

H. A. BEEKHUIS.
FRUIT GRADER.

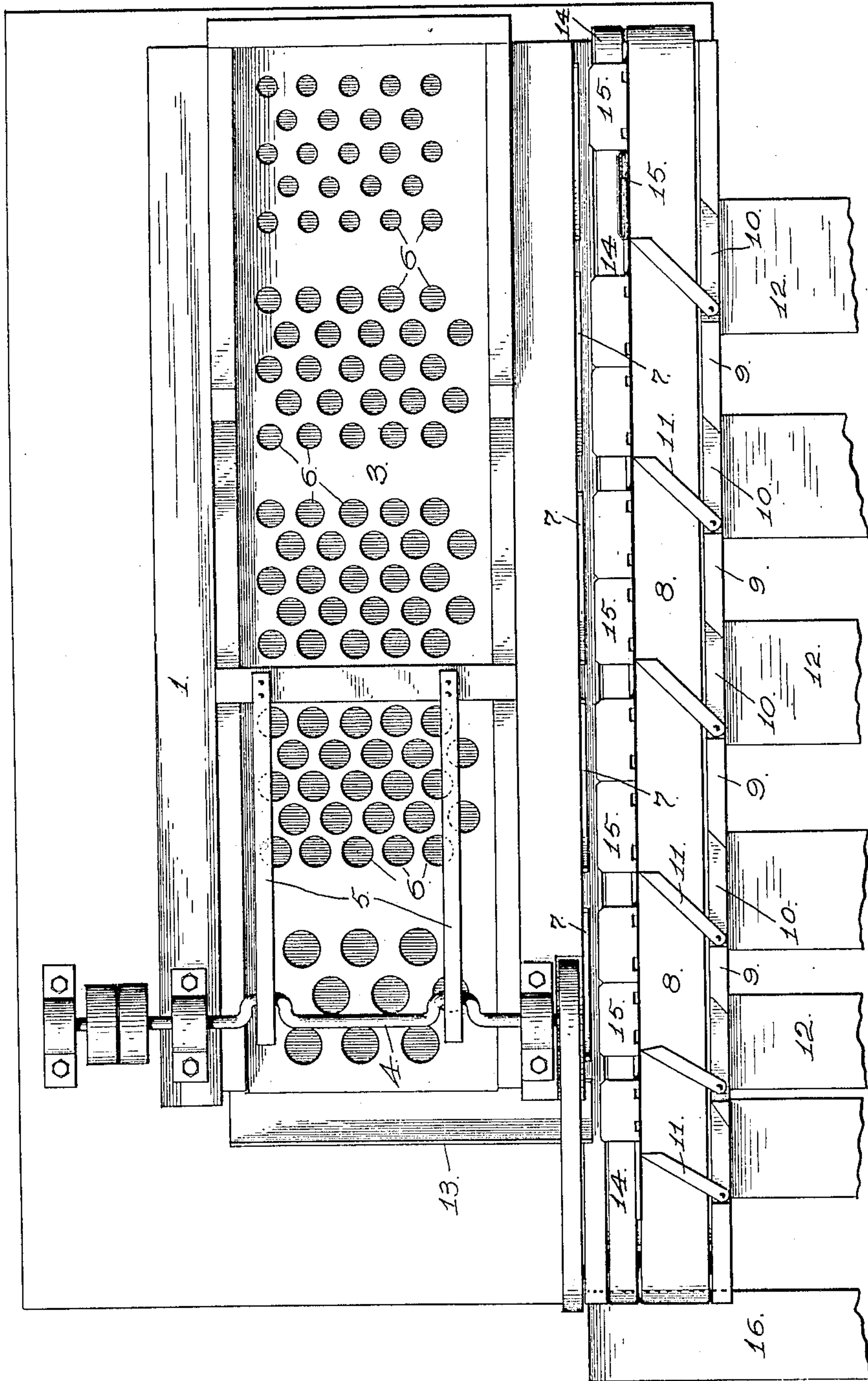
APPLICATION FILED FEB. 20, 1908.

Patented Dec. 15, 1908.

2 SHEETS—SHEET 1.

906,605.

Fig. 1.



INVENTOR.

WITNESSES.

Arthur L. Lee.
W. A. Allen

Hermanus Albert Beekhuis
by Wm. F. Booth
his Attorney

FRUIT GRADER.

Patented Dec. 15, 1908.

2 SHEETS—SHEET 2.

906,605.

