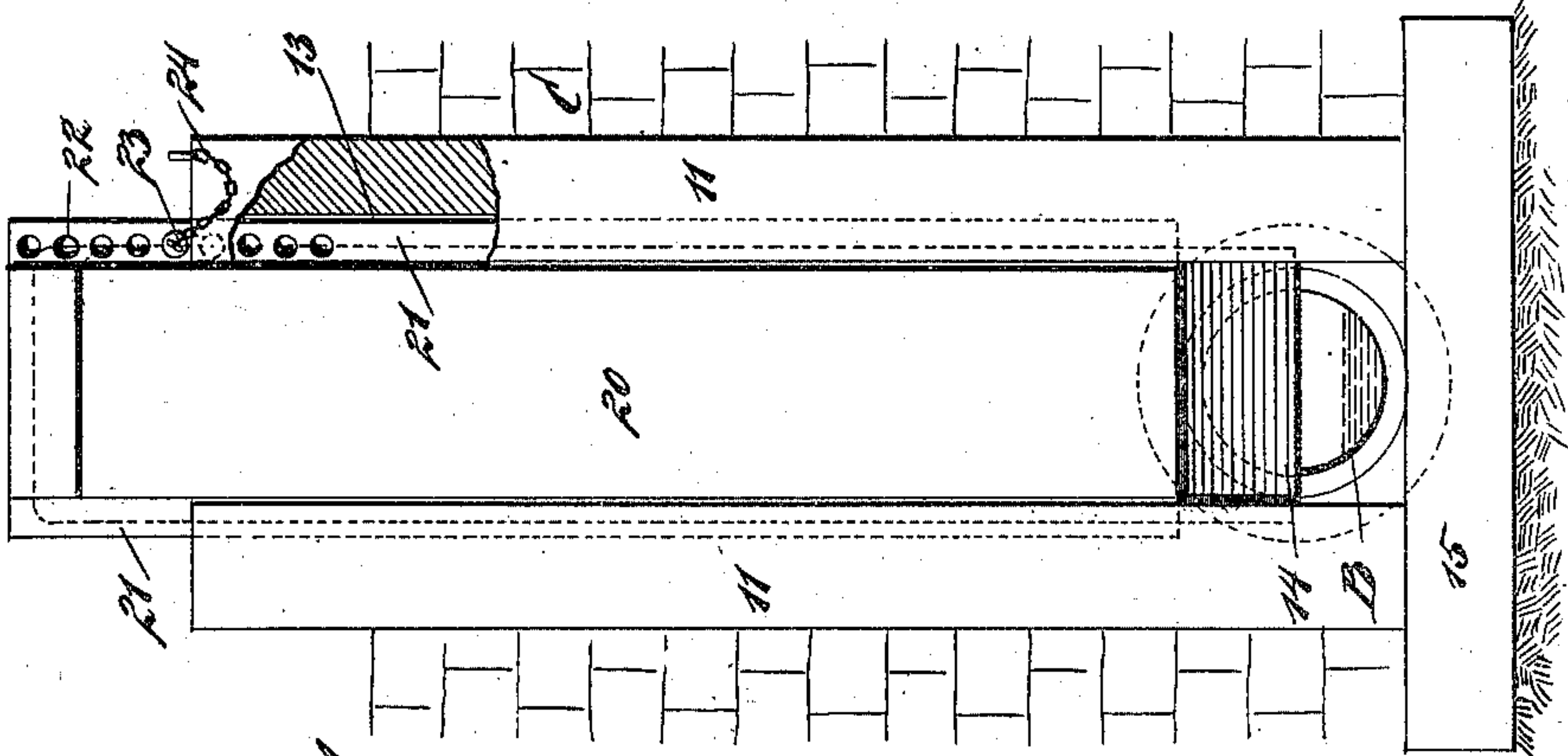


Fig. 2.

