(No Model.)

3 Sheets—Sheet 1.

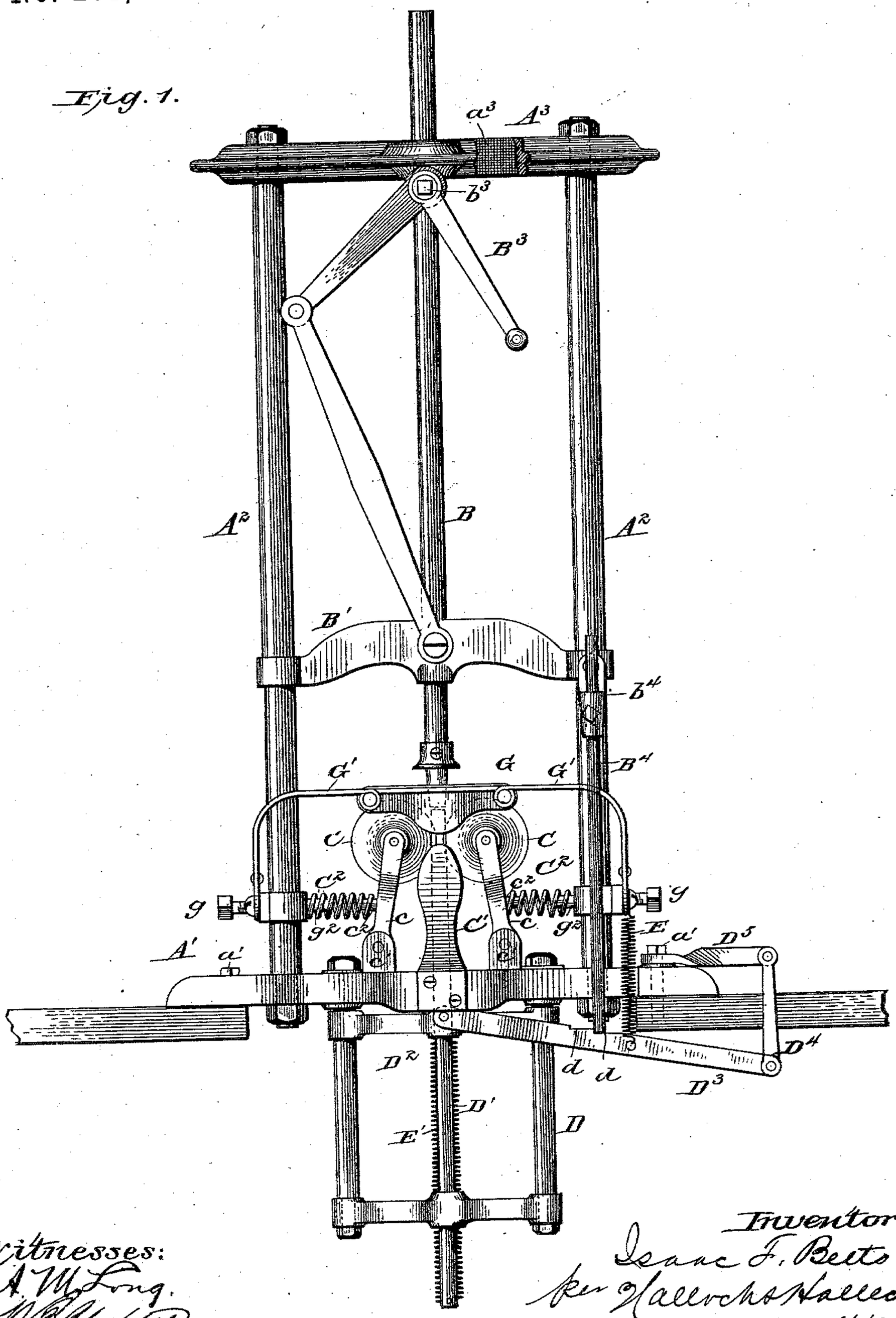
I. F. BETTS.

FRUIT STONER.

No. 281,234.

Patented July 17, 1883.

Fig. 1.



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(No Model.)

