

M. J. ADAMS.  
 FLUMES FOR ESTABLISHING PERMANENT CHANNELS IN  
 RIVERS, &c.

No. 195,201.

Patented Sept. 18, 1877.

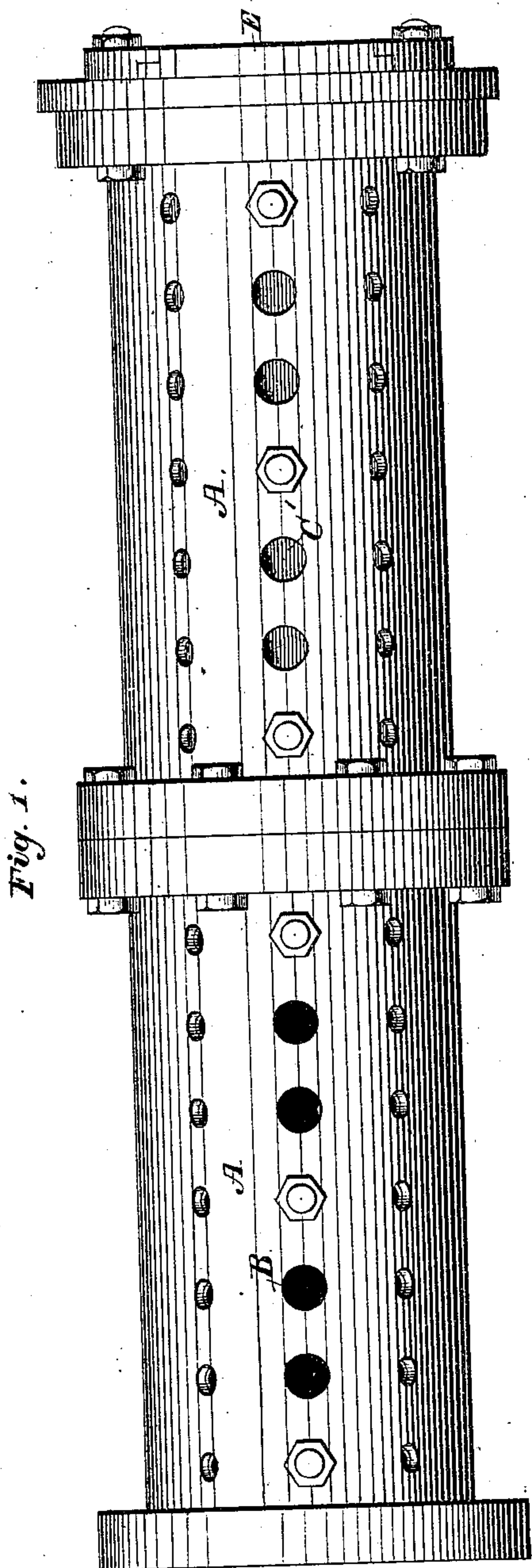
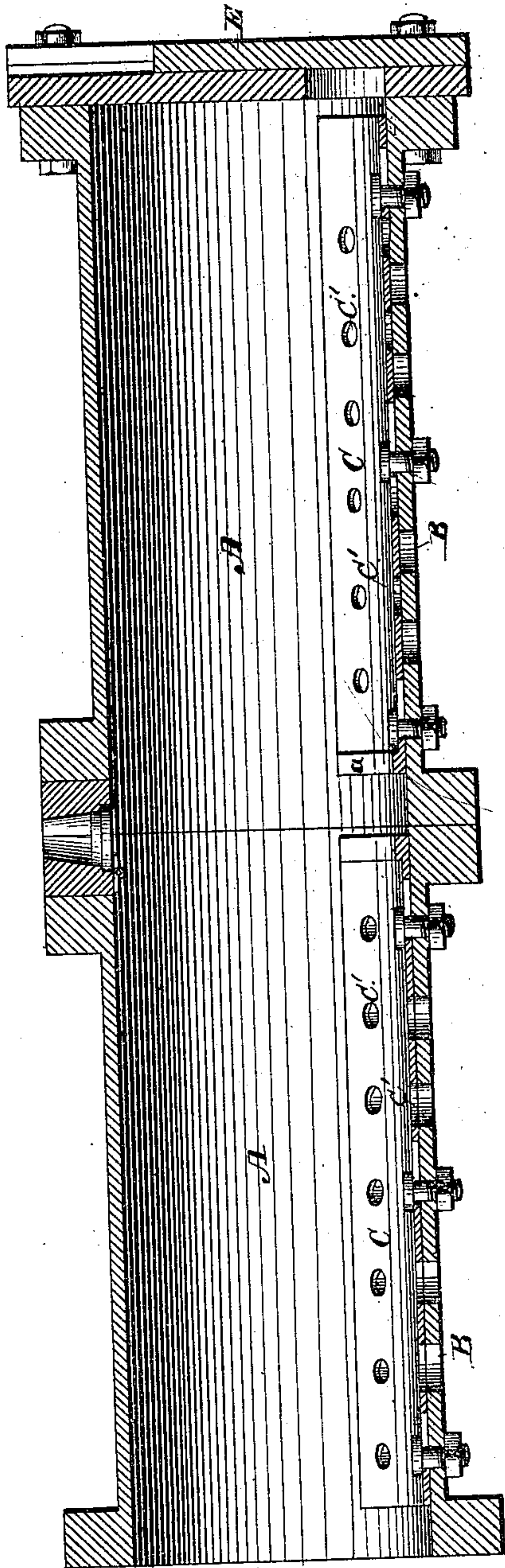


