

(No Model.)

F. A. GARTNER.
DAM CONSTRUCTION.

No. 583,226.

Patented May 25, 1897.

Fig. 1.

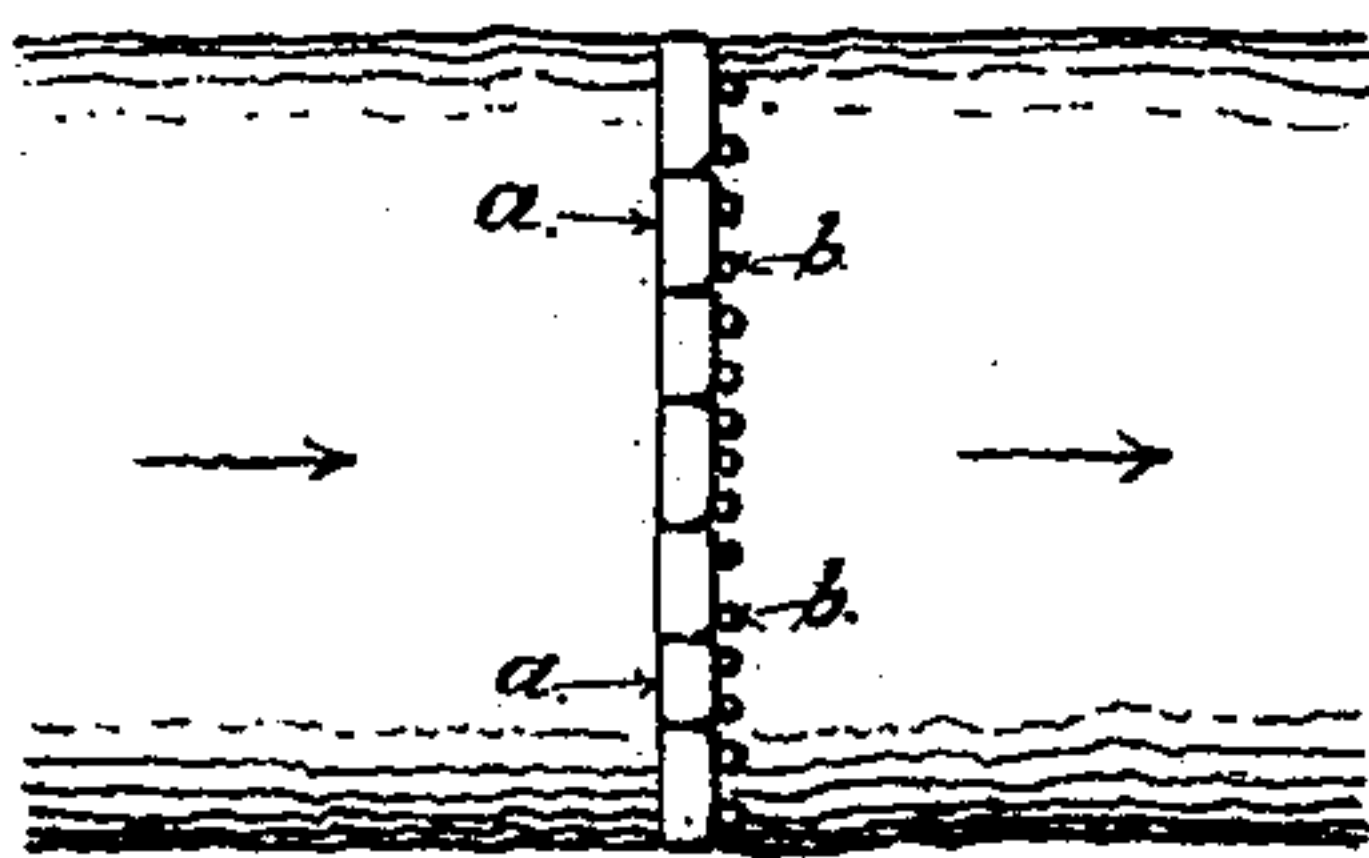


Fig. 2.