3 Sheets—Sheet 2.

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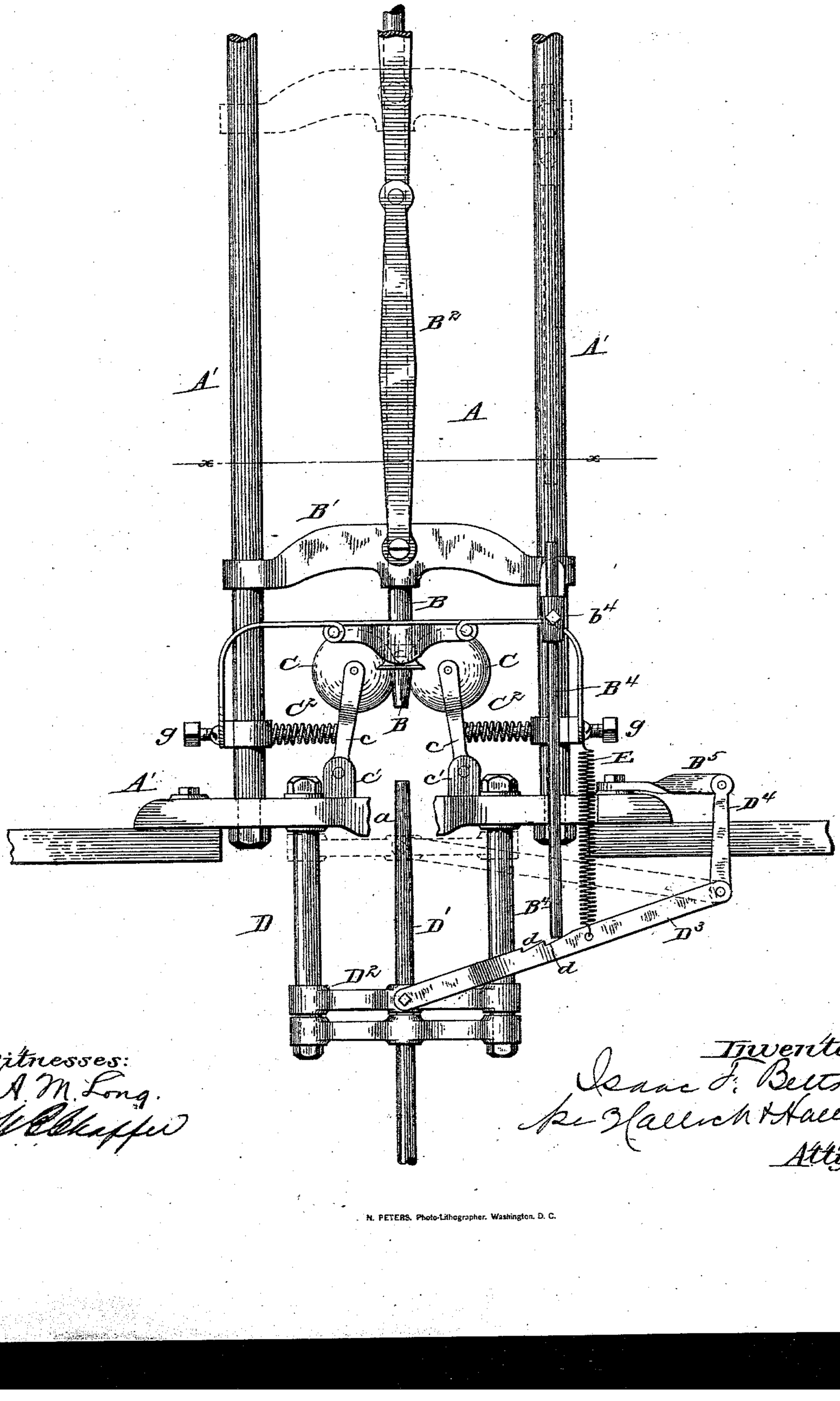
Fig. 2.



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(No Model.) 3 Sheets—Sheet 3.

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FRUIT STONER.

No. 281,234. Patented July 17, 1883.

Fig. 3.

