

No. 616,632.

Patented Dec. 27, 1898.

H. RAUCH.  
APPARATUS FOR PITCHING CASKS.

(Application filed Mar. 29, 1898.)

(No Model.)

Fig. 1.

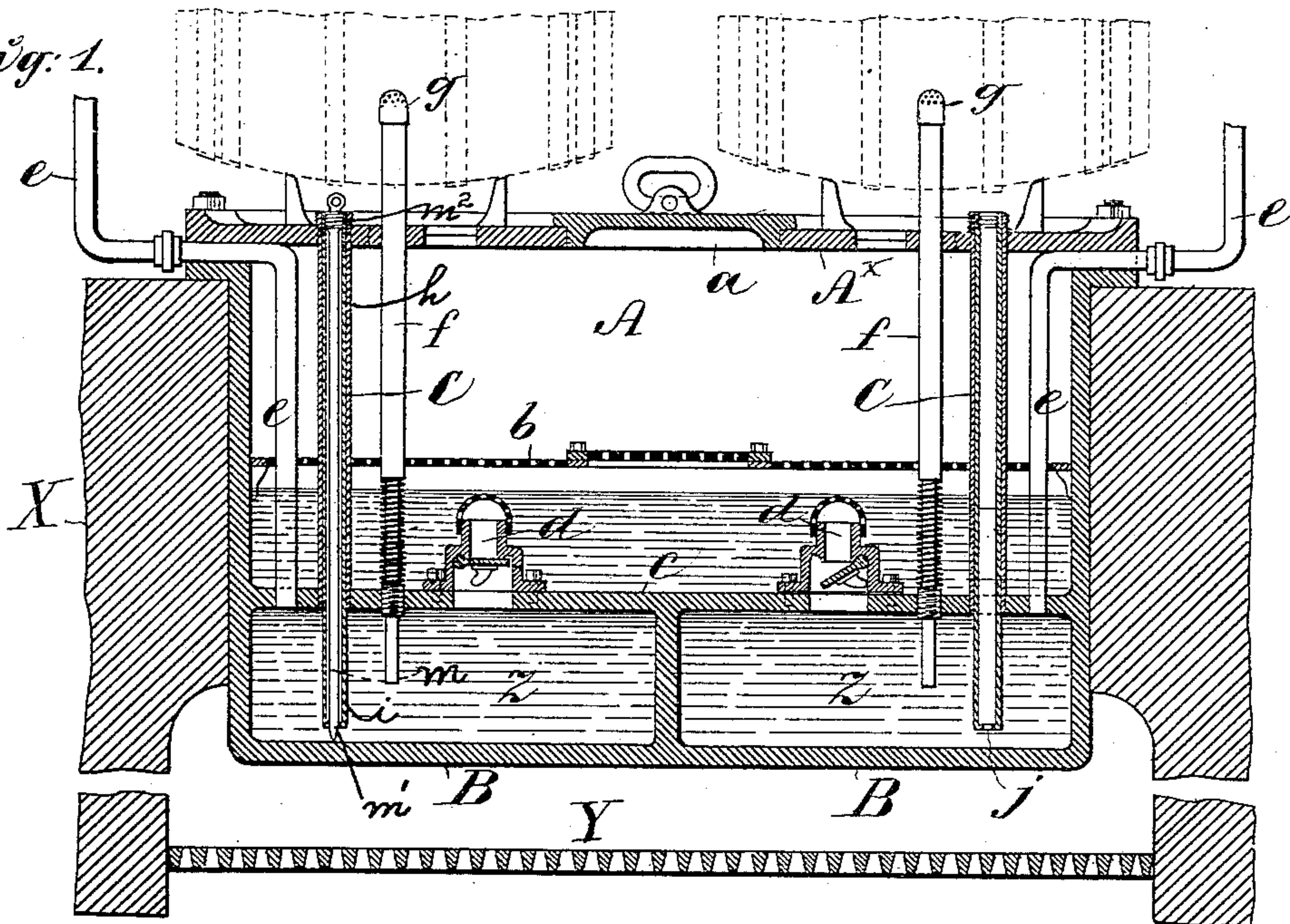


Fig. 2.

