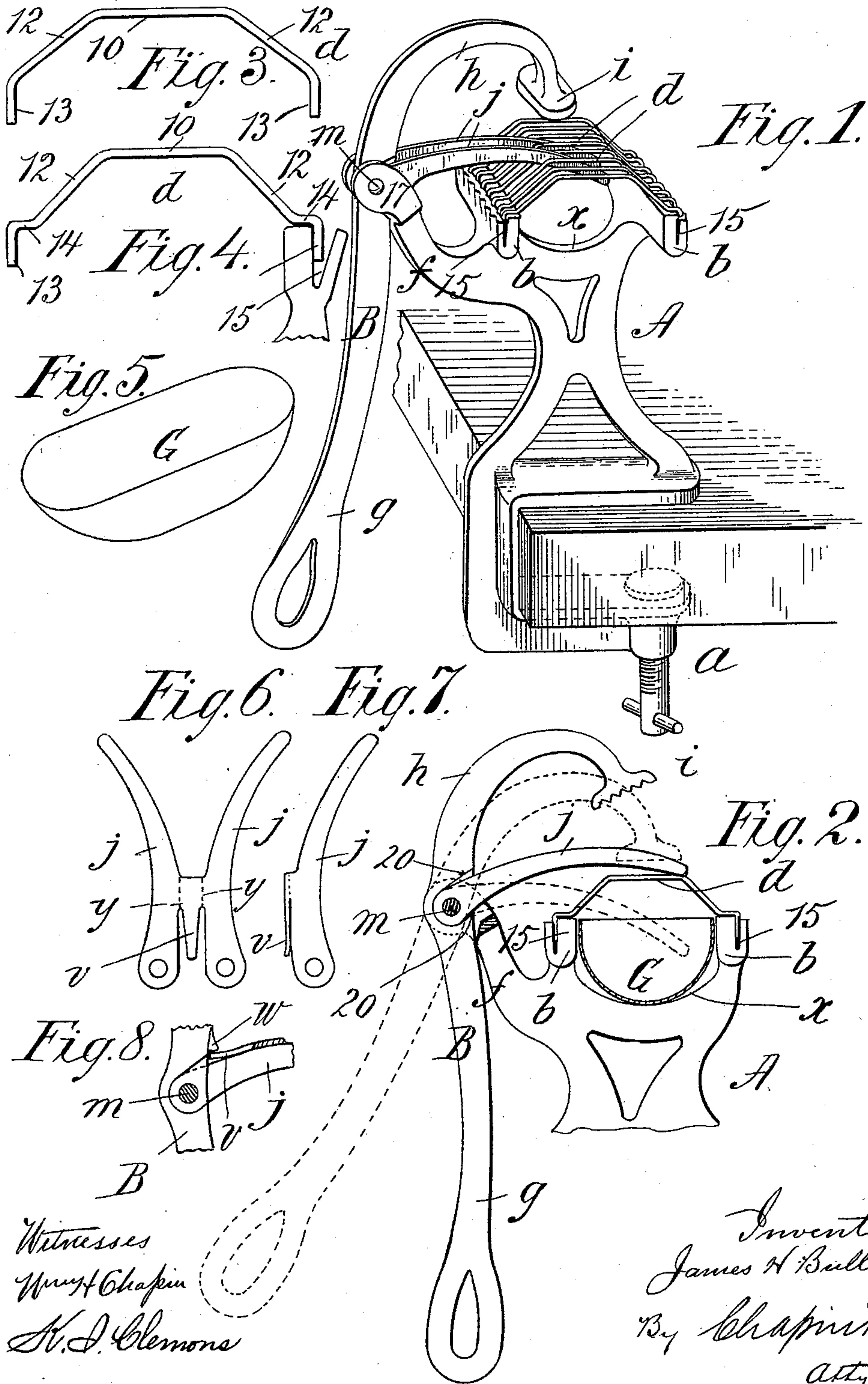


(No Model.)

J. H. BULLARD.
RAISIN SEEDER.

No. 539,610.

Patented May 21, 1895.



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UNITED STATES PATENT OFFICE.

JAMES H. BULLARD, OF SPRINGFIELD, MASSACHUSETTS.

RAISIN-SEEDER.

SPECIFICATION forming part of Letters Patent No. 539,610, dated May 21, 1895.

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To all whom it may concern:

Be it known that I, JAMES H. BULLARD, a citizen of the United States of America, residing at Springfield, in the county of Hampden and State of Massachusetts, have invented new and useful Improvements in Raisin-Seeder, of which the following is a specification.

This invention relates to that class of raisin seeders which comprise an open-work bed, or rest, for the moistened and softened raisin, and a movable part to press against the raisin and crowd its seeds therefrom, the seeds passing through the grates or bars of the open-work bed leaving the seeded raisin to be removed at pleasure.