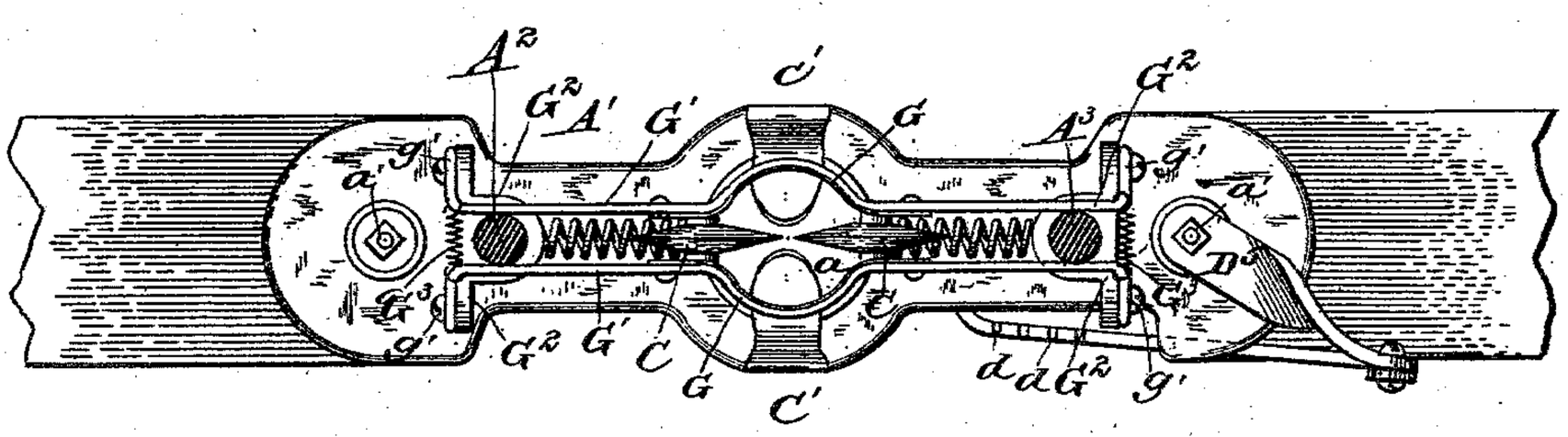


Fig. 4.

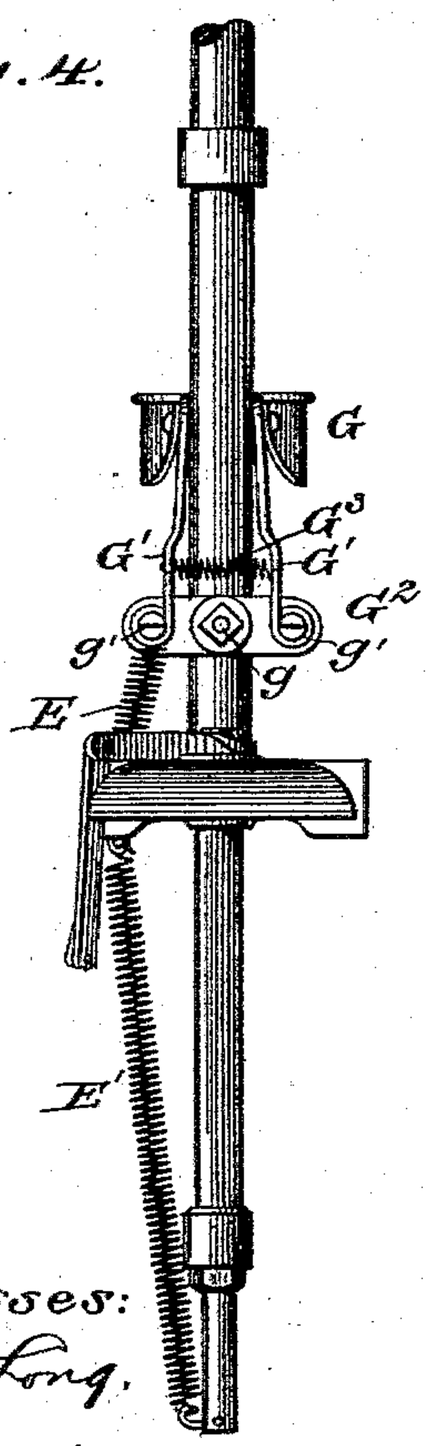


Fig. 5.

