

No. 731,092.

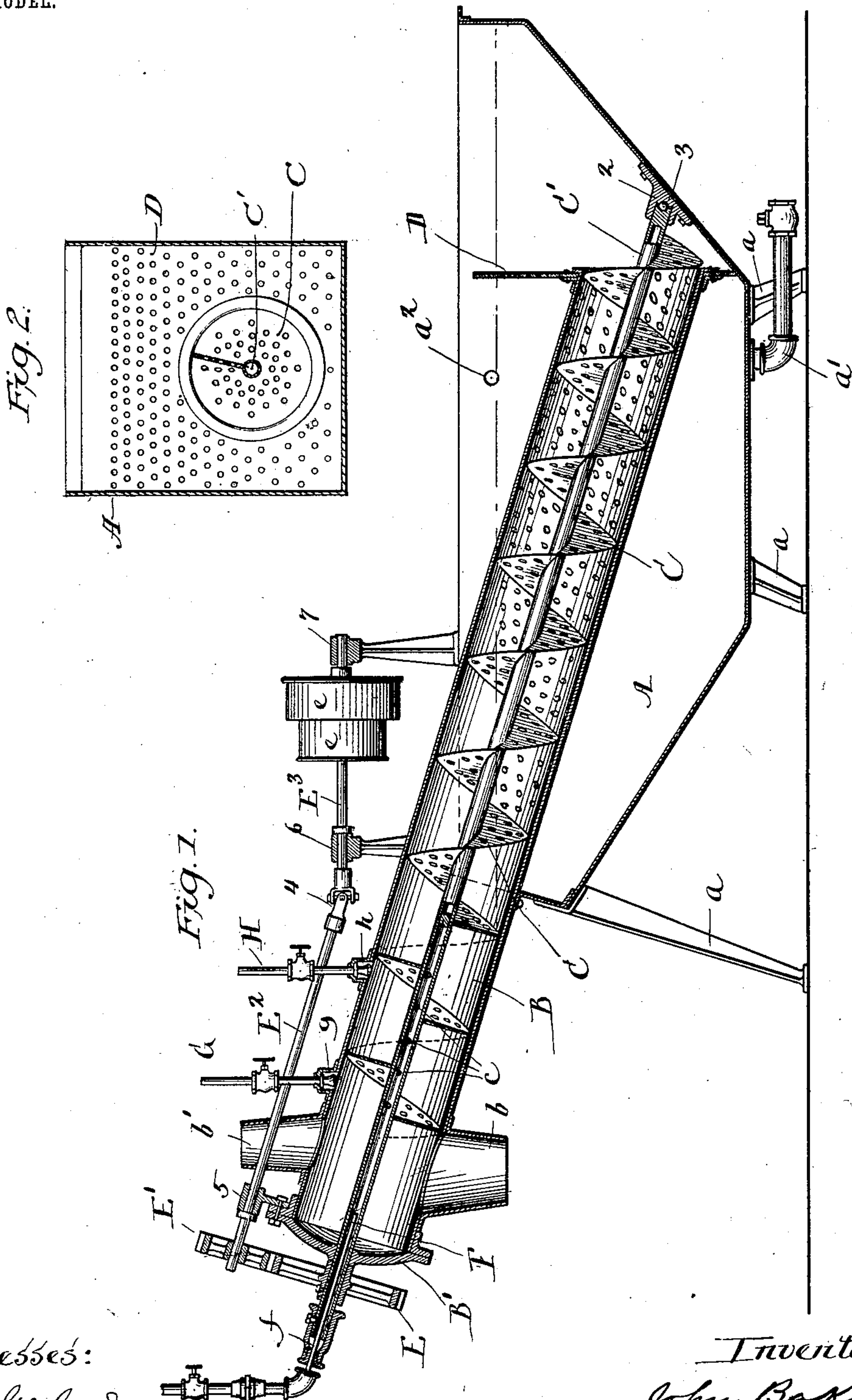
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J. BAKER.

