

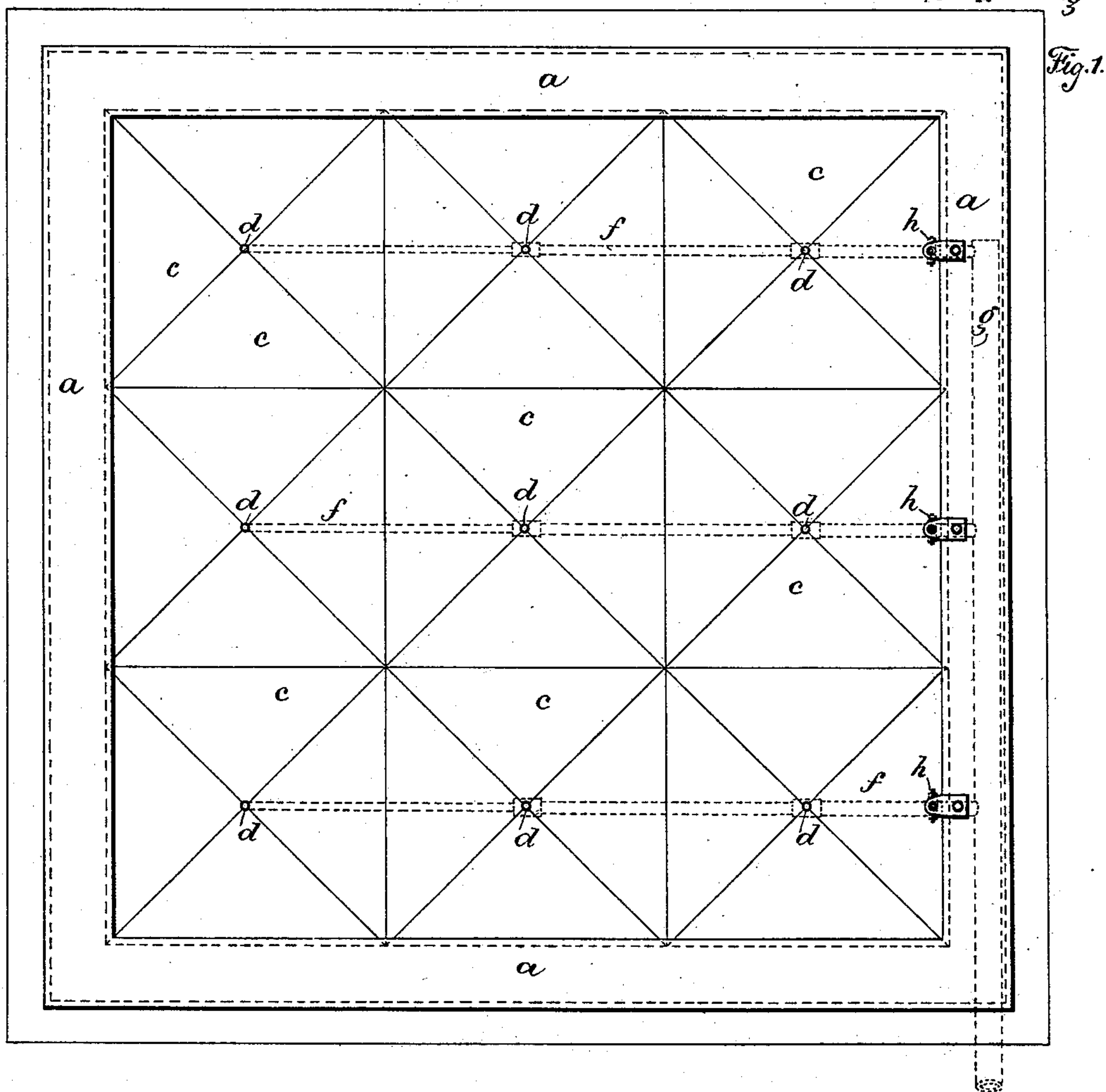
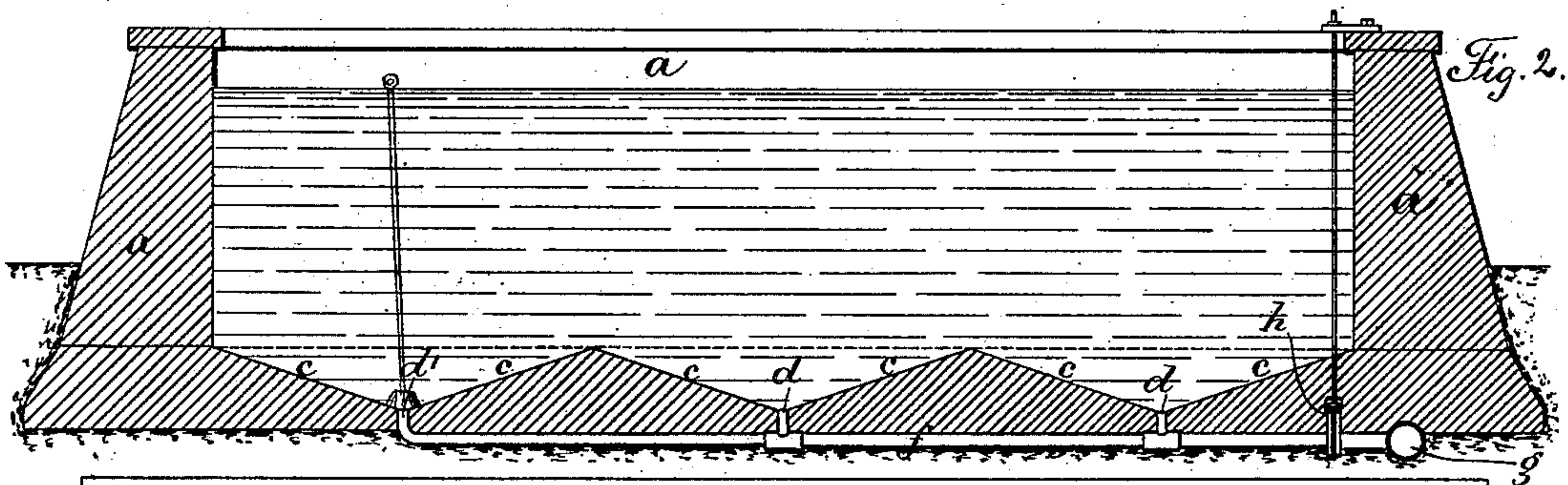
(No Model.)

