

(No Model.)

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APPARATUS FOR BLEACHING FRUIT, &c.

No. 275,044.

Patented Apr. 3, 1883.

Fig. 1.

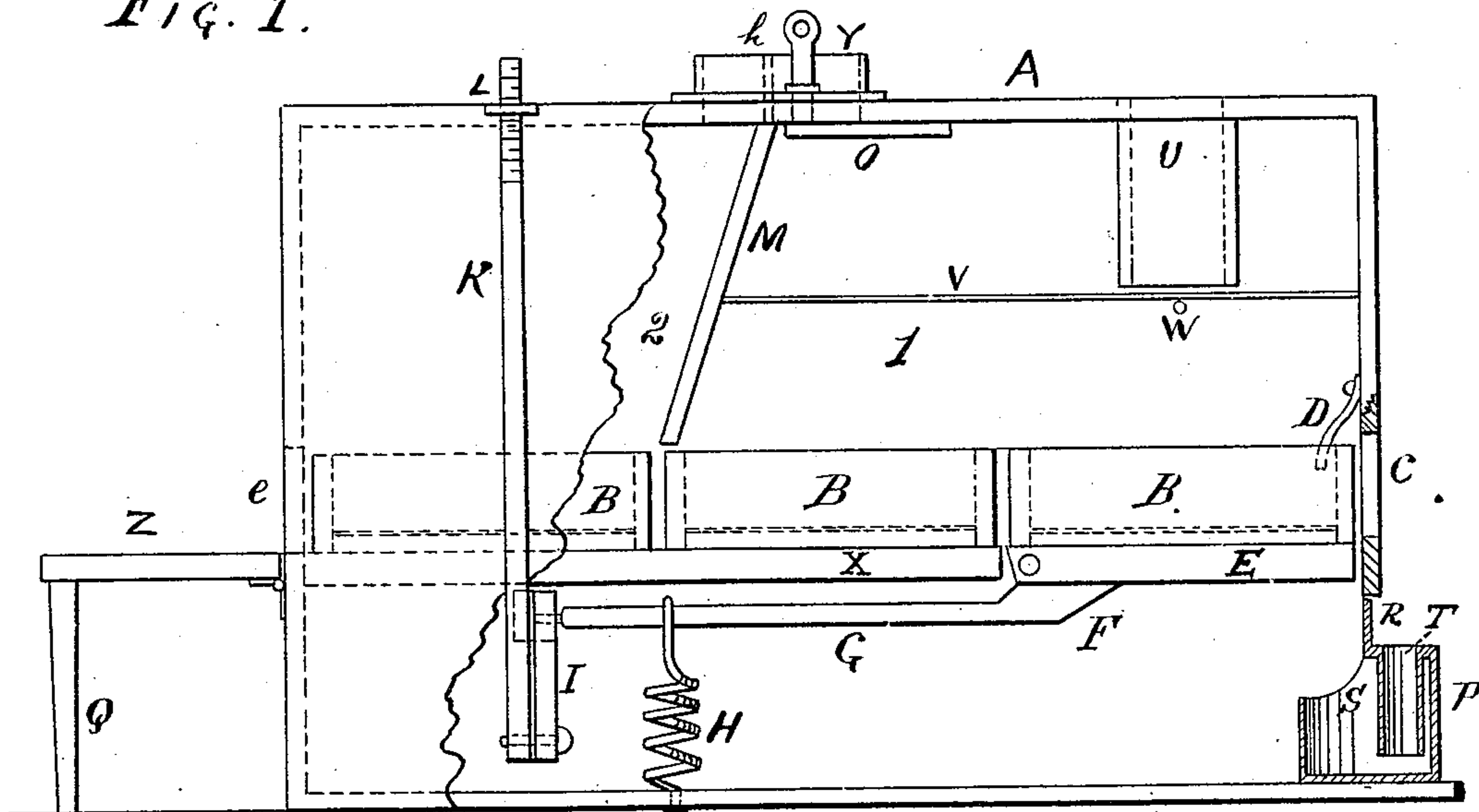
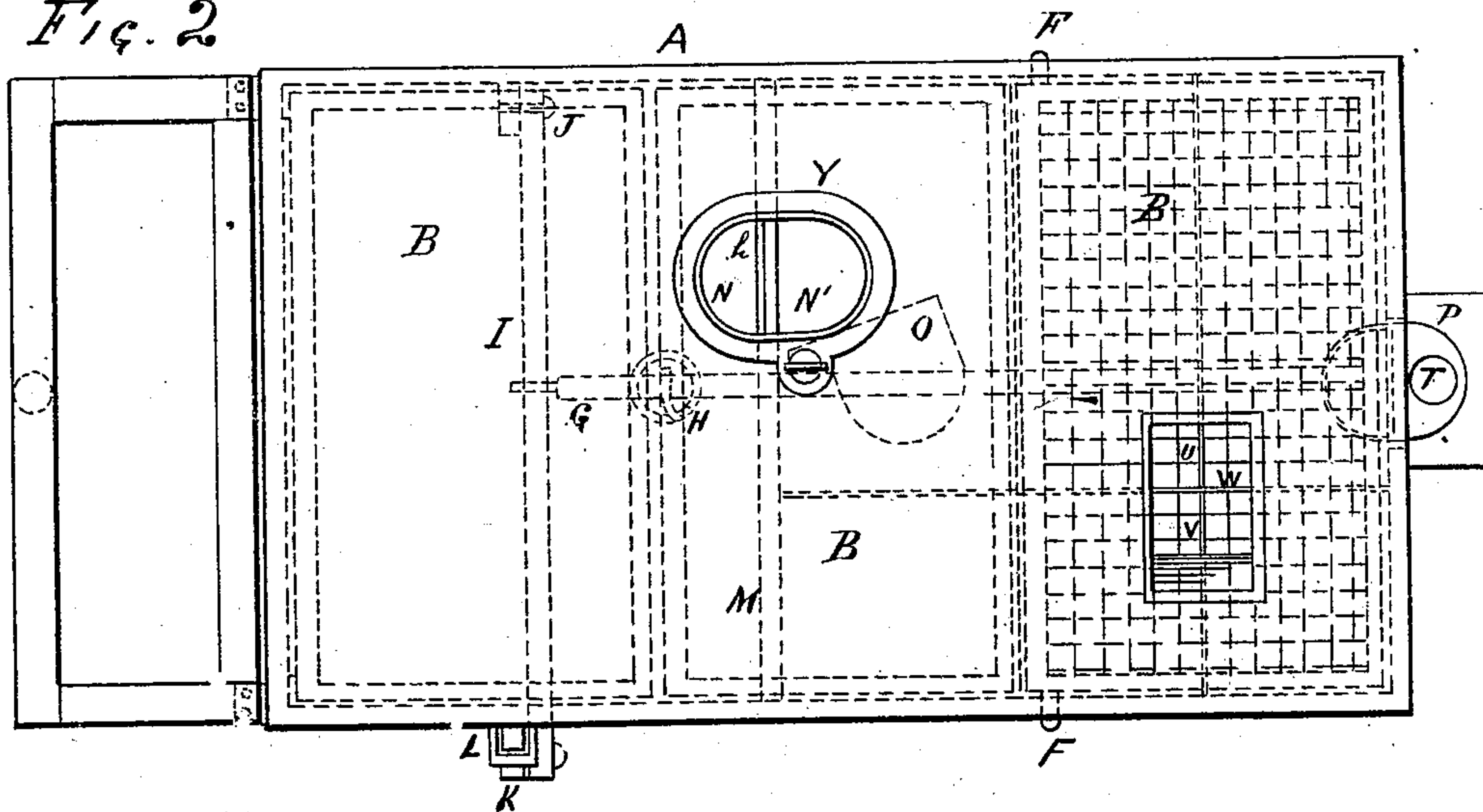