Fig. 1.

Fig. 2.



Inventor.

Attest.

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# UNITED STATES PATENT OFFICE.

MANNING J. ADAMS, OF ST. PAUL, MINN., ASSIGNOR OF ONE-HALF HIS RIGHT  
TO NATIONAL TUBE WORKS COMPANY, OF McKEESPORT, PA.

IMPROVEMENT IN FLUMES FOR ESTABLISHING PERMANENT CHANNELS IN RIVERS, &c.

Specification forming part of Letters Patent No. 195,201, dated September 18, 1877; application filed  
August 30, 1877.

*To all whom it may concern:*

Be it known that I, MANNING J. ADAMS, of the city of St. Paul, county of Ramsey, and State of Minnesota, have invented a new and useful invention for Establishing a Permanent Channel in Rivers, Canals, Sloughs, and Still Waters, which invention is fully set forth in the following specification, reference being had to the accompanying drawings.

The object of my invention is to establish permanent channels in rivers, sloughs, canals, and still waters by laying in the most suitable place in the same, from head to mouth, one continuous line of flumes, having valved openings.

In the drawings, A are the flumes. B are the perforations on the under side of the flumes A; C, the valves; and E is the gate. The flumes are made of lap-welded iron of the necessary thickness, diameter, and length. The holes are placed promiscuously or parallel, and holes are made at the joints or couplings, the flanges of which are secured together by bolts. A gate, E, is placed at the end of the line of flumes, sliding in suitable ways. The valves C are made of the same material, and of a length and width sufficient to cover the rows of perforations B, and are provided with holes C', corresponding to those in the flume. They are retained in place, with freedom to slide lengthwise, by means of slots and bolts, as shown. They are also provided with a transverse brace or rib, *a*, on one end, by which they may be operated. The lever-valves are made of buoyant material, each being provided with a flange and hinge, fastened to a casting, which fits the hole in the joint. The gate at the end is made of a casting, with guideways of wrought-iron, and is opened and shut by a draw-bolt. This gate is opened to drive away sand or mud at the end of the tube.

Operation: The flumes are laid in the most

suitable place on the bed of the stream in one continuous line, and are joined by couplings or flanges with bolts, the perforated part of the flumes resting on the bed of the stream. A dam or pump is placed at the head, forcing the water through the flumes, &c., securing the required pressure. The flumes are all closed when not in operation. When it becomes necessary to operate, the sliding valves are opened by inserting a lever through the lever-valve in the joint, which reaches the brace or rib on the slide-valve, and, by pressing against said rib, opens or shuts the valves, the slots and bolts keeping them in their place. When the valves are opened the water rushes out from the flume, abrading the sand or mud around and about the same, driving it away from its neighborhood, cutting as low as is required, and securing the lowest and cleanest place for the waters to traverse. The sand or mud is driven into sloughs and open places, forming embankments, and necessarily confining the waters in the neighborhood of the flumes, thereby creating a permanent channel.

I claim as my invention—

1. The above-described flumes for establishing permanent channels in rivers, sloughs, canals, and still waters, the same being provided with ports or valves for the forcible discharge of water upon the bottom, and a gate at the lower end, and mechanism for applying pressure at the upper end, substantially as described.

2. The combination, with the above-described flumes, of the lever-valves, as and for the purpose set forth.

3. The combination, with the above-described flumes, of the sliding valves, as set forth.

MANNING J. ADAMS.

Witnesses:

WM. CADY,  
CHRISTIAN SIEGFRIED.