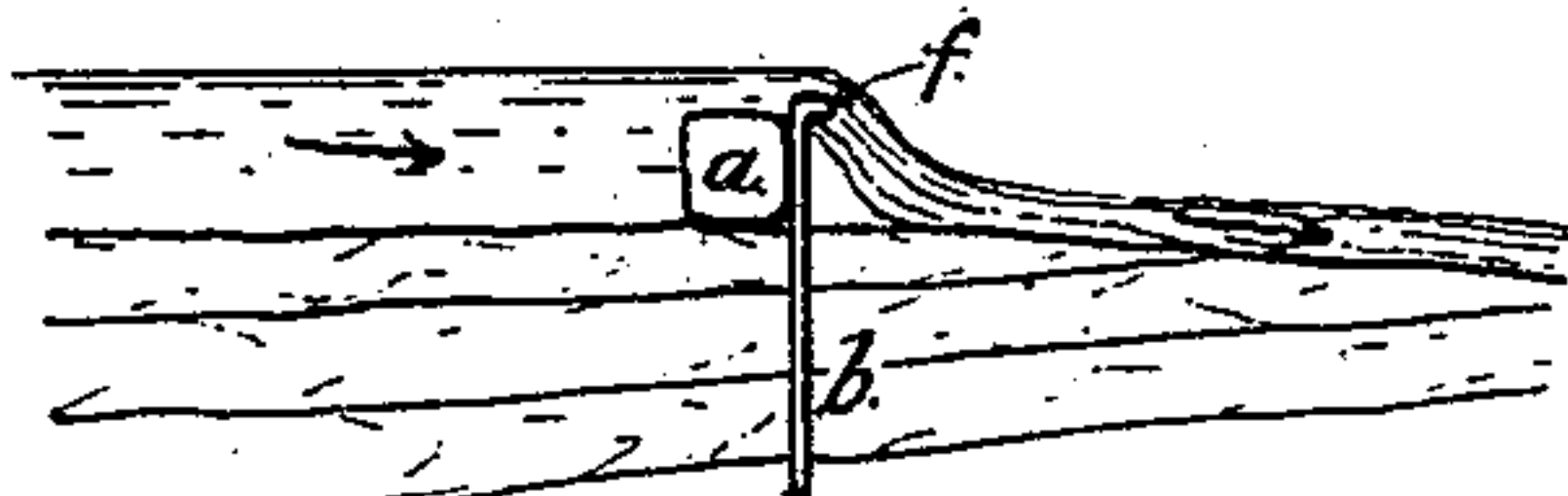


Fig. 3.