MACHINE FOR CLEANING AND SCALDING VEGETABLES, &c.

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NO MODEL.



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UNITED STATES PATENT OFFICE.

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MACHINE FOR CLEANING AND SCALDING VEGETABLES, &c.

SPECIFICATION forming part of Letters Patent No. 731,092, dated June 16, 1903.

Application filed August 5, 1901. Serial No. 70,887. (No model.)

To all whom it may concern:

Be it known that I, JOHN BAKER, a resident of Valparaiso, in the county of Porter, State of Indiana, have invented certain new and
 5 useful Improvements in Machines for Cleaning and Scalding Vegetables, &c., of which the following is a full, clear, and exact description.

This invention has for its object to provide
 10 an improved construction of machine more particularly designed for cleaning and scalding tomatoes or other vegetables or fruits that require to be cleaned or scalded before being subjected to the canning process.

15 My invention consists in features of improvement hereinafter described, illustrated in the accompanying drawings, and more particularly pointed out by the claims at the end of this specification.

20 In the accompanying drawings, Figure 1 shows a view in central vertical longitudinal section through a machine embodying my invention. Fig. 2 is a view in vertical cross-section taken in front of the perforated dia-
 25 phragm.

The body of the machine comprises a water-tight tank A, that is shown as supported upon suitable legs *a*. Into this tank dips the lower
 30 end of an inclined partially-perforated or foraminous cylinder B, within which is mounted the spiral conveyer C, the blade of which is of perforated metal. The lower end of the cylinder B is connected to a perforated plate or diaphragm D, that forms, with the front por-
 35 tion of the inclined part of the tank A, a hopper into which the tomatoes or other vegetables to be cleaned and scalded will be placed. The tank A is furnished at its bottom with a suitable discharge-pipe *a'* and adjacent to its
 40 top with an overflow pipe or port *a''*, this overflow pipe or port determining the level of water within the tank. The cylinder B is straight from end to end, and that part of the cylinder within the tank A is formed of perforated
 45 or foraminous material, while that part of the cylinder outside of the tank is imperforate, so that the water will stand within the cylinder B at a point slightly beyond the rear end of the tank A. The spiral conveyer C is
 50 mounted upon the shaft C', the lower end of which is stepped or journaled in a block 2, that is bolted upon the inner face of the in-

clined front of the tank A. The lower end of the conveyer-shaft C' rests upon a bearing-
 ball 3 in order to insure an easy movement 55 of the shaft. The upper portion of the conveyer-shaft C' is tubular and is provided with a series of holes or perforations *c*, through which steam will be discharged into the conveyer-cylinder. This upper end of the con- 60
 veyer-shaft C extends through the cap-plate B', that is bolted to the end of the cylinder B, and outside this cap carries a gear-wheel E, fixed thereto and engaging a pinion E', that
 is mounted on the shaft E². This shaft E² is 65 connected at its lower end by a universal coupling 4 with a shaft E³, and the shafts E² and E³ are journaled in suitable bearings 5, 6, and 7, sustained by standards mounted
 upon the top of the machine. The shaft E³ 70 carries the pulleys *e*, whereby the shafts and the conveyer will be driven. Into the upper end of the tubular shaft C' passes a pipe F, whereby steam will be delivered into the tu-
 bular shaft to be discharged through the 75 holes *c*. The pipe F is connected to a stationary coupling *f*, that encircles the upper end of the tubular shaft C' and forms a close joint therewith.

The cylinder B is provided upon its under 80 side, near its upper end, with a discharge-spout *b* for the cleaned tomatoes or other vegetables and upon its upper side is furnished with a pipe or spout *b'*, through which fumes, steam, &c., may discharge. The shaft E² 85 preferably passes through holes formed in the sides of the discharge-pipe *b'*. Into the upper side of the cylinder B also leads a steam-delivery pipe G, provided with a nozzle *g*, and to the upper part of the cylinder also leads a 90
 water-supply pipe H, having a spraying-nozzle *h*, the purpose of which will presently more fully appear.