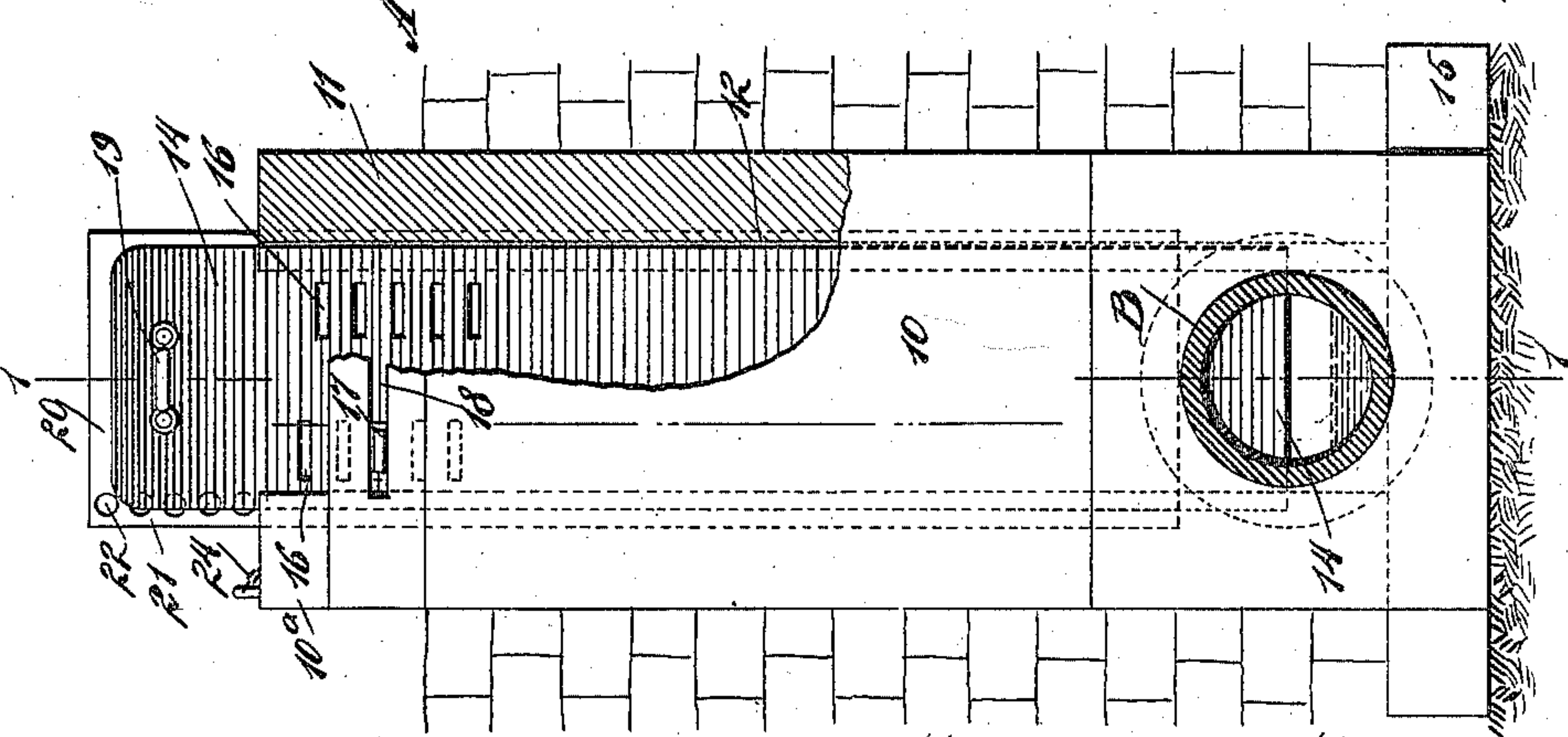


Fig. 1.