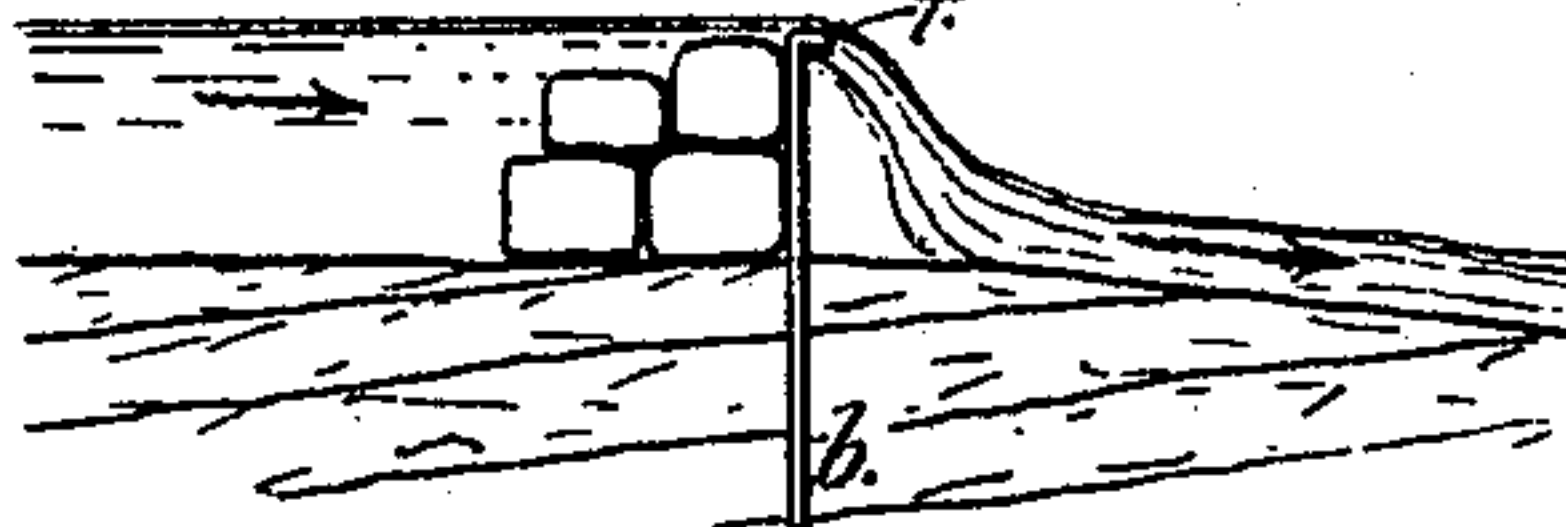


Fig. 4.

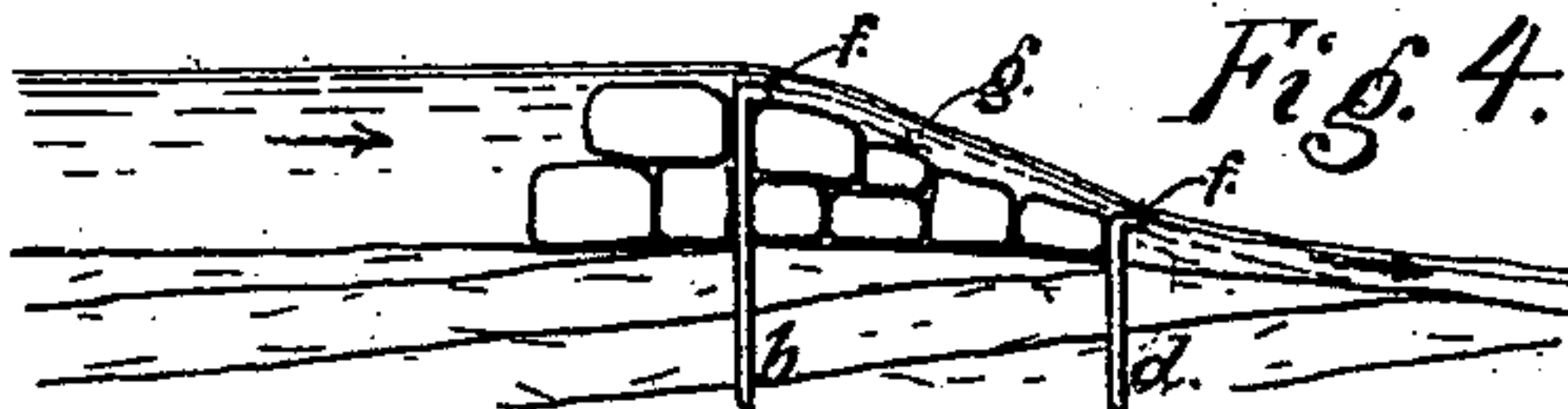


Fig. 5.