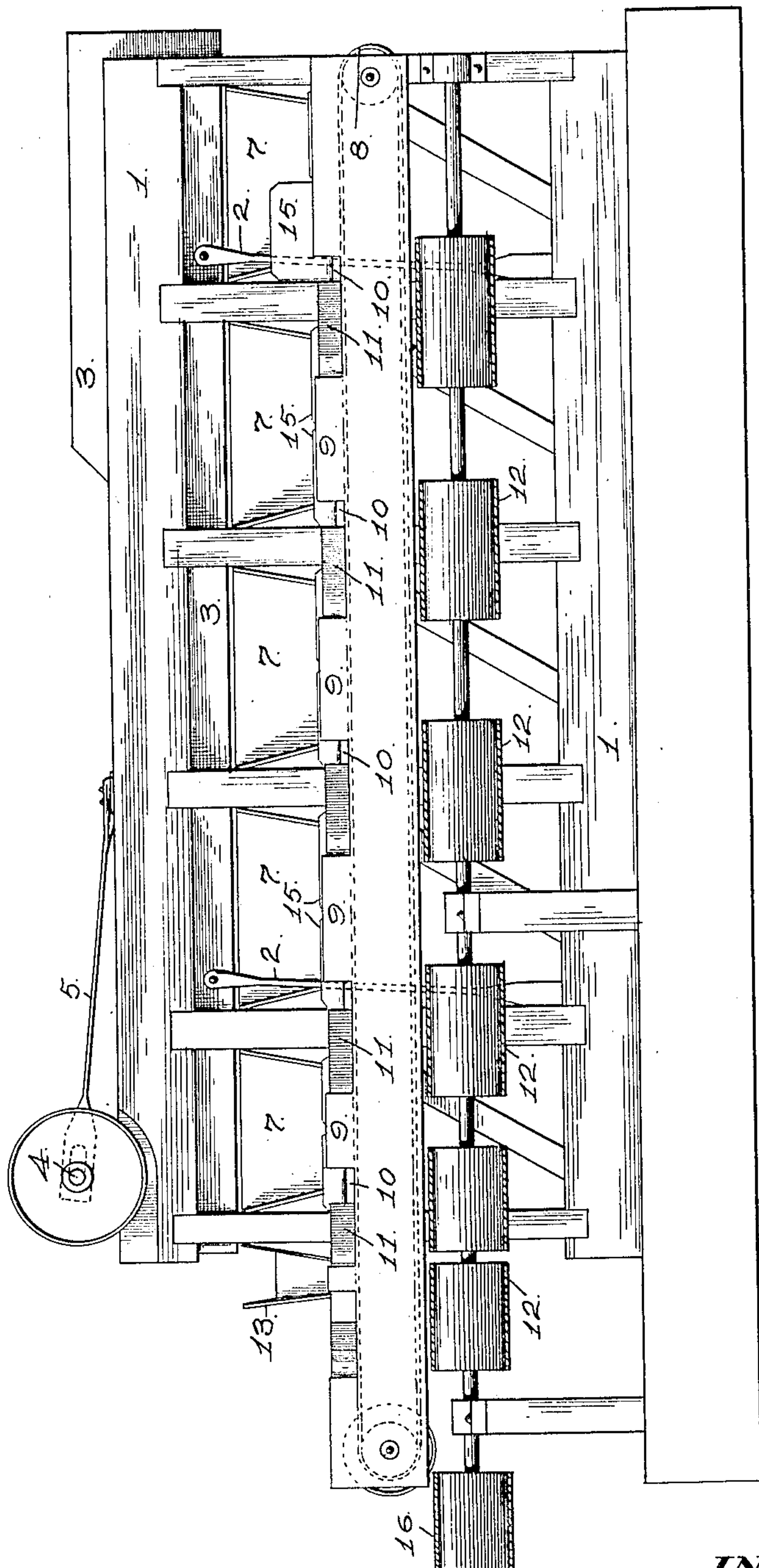


Fig. 2.

INVENTOR.

Hermanus Albert Beekhuis
by John F. Booth
his Attorney.

WITNESSES.

Arthur L. Slee.
Wacker

UNITED STATES PATENT OFFICE.

HERMANUS ALBERT BEEKHUIS, OF HANFORD, CALIFORNIA, ASSIGNOR TO CALIFORNIA FRUIT CANNERS ASSOCIATION, OF SAN FRANCISCO, CALIFORNIA, A CORPORATION OF CALIFORNIA.

FRUIT-GRADER.

No. 906,605.

Specification of Letters Patent.

Patented Dec. 15, 1908.

Application filed February 20, 1908. Serial No. 416,819.

To all whom it may concern:

Be it known that I, HERMANUS ALBERT BEEKHUIS, a citizen of the United States, residing at Hanford, in the county of Kings and State of California, have invented certain new and useful Improvements in Fruit-Graders, of which the following is a specification.

My invention relates to the class of fruit-graders, and it consists in the novel constructions, arrangements and combinations of parts which I shall hereinafter fully describe.

The object of my invention is to separate fruit according to size, and to rapidly, economically and effectively handle the different grades, thus adapting the machine for use in canning plants, where these results are important.

Referring to the accompanying drawings, Figure 1 is a plan of my machine. Fig. 2 is a side elevation of the same.