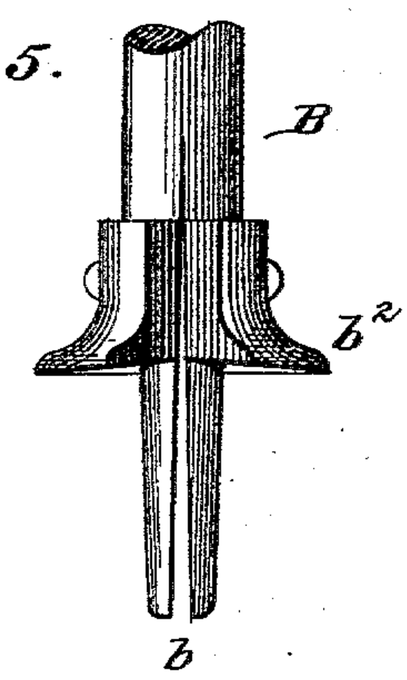


Fig. 6.

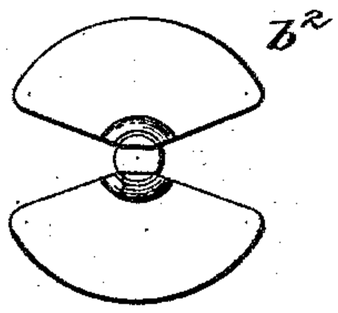
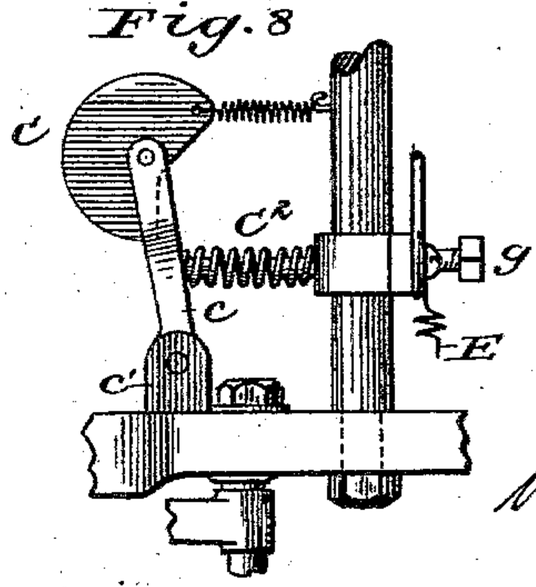


Fig. 7.

Fig. 8



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UNITED STATES PATENT OFFICE.

ISAAC F. BETTS, OF WILMINGTON, DELAWARE, ASSIGNOR OF ONE-HALF TO SAML. F. BETTS, OF SAME PLACE.

FRUIT-STONER.

SPECIFICATION forming part of Letters Patent No. 281,234, dated July 17, 1883.

Application filed March 17, 1883. (No model).

To all whom it may concern:

Be it known that I, ISAAC F. BETTS, a citizen of the United States, residing at Wilmington, in the county of New Castle and State of Delaware, have invented certain new and useful Improvements in Fruit-Stoners; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention relates to devices for stoning peaches, and relates particularly to that class of devices shown in my Patent No. 267,320, granted November 14, 1882.

My invention consists of constructions and combinations, all as will hereinafter be set forth.

Referring to the drawings, in which Figure 1 represents a front elevation, showing the relative position of the lever; Fig. 2, a similar view with the uprights and part of the base broken away, showing in full line the relative positions of the parts when the plunger-rod has forced the peach below the knives, and the arm has forced the cross-head of the stone-supporting spindle to its lowest point preparatory to dropping the stones, the dotted lines showing the parts retracted preparatory to grasping the peach in the hopper; Fig. 3, a section on line *x x*, Fig. 2, showing the parts in top plan; Fig. 4, a side elevation with frame broken away; Figs. 5 and 6, detail views of the plunger; Fig. 7, a side elevation of part of the stone-supporting spindle, and Fig. 8 a side elevation of a modified form of knife.

