(No Model.) 2 Sheets—Sheet 1.

H. VANDER WEYDE.

APPARATUS FOR BRANDING ICE SLABS.

No. 566,039. Patented Aug. 18, 1896.

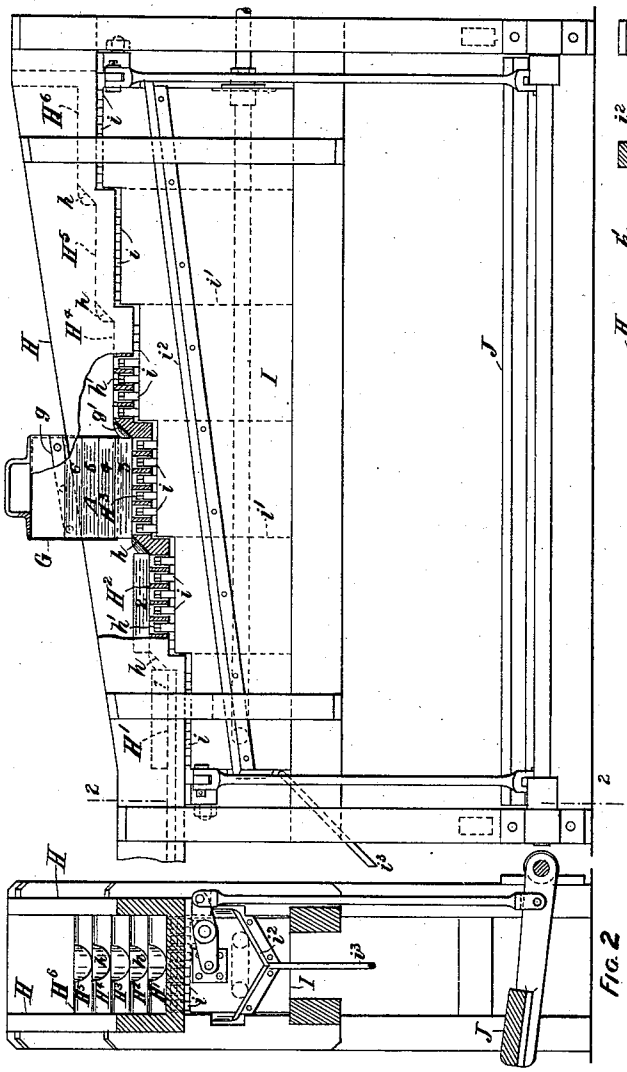

FIG. 1

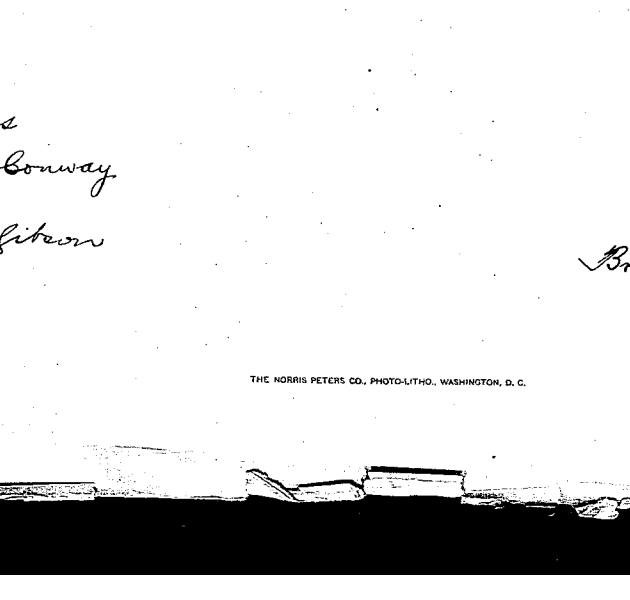

FIG. 2

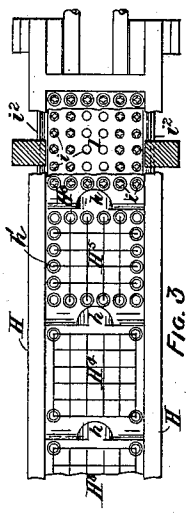

FIG. 3

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(No Model.) 2 Sheets—Sheet 2.