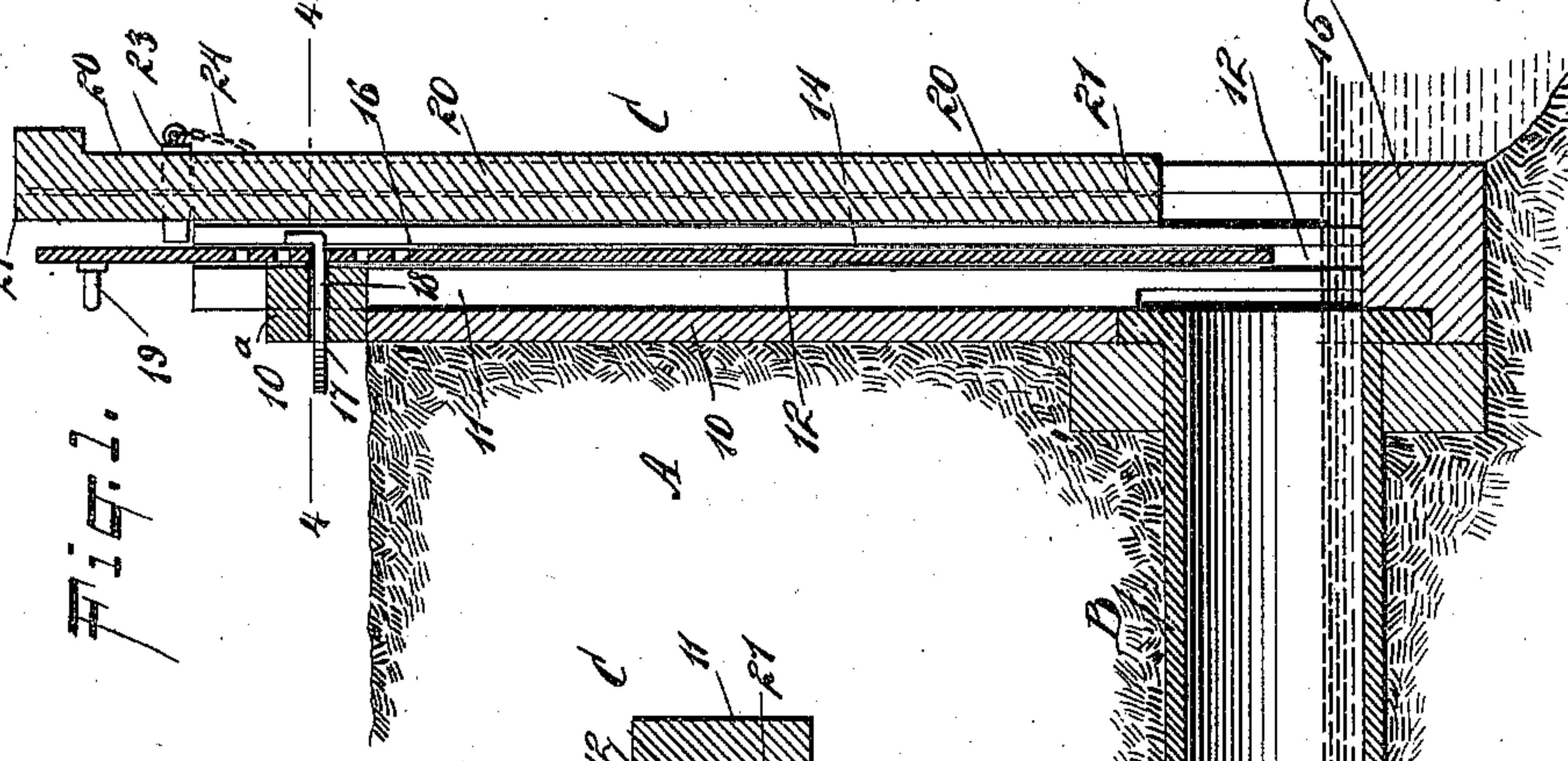
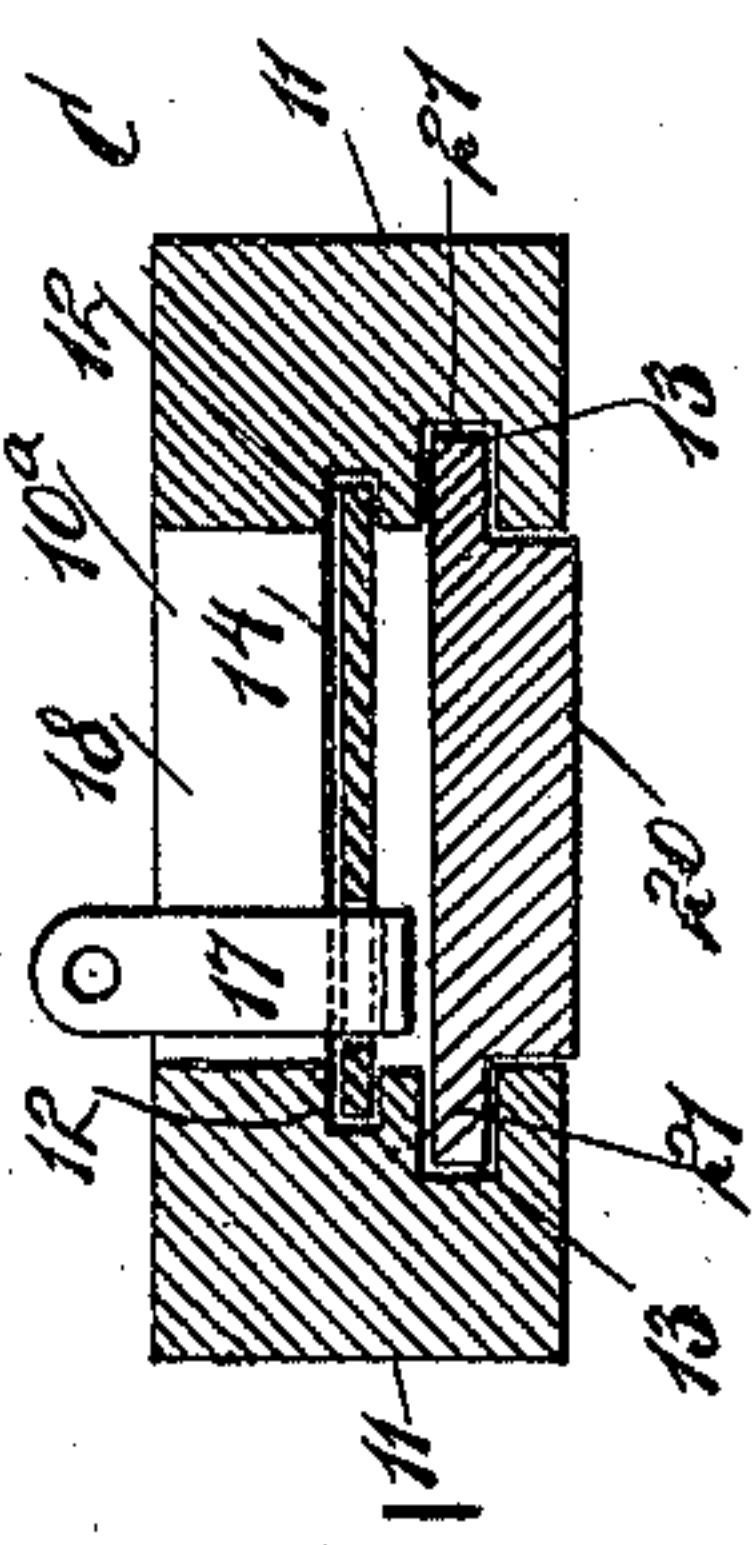


