

No. 860,081.

PATENTED JULY 16, 1907.

N. B. CONVERSE.
FUNNEL FOR FRUIT PACKING MACHINES.
APPLICATION FILED OCT. 23, 1906.

Fig. 1.

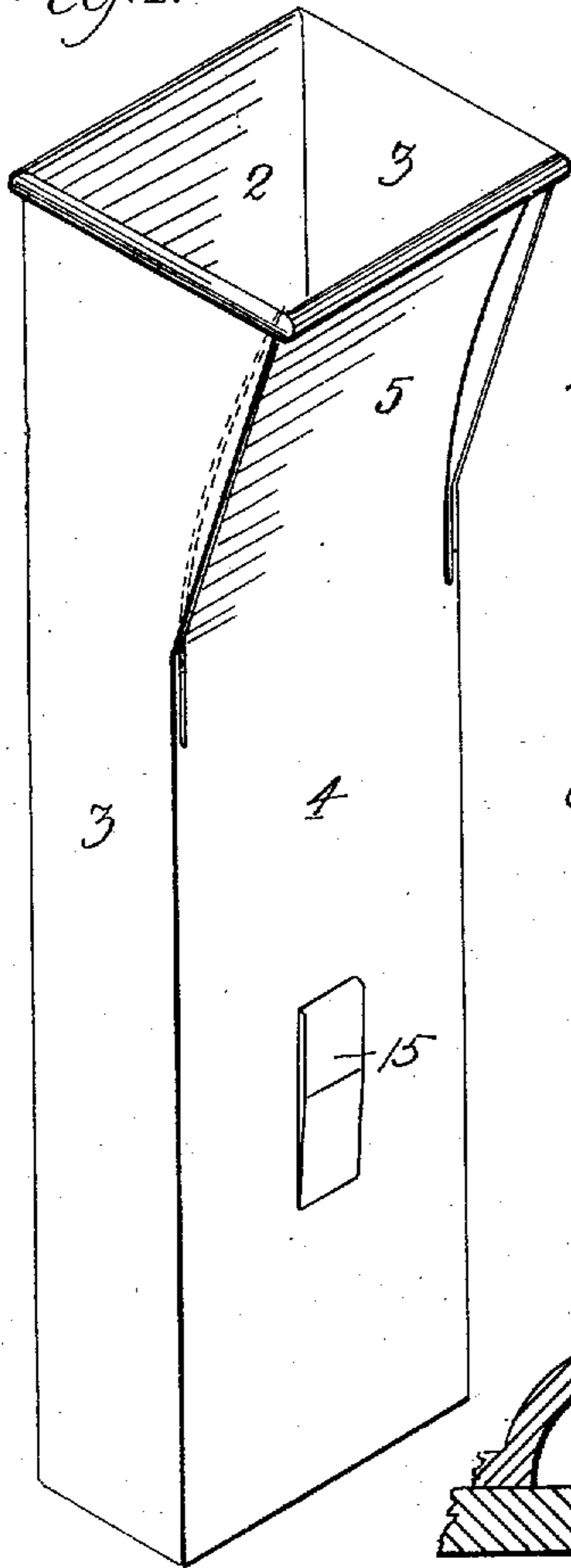


Fig. 2.

