

W. JASPER.  
Machinery for Making Cube Sugar.

No. 208,522.

Patented Oct. 1, 1878.

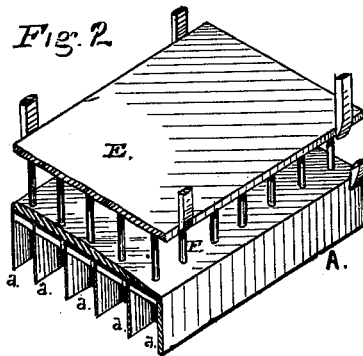
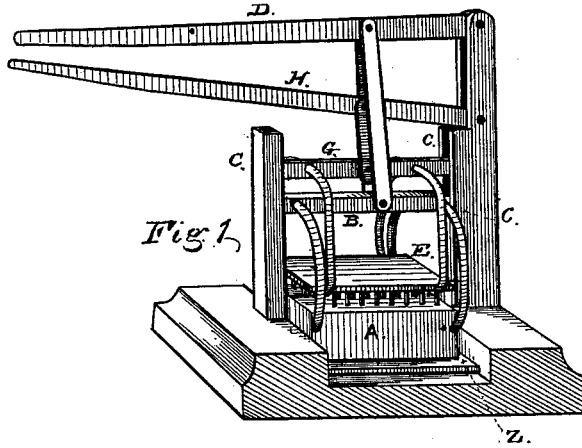
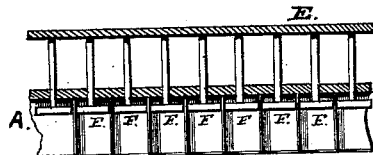


Fig 3



Witnesses:  
William H. Caborn.  
Edward C. Osborn

Inventor:  
William Jasper  
By G. W. Smith  
His Atty.

# UNITED STATES PATENT OFFICE

WILLIAM JASPER, OF SAN FRANCISCO, CALIFORNIA, ASSIGNOR OF ONE-HALF HIS RIGHT TO STEPHEN BOUSHEY, OF SAME PLACE.

## IMPROVEMENT IN MACHINERY FOR MAKING CUBE SUGAR.

Specification forming part of Letters Patent No. 208,522, dated October 1, 1878; application filed April 12, 1878.

*To all whom it may concern:*

Be it known that I, WILLIAM JASPER, of the city and county of San Francisco, in the State of California, have invented a certain new and useful Improvement in Machinery for Making Cube Sugar, which invention is fully set forth and described in the following specification and the accompanying drawing.

My invention relates to machines for cutting and forming sugar into cubes from a slab or block; and it consists in an improved mechanism for pressing the cubes before the cutter-plate is withdrawn or raised, and for holding them upon the tray while the cutters are being raised.

The object of my invention is to give a uniform density to the sugar cubes, and to produce them from the slab or block with sharp and square edges and surfaces.

In the drawings herein referred to, Figure 1 is a side elevation, in perspective, of the cutter and pressers, showing the manner in which they are both arranged in the machine-frame. Fig. 2 is a detail view, in perspective, of the cutters and the pressers. Fig. 3 is a vertical section through these parts.

The cutter-plate A is formed of a set of blades, *a a*, set across each other and forming rectangular spaces of the size required for the cubes. This plate is supported by a cross-head, B, within the frame, and is reciprocated between the uprights C C by the lever D, that is actuated from a driving-shaft of the machine or other mechanism with which this my invention is combined.

The plate E, arranged above the cutter, carries the pressers F, which are formed of a series of rectangular blocks, secured upon or to the ends of short vertical rods projecting from the bottom of the plate E, and corresponding in number and size to the rectangular spaces between or inclosed by the cutting-blades *a a*. Within these spaces the pressers fit and slide closely. These pressers are supported from the cross-head G, and are reciprocated, by means of the lever H, from a proper shaft or moving part of the machine.

The levers D H are actuated either by means of arms on a rock-shaft, connected thereto by rods, or by cams and lifting-rods, or any simi-

lar mechanism, by which the cutter and the presser are moved to cut the sugar, to press the cubes while they are held between the blades of the cutter, and to hold them steady upon the tray against any movement while the cutters are moving up out of the sugar.

These motions required to properly operate the pressing mechanism take place in the following manner: When the cutter A is brought down upon the slab of sugar presented to it on the tray or plate Z, and is pressed through to separate the mass into cubes, the pressers F are moved down for a short distance with a strong pressure while the cutters are holding the cubes, and a compression of the so-formed cubes takes place, by which their surfaces are rendered smooth and even and the edges sharp and clean; and while the pressers are still bearing upon the top of the formed cubes the cutters begin to move upward out of the sugar until, after reaching a certain height from the bottom of the cubes, sufficiently to clear them from the adhering sugar and cause them to move smoothly out from between the cubes, the cutter A strikes the presser-plate E, and in rising lifts it, with its pressers, free from the cubes, which are left perfectly formed and detached upon the plate Z, ready to be removed from the machine to the drying-room.

I do not claim, broadly, the pressing of the cubes of sugar in the molds after being cut from a slab; nor do I claim in this application the broad combination of a plate to support the slab of sugar, and a series of parallel and perpendicular cutters reciprocated above such plate and working over pressers, which force the cubes from the cutters when the same are raised, since such combination is shown in patent granted to me August 14, 1877, and numbered 194,244; but in that patent the pressers are not forced down to compress the sugar after the cutters have divided the slab into cubes, and by this change in the combination I am enabled to produce cube sugar of uniform density and with sharp and square edges, as before described.

Having thus fully described my invention, what I claim therein as new, and desire to secure by Letters Patent, is—

A cube-sugar machine wherein are com-

bined a plate, Z, for supporting a slab of sugar, the cutting-frame A, reciprocating vertically above such plate between standards, the plate E, reciprocating vertically above the cutting-frame and having downwardly projecting spindles, which work through the cutting-frame and are attached to presser-plates F, sliding in the spaces of the said cutting-frame, and the levers D H, for operating the

cutting-frame and presser-plate, substantially as described and shown.

In testimony that I claim the foregoing I have hereunto set my hand and seal this 1st day of April, 1878.

WILLIAM JASPER. [L. S.]

Witnesses:

C. W. M. SMITH,  
CHAS. E. KELLY.