S. B. Collins.

Vegetable Steamer.

No. 41,485. Fig. 1. Patented Feb. 9, 1864.

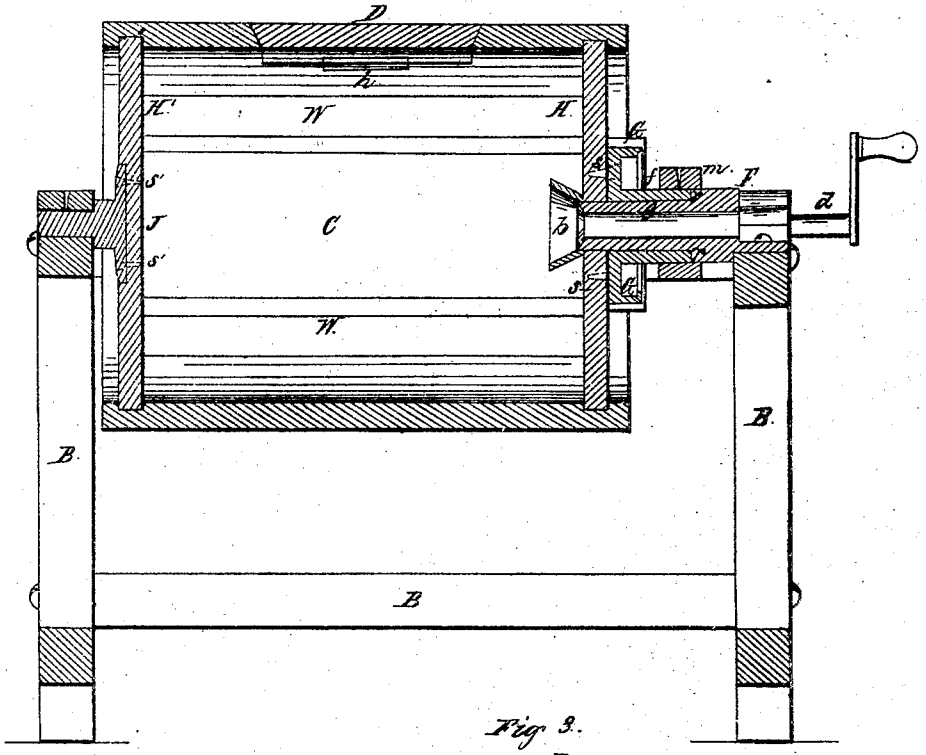


Fig. 2.

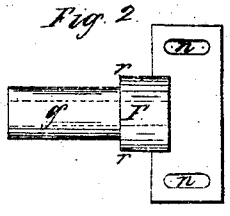
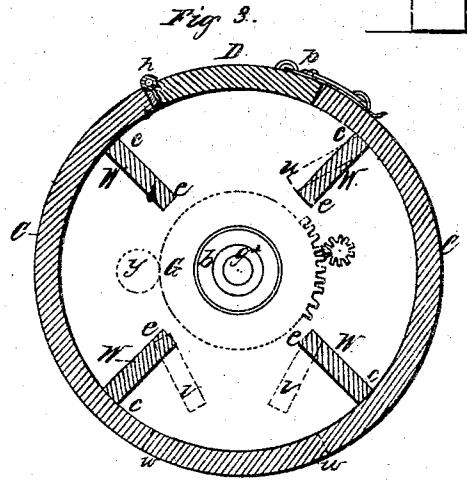


Fig. 3.



Witnesses:
Wm. S. Loughborough
E. E. Hill

Inventor
Selah B. Collins

UNITED STATES PATENT OFFICE.

SELAH B. COLLINS, OF LYNDON, MICHIGAN.

IMPROVEMENT IN REVOLVING VEGETABLE-STEAMERS.

Specification forming part of Letters Patent No. **41,485**, dated February 9, 1864; antedated January 27, 1864.

To all whom it may concern:

Be it known that I, SELAH B. COLLINS, of Lyndon, in the county of Washtenaw and State of Michigan, have invented a new and useful Revolving or Rotary Steaming-Box for Cooking Feed for Stock, &c.; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, making a part of this specification, in which—

Figure 1 is a vertical central section of the invention. Fig. 2 is a top view of the adjustable conducting-pipe F. Fig. 3 is a transverse section of the cylinder or box C, showing the arrangement of the elevating bars or wings W.

Similar letters of reference indicate corresponding parts in each figure.