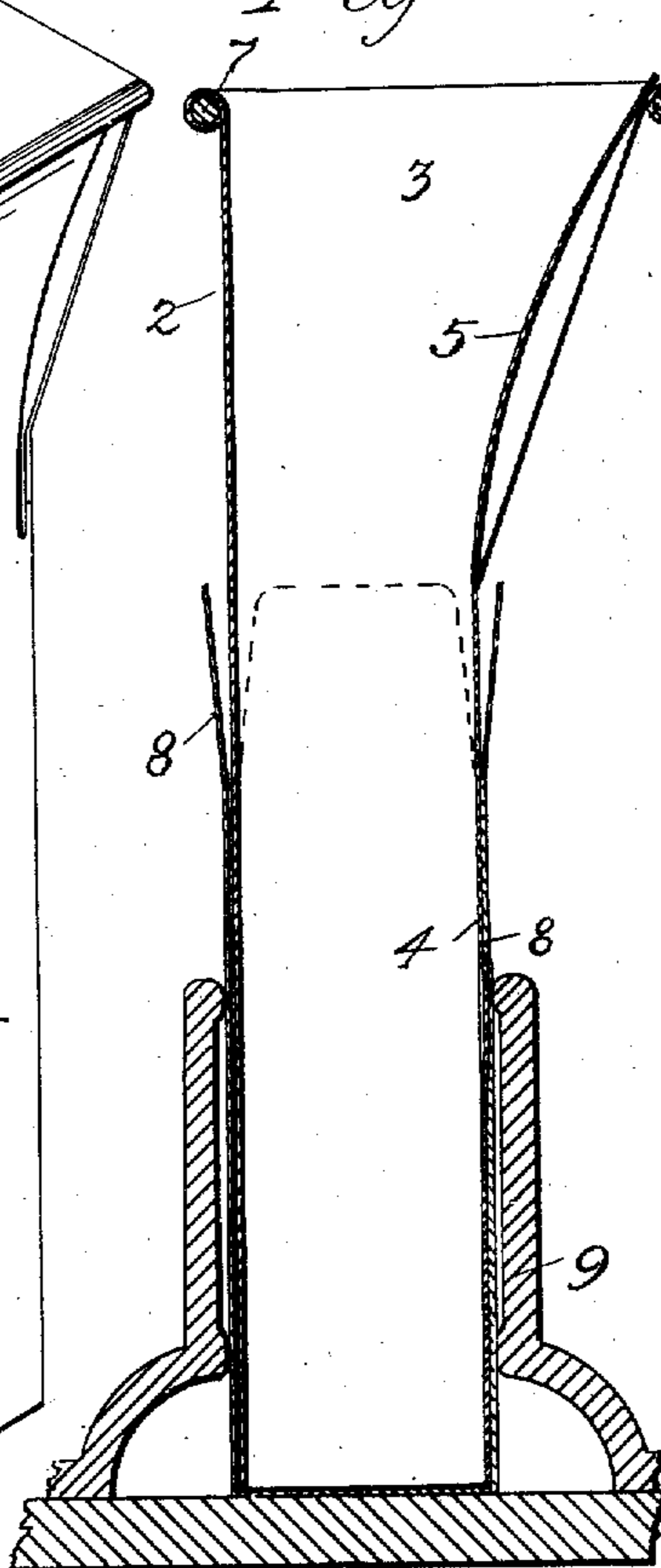


Fig. 3.