One object of the invention is to provide in combination with the open-work bed and the raisin presser, a device which will automatically, as the presser is moved away from the bed, after having effected the seeding of the raisin, detach the crushed and seeded raisin from its clinging engagement with bars of the bed, whereby the raisin may be, with the greatest rapidity, removed by the fingers, leaving the bed clear in readiness for receiving another raisin.

Another object of the invention is to generally improve the construction of the parts to the end of rendering them cheaper and easier of manufacture and more stable and durable, and efficient in use.

To these ends the invention consists in constructions and combinations of parts, all substantially as will hereinafter fully appear and be set forth in the claims.

Reference is to be had to the accompanying drawings, in which—

Figure 1 is a perspective view of the improved raisin-seeder. Fig. 2 is a central vertical cross-section of the same. Figs. 3 and 4 are views in detail indicating the formations of the wire parts which in plurality constitute the open-work supporting-bed for the raisin and the mode of connecting such wires to the supporting stand or frame. Fig. 5 is a perspective view of the receptacle for the seeds. Figs. 6 and 7 are views showing the preferred manner of producing the duplicated detacher-arms; and Fig. 8 is a sectional view at the joint between the operating-lever

and the detacher-arms, showing a detail of construction to be hereinafter referred to.

In the drawings, A represents the frame, or stand, provided with the screw table-clamp, *a*, for securing the stand to the table, or other support, while the machine is being operated.

The stand has at its top the opposite parallel separated bars, *b, b*, which support the parallel spanning wires, *d, d*, which constitute the grate-like bed, or rest, for the raisin. These wires are each formed with a straight middle portion, 10, downwardly diverging portions, 12, 12, terminating in the extremities, 13, 13, which are at right angles to the middle portion, 10.

The separated bars, *b b*, of the stand are formed with the upwardly opening longitudinal grooves, 15, 15, into which the said extremities, 13, of the series of wires are entered, the anchoring of such extremities being by forcing and closing the metal at one side of the groove inwardly to a clamping bind against said portions, 13.

This method of anchoring the wires by upsetting, to a clamping bind, the one boundary of the groove, is particularly indicated in Fig. 4, in which view it is also shown that the spanning wires have in addition to the portions, 10, 12, and 13, also the short sections, 14, 14, intermediate between the portions 12 and 13, and at right angles to the extremities, 13, and which are designed to rest transversely on the tops of the bars, *b, b*, inside of the grooves, 15, to impart increased stability to the said wires, whereby they may not be readily deflected either vertically or transversely.

The terminals of the wires, *d, d*, in lieu of, or in addition to being secured by the clamping bind of the inset metal at the side of each groove, may be embedded in solder run into the grooves.

The stand is provided with the bracket-arm, *f*, between the paired ear-pieces, 17, of which is intermediately provided the lever, B, the lower member, *g*, of which constitutes the operating handle, while the upper member, *h*, comprises the presser head, *i*, the under surface of which is ribbed in a direction across the lengths of the wires of the bed.

The frame, A, at its portion between the

bars, *b, b*, and under the bed, is hollowed out as seen at *x*, affording space for the occupancy of a receptacle, *G*, into which may be received the raisin seeds.

5 There is, coacting with the lever, *B*, one or more arms, *j, j*, which swing up and down between certain of the wires at the intermediate part of the bed, they taking their position below the bed, as seen in Fig. 1, and in the
10 dotted lines Fig. 2 on the down swing of the presser head, and having their rising movement to lift the seeded raisin from its adhesion upon the bed when the lever is swung up to carry the presser head away from the grate-
15 like bed, as seen in the full lines in Fig. 2. These arms very efficiently detach the raisin, which, after the seed expelling operation, is somewhat mashed and in tenacious engagement with the wires of the open-work bed.

20 In order that there may be a degree of lost motion between the detacher-arms, *j, j*, and the lever, *B*, so that the movements of the arms, while ample, need not be so great as to interfere with the placing of the raisin on the
25 bed, while the presser head is still far enough removed from the bed to permit the interposition of the raisin, the arms are articulated to the lever so as to have the lost motion at the initial of the swinging movement, whereby
30 their swinging movements in the upward direction will not begin until after the raisin presser head has moved away from the bed, and so that as the parts are down swung the lever may,—even after the detacher arms have
35 moved down to their farthest extent as limited by striking against one of the bars, *b*, or against the raisin seeds in the receptacle, *G*,—still have its movement to the open-work bed. This jointing of the detacher arms to the le-
40 ver for the lost motion and then the movement in unison with the lever is acquired in this wise:—The arms, *j, j*, instead of being integral with the lever, (as they might be under the invention as more broadly considered) are
45 pivoted by the same pivot-pin, *m*, as constitutes the connection of the lever with the ear pieces of the bracket-arm, *f*. The pivoted end portions of the said arms which are of thin metal are let sidewise into depressions,
50 20, 20, in the sides of the lever which are so widened relative to the width of the arms, (see Fig. 2) that the lever may have quite a little degree of swinging movement before the
55 shoulders at the borders of the depressions will come into edgewise contact with the arms to carry them along too.