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FIG. 4

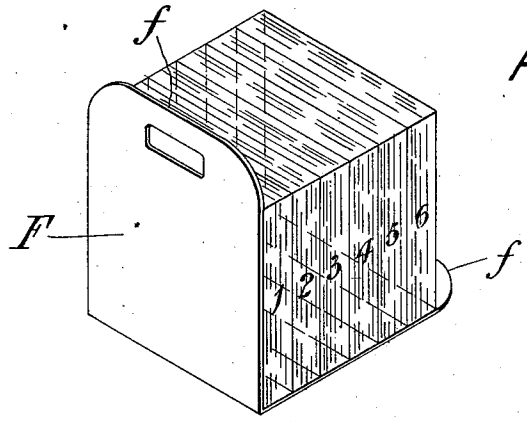
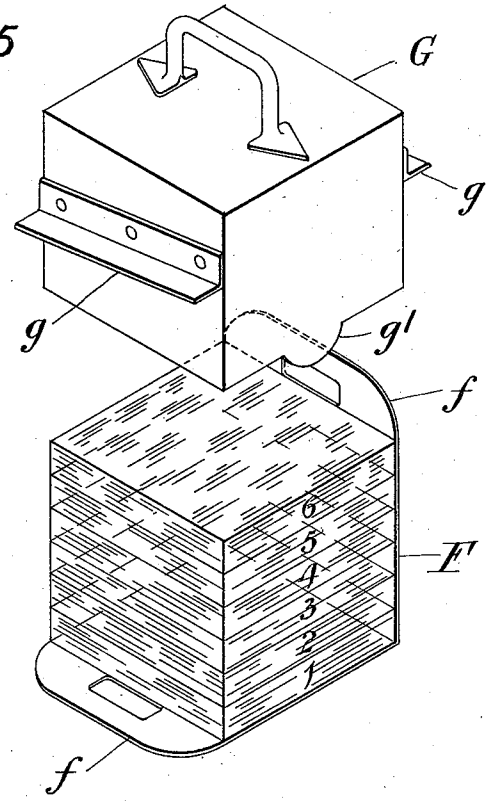


FIG. 5



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Colin C. Mitchell

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UNITED STATES PATENT OFFICE.

HENRY VANDER WEYDE, OF LONDON, ENGLAND.

APPARATUS FOR BRANDING ICE SLABS.

SPECIFICATION forming part of Letters Patent No. 566,039, dated August 18, 1896.

Application filed November 12, 1895. Serial No. 568,680. (No model.)

To all whom it may concern:

Be it known that I, HENRY VANDER WEYDE, artist and electric-light photographer, of 182 Regent Street, London, W., England, have invented a new and useful Improved Apparatus for Branding Ice Slabs, of which the following is a full, clear, and exact description.

This invention relates to improved apparatus for branding ice in the form of slabs (obtained by cutting up block-ice by means of apparatus such as that forming the subject of another application for Letters Patent of the United States filed by me November 12, 1895, Serial No. 568,679) with impressions of a trade-mark or ornamental device, the impressions on the face of each slab corresponding in number and situation to the cubes into which the slab is to be ultimately divided, so that each cube will bear an imprint on one, at least, of its faces. The branding is performed by bringing the ice slab into contact with warmed dies, and as it is essential to the ultimate object in view that the operation should be performed as quickly as possible the apparatus hereinafter described is designed specially for the purpose of enabling all the slabs into which the ice block is sawed to be applied quickly and simultaneously to as many sets of branding-dies and as quickly withdrawn therefrom and returned to the cutting-bench.

Reference is to be had to the accompanying drawings, forming part of this specification, wherein—

Figure 1 shows a rear elevation, partly in section; Fig. 2, a cross-section on line 2 2, Fig. 1; and Fig. 3, a part plan of the apparatus for branding the slabs of ice. Figs. 4 and 5 are perspective views showing, on an enlarged scale, a tipping appliance for bringing the slabs to a superposed position and the device for distributing the slabs upon the branding apparatus.

The same letters of reference denote like parts in all the figures.

The slabs being juxtaposed and standing on edge as they leave the saws it is first necessary to bring them to the horizontal position, and for this purpose the slabs 1 2 3 4 5 6 are first slid onto the tipper F, Fig. 4, which is merely an L-shaped plate, having projecting ends *f*, forming handles by means of which it may be rocked about its corner, so as to bring the slabs from the vertical juxtaposed position, Fig. 4, to the horizontal superposed position, Fig. 5.

G is a box-like holder open at the bottom, which is placed over the slabs so as to inclose them (but not the tipper F) for the purpose of sliding the slabs collectively off the tipper and distributing them on the branding apparatus by a horizontal sliding movement.

The branding-table comprises a step-like series of supporting-surfaces H′ to H⁶, the first, H′, being flush with the table on which the tipper F is used, and the others being arranged in a series of steps corresponding to or slightly exceeding in height the thickness of the ice slabs 1 2 3 4 5 6. The holder G is provided with lateral flanges *g*, corresponding to the inclination of the sides H of the branding-table between which the holder G is received and on the inclined edges of which the flanges *g* are adapted to rest and slide.

