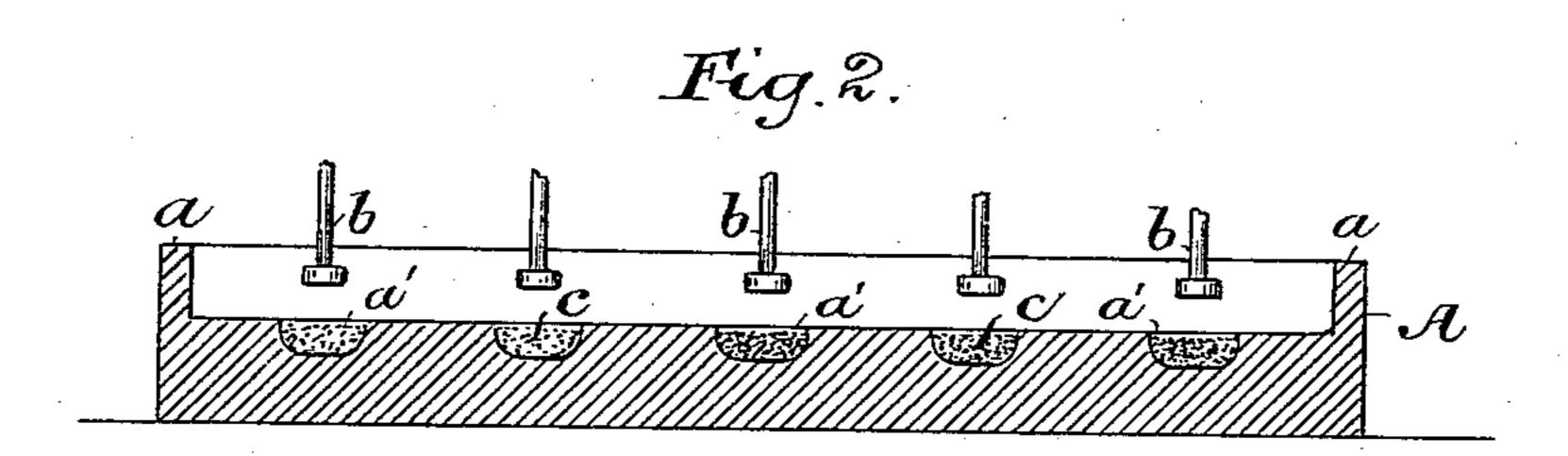
(No Model.)

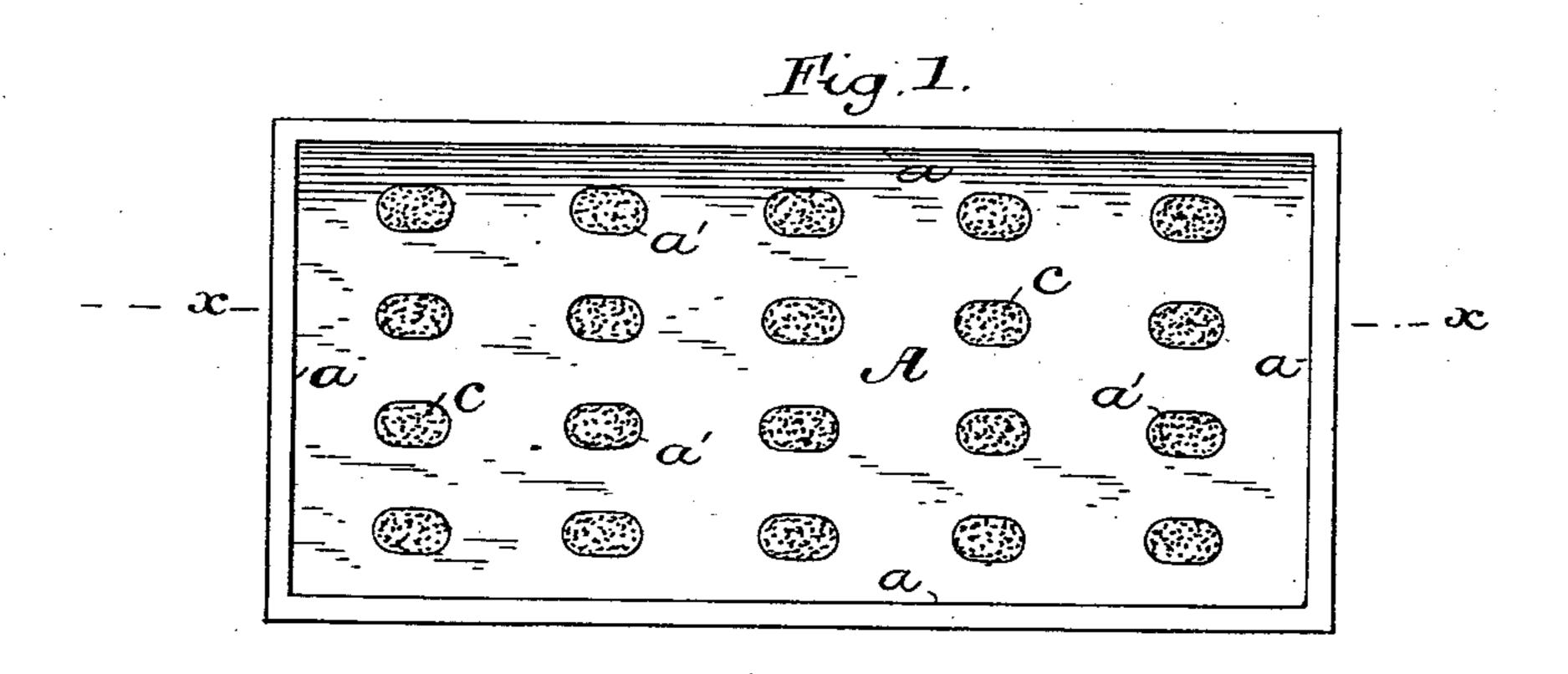
## J. J. DETWILLER.

