C. D. NARAMOR.

VACUUM BEAN PICKER.

APPLICATION FILED JULY 19, 1916.

1,242,840. Patented Oct. 9, 1917.

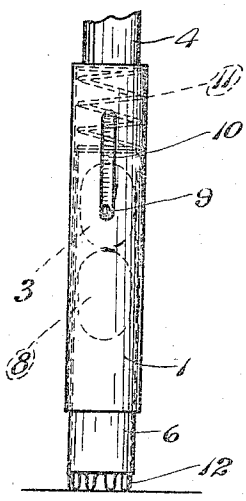



FIG. 1.

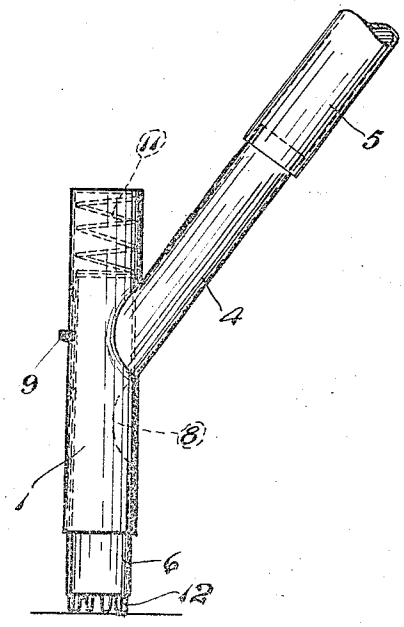



FIG. 2.

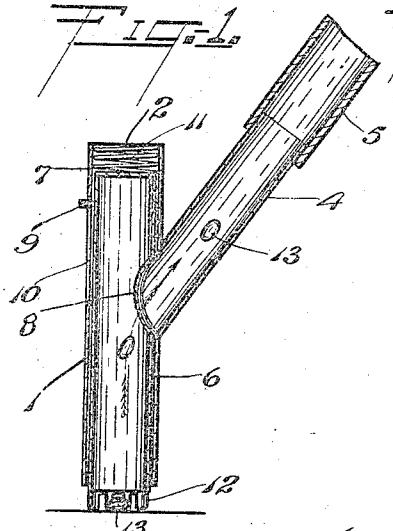



FIG. 3.

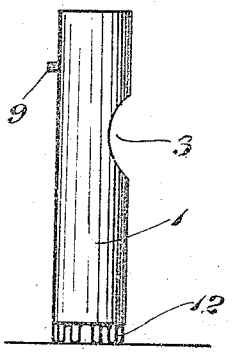



FIG. 4.

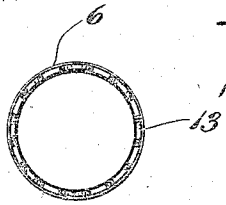



FIG. 5.

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# UNITED STATES PATENT OFFICE.

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## VACUUM BEAN-PICKER.

1,242,840. Specification of Letters Patent. Patented Oct. 9, 1917.

Application filed July 19, 1916. Serial No. 110,122.

*To all whom it may concern:*

Be it known that I, COLTON D. NARAMOR, a citizen of the United States of America, residing at Caro, in the county of Tuscola and State of Michigan, have invented certain new and useful Improvements in Vacuum Bean-Pickers, of which the following is a specification.

This invention relates to a device to be used in picking or sorting inferior and imperfect beans from those which are good, it being an object and purpose of the invention to provide a device of this character in which the inferior beans may be transferred to any convenient receptacle through suction operating through the device. Many other objects and purposes together with novel details of construction and operation for attaining the same will further appear as the disclosure of the preferred embodiment to my invention is made, reference being had to the accompanying drawing, in which;

Figure 1 is a front elevation of the bean picking device.

Fig. 2 is a side elevation thereof.

Fig. 3 is a vertical section taken through the device with the parts in position such that the suction may operate to carry a bean through said device.

Fig. 4 is a side elevation of a portion of the device; and

Fig. 5 is a view of the bottom end of the device.

Like reference characters refer to like parts throughout the several views of the drawing.