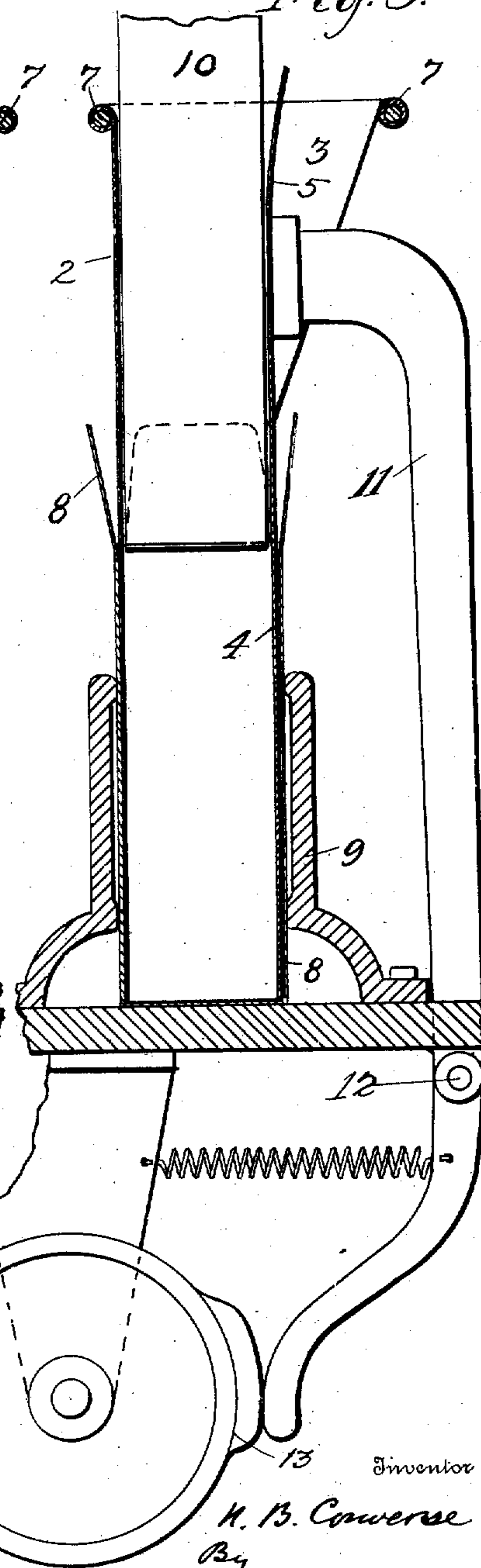
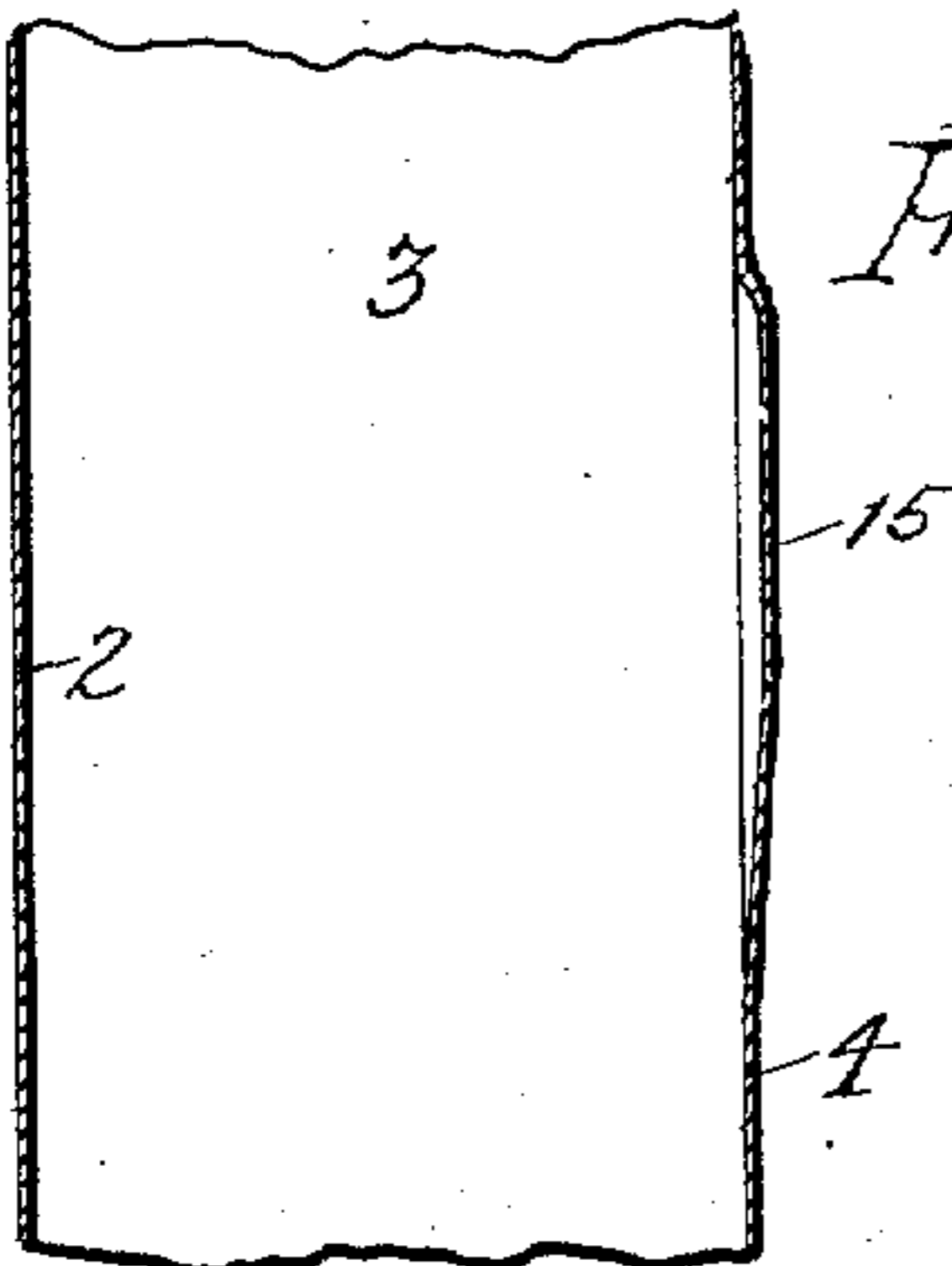


Fig. 4.



Witnesses
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NEWTON B. CONVERSE, OF FRESNO, CALIFORNIA, ASSIGNOR, BY DIRECT AND MESNE ASSIGNMENTS, TO HIMSELF AND J. E. DICKINSON, TRUSTEES, OF FRESNO, CALIFORNIA.

FUNNEL FOR FRUIT-PACKING MACHINES.

No. 860,081.

Specification of Letters Patent.

Patented July 16, 1907.

Application filed October 23, 1905. Serial No. 283,980.

To all whom it may concern:

Be it known that I, NEWTON B. CONVERSE, a citizen of the United States, residing at Fresno, in the county of Fresno and State of California, have invented certain new and useful Improvements in Funnels for Fruit-Packing Machines, of which the following is a specification.

This invention relates to funnels for filling cartons with raisins or other material, for the purpose of packing the same.

The object of the invention is to provide a funnel which will enable the raisins or other material to be packed in the carton without breaking or unduly crushing the same by a plunger used for the purpose of compressing the material into the carton.

A further object is to provide means for furnishing pressure between the funnel and the beads on the inner face of the channel walls of a packing machine.

Another object is to provide a funnel furnished with means by which it can be gripped to assist in mechanically extracting it from the carton and to assist in conveying it from the packing machine.