The holder G is closed at top, its sides being less in depth than the total height of the collective slabs by nearly but not quite the thickness of a slab, so that, while the whole of the slabs may be slid together as one, the holder will be raised so as to clear the steps as its runners *g* slide upon the inclined sides of the table. That side of the holder G which is rearmost in descending is furnished with a downwardly-projecting finger *g′*, and a notch *h* is formed in the rounded edge of each step to give passage to said finger, the object of which is to enable the holder G to remove the ice slabs as it descends the guides H.

The supporting-surfaces H′ to H⁶ are preferably perforated or made grid-like, allowing the passage of the branding-dies *i*, of which, in the example shown, there are thirty-six in each step. These dies correspond in number and position to the cubes into which the slab is to be ultimately divided, and they are preferably formed by stamping up in sheet metal and plated to prevent rust. They have embossed upon their upper faces the trade-mark or other device which it is desired to impress upon the ice, and they stand up from a box-

like heater I, whose top is stepped to correspond to the surfaces H′ to H⁶ of the branding-table. The faces of the dies are normally below the level of the ice-supporting surfaces H′ H⁶, and the heater I is mounted to slide in vertical guides and is adapted to be lifted by a treadle-motion J and connections, as shown. The heater I may be a water or steam heated box, preferably divided by cross-partitions *i′* into compartments corresponding to the steps and separately supplied by circulation-pipes, or, preferably, the heater I is warmed by gas-flames burning in each compartment, the division of the heater into compartments serving to prevent unequal heating. As it is important that the temperature of the working compartment should not exceed 0° centigrade the heater should be lagged with some non-conducting and non-absorbent material to prevent radiation of heat, and the flames should be carefully regulated and kept under control. Transversely-sloping gutter-grooves between the rows of dies lead to inclined gutters *i*², by which the water resulting from the melting of the ice in branding is carried to a drain-pipe *i*³, so that the production of vapor in the apartment and condensation of moisture on the ice is avoided as far as practicable. The temperature of the heater need not in general exceed 15° centigrade or thereabout.

The operation of distributing the slabs on the branding-table, branding them simultaneously, and re-collecting them in superposed order is performed as follows: The superposed slabs contained in the box-like holder G, as shown in Fig. 4, being slid in their collective form from the lower toward the upper end of the branding-table, the runners *g* resting on the sides H, the holder G is thereby raised and allows the slabs to be successively arrested by the risers of the steps and deposited on the surfaces H′ to H⁶, the lowermost slab being first arrested, and so on successively. Fig. 1 shows the position when three of the slabs have been so deposited. The whole of the slabs having been thus placed in position, the heater I is raised, by the treadle or other means, so as to cause the dies to project through the branding-table and bring them into contact with the lower faces of the whole of the ice slabs. The purpose of performing the operation in the upward direction is to allow the resulting water to drain away from the ice and leave clear impressions of the dies.

It will be obvious that the described construction is susceptible of modification without departing from the invention.

After thus branding the slabs on their lower faces the holder G is replaced over the uppermost slab and slid down the inclined sides H, whereby the slabs are collected from the table into the holder G in their original position and order, Fig. 1 representing also the position after four slabs have been thus collected. The superposed slabs are then ready to be returned to the saw-bench for cutting transversely into two directions, first into prisms and then into cubes.

I claim—

1. Apparatus for branding ice slabs, consisting of a stepped series of supporting-surfaces for the slabs and of corresponding sets of dies adapted to pass through the slab-supports and to be brought into contact with the ice slabs thereon and means for effecting the passage of the dies through the slab-supports, as specified.

2. Apparatus for branding ice slabs, consisting of a stepped series of suporting-surfaces for the slabs, corresponding sets of upwardly-projecting dies arranged beneath and adapted to pass through the slab-supports, a heater upon which said dies are fixed and means for effecting the passage of the dies through the slab-supports, as described.

3. Apparatus for distributing superposed ice slabs on, and collecting them in superposed order from, a stepped series of supporting-surfaces, comprising a stepped series of supporting-surfaces, inclined guide-rails alongside of the stepped surface, in combination with a box-like holder open at bottom, adapted to inclose the superposed slabs, as described, and to rest and run on the said inclined guide-rails, the said holder having the side which is toward the higher end of the stepped surface projecting downward below the opposite side and the risers of the stepped surface being formed so as to allow such downward projection to pass clear of them in the upward motion and to engage with the slabs on the downward motion, as described.

HENRY VANDER WEYDE.

In presence of—
G. F. WARREN,
JOSEPH LAKE.