A represents the frame; B, the plunger; B′, the cross-head for the plunger; B^2, the jointed rod for moving the cross-head B′; B^3, the crank for moving the rod; B^4, the secondary plunger. C C are the pivoted knives; C′ C′, the side stripping-knives; D, a frame pendent from the base; D^4, an adjustable and vertically-reciprocating anvil; D^2, a cross-head on the frame D; D^3, a lever attached by one end to the cross-head and by the other to a link, D^4; D^5, an arm rigidly fixed to the base; E, a retracting-spring attached by one end to the frame and by the other to the lever D^3; G, a hopper attached to the uprights of the frame.

The frame A consists of base A′, having an opening, *a*, uprights A^2 A^2, and slotted top A^3. The base is attached to the table A^4 by means of bolts *a*′, arranged at suitable points. The uprights A^2 A^2 are bolted to the base, and are capped by the slotted top A^3. Pivoted to the front of the top is the crank B^3, the pin b^3 of which passes through the front wall of the slot a^3, and keyed to the upper section of the jointed rod B^2. The lower end of this rod is attached to cross-head B′, which slides upon the uprights A^2 A^2 when the crank is revolved. Adjustably attached to the center of this cross-head is the plunger B, which extends upwardly through an opening in the rear wall of slot a^3. The lower end of the plunger is slotted, as shown at *b* in Fig. 5, so that the knives C C will not strike against the plunger when the latter is forced between them. Near the upper end of slot *b* is a head, b^2, having its sides slotted to correspond with the slot *b*, and for the same purpose. The head b^2 is adjustably attached to the plunger, so that the distance from the lower end may be regulated when desired. The knives C C are pivoted to standards *c c*, which in turn are pivoted to lugs *c*′ *c*′ on base A′. The knives are forced together by springs C^2 C^2, fitting on nipples c^2 c^2 and g^2 g^2, for an obvious purpose.

Hopper G is formed of two bowed pieces of metal, having the upper side flared for holding the peach, and their backs attached to arches G′ G′, which extend to clips G^2 G^2, adjustably attached to the uprights A′ A′ by means of set-screws *g*. The ends of the arches are held in place by screws *g*′. The edges of the plates forming the hopper are drawn together by means of springs G^3 G^3, attached to arches G′ G′. These springs permit the hopper-plates to separate and allow the peach to pass through when forced down by the plunger. The side stripping-knives, C′ C′, are attached by their lower ends to the wall of opening *a* in base A′, and project upwardly on each side of the pivoted knives, as shown in my former patent.

Projecting upwardly through opening *a* is a vertically-reciprocating anvil, D′, which is adjustably attached to a cross-head, D^2, adapted to move upon the vertical bars of frame D. The upper end of this anvil is slotted, as shown

in Fig. 7, so that the said anvil can pass upwardly between the knives against the under side of the peach resting in hopper G, and grasp the end of the stone when the plunger is forced downwardly.

To the cross-head is pivoted one end of a lever, D^3, having its other end connected to the distal end of arm D^5 by means of a link, D^4, pivoted at both ends to the objects to which it is attached. At or near the middle of the lever one end of the retracting-spring E is fixed. This spring is attached by its upper end to one of the clips G^2, and when retracted draws the inner end of the lever upwardly, and thus forces the cross-head D^2 and spindle D′ toward the base. If desired, this spring may be dispensed with, and a spring, E′, attached to the bottom of the anvil and under side of the frame; or, if desired, both springs may be used; but for ordinary purposes I prefer to use the spring E, attached to the base and lever.

Upon the lever are inclined notches *d*, which serve as a bearing for the end of the secondary plunger B^4. This plunger is attached to the cross-head B′ by means of a set-screw passing through a sleeve, b^4, which may be attached at any point upon the cross-head, but is preferably attached in such a manner as to bring it parallel with the upright, so that when forced downward its end will strike the bottom of the inclined notches *d* on lever D^3, and when the latter has been forced downwardly to its greatest distance will ride upon the bottom of the inclined notches *d* and force the cross-head of the plunger upwardly a sufficient distance to permit the lower end of the plunger to draw away from the stone, which will fall from the head of the stone-supporting spindle.