J. D. COOK.

MEANS FOR CLEANING RESERVOIRS.

No. 299,744.

Patented June 3, 1884.



Witnesses:
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UNITED STATES PATENT OFFICE.

JOSIAH D. COOK, OF TOLEDO, OHIO.

MEANS FOR CLEANING RESERVOIRS.

SPECIFICATION forming part of Letters Patent No. 299,744, dated June 3, 1884.

Application filed November 30, 1883. (No model.)

To all whom it may concern:

Be it known that I, JOSIAH D. COOK, of Toledo, in the State of Ohio, have invented an Improvement in Means for Cleaning Reservoirs, of which the following is a specification.

In many cities the water-supply is drawn from rivers containing a large percentage of earthy materials. The water is pumped into reservoirs, and these require frequent cleaning in order to remove the sediment. In doing this the supply has to be drawn down considerably or entirely, and either the head is lowered or the supply temporarily lessened or cut off.

The object of my invention is to remove the sediment progressively or periodically without disturbing or interfering with the water supply or lessening the pressure.

I make use of hopper-shaped sediment-collectors at the bottom of the reservoir, such sediment-collectors having openings at the lowest points, which openings are provided with pipes and gates or cocks, by means of which a periodical or gradual discharge is secured. In almost all instances the sediment deposited at the bottom of reservoirs will slide down an inclined surface in a semi-fluid condition. I avail of this fact in constructing the sediment-collectors, and make the sides of the hopper-shaped receptacles at such an inclination that the sediment will constantly slide down to the place of delivery.

In the drawings, Figure 1 is a plan of a reservoir constructed with my sediment-collectors, and Fig. 2 is a vertical section of the same.

The improvement is available with a reservoir of any desired size or height of water. In the reservoir represented the walls *a a* are of masonry; but they may be constructed in any other desired manner. The entire bottom of the reservoir or any desired portion thereof is made with sediment-collectors. Each collector is about thirty feet square, (more or less,) with sides *c c* that slope down to the exit-pipe *d*, and the sides are sufficiently steep to prevent the lodgment of sediment; hence such sediment, as it is deposited from the water, slides down constantly or gradually to the delivery or exit pipe *d* of each collector. The collectors are made in ranges, and preferably cover the entire bottom of the reservoir, and the outlet-pipes *d* are connected and open into one or

more sewer or discharge pipes. These pipes are to be of increasing diameter from about four inches upwardly, according to the amount of sediment and the head of water. I prefer to employ the ranges of pipes *f* of increasing diameter opening into the sewer or discharge pipe *g*, and to apply at *h h* stop-cocks or gates.

When the percentage of solid matter in the water is high, and there is a constant deposit, the gates *h* may be opened to such a limited extent that there will be a flow of muddy water constantly, the solid matter not being sufficient to obstruct the pipes. If the deposit of solid matter is only periodical in times of freshets, the gates or stop-cocks *h* will only require to be opened when the bottoms of the sediment-collectors require to be freed from the deposit. In all cases care should be taken to blow off the earthy deposit with sufficient frequency to prevent the pipes becoming obstructed by the deposit.

Any suitable valves, gates, or stoppers may be used, and in some cases it may be advantageous to provide a stopper at the upper end of each discharge-pipe *d*, as seen at *d'*, Fig. 2, so that each sediment-collector can be cleaned in succession.

The water-conduit supplying the reservoir is to be of any desired character, and does not require to be represented in the drawings.

I claim as my invention—

1. In a water-reservoir, a series of sediment-collectors with inclined sides composing the bottom of such reservoir, in combination with pipes passing off from the lowest portions of such sediment-collectors, and suitable valves or stoppers in such pipes, whereby the materials at the lower portions of such collectors can be discharged, substantially as specified.

2. The combination, in a water-reservoir, of the inclosing-walls, ranges of sediment-collectors with inclined sides, forming the bottom of the reservoir, pipes opening into the lowest portions of the sediment-collectors to convey away the sediment by the action of the water, and cocks, gates, or stoppers to regulate the discharge of such sediment, substantially as set forth.

Signed by me this 24th day of November, A. D. 1883.

Witnesses: JOSIAH D. COOK.

E. W. LENDERSON,

A. D. STEWART.