In the preferred construction there is provided an outer tube 1 open at its lower end but closed by a member 2 at its upper end, this tube having an opening 3 in one side in which a tubular handle 4 is secured. The handle 4 is positioned at an angle to the vertical and has secured to its free end a tube 5 which may lead to any suitable suction apparatus for drawing air through the handle 4 and the outer tube 1. A tube of smaller diameter 6 is loosely mounted within the outer tube 1, its lower end also being open and its upper end closed by a member 7. There is also provided in the side of the tube 6 an opening 8 which when it is in alinement with the opening 3 of the outer tube provides a continuous passage from the lower end of the inner tube 6 to the handle 4 and the suction tube 5. A pin 9 fastened adjacent the upper end of the inner tube 6 extends outwardly through a vertical slot 10 in the outer tube 1 and between the ends 2 and 7 of said tubes a coil spring 11 is placed, the tendency of which is to force the pin 9 to the lower end of the slot 10 and in this way carry the opening 8 below the lower end of the tubular handle 4. At the lower end of the inner member 6 a wire 12 is secured, it being bent in a series of convolutions as shown, providing a support attached at the lower end of the inner member which will elevate it a short distance above any table or other surface on which means such as indicated at 13 may be placed.

In the operation of the device a quantity of beans are spread upon a flat surface and separated from each other short distances such that the lower end of the device may be placed over any bean which is to be removed, the handle 4 is grasped by the hand, the tool placed over an inferior or imperfect bean 13 and a downward pressure then applied to the handle 4 causing compression of the spring 11 and the movement of the pin 9 to the upper end of the slot 10. When the pin is in such position opening 8 is in alinement with the passage through the handle 4 and the suction apparatus, which, as it forms no part of the present invention is not disclosed in the present application, being in operation, the suction through the tube 5 and handle 4 causes the bean to be elevated and carried through this tube 5, the bean being delivered to any suitable receptacle placed between the suction apparatus and the tube. In practice an operator will use two of these devices, one in each hand, and may with great rapidity remove inferior and imperfect beans or any dirt or other foreign matter which may be among the good product.

I claim:—

1. A bean sorting device including a hollow handle, an outer tube having a closed upper end into which the handle leads and an inner tube having a closed upper end slidably mounted within the outer tube, said inner tube having an opening in one side adapted to come in alinement with the passage through the handle in one position thereof.

2. In a bean sorting device, inner and outer telescoping hollow members each having a closed upper end and an open lower end, a spring interposed between said closed ends, means to limit the movement of the in-

ner member in both directions with respect to the outer member, and a hollow handle secured to and having the passage therethrough communicating with the interior of the outer member, said inner member having an opening in its side adapted to come in alinement with said passage in one position of the inner member with respect to the outer member.

3. In a bean sorting device, inner and outer telescoping hollow members each having a closed upper end and an open lower end, a spring interposed between said closed ends, a pin on the inner member extending through a slot in the outer member to limit the movements of said members with respect to each other, and a hollow handle secured to and having its passage communicating with the interior of the outer member, said inner member also having an opening in one side adapted to come in alinement with said passage when said pin is at one end of the slot, substantially as described.

4. A pneumatic bean sorting device comprising inner and outer telescoping members each having an opening in its side, a hollow handle adapted to communicate with a suction device connected to said outer member and communicating with the opening therein, whereby upon operation of said device the openings in the inner and outer members will register to establish communication between the telescoping members and the hollow handle.

5. A pneumatic bean sorting device comprising inner and outer telescoping members each having an opening in its side, a hollow handle adapted to communicate with a suction device, connected to said outer member and communicating with the opening therein, means for normally holding said telescoping members in their extended position to prohibit registration of the openings in the telescoping members, said telescoping members being adapted to slide relative to each other upon application of the device, whereby the said openings are brought into registration and communication established between said telescoping members and said hollow handle.

6. A pneumatic bean sorting device comprising inner and outer telescoping members with closed upper ends, each member having an opening in its side, a hollow handle adapted to communicate with a suction device connected to said outer member and communicating with the opening therein, a spring interposed between the closed ends of the telescoping members to hold the members extended and the openings therein out of registration, said telescoping members being adapted to slide relative to each other upon application of the device whereby the openings in the telescopic members will register and thereby establish communication between said telescopic members and the hollow handle.

7. A pneumatic bean sorting device comprising inner and outer telescoping members, a hollow handle adapted to communicate with a suction device, connected with the outer member and communicating with said telescopic members, a wire having a series of convolutions attached to the lower end of the inner member whereby said member is elevated when the same is placed over a bean, whereby the suction passing through said telescoping members and hollow handle will draw the bean through the same.

In testimony whereof I affix my signature.

COLTON D. NARAMOR.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."