Fig. 2



WITNESSES

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APPARATUS FOR BLEACHING FRUIT, &c.

SPECIFICATION forming part of Letters Patent No. 275,044, dated April 3, 1883.

Application filed January 13, 1883. (No model.)

To all whom it may concern:

Be it known that I, JOTHAM R. HILLMAN, of the town of Hopewell, in the county of Ontario and State of New York, have invented an Improved Apparatus for Bleaching and Setting the Color of Fruit and Vegetables preparatory to drying the same, of which the following is a specification.

The object of my invention is to provide an apparatus for subjecting the newly sliced or prepared fruit to the action of burning sulphur fumes, to have this action continuous and rapid upon successive boxes of the fruit as fast as introduced, and to provide for the escape of the sulphur-fumes in an efficient manner, after having acted upon the fruit, without contaminating the air of the apartment in which the apparatus is used, and in which all the operations may be carried on with ease, rapidity, and certainty.

In the accompanying drawings, Figure 1 represents a side elevation of my improved bleacher, with a part of the side removed to show its internal arrangement. Fig. 2 is a top view.

The same letters of reference refer to like parts in both views.

A is a rectangular case, preferably of wood, and inclosed on all sides.

B B B are three of the boxes which hold the freshly-sliced fruit. The boxes are open on top and the bottom is formed of wire-netting, (shown in one box in Fig. 2, but omitted from the other boxes to avoid confusion in the drawings,) to allow the fumes of the sulphur to readily pass through and come in contact with the fruit. These boxes are introduced through the opening C in the end of the apparatus.

D is a flexible flap, of rubber or other suitable material, to close the space between the box and the opening C to prevent the escape of the sulphur-fumes.

When the box is first entered it rests upon a platform, E, pivoted at F F upon opposite sides of the case. Rigidly attached to said platform is a lever, G, which is held down by a spiral spring, H, and which counterbalances the weight of the platform E and box B. The rear end of lever G engages with the lever I, pivoted to the side of the case at J, the other end of which passes through the outside of the case and is pivoted to the perpendicular

bar K, which is graduated near the top, and slides freely up and down through the staple L.

M is a partition dividing the upper part of the case into two compartments, 1 and 2. Astride this partition is an opening, N and N', surmounted by a sleeve, Y, for a stove-pipe to fit upon, to convey the sulphur-fumes out of the apartment. This sleeve has a partition, h, in it, coinciding with the partition M.

O is a damper, by which the side of the opening N' may be closed to prevent the escape of the sulphur-fumes up the pipe, if desired.

The iron pot in which the sulphur is burned is shown at P. It is placed in an opening through the end of the case, which, with the flange R on its top, it exactly fills. The part S of the sulphur-pot is open on top, and in this the sulphur is first placed and ignited, the fumes passing directly into the bleacher or case A. The part of the sulphur-pot which is outside the case is closed on top, but has therein an open tube, T, extending downward nearly to the bottom of the pot, and is submerged in the melted and burning sulphur in compartment S. In the tube T is placed a roll of sulphur, which at the bottom slowly melts and keeps up the supply of burning sulphur, the fumes of which, it will be seen, cannot escape into the outside air, but must all pass into the case and through the fruit.

The operation of the apparatus will be readily understood. The sulphur being ignited, an empty box is introduced through C upon the platform E. The freshly-sliced fruit is passed directly through the spout U into the box. Across the bottom of the spout are placed two cords or wires, V and W, at right angles, and fastened to opposite sides of the case. The action of these cords or wires is to separate the pieces of fruit from each other and distribute them evenly over the box, which is done very effectually. As the box fills the platform E is depressed, overcoming the tension of the spiral spring H, and through the system of levers G and I the indicator-bar K is raised, and by the graduations thereon it is easily seen when the box is full of fruit. Another empty box is then introduced at C, pushing before it the first box upon the tracks X, fastened along the inner sides of the case, and during all this time the fruit is being thoroughly acted upon by the sulphur-fumes. When the

second box is filled a third is introduced through C, which pushes the first box under the partition M into compartment 2, where the sulphur-fumes with which the fruit is impregnated can escape through that side of the sleeve Y into the chimney, instead of being taken at once into the working-apartment and injuring the health of the operators. When the third box is filled a fourth is introduced, which pushes the first box out through the opening e upon the bracket Z, from whence the contents are removed to the "drier," and the empty box is ready to be returned to the bleacher. Any number of these boxes, duplicates of B B B, may be used, as may be found convenient. The bracket Z is hung upon hinges and supported by the leg Q, which can be removed and the bracket folded up compactly against the case. These operations, it will be seen, may be carried on consecutively and indefinitely, giving the apparatus a capacity for work and a certainty far exceeding, it is believed, any previous apparatus devised for the purpose.

25 Having thus described my invention, what I claim, and desire to secure by Letters Patent, is—

1. In a fruit-bleacher, the case A, divided in

its upper part into two compartments by the transverse partition M, and so constructed with openings C and e, pivoted platform E, and tracks X as to permit the introduction successively of the boxes B B B and their duplicates (to expose the contained fruit to the sulphur-fumes) and the passage of the said boxes through the apparatus, substantially as and for the purposes herein set forth and described.

2. In a fruit-bleacher, the combination therewith of the pivoted platform E, levers G and I, spiral spring H, and graduated indicator-bar K, substantially as described.

3. In a fruit-bleacher, the combination, with the case A, of the stove-pipe sleeve or collar Y, having in it the transverse partition h, coinciding with the partition M, the whole surmounting the openings N and N', communicating with the compartments 1 and 2; also, in combination with said sleeve or collar and case A, the damper O, substantially as described.

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Witnesses:

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