Fig. 4.



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# UNITED STATES PATENT OFFICE.

IGNATIUS D. O'DONNELL, OF BILLINGS, MONTANA.

## HEAD-GATE.

SPECIFICATION forming part of Letters Patent No. 598,807, dated February 8, 1898.

Application filed August 18, 1897. Serial No. 648,662. (No model.)

*To all whom it may concern:*

Be it known that I, IGNATIUS D. O'DONNELL, of Billings, in the county of Yellowstone and State of Montana, have invented a new and Improved Head-Gate, of which the following is a full, clear, and exact description.

The object of my invention is to so construct a head-gate that it will comprise a frame and two independently-operated gates, one of the said gates being the general or main gate to be used and set by the company supplying water to the gate and the other gate being an auxiliary or individual gate, as it is completely under the control of the consumer of the water supplied to the gate.

A further object of the invention is to so construct the head-gate that the main or company gate may be locked in position to admit of the passage of a predetermined quantity of water through the gate in a predetermined length of time, while the consumer may lock the auxiliary or individual gate closed, or partially closed, and thereby have complete control of the water-supply.

A further object of the invention is to provide a head-gate which may be set at the front of a ditch-bank in such manner as not to interfere with the bank to any extent, permitting the bank to be so built that it may be used as a roadway for teams.

The invention consists in the novel construction and combination of the several parts, as will be hereinafter fully set forth, and pointed out in the claims.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar characters of reference indicate corresponding parts in all the figures.

Figure 1 is a vertical section through the improved head-gate and through the ditch-bank, the section being on the line 1 1 of Fig. 2. Fig. 2 is a rear elevation of the gate, parts being broken away. Fig. 3 is a front elevation of the gate, parts being broken away; and Fig. 4 is a horizontal section on the line 4 4 of Fig. 1.

A represents a ditch-bank against which the back 10 of the head-gate C abuts. The back 10 of the head-gate is closed, and at the top the back is increased in width, forming practically a sill 10<sup>a</sup>, which is above the ditch-bank. A pipe B, leading from the ditch,

and which is carried through the bank, extends through the back 10 of the gate at a point near the bottom. Each side piece 11 of the gate-frame is provided with two longitudinal slideways 12 and 13, corresponding slideways being opposite. A main gate 14, preferably made of metal, is held to slide in the slideways 12, and when the main gate 14 is closed it will rest upon the bottom sill 15 of the gate-frame in a water-tight manner, completely cutting off the water-supply from the front portion of the structure.