A further object is to provide a funnel for machine packing which shall have an open mouth and means for contracting said mouth so as to make its sides parallel and in line with the sides of the funnel, so that when the plunger or other pressure device enters the mouth the contents in the mouth will be contracted so as to have cross-section of about the same size and shape of the pressing means.

In the accompanying drawing, Figure 1 is a perspective view of the funnel; Fig. 2 is a cross sectional view of the funnel in position; Fig. 3 is a similar view showing the funnel in use; Fig. 4 is an enlarged vertical section of a portion of the funnel to illustrate a detail of its construction.

Referring to the drawing, 1 represents the funnel which has a rectangular fixed side 2, two fixed sides 3, of which the lower portions are rectangular and the upper portions are enlarged or extended at the edge remote from the fixed side 2, and a fourth side 4, of which the lower portion is fixed between two sides 3, while the upper portion 5 is flexible and can be moved inwards between the enlarged upper portions 6 of said sides. The wire beading 7 acts as a support extending entirely around the top of the funnel and connecting the fixed tops of the side thereof.

8 represents the carton, a series of which are placed in a guideway 9, in each of them being inserted one of these funnels, and being moved in said guideway into such position that a plunger 10 can descend into the carton and compress the raisins or other material therein. When in this position, the flexible upper

portion 5 of the side 4 is pressed inwards by means of a lever 11, pivoted at 12, the lower arm of the lever being operated by a cam 13 driven from any suitable source of power. When the raisins or other material have been discharged into the funnel falling then into the carton, this flexible portion is pressed inwards so as to permit the plunger to fit tightly within the carton. By pushing inwards this flexible portion of the side, the raisins can not be pressed between the side of the plunger and the side of the funnel but are all of them forced downwards by the lower end of the plunger.

The side 4 of the funnel is formed with a portion 15 embossed or stamped therefrom, said portion therefore being slightly resilient and pressing the sides of the carton against the sides of the guideway. The advantage of this construction is that the embossment 15 causes the funnel to stop by friction when the impelling means are arrested, thereby accurately centering the carton beneath the plunger which enters the same. The friction thus created between the funnel and channel walls prevents the funnels toppling over when they stop, the funnels being top-heavy and having considerable momentum. The bead 7 forms a convenient means for gripping the funnel to extract it from the packing machine.

I claim:—

1. A funnel the lower portion of which is rectangular and which has a side movable at the upper portion and adapted to be pressed inwards between two adjacent sides, said adjacent sides being enlarged to extend over said movable upper portion when in its outer position, substantially as described.

2. A funnel the lower portion of which is rectangular and which has a side made of spring metal and movable at the upper portion and adapted to be pressed inwards between two adjacent sides, said adjacent sides being enlarged to extend over said movable upper portion when in its outer position, substantially as described.

3. A funnel the sides of which are rigidly connected together at the lower portion, one side at the upper portion being movable inwards between two adjacent sides, said adjacent sides extending over the edges of the movable upper portion when the latter is in its outer position, substantially as described.

4. A funnel the sides of which are rigidly connected together at the lower portion, one side at the upper portion being made of spring metal and movable inwards between two adjacent sides, said adjacent sides extending over the edges of the movable upper portion when the latter is in its outer position, substantially as described.

5. A funnel comprising sides, one of which is movable inwards at the upper portion between two adjacent sides, said adjacent sides being extended over the edges of said movable upper portion when in its outer position, substantially as described.

6. A funnel comprising sides, one of which is made of spring metal and movable inwards at the upper portion between two adjacent sides, said adjacent sides being ex-

tended over the edges of said movable upper portion when in its outer position, substantially as described.

7. A funnel comprising sides, one of which is movable inwards at the upper portion between two adjacent sides, said adjacent sides being extended over the edges of said movable upper portion when in its outer position, and a support extending entirely around the top of the funnel and connecting the fixed tops of the sides thereof, substantially as described.
- 10 8. A funnel comprising sides, one of which is movable inwards at the upper portion between two adjacent sides, said adjacent sides being extended over the edges of said movable upper portion when in its outer position, a support extending entirely around the top of the funnel and connecting the fixed tops of the sides thereof, the movable edge resting when in its outer position against said support, substantially as described.
- 15 9. A funnel for cartons having an embossed or stamped

out portion in one of its sides, in combination with a guideway for cartons for use with said funnel, substantially as described.

10. A funnel for cartons having a flexible embossment on one side in combination with the guideway for use with said funnel, substantially as described.

11. A funnel for cartons having four sides, one side being embossed and provided near its top with means for mechanical engagement with a device to extract it from the carton, substantially as described.

In witness whereof I have hereunto set my hand in the presence of two subscribing witnesses.

NEWTON B. CONVERSE.

Witnesses:

D. A. CASHIER,
L. B. HAYHURST.