The paired arms, *j, j*, are preferably integrally formed by being struck out in a single blank, as seen in Fig. 6, which has the tie
60 member, *y*, and by bending the member along the lines, *y*, so that the arms are brought to parallel planes. The blank may be struck up with the tongue, *v*, which constitutes a spring. To coact with this spring, *v*, there may be a
65 lug, *w*,—Fig. 8,—cast on the lever, *B*, near the pivot against which the spring bears with the result of normally pressing the arms to their

lowermost disposition relative to the lever. By this means, as soon as the lever is swung to cause the presser, *i*, to approach the bed, *d*,
70 the detacher arms will not fail to immediately take their positions below the bed, leaving the latter all free and clear for the reception of the raisin.

In the jointing of the arms to the lever so
75 that there is the provision for the lost motion, the arms may not always be depended on to fall by their gravity immediately on the commencement of the descent of the presser. Hence the utility of the spring will be appar-
80 ent for more positively insuring the retreat of the arms under the bed immediately the presser has descended a little way, but before it has descended so far as to prevent the interposition of the raisin between it and the
85 bed.

On reference to Figs. 1 and 2, it will be seen that the openwork bed presents a grated surface with an elevated level intermediate part and with sloping marginal portions, and that
90 the presser, *i*, is of a width no greater than the level intermediate part. Therefore, as a raisin is inserted sufficiently far under the presser as to have its seeds crowded out therefrom, a portion thereof may still protrude
95 and overhang one of the sloping sides of the bed so that it may be readily held by the fingers during the seeding operation.

I do not broadly claim a bed composed of firmly mounted parallel wires, in combination
100 with a reciprocating raisin presser which has at its working face a series of ribs and grooves at right angles to said wires, as such is substantially claimed in my application, Serial
No. 506,727, filed April 7, 1894.
105

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

1. In a raisin seeding device, the combination with the grate-like bed and the movable
110 presser which has its movement against and away from the bed, of the arms connected to the presser and rising through the grating from below to detach the raisin as the presser moves away from the bed, all combined sub-
115 stantially as described.

2. In a raisin seeding device, the combination with a grate-like bed and a movable part comprising the raisin presser which has its
120 movement against and away from the bed, of one or more raisin detacher arms pivotally mounted for swinging movement through the separated members of the bed, and an abutment on the presser-carrying part which, after a certain degree of movement of such part
125 then contacts against and causes movement of the said detacher-arm, substantially as and for the purpose set forth.

3. In a raisin seeder, the combination of the open-work bed and the lever carrying the
130 raisin presser, of the paired detacher arms formed from a single blank and having the uniting member intermediate between the ends of the arms which is folded to bring the

arms in sidewise separation in parallel planes, the rear extremities of the arms embracing the lever and the pivot passing through and uniting the arms and lever, and serving to support them on the frame of the machine, substantially as described.

4. In a raisin seeding device, the frame or stand having metallic bars *b, b*, at its opposite sides, said bars having longitudinal grooves, and the grating consisting of wires with their ends extending into the grooves of the bars, and extending from bar to bar, the grooves in the bars being closed by upsetting so that the ends of the wires are firmly held, substantially as described.

5. In a raisin seeding device, the integral frame having parallel side bars grooved on their upper surface, and the grating consisting of parallel wires with their ends securely held in the grooves of the bars, the wires extending from the grooves horizontally on the bars, thence inclined upwardly, and thence extending across the recess between the wires, all in combination substantially as described.

6. In a raisin seeding device, the combination with the frame having the opposite grooved bars, *b, b*, of the plurality of wires, *d, d*, each comprising the middle horizontal section, 10, the downwardly diverging sections, 12, 12, the short horizontal sections, 14, 14, and the terminals, 13, 13, which are set within the grooves of the bars and there confined by having the metal at one side of each groove set in to exert a clamping bind on said terminals, while said sections, 14, 14, have bearings crosswise on top portions of the said bars, *b*, all substantially as and for the purposes set forth.

7. In a raisin seeding device, the combina-

tion with a grate-like bed and a lever carrying a raisin presser of one or more detachable arms pivotally mounted for swinging movement through the separated members of the bed, and an abutment on the presser carrying lever which, after a certain degree of movement of such lever then contacts against and compels movement of the said detachable arm, and a spring applied between the detachable arm and the lever for exerting a downward pressure on the arm, substantially as described.

8. In a raisin seeding device, the integral frame having side bars with grooves in their upper faces, the wires having their ends clamped in said grooves by the compression of the metal and extending parallel to each other from bar to bar, combined with the presser lever having its face grooved in direction transverse to the bars, said lever pivoted to the frame, all substantially as described.

9. The raisin seeding implement having an integral metallic frame with parallel side bars with grooves in their upper faces, parallel wires with their ends clamped in said grooves and extending from bar to bar, said wires having a straight middle portion and downwardly extending end portions, a lever pivotally connected to the frame and having an arm extending over the wires as described, and a seed receptacle below the wires and enclosed between the bars, all in combination substantially as described.

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