This invention consists, mainly, in the employment of a revolving or rotary steaming-box for cooking feed for stock, &c., it being so constructed and arranged that it may be revolved at intervals, or continually, if desired, during the process, while the steam is being forced into it from a steam-caldron or other generator. The several longitudinal bars fixed to the inside of the cylinder or box carry portions of the contents up at each revolution, whence they are discharged gradually, as the bars ascend, thus exposing every particle to the direct action of the inflowing steam, causing it to be quickly and uniformly steamed through, thereby saving a vast amount of time and fuel necessarily consumed in effecting the same end by the ordinary methods; and, furthermore, when two or more varieties are cooked together, which is usual, they become perfectly mixed during the process, which also saves the time and labor necessarily required in its preparation in this respect. Another feature of it consists in a simple and effectual method of conducting the steam into the revolving cylinder or box.

To enable others to make and use my invention, I will proceed to describe its construction and operation.

The cylinder or box C is suspended in a frame, B, or other suitable support, by means of the journal J, which is fixed to the head H′ by means *s′* and by the projecting hollow-journal *f* of the gear-wheel G, which is fixed to the head H by screws *s*. The sleeve *f* rests in the journal-box *m*, and is bored out to fit the arm *g* of the tube F. The joint between the end of the sleeve and the shoulder *r* of the conducting-pipe is inclosed by the journal-box *m*, which is an additional security to prevent the escape of steam therefrom. The conducting-pipe F is attached to the frame B by set-screws passing through the slots *n*, Fig. 2, which allows the pipe to be moved in, thus compensating for any wear between the shoulder and the end of the sleeve *f*, and its inner end may be protected by a funnel-shaped cup, *b*, to prevent the feed from working into and obstructing it. The revolving cylinder C has a door, D, on one side, which is secured by a hinge, *h*, and an ordinary hasp and staple, *p*. The elevating bars or wings W are arranged against the outer case and extend from one head to the other. The inner edge of these wings may be pivoted to the heads H and H′ by dowel-pins, (shown by red dotted lines *e*, Fig. 3,) or otherwise, and they may be kept in position by adjusting-pins indicated by red lines *c*. They may be set angling, as indicated by the dotted lines *u*, if desired, so as to elevate the substance to a higher point before discharging it. This position would be desirable in steaming grain.

The cylinder may be made either four, six, eight, or any other number of squares desired, instead of being round.

Operation: The box C is filled with pumpkins, potatoes, or grain, &c., or a mixture of each, and the door D closed and secured by the hook. It is then supplied with steam by inserting the steam-pipe from an ordinary steam-caldron into the conducting-pipe F, and at intervals the box C is revolved a few times, by turning the crank-shaft *d*, and as it revolves each wing W elevates a portion of the contents into the hottest part of the chamber, thus changing the relative position of each particle and exposing it to the direct action of the inflowing current of steam, whereby the bulk is more uniformly and thoroughly cooked, and in much less time than is possible in the ordinary way, where the substance lies perfectly at rest on the bottom of the steam-box, while the hottest part of the chamber is always at the top, thereby causing a large percentage of steam to be wasted, whereas in this operation every particle of steam that enters the

cooking-box is fully utilized. Besides, when two or more kinds are cooked together they become thoroughly mixed by the same process, which saves time in preparing the feed after it is cooked. When the substance has steamed long enough, the door D of the box is turned down as indicated by the full red lines *w* in Fig. 3, and the adjusting pins withdrawn from the wings W, which are next the door. The latter is then opened, and the feed discharged into a vat below; the said two wings swinging into the position indicated by the red lines *v*, thereby discharging whatever might otherwise lodge behind them.

By withdrawing the dowels *e* and pins *c*, the several wings W may be removed, when the box may be used for steaming hay, stalks, &c., to good advantage. This adjustment would also be well adapted to steaming clothes, which would be cleansed by the combined action of the revolving and steaming process.

There may be a small perforated cylinder substituted for the cup *b*, and extended across to and connected with the head H′ in small machines for cooking potatoes or other vegetables for table use.

What I claim as my invention, and desire to secure by Letters Patent, is—

The wings or elevating bars W, which are made adjustable and detachable, substantially in the manner and for the purposes specified, in combination with the rotary steaming-box C, as set forth.

SELAH B. COLLINS.

Witnesses:
WM. S. LOUGHBOROUGH,
E. E. SILL.