W. SCHMOLZ.

Construction of Dams.

No. 165,371. Patented July 6, 1875.

Fig 1.

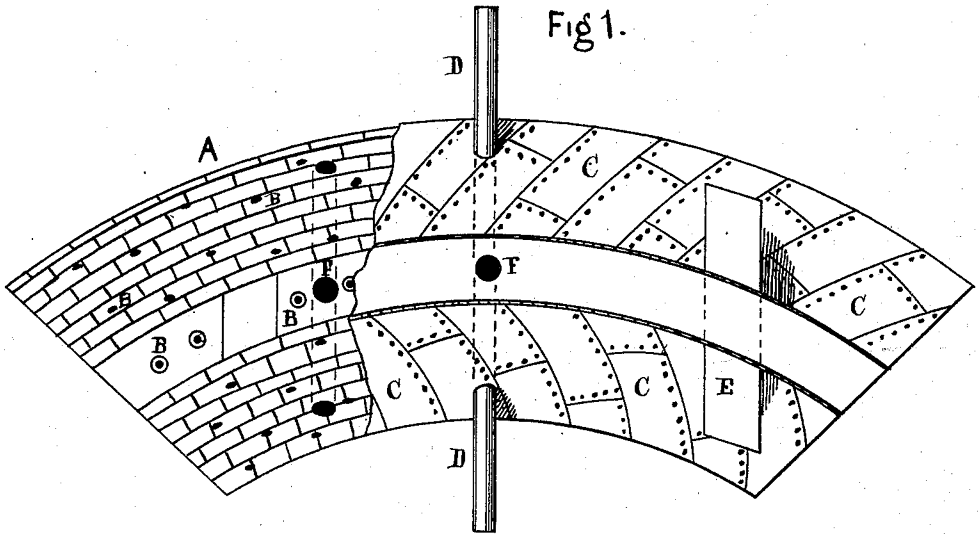


Fig 2.

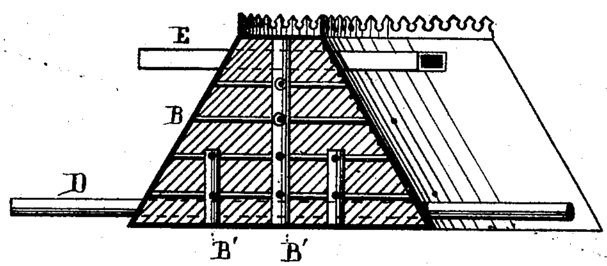
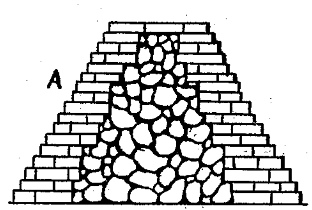


Fig 3



Witnesses
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UNITED STATES PATENT OFFICE.

WILLIAM SCHMOLZ, OF SAN FRANCISCO, CALIFORNIA.

IMPROVEMENT IN THE CONSTRUCTION OF DAMS.

Specification forming part of Letters Patent No. **165,371**, dated July 6, 1875; application filed November 30, 1874.

To all whom it may concern:

Be it known that I, WILLIAM SCHMOLZ, of San Francisco, in the county of San Francisco and State of California, have invented an Improved Method of Constructing Dams for Reservoirs and Streams; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawings and to the letters marked thereon.

My invention relates to an improved method and material for the construction of dams such as are employed for forming reservoirs of water in the courses of rapid-running streams; and it consists in so shaping the embankment that it shall be curved or arched against the force or pressure of the stream, and in the combination, in said embankment, of earth, masonry, or rubble, and iron plates, which are properly riveted and secured over and above the embankment proper.

Referring to the accompanying drawings for a more complete explanation of my invention, Figure 1 is a plan or top view, showing part of the plates removed from the masonry. Fig. 2 is a transverse vertical section, showing the manner of tying and the conduits for seepage water. Fig. 3 is a section, showing a form of construction.

A is the body of my dam, which is suitably formed of masonry, and is tied together both in the direction of its length and transversely by means of iron rods B B, these being crossed, in turn, by the vertical braces B′. In building my dam I first form a solid abutment within each of the banks of the stream, and against these abutments of masonry the ends of the dam are built. In shape I prefer to form my dam in the arc of a circle or elliptic curve, with its convex side toward the stream, thus giving it the greatest possible resistance to any pressure from that direction. The slope of the dam from both sides may be as great as is considered suitable, and these faces are covered by plates of iron C, which are riveted together, so as to protect the whole surface, as shown in Fig. 1. D is the supply-pipe from the interior of the reservoir, and E is the waste or overflow sluice. Within the body of the dam I make vertical passages or shafts F, which extend down to the waste and supply pipes D, in which suitable gates are made to operate in order to shut off or admit the passage of water through the pipes.

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

A dam adapted for use in rapid rivers or streams, wherein a body composed of masonry tied together by iron rods and filled with rubble, earth, or other suitable material, and having an exterior sloping backward and curved up stream, is wholly covered by iron plates, substantially as described and shown.

In witness whereof I have hereunto set my hand and seal.

WM. SCHMOLZ. [L. S.]

Witnesses:

C. W. M. SMITH,

PHILIP MAHLER.