The operation of the parts is as follows: The parts are drawn to the position shown in dotted lines, Fig. 2, so that the peach can be placed in the hopper G. The crank is now revolved, and forces the slotted end of the plunger, by means of jointed rod B^2 and cross-head B′, against the top part of the peach resting in the hopper, and penetrates to the stone, and its head b^2 rests upon the surface of the peach. This head may be adjusted on the plunger to suit the varying sizes of the peaches, so that it will always rest upon the upper surface of the latter. In forcing its way to the peach-stone the plunger impales the lower end of the peach upon the anvil, the slotted ends of which grasp said stone, and prevents it from turning. The peach in the meanwhile is being forced through the hopper, and between the pivoted and side knives, and stripped of its meat. This operation is assisted by the secondary plunger, which strikes against the lever D^3, and forces the latter and the stone-supporting spindle downwardly, as shown in full lines, Fig. 2. When the cross-head D^2 strikes against the bottom of the frame D, the lower end of said secondary plunger rides upon the inclined bottom of notch *d* and elevates the plunger B a sufficient distance to release the stone, which falls through opening *a*. The plunger is now drawn upwardly, and the retracting-spring draws the anvil to the position shown in Fig. 1. If desired, the pivoted knives may be segmental, and have a retracting-spring attached to one of the corners near the periphery, and to the uprights, as shown in Fig. 8. The operation of this knife is obvious.

I am aware that peach-stoners have been provided with vertically-reciprocating anvils placed beneath plungers, and to these, broadly, I make no claim; but

What I do claim is—

1. In a fruit-stoner, the combination of a frame, a slotted plunger moving upon said frame, a vertically-reciprocating anvil moving upon said frame, and having a slotted end for the pivoted knives to pass through when the anvil is reciprocated, said pivoted knives between the plunger and anvil, and stripping-knives on each side of the rotary knives.

2. In a fruit-stoner, the combination of a frame, a plunger moving upon said frame, and having a slotted end and a slotted head, and a vertical reciprocating anvil having a slotted end and placed beneath the plunger and knives, which latter are interposed between the plunger and anvil, said slots permitting the plunger and anvil, when reciprocated, to pass between the knives.

3. In a fruit-stoner, the combination of a frame, a plunger moving upon said frame, a secondary plunger operated by the main plunger, a vertically-reciprocating anvil having a lever operated by said plungers, and knives interposed between the plunger and anvil.

4. In a fruit-stoner, the combination of a frame, a plunger moving upon said frame, a secondary plunger operated by the main plunger, a reciprocating anvil beneath the plunger, a retracting-spring for the anvil, and knives interposed between the plunger and anvil, substantially as described.

5. In a fruit-stoner, the combination of a frame, a plunger moving upon said frame, a secondary plunger operated by the main plunger, a vertically-reciprocating anvil, a retracting-spring for the spindle, knives between the plunger and spindles, and a hopper above the knives, substantially as described.

6. In a fruit-stoner, the combination of a frame, a cross-head having a main and secondary plunger, a cross-head having an anvil, a lever attached to the anvil's cross-head and to the frame, and a retracting-spring for the anvil, substantially as described.

7. In a fruit-stoner, the combination of a frame, a secondary plunger operated by the main plunger, and operating the vertically-reciprocating anvil, and a lever attached to the anvil and frame, and having notches with inclined bottom, for the purpose set forth.

8. In a fruit-stoner, the combination of a frame, a hopper formed in sections, supporting-arches for the hopper, hinged at their ends to the frame, and springs for drawing the sections of the hopper together, for the purpose set forth.

9. In a fruit-stoner, a segmental pivoted knife having a retracting-spring, for the purpose set forth.

In testimony whereof I affix my signature in presence of two witnesses.

ISAAC F. BETTS.

Witnesses:
EDW. A. ELLICOTT,
SAML. F. BETTS.