1 is a frame in which is supported, upon spring standards 2, the grading table 3, to which a shaking motion is imparted by suitable means, here shown as consisting of the crank-shaft 4 and connecting links 5.

The grading table is provided with holes 6, arranged in groups, the holes in successive groups, being graduated in size, those of the first group, at the head of the table where the fruit is supplied to it, being the smallest, and those at the foot of the table being the largest.

Under each group of holes is a chute 7, each chute leading and directing its fruit to a traveling carrier 8. The outer fixed guard 9 of this carrier has gate-ways 10, each of which is controlled by a switch-gate 11 which is adapted to be turned inwardly at an angle over the carrier, in order to divert the fruit thereon to and through the gate-way.

Beyond each gate-way is a traveling carrier 12 which is supposed to lead to the canning tables or other destination for the graded fruit.

At the foot of the table 3 is a trough 13 which receives the largest size of fruit which is unable to pass through the table holes, and delivers it to the carrier 8.

Now, in case any one grade of fruit is delivered at the canning table or other destination in too great quantity to be properly handled, I provide for diverting said grade,

either in whole or in part, to supplementary or additional canning tables or destinations. This is done as follows:—Between the inner side of the carrier 8 and the delivery ends of the chutes 7 lies a supplementary traveling carrier 14, Fig. 1. Above this carrier are arranged swinging bridges 15, which when turned down overlie the said carrier and span the space between the delivery ends of the chutes 7 and the main carrier 8; and when turned up, bar the passage to said main carrier and expose the supplementary carrier, as is shown, in one instance, in Fig. 1. Each of these bridges is best divided into sections, so that either the whole, or only a portion of the particular grade may be diverted to the supplementary carrier 14. At the end of the supplementary carrier is a carrier 16 which leads to additional canning tables or destinations.

The operation of the machine is as follows:—The fruit, say, for example, previously divided, pitted and peeled peaches, is supplied to the head of the grading table, and is thereon shaken and advanced. The smallest fruit drops through the first group of holes, and travels by gravity down the underlying chute 7 and over the turned down bridge 15, to the carrier 8. Advancing with this carrier, the fruit meets and is deflected by the switch-gate 11, through the gate-way 10, to the carrier 12, by which it is taken to the canning table. Each grade is similarly and separately treated.

When desired, two or more grades may be blended; as, for example, if the smallest grade and the one next larger are required to be blended, the first switch gate can be left in position to keep its gate-way 10 closed, and the next gate may be swung over the carrier 8, in order to divert both grades to the same carrier 12. But, if there should be more of any grade than the operators at the canning table can properly handle, say, for example, the smallest grade, then the bridge 15 of this grade, or one section of it, as shown, is turned up to obstruct the passage of the whole or a portion of said grade, to the main carrier 8. By this turned up bridge, or section thereof, said grade, or a portion of it, falls upon the supplementary carrier 14, by which it is carried along under all the other recumbent bridges, (which are high enough above said carrier to permit such passage) and is delivered to the end

carrier 16, which takes it to an additional canning table at which it can be handled.

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

1. In a fruit-grader, the combination of a grading table, underlying chutes to receive each grade, a traveling carrier common to all said chutes and to which they separately deliver their fruit, means for separately diverting the grades from said carrier, a supplementary traveling carrier, and means for diverting any grade from its course to the main carrier, to said supplementary carrier.
2. In a fruit-grader, the combination of a grading table, underlying chutes to receive each grade, a traveling carrier common to all said chutes and to which they separately deliver their fruit, means for separately diverting the grades from said carrier, a supplementary traveling carrier interposed between the main carrier and the delivery chutes, and means for diverting any grade, from its chute, to the supplementary carrier.
3. In a fruit-grader, the combination of a grading table, underlying chutes to receive each grade, a traveling carrier common to all said chutes and to which they separately deliver their fruit, means for separately diverting the grades from said carrier, a supplementary traveling carrier interposed be-

tween the main carrier and the delivery chutes, and swinging bridges overlying the supplementary carrier to normally carry the fruit from the chutes to the main carrier, and adapted, when raised, to bar the passage of the fruit to said main carrier and to effect its delivery to the supplementary carrier.

4. In a fruit-grader, the combination of a grading table, underlying chutes to receive each grade, a traveling carrier common to all said chutes and to which they separately deliver their fruit, means for separately diverting the grades from said carrier, a supplementary traveling carrier interposed between the main carrier and the delivery chutes, swinging bridges overlying the supplementary carrier to normally carry the fruit from the chutes to the main carrier, and adapted, when raised, to bar the passage of the fruit to said main carrier and to effect its delivery to the supplementary carrier, and a carrier to separately dispose of the fruit from the supplementary carrier.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

HERMANUS ALBERT BEEKHUIS.

Witnesses:

D. H. LATIMER,
J. H. FARLEY.