## TRAY FOR TORPEDO MACHINES.

No. 385,795.

Patented July 10, 1888.





Witnesses. Geo. Wadman. Maurice J. Roach,

Trevertor.

Jacol J. Detwiller,

By his attorneys,

Sifford Es Brown.

## United States Patent Office.

JACOB J. DETWILLER, OF GREENVILLE, NEW JERSEY, ASSIGNOR TO THE DETWILLER AND STREET FIRE WORKS MANUFACTURING COMPANY, OF NEW YORK, N. Y.

## TRAY FOR TORPEDO-MACHINES.

SPECIFICATION forming part of Letters Patent No. 385,795, dated July 10, 1888.

Application filed February 24, 1888. Serial No. 265, 154. (No model.)

To all whom it may concern:

Be it known that I, JACOB J. DETWILLER, of Greenville, in the county of Hudson and State of New Jersey, have invented a certain new and useful Improvement in Torpedo-Machines, of which the following is a specification.

My improvement relates to machines used in the manufacture of toy torpedoes; and it consists in means, about to be described, whereby the danger from explosion of the fulminating-powders used in such torpedoes during the act of filling the torpedoes will be lessened, and also whereby wet or dry fulminates may be used, as desired.

I will describe my improvement in detail, and then point out the novel features in a claim.

In the accompanying drawings, Figure 1 is a plan or top view of a tray embodying my improvement containing fulminate. Fig. 2 is a longitudinal section of the same, taken on the plane of the dotted line x x, Fig. 2.

Similar letters of reference designate corre-

sponding parts in both the figures.

I will not describe a machine for dipping fulminate and supplying it to the torpedoes, for there are numerous examples of such in the art which are too well known to require description here, and my improvement may be be used with any suitable form of dippingmachine. I would refer to United States Letters Patent No. 159,995, granted February 16, 1875, to D. J. Wolfe and G. A. Lilliendahl, as illustrating and describing such a machine.

A designates the tray for containing fulmi-

nate. It is made of soft india rubber. Upon its upper side and extending about its edge I have shown a rim or flange, a. The upper side of the tray is provided inward of the flange with a number of recesses or depressions, 40 a'. These recesses or depressions are for containing fulminate, c. When dipping-pins b are passed downwardly into the recess or depressions, their heads gather upon them suitable quantities of the fulminate. The tray will 45 preferably be of such thickness as to admit of a considerable thickness of rubber below the recesses or depressions a'.

The use of soft rubber for the tray is advantageous, because it counteracts friction or 50 blows from the dipping pins or other parts of the machine and prevents leakage, therefore adapting the tray for use with either wet or dry fulminates. In case of an explosion the tray remains intact and the workmen are not 55 endangered by flying splinters of wood and metal, as the rubber yields to the sudden expansion of the generated gases.

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

A tray for use in a torpedo-machine, made of soft rubber and provided with recesses or depressions for containing fulminate, said tray being of such thickness as to admit of a considerable thickness of rubber below the recesses or depressions, substantially as specified.

JACOB J. DETWILLER.

Witnesses:

D. H. DRISCOLL, M. J. ROACH.