

W. TODT.
DAM AS CLOSURE FOR COLLECTING BASINS CONSTRUCTED IN A FILTERLIKE MANNER OF
LOOSE SMALL ROCK.
998,813. APPLICATION FILED APR. 26, 1911. Patented July 25, 1911.

FIG.1.

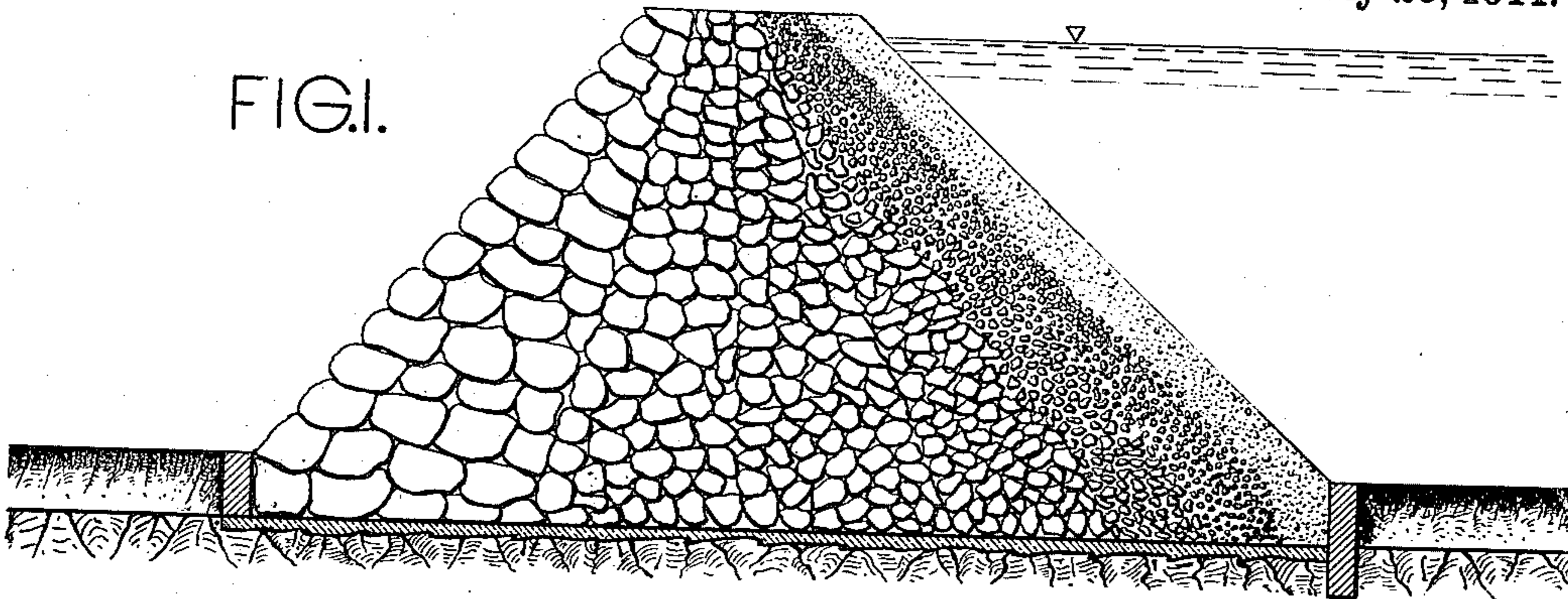


FIG.2.