A series of openings 16 is made in the upper portion of the main gate 14, the said openings being shown in two rows, each opening being at a different distance from the bottom portion of the said main gate. The main gate may be locked in a position to completely close the mouth of the water-supply pipe by passing a latch-bar 17 through one of the apertures 16 and through an opening 18, made in the upper sill 10<sup>a</sup> of the gate-frame. The inner end of the latch-bar is preferably bent at an angle to the body, so that it cannot be withdrawn from the outside or back portion of the gate-frame, and at the back portion of the gate-frame the latch-bar is usually provided with an opening to receive a padlock, or the latch-bar may be locked in position at the outside of the gate-frame in any other suitable manner. A handle 19 is provided for the main gate 14, and through the medium of this gate the company supplying water to the consumer may regulate said supply.

An individual gate 20 or a gate which is to be used by the consumer only is held to slide in the ways 13 in the frame of the structure. The individual or consumer's gate is preferably provided with ribs 21 at its sides, which enter the slideways 13 in order that the front of the said individual gate may be flush with the front of the frame of the structure, and this portion of the structure is flush with the front face of the ditch-bank. A series of openings 22 is made in the individual gate, preferably at the top and near one side. Usually these openings are produced in one of the ribs of the individual gate, as shown particularly in Fig. 3. When the individual gate is closed, it will remain closed in a water-tight manner by reason of its own weight, and when the said individual gate is raised to ex-



pose more or less of the opening between the bottom of the frame of the structure and the bottom of the main or company gate the individual gate may be held in such position  
 5 by passing a pin 23 through one of the openings 22 in such manner that the pin will rest upon the upper surface of the frame of the structure, as is also shown in Fig. 3. This pin is usually attached to the frame by a  
 10 length of chain 24 or its equivalent.

It will be observed that access cannot be gained to the latch-bar 17 while the individual gate is in the frame, nor can the latch-bar be removed from the frame, even though  
 15 its lock be removed, until the individual gate is carried above the latch-bar or entirely withdrawn from the frame, and as the individual gate is necessarily somewhat heavy such a task would be difficult and is only undertaken  
 20 when the company or main gate is to be set.

After the amount of water is measured in the lateral and agreed upon between the buyer and the ditch company, for example, the main or company gate is set and locked, and, as  
 25 heretofore stated, after such adjustment of the main gate the individual gate may be opened or closed at the option of the consumer, since in an irrigated country water is not needed at all times, and sometimes more water  
 30 is required than at others.

This head-gate enables a company supplying water to control its supply and the buyer or user of the water to husband the supply. The gate is exceedingly simple and durable.  
 35 It is economic also in its construction.

Having thus described my invention, I claim as new and desire to secure by Letters Patent—

1. In a head-gate, the combination with the  
 40 frame, and the water-supply pipe leading thereinto, of a main gate held to slide in said frame in front of the outlet of the water-supply pipe and provided with a series of openings in vertical alinement adapted to receive  
 45 a latch-bar, and a second gate held to slide in said frame in front of said main gate and provided with means for holding it at different heights, said second gate being placed in close proximity to the main gate, whereby it serves  
 50 to cover the rear end of the latch-bar in the main gate, as specified.

2. In a head-gate, the combination, with a

frame having slideways therein, and a water-supply pipe leading into the frame, of a main or company gate held to slide in the frame in  
 55 front of the outlet of the water-supply pipe, being capable of partially or entirely cutting off the water-supply, an individual gate adapted for the consumer's use held to slide in the frame in front of the main gate, being  
 60 capable of controlling the supply of water discharged from beneath the main gate, and an independent locking device for each of the said gates, as and for the purpose specified.

3. In a head-gate, the combination, with a  
 65 frame, a water-supply pipe leading into the said frame, a main gate adapted for company use held to slide in the said frame, being capable of entirely or partially cutting off the supply of water from the front portion of the  
 70 structure, the said main gate being provided with openings, and a latch-bar passed through the openings in the main gate from the front of said gate and through an opening in the frame of the structure, of an individual gate  
 75 adapted for the consumer's use held to slide in the frame in front of the main gate, and a locking device for maintaining the individual or consumer's gate in a position to partially or entirely expose an outlet-opening beneath  
 80 the main gate, the individual gate being also capable of completely closing the front portion of the structure, as specified.

4. In a head-gate, the frame provided with  
 85 two parallel slideways therein in close proximity to each other, a main gate held to slide in one of said slideways and provided with a series of vertically-alined openings, a latch-bar formed with a bent end and arranged to be inserted through one of said openings and  
 90 through an opening in the structure of said frame, the end of said bar opposite the bent end being adapted to receive a lock, and a second gate held to slide in the other of said guideways and adapted to cover the bent end  
 95 of the latch-bar, said latter gate being provided with a series of openings out of alinement with the openings in the first-named gate and adapted to receive a locking device as and for the purpose specified.

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Witnesses:

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