From the foregoing description the opera-
 tion will be seen to be as follows: Tomatoes 95 or other vegetables to be cleaned and scalded will be placed in the hopper at the front of the water-tight tank after this tank has been filled with water to a height determined by the overflow-port *a''*. Revolution will then 100
 be imparted to the conveyer C by means of its shaft C', and the tomatoes or the like will be advanced by the conveyer in upward direction through the inclined cylinder B. In-

asmuch as the lower portion of the cylinder B is perforated or foraminous and is submerged within the water of the tank A', it will be readily understood that as the tomatoes or the like are thus advanced up the cylinder B they will be agitated and subjected to the action of the water, thereby causing any dirt that may adhere thereto to fall away and pass through the perforations of the cylinder B and on to the bottom of the tank A', whence such impurities will be withdrawn through the pipe a'. As the tomatoes are thus advanced up the inclined cylinder B they come in contact with the fresh water delivered through the pipe H and with the steam delivered through the pipe G. The effect of thus delivering water into the cylinder B and above the water-line of the tank is not only to remove from the tomatoes the skum or impurities that may still adhere thereto, but also to cause such scum and impurities to pass backward through the holes or openings of the cylinder B into the tank A, whence the scum or like impurities will be discharged through the overflow-pipe a², while the heavier impurities will fall to the bottom of the tank to be thence discharged through the pipe a'. As steam is delivered by pipes F and G into the upper portion of the cylinder B it will serve to effectively scald the tomatoes or other vegetables being cleaned before their discharge through the spout b, below which suitable buckets or the like will be placed to receive them. By arranging the conveyer C within the straight inclined cylinder B the necessity of forming the conveyer-shaft C' of sections coupled together is avoided and an easier action of the conveyer is obtained. The driving-shaft being connected with the upper end of the conveyer-shaft also avoids the necessity of extending the conveyer-shaft through the water-tight tank and employing a stuffing-box in such tank. Moreover, by connecting the lower end of the conveyer-cylinder to a diaphragm adjacent to the front of the tank A a hopper is formed which allows the tomatoes or like articles being treated to enter directly into the end of the conveyer-cylinder, and thus avoid any cutting or mashing of the tomatoes.

My invention affords a more simple and effective construction of machine for cleaning and scalding tomatoes or the like than any other machine with which I am familiar.

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

1. In apparatus of the character described, the combination with a water-tight tank, of a diaphragm extending across said tank near its front and having an opening therein, said diaphragm forming with the front portion of said tank a hopper to receive vegetables, &c., a straight, inclined and partially-perforated cylinder having its lower end submerged in said tank and having its upper end provided with a discharge-spout, the lower end of said cylinder being secured to said diaphragm at the opening thereof, a journal-block secured to the front wall of said tank opposite the axial center of said cylinder, a conveyer-shaft stepped in said journal-block and extending in straight line from end to end of said inclined cylinder, a perforated conveyer mounted upon said conveyer-shaft, a gear-wheel connected to the upper end of said conveyer-shaft and gearing for driving said conveyer-shaft.

2. In apparatus of the character described, the combination with a water-tight tank, of a diaphragm extending across said tank near its front and having an opening therein, said diaphragm forming with the front portion of said tank a hopper to receive vegetables, &c., a straight inclined and partially-perforated cylinder having its lower end submerged in said tank and having its upper end provided with a discharge-spout, the lower end of said cylinder being secured to said diaphragm at the opening thereof, a journal-block secured to the front wall of said tank opposite the axial center of said cylinder, a tubular, perforated conveyer-shaft stepped in said journal-block and extending in straight line from end to end of said inclined cylinder, a perforated conveyer mounted upon said conveyer-shaft, a gear-wheel connected to the upper end of said conveyer-shaft, gearing for driving said conveyer-shaft, a steam-pipe coupled to the upper end of the tubular conveyer-shaft and a spray-pipe located in the top of said cylinder adjacent its upper end for delivering water to the interior of the cylinder.

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