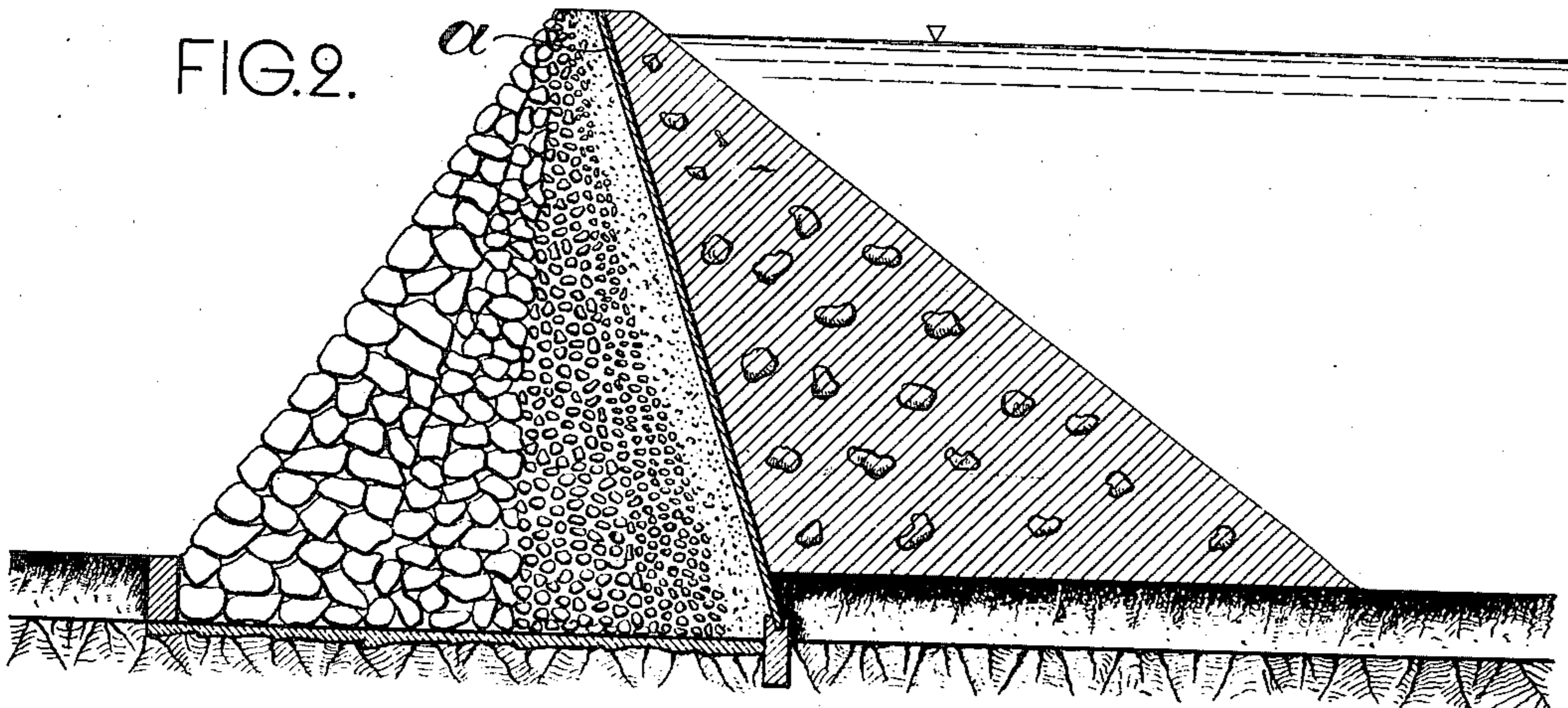
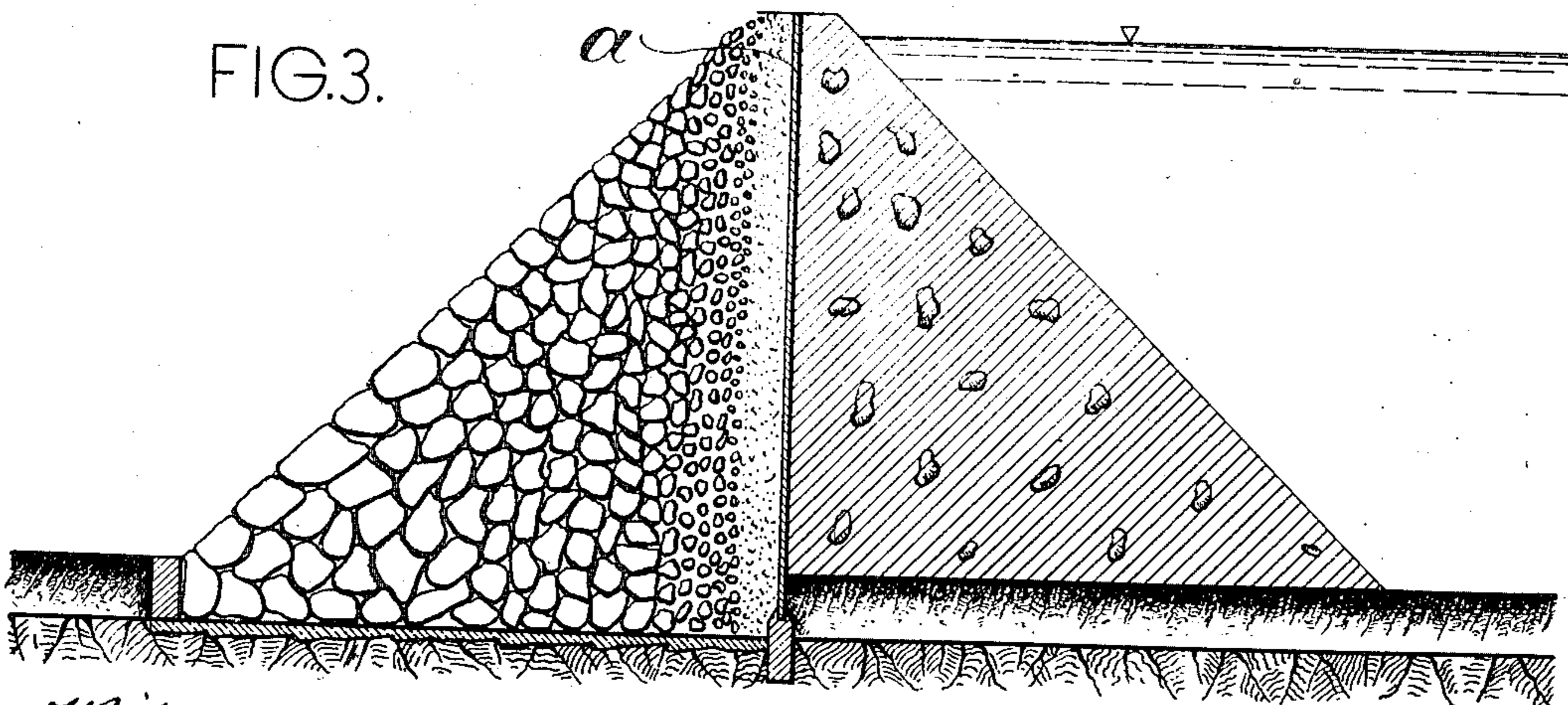


