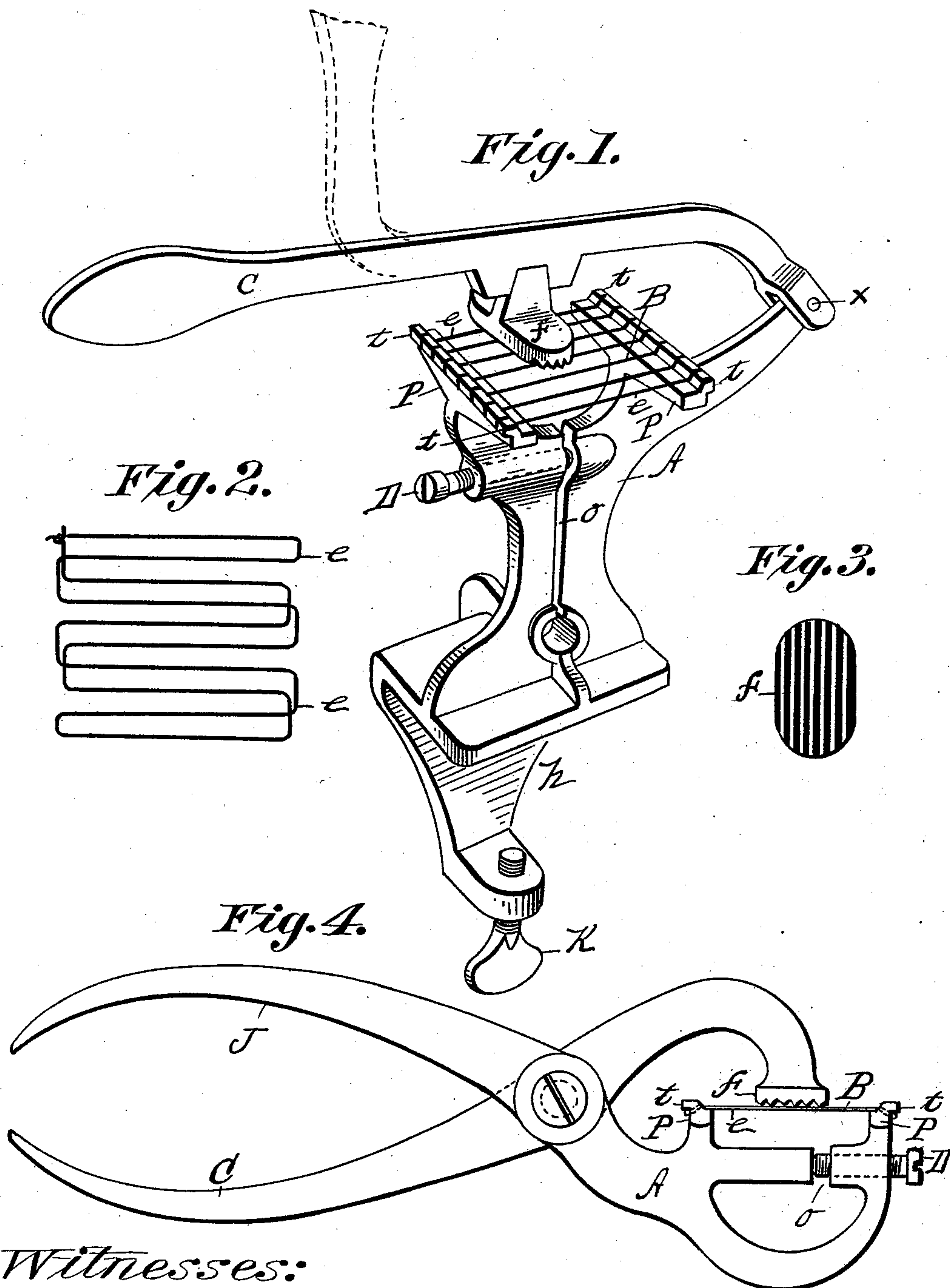


(No Model.)

J. H. BULLARD.  
RAISIN SEEDER.

No. 539,664.

Patented May 21, 1895.



Witnesses:  
J. A. Gaffney  
H. J. Clemons

Inventor,  
James H. Bullard  
By Chapman Atty.



# UNITED STATES PATENT OFFICE.

JAMES H. BULLARD, OF SPRINGFIELD, MASSACHUSETTS.

## RAISIN-SEEDER.

SPECIFICATION forming part of Letters Patent No. 539,664, dated May 21, 1895.

Application filed April 7, 1894. Serial No. 506,727. (No model.)

*To all whom it may concern:*

Be it known that I, JAMES H. BULLARD, a citizen of the United States, 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 raisin seeders, the object being to provide a machine of this class possessing operative advantages by which the seeding of raisins is facilitated and perfect operation of the same is secured; and the invention consists in a peculiar construction of the various parts of the machine, all as hereinafter fully described and more particularly pointed out in the claims.

In the drawings forming part of this specification, Figure 1 is a perspective view, and Fig. 4 a side elevation, illustrating a raisin-seeder embodying my improvements. Fig. 2 is a diagram illustrating the relations of the several convolutions of wire which constitute the bed against which the raisin is pressed. Fig. 3 is a plan view of the raisin-presser.

