(Model.)

H. J. BORIE.
Perforated Soap.

No. 235,730.

Patented Dec. 21, 1880.

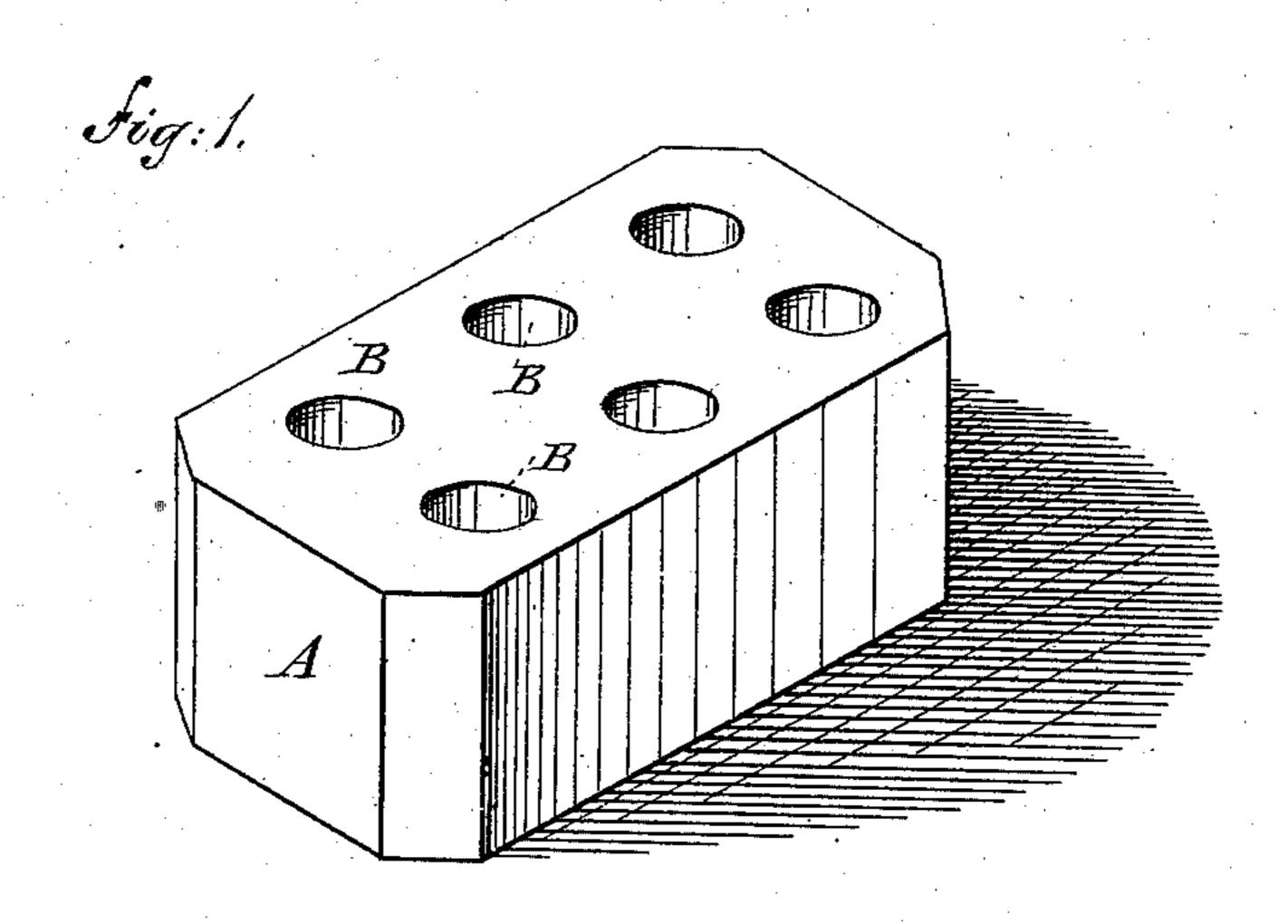
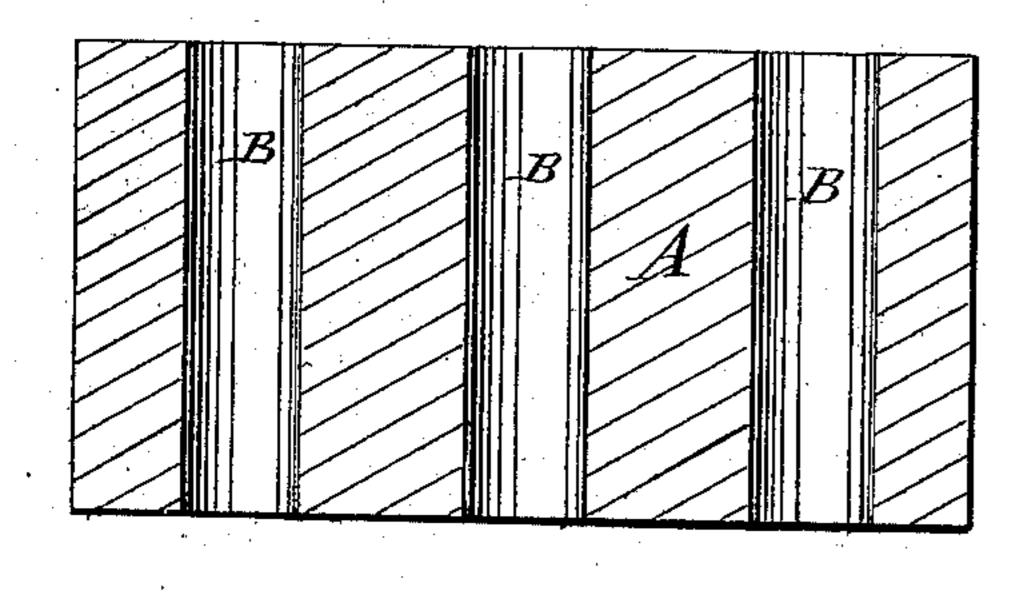
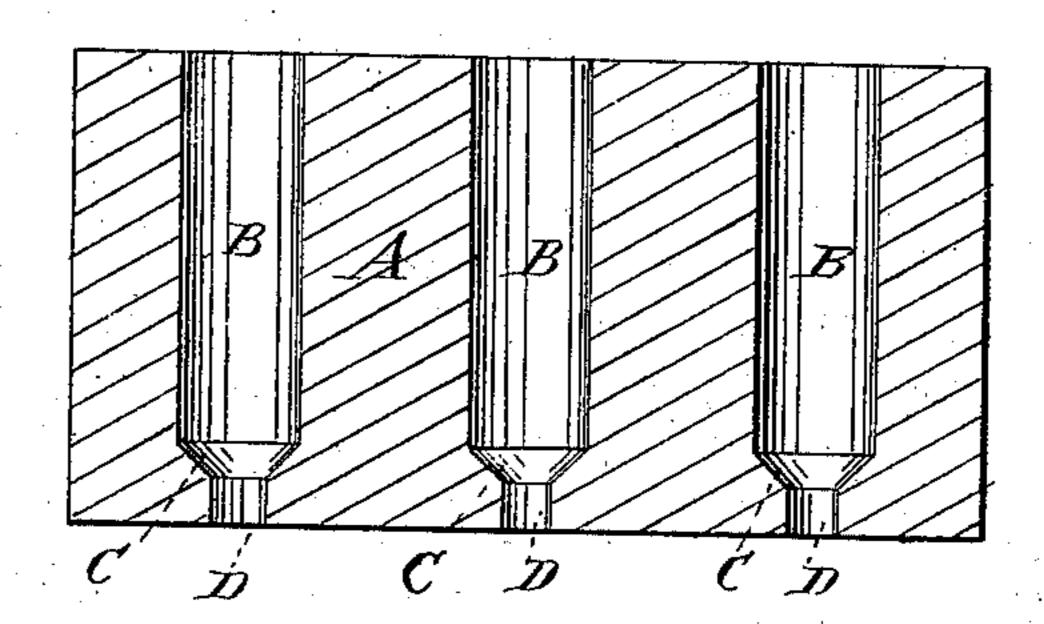