FIG.3.



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DAM AS CLOSURE FOR COLLECTING-BASINS CONSTRUCTED IN A FILTERLIKE MANNER
OF LOOSE SMALL ROCK.

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Specification of Letters Patent.

Patented July 25, 1911.

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To all whom it may concern:

Be it known that I, WILLY TODT, a subject of the German Emperor, and a resident of 20 Huttenstrasse, Dusseldorf, Kingdom of Prussia, Germany, have invented certain new and useful Improvements in Dams as Closures for Collecting-Basins, Constructed in a Filterlike Manner of Loose Small Rock, of which the following is a specification.

The invention relates to the closing dam for a collecting basin.

The dam is constructed of loose small rocks of various sizes. These rocks are arranged in form of a filter, so that the finest grade is situated toward the water and increases in coarseness toward the outside, the air side, Figure 1. If circumstances render it advisable to provide a separate impermeable layer *a* of a suitable material on the water

side such layer is preferably protected by a separate cover of small rocks or the like as shown in Fig. 2. Such impermeable layer may have an inclined position as shown in Fig. 2, or also a vertical position as shown in Fig. 3. The advantage of this method

of construction consists chiefly in an increased safety against the dam being destroyed. The greatest danger to dams constructed of loose small rock is the water which enters into the body of the dam if the impermeable layer is damaged. As such dams constructed of loose small rock are piled up irregularly of rocks of various sizes

the water entering under a high pressure will be able to wash away the finer rocks through the interstices between the larger rocks, thereby forming passages and cavities and possibly completely destroying the dam. This is quite impossible with a dam

constructed according to the present invention, because the water which will penetrate

into the dam cannot in consequence of the filterlike disposition of the material wash the particles of sand and the like through the interstices of the following layers. On the contrary the water will pass drop by drop only, like through a sieve, through the fine pores, of the fine grade layers on the water side and will then pass through the gradually increasing interstices of the coarser layers, until it flows off at the base, without having done any harm. The present method of construction also affords a greater safety compared to walled or earth dams, as it is impossible for an inner water pressure or a softening of the dam to occur. A further advantage is the cheapness of the construction, which the method of the construction according to the present invention has in common with the ordinary loose small rock dams.

The great advantage of an absolute safety against destruction is obtained by a systematic distribution of the material, without the need of any expensive constructions.

I claim:

A dam consisting of loose small rock, to serve as closure for a collecting basin, constructed in such a manner, that the loose small rocks are arranged, like in a filter, according to their grade of fineness in such a manner, that the finest grade of the material is disposed on the water side, and the remainder of the material gradually increases in grade of fineness toward the outside, the air side of the dam.

In testimony whereof I hereto affix my signature in presence of two witnesses.

WILLY TODT.

Witnesses:

GERTRUD BONA,
BESSIE F. DUNLAP.