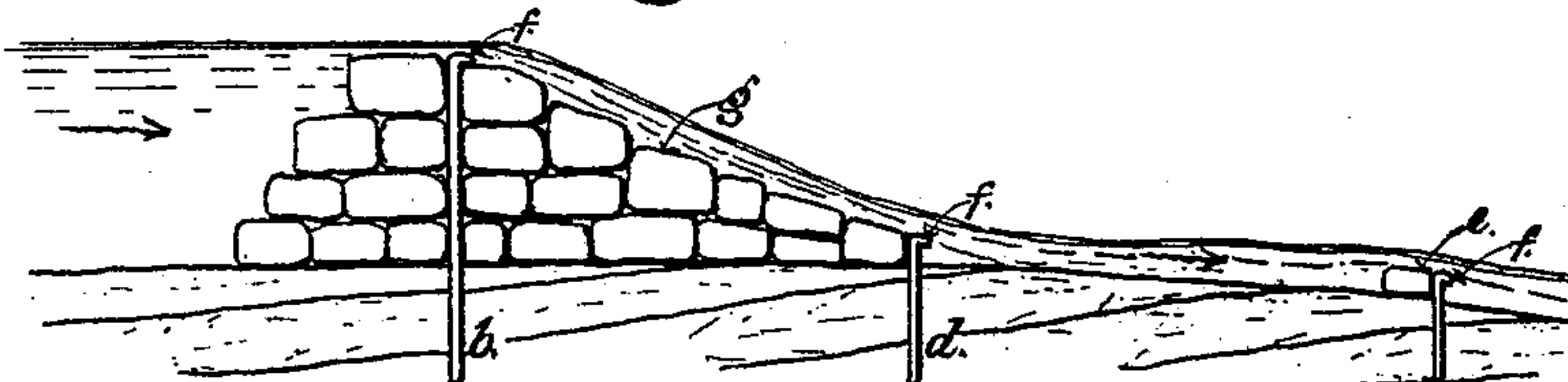
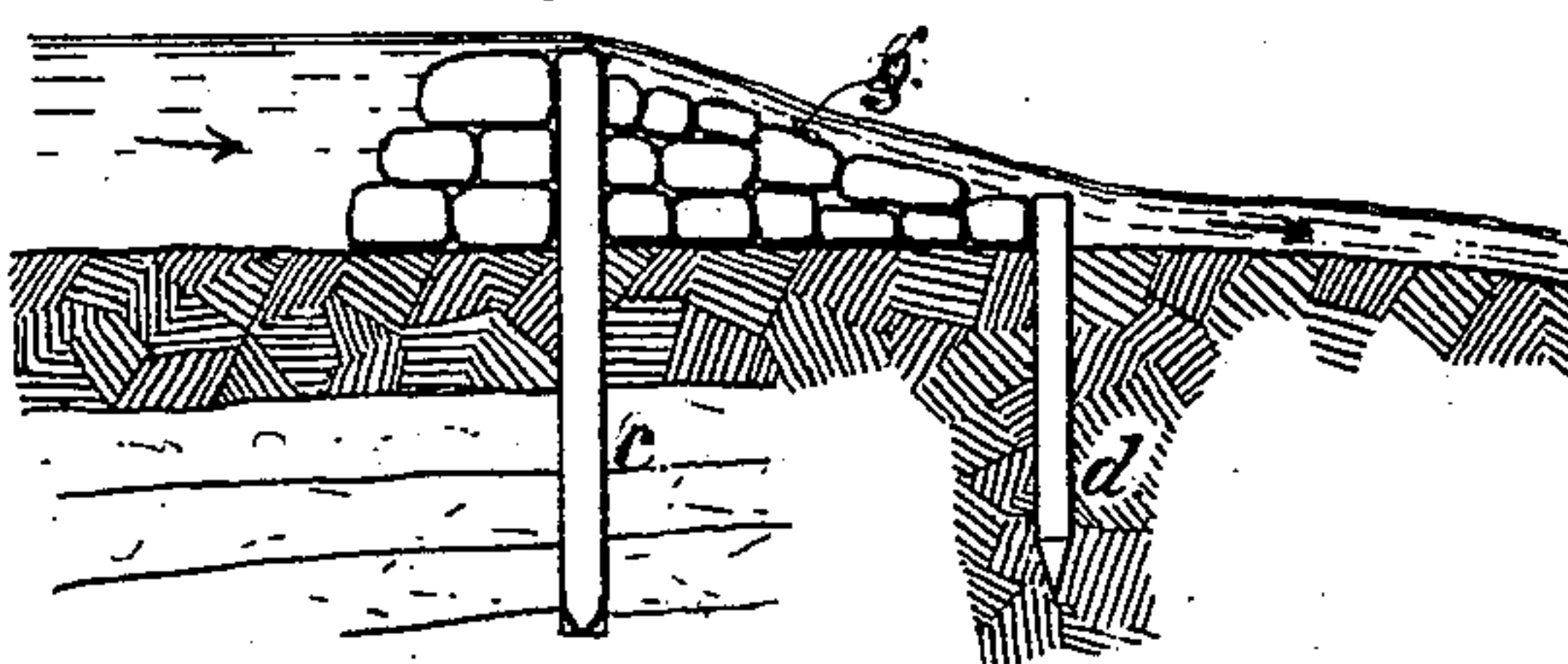