Fig: h.

Jig. 3.





WITNESSES:

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INVENTOR:

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ATTORNEYS

## UNITED STATES PATENT OFFICE.

HENRY J. BORIE, OF SAN FRANCISCO, CALIFORNIA, ASSIGNOR OF ONE-FIFTEENTH TO THOMAS J. W. ROBERTSON, OF WASHINGTON, D. C.

## PERFORATED SOAP.

SPECIFICATION forming part of Letters Patent No. 235,730, dated December 21, 1880.

Application filed March 15, 1880. (Model.)

To all whom it may concern:

Be it known that I, Henry J. Borie, of San Francisco, in the county of San Francisco and State of California, have invented a new and useful Improvement in Soap, of which the following is a specification.

The object of this invention is to provide a new and improved cake of soap which has been uniformly dried and solidified throughout its whole body, so as to be dissolved gradually in washing and without waste.

The invention consists in a cake of soap provided with perforations, which may be of the same diameter in cross-section throughout, or may decrease in cross-section at or toward the bottom.

In the accompanying drawings, Figure 1 is a perspective view of my improved cake of soap. Fig. 2 is a longitudinal sectional elevation of the same, showing the perforations having the same cross-section throughout. Fig. 3 is a longitudinal sectional elevation of a cake of soap in which the cross-section of the perforations decreases at the bottom.

A cake of soap, A, is provided with one, two, or more perforations, B B B, which may be of the same cross-section throughout their entire length or depth, as shown in Fig. 2, or which may decrease in cross-section at or near the lower end, as shown in Fig. 3. The perforations may be beveled from the top toward the bottom, or may be provided with an inclined or beveled shoulder, C, near the lower end, with narrower perforations D D under the shoulder C. The perforations may have any desired cross-section.

The advantages of the within-described cake of soap are, first, that it dries and solidifies throughout the whole piece in a few days,

while ordinary soap remains more or less soft 40 on the inside for months, and by dissolving rapidly as soon as its thin hard crust is used up spoils the clothes; secondly, that being always hard and dry the numerous edges presented by the perforations absorb but little 45 water at once, and so that persons use it to the best advantage on the clothes on which they rub effectually, requiring much less pressure than solid soap does, thus saving a good deal of work on the part of the operator. The to operator will also be relieved by the lesser weight of the cake, when he has to move it for consecutive hours, as is the case with laundry people. Again, there will also be less tearing of the clothes because of less rubbing. 55 So, also, this perforated cake will wash at least as many clothes as a cake of ordinary soap of the same size and age and made of the same materials will do, thereby saving to the consumer all the soap represented by the perfo- 60 rations, which will, on an average, amount to twenty per cent. Further, the manufacturers of this improved soap will also be able to use their capital several times over, while they can only do so once with solid soap, which 65 has to be kept for a comparatively long time before it is put on the market. Finally, the public will also be benefited in the shape of some reductions on the washing rates.

What I claim as new and useful is—
As a new article of manufacture, a cake or bar of soap having perforations, substantially as and for the purpose specified.

HENRY J. BORIE.

Witnesses:
OSCAR F. GUNZ,
C. SEDGWICK.