IP8402 XR 66,661 SR TITU

T. Williams.

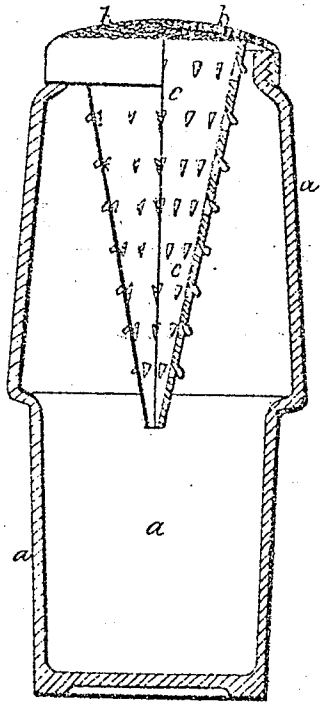
Dredging Box.

No. 66,661. Patented July 9, 1867.

T- 24/95

X 25/16

X132



Witnesses:
S. B. Kidder.
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THOMAS WILLIAMS, OF BOSTON, MASSACHUSETTS.

Letters Patent No. 66,661, *dated July* 9, 1867.

IMPROVED DREDGING-BOX.

The Schedule referred to in these Letters Patent and making part of the same.

TO ALL WHOM IT MAY CONCERN:

Be it known that I, THOMAS WILLIAMS, of Boston, in the county of Suffolk, and State of Massachusetts, have invented an improvement in Dredging-Boxes; and I do hereby declare that the following, taken in connection with the drawings which accompany and form part of this specification, is a description of my invention sufficient to enable those skilled in the art to practise it.

This invention relates to that class of implements which may be classed under the head of dredging-boxes, the purpose of which is to deliver, through numerous openings and over considerable surface, matter in the form of powder or granules.

The object of my invention is to loosen and disintegrate lumps of material that may be placed in a d box, or which may concrete therein.

The invention is of especial utility when applied for the disintegration and delivery of salt, that m being specially liable to harden into lumps, but it is also useful in the same way in its action on various mat

My invention consists in applying to a vessel closed with a perforated cover a conical or pointed inw projecting hollow perforated piece, through and into which the contents of the vessel must pass in esc therefrom, the cone acting as a breaker, against the end of which lumps are broken when they impinge, act of shaking the dredge-box and its contents.

It also consists in providing any hollow body attached to the perforated cover of a dredge-box, and th and into which the material must pass before escaping from the dredge-box, with projections or serratic remove particles from the lumps of material shaken against them.

The drawing shows a dredge-box with my improvement added thereto, the view being a vertical c section through the box, exhibiting, half in elevation and half in similar section, my new device.

a is the body of the dredge-box, which may be of any suitable form or material. *b* is the perforated cover, and *c* is the hollow body, shielding the perforated cover from direct contact with the mass of the contents of *a*, and projecting inwardly in a tapering form, terminating in or nearly in a point, and being perforated as shown. To make, on the convex surface of *c*, teeth or asperities with which to rasp or abrade particles from the lumps of the material with which *a* is filled, the perforations are preferably made by mere displacement of the material of *c*, instead of by entirely removing the material.

The ordinary difficulty experienced with common dredge-boxes, viz, the compacting of the contents against the perforated cover, is avoided where my improvement is used, and as the annular space between the pi and the upper part of the body *a* is flaring downwards, the tendency of the contents to compact in said s very slight.

I claim, in combination with the body and perforated cover of a dredge-box, a perforated inwardly-proje hollow conical or pointed body *c*, arranged to operate substantially as described.

Also, in combination with the body and perforated cover of a dredge-box, a perforated hollow body i posed between said cover and the contents of said body, when provided with asperities, substantially as an the purpose specified.

THOMAS WILLIAMS.

Witnesses:

J. B. CROSBY,

FRANCIS GOULD.