Fig. 6.



WITNESSES.

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DAM CONSTRUCTION.

SPECIFICATION forming part of Letters Patent No. 583,226, dated May 25, 1897.

Application filed April 6, 1896. Serial No. 586,627. (No model.)

To all whom it may concern:

Be it known that I, FREDERICK ARNOLD GARTNER, a citizen of the United States, residing at Detroit, in the county of Wayne and State of Michigan, have invented a new and useful Method of Dam Construction, of which the following is a specification.

My invention consists in improvements in stone dams built for damming or retarding the flow of water and thus raising its level. I attain this object by placing across the stream in any desired direction a row of stone blocks *a a*, each held in position by at least two stakes or bars *b b*, set against said stone block on the side facing downstream and let solidly into the strata forming the bottom of the stream, as indicated by Figure 1 on drawings. If the river-bottom consists of rock, I would make said bars of iron, coated to prevent rusting as far as possible, and placed into a hole drilled in the rock.

The simplest form of constructing the dam is shown by a section through same in Fig. 2.

The top of the bar should at the level of the top of the stone block or dam be bent downstream, as shown on drawings by letter *f*, in order to form less of an obstruction to floating timbers, brush, ice, &c.

If the height of the dam necessitates more than one stone in height, its form could be as shown in Fig. 3.

If there is danger that the wash of water going over the dam will wash out a hole below the same and thus endanger its safety, an apron *g* should be built, as shown in Figs. 4, 5, and 6, the stakes or rods being also used at the lower part of said apron, at least two to each lower block of stone, to secure same, as shown at *d*.

If the flow of the water is very strong and the material forming the river-bottom very susceptible to erosion or washing, one or more

additional dams of any height desired may be placed farther downstream, as shown at *e*, Fig. 5.

If the river-bottom consists of clay, soil, sand, gravel, or similar material, wooden, iron, or other piles could be used, as shown at *d*, Fig. 6.

If the river-bottom consists of rock and is overlaid with several feet of drift, I would bore through the drift and a reasonable depth into the rock and place in the holes wooden, iron, or other piles, as shown at *c*, Fig. 6.

If the line across the stream selected for the dam presents a profile of various depths, I would use a combination of the various plans suggested above and shown on drawings.

The dam can be built on straight or curved lines, and openings left in the same at any desired place.

By building portions of the dam less high than others the stronger overflow can be directed where it may be desirable.

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

1. The dam formed of blocks, as distinguished from boulders or rubble, suitably formed and laid across the watercourse and held in place by rods or piles let into the strata of the bottom on the downstream side of the blocks.

2. The combination of a dam and an apron therefor, both formed of blocks, as distinguished from boulders or rubble, suitably formed and laid across the watercourse and held in place by rods or piles let into the strata of the bottom on the downstream side of the blocks.

FREDERICK ARNOLD GARTNER.

Witnesses:

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FREDERICK W. A. KURTH.