In the drawings, (referring now to Fig. 1) A is a metallic frame, or casting, provided with a table clamp, *h*, at its lower end and a clamp screw, *K*, for securing said frame to a table or other place, whereby the machine is held suitably while being operated. The said frame, *A*, is partially divided by a vertical slot, *o*, thus forming semi-divided parts thereof which are capable of a slightly separating movement, and into one of said divided portions of the frame is placed a screw, *D*, which is adapted to be screwed against the opposite portion of the frame to adjust said partially divided portions slightly away from, or toward, each other. Said screw, when turned in, serves to separate said frame portion, more or less, and when turned in the opposite direction permits the frame portions to approach each other by spring action. On each of said frame portions is arranged a bar, *P*, which two bars are parallel to each other and of substantially the same length, and they constitute the supporting elements of the raisin bed, *B*. For the purpose of providing convenient means on said bars, *P*, for attaching the raisin bed, proper, thereto, said bars are each slotted on their upper edges, as

shown, thereby forming a series of teeth, *t*, on their upper sides from end to end. The said raisin bed, proper, consists of a series of parallel tightly drawn wires, *e*, extending between said bars, *P*, and leaving an open space therebetween on which raisins to be operated upon for removing the seeds therefrom are laid, one by one. The said wire, *e*, is drawn around the said teeth, *t*, on the bars, *P*, and secured by the ends thereof in any suitable way so that the several lengths of wire forming the bed are retained in a uniform plane side by side, as shown. After the said wires shall have been properly secured on the bars, *P*, the screw, *D*, is turned against the opposite portion of the frame, *A*, thereby slightly separating the bars, *P*, and imparting the requisite strain to the bed wires, *e*, to sustain them against undue deflection when pressed upon to force the seeds out of a raisin. The wires, *e*, as shown in Fig. 1, are slightly more separated than they are in practice, such separation of said wires being preferably provided as will cause the width of the spaces therebetween to be slightly less than the size of the average raisin seed so that as the seeds are pressed between the wires the latter will spring laterally, more or less, letting the seeds pass through, and immediately after, the wires will regain their normal relative positions, thereby preventing the seed from being drawn upwardly through them, by any adhesion to the raisin that may exist at that point of the operation, and permitting the raisin to be removed from the bed wires, and insuring the perfect separation of the seed from the raisin thus preventing all possibility of the seed being withdrawn from the bed when the raisin is removed. The quality of wire used in making said bed, *B*, is preferably that known as "piano wire," for the reason that it is very strong, and when forced laterally will quickly regain a straight position. A convenient handle, or lever, *C*, is pivoted to said frame, *A*, (in Fig. 1, at *x*.) and on said handle and forming, preferably, an integral part thereof, a raisin presser, *f*, is rigidly fixed having its under face corrugated, as shown, which, through the vibratory movement of said lever is moved against, and from, the said raisin bed, *B*, to the end that a raisin placed upon



the latter may, by the movement of said presser thereagainst, through the movement of said handle, be pressed against said bed wires with sufficient force to drive the seeds  
 5 of the raisin between and beneath said wires, as above described. The corrugated face of said presser, *f*, in practice, is made, preferably, of a width somewhat less than that of a compressed raisin so that the pressure it ex-  
 10 erts shall be mainly upon the central part of the raisin where the seeds are lodged. Corrugating the face of said presser, or otherwise making a broken bearing surface thereon, produces a series of grooves, or spaces, be-  
 15 tween the ribs, or bearing parts, thereof which materially lessens the tendency of the raisin to adhere to the presser, and, consequently, the raisin is left on the wire table, *B*, after the seeds are pressed out of it, from which it  
 20 can then be pushed off in the act of placing another raisin thereon. The free end of said lever, *C*, may be turned at right angles there-  
 to, if desired, as indicated by dotted lines in Fig. 1.

25 A more convenient form of the raisin seeder, for hand use, is shown in the modified frame construction illustrated in Fig. 4, and wherein the table-clamp *h*, and the clamp-screw, *K*, are not needed. In said figure the lever, *C*,  
 30 as in Fig. 1, carries the presser, *f*, and the latter is shown integral with said lever; also in said Fig. 4, is shown the partially separated frame, *A*, on the handle, *J*, on parts of which are the bars, *P*, provided with the teeth,  
 35 *t*, the wire-bed, *B*, and the screw, *D*, acting as described, to regulate the tension of the wires composing the bed, *B*. The instrument thus modified may be held in, and operated by,  
 40 one hand.

It is obvious that the frame, *A*, may be made solid and be thus sufficiently rigid to

permit of dispensing with the tension screw, *D*, if so preferred.

What I claim as my invention is—

1. In a raisin seeding machine, a raisin sup- 45  
 porting bed consisting of a series of firmly mounted parallel separated sections of wire, in combination with the reciprocatory raisin presser, *f*, which has at its working face a se-  
 50 ries of ribs and grooves extending in lines at right angles to the lengths of the wires of the bed, and means for imparting the reciproca-  
 tory movement to the said presser, substantially as described.

2. In a raisin seeding machine, a bed upon 55  
 which to lay raisins consisting of a series of separated wires arranged side by side, a frame on which said bed is supported having teeth-  
 bearing parts, each of which parts is partially separated from the other, a tension screw in 60  
 one of said teeth-bearing parts having a bearing against the opposite part, combined with a raisin presser and an operating lever there-  
 for whereby said presser is moved against, and from, said bed, substantially as set forth. 65

3. In a raisin seeder, a frame therefor hav-  
 ing thereon the teeth-bearing bars, *P*, the frame between said parts being partially di-  
 70 vided, a tension screw, *D*, in one of said divided parts, having its point for engagement against the opposite part, a bed, *B*, consist-  
 ing of a series of separated wires secured to the said teeth, combined with a raisin presser, *f*, having a corrugated face, and a lever, *C*,  
 75 therefor, whereby said presser is moved against, and from, said bed, substantially as set forth.

JAMES H. BULLARD.

Witnesses:

H. A. CHAPIN,

WM. S. BELLOWS.