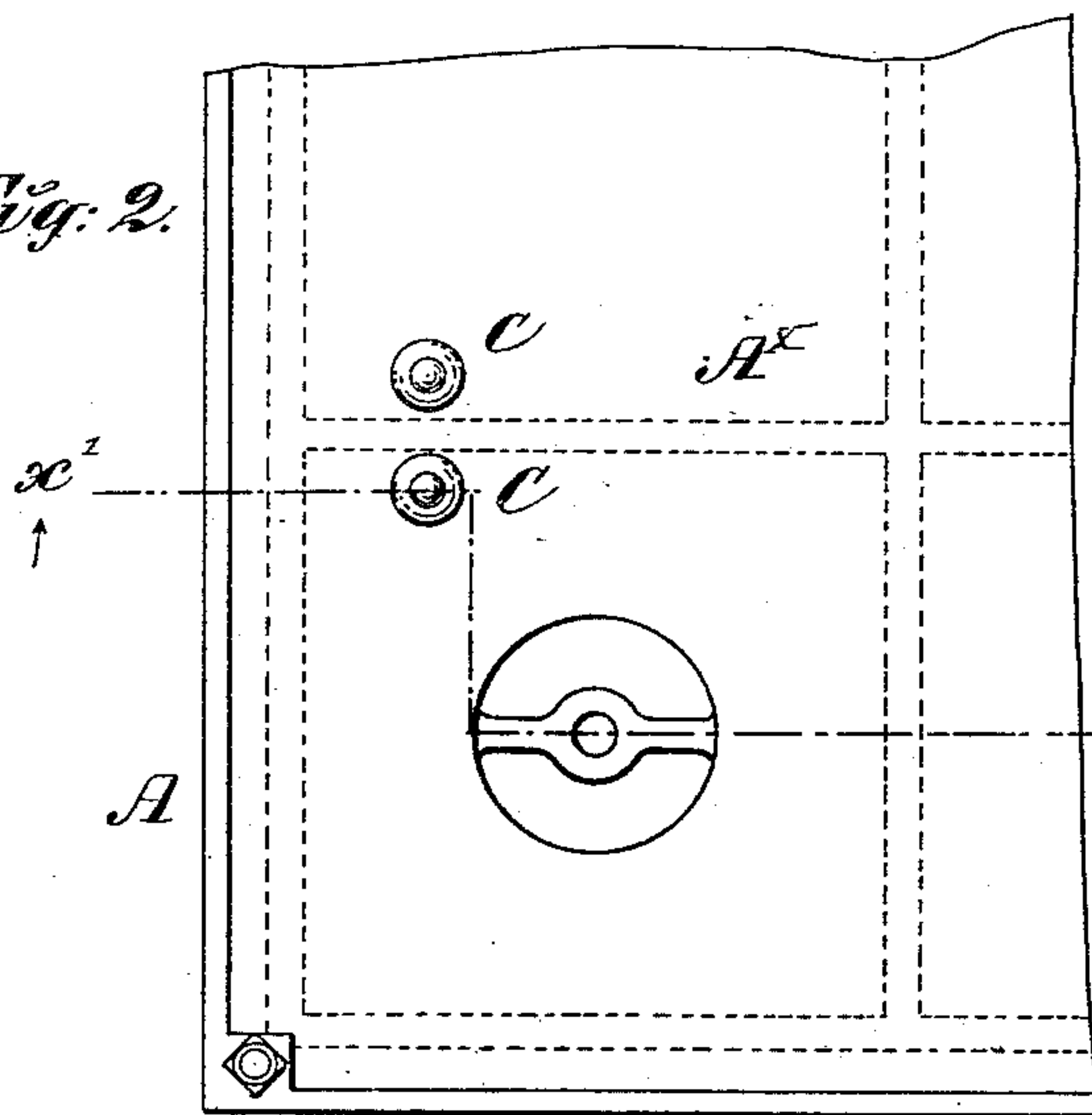
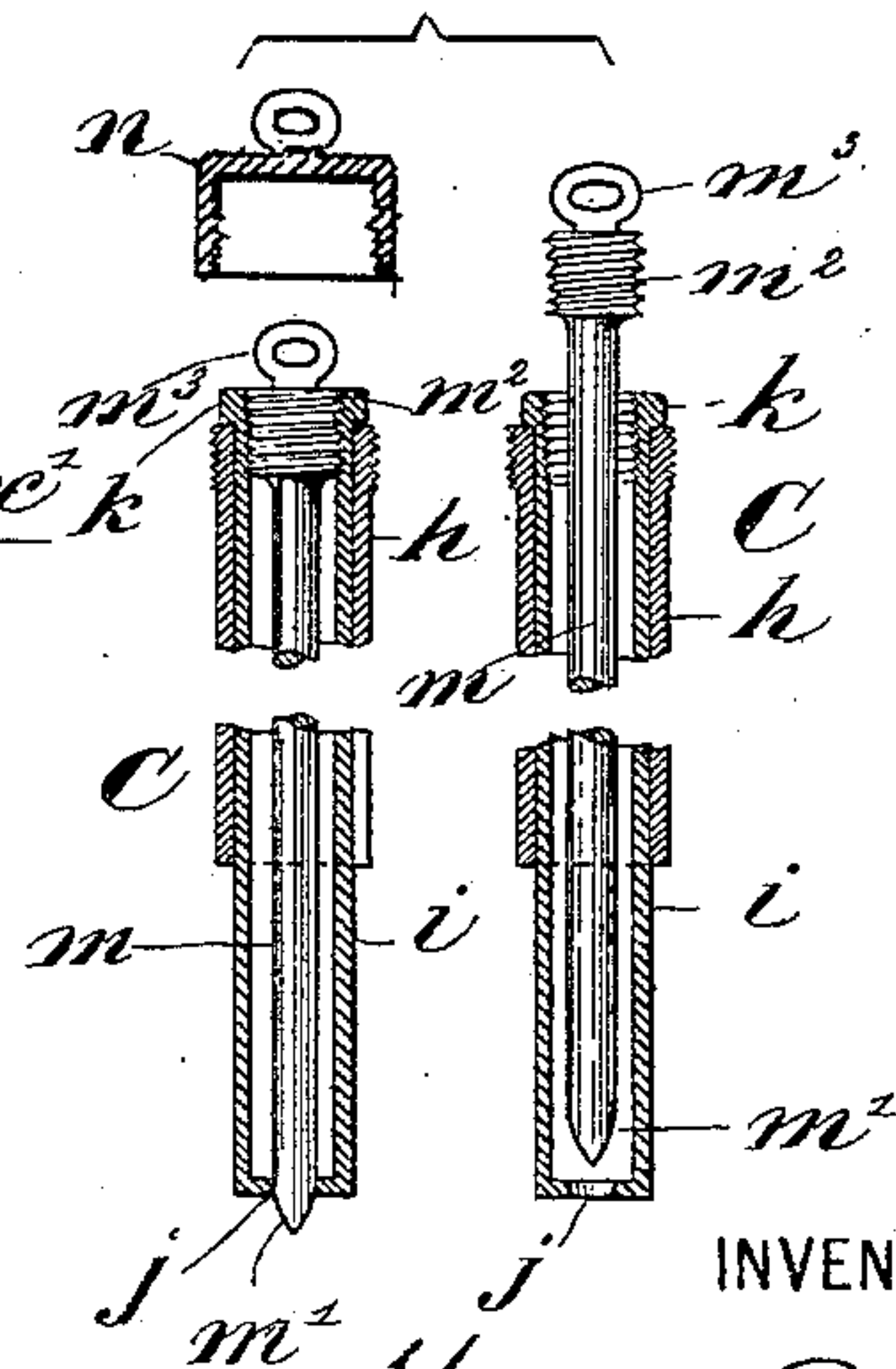


Fig. 3.



WITNESSES:

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# UNITED STATES PATENT OFFICE.

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## APPARATUS FOR PITCHING CASKS.

SPECIFICATION forming part of Letters Patent No. 616,632, dated December 27, 1898.

Application filed March 29, 1898. Serial No. 675,545. (No model.)

*To all whom it may concern:*

Be it known that I, HENRY RAUCH, a citizen of the United States, residing in the borough of Manhattan and city, county, and State of New York, have invented certain new and useful Improvements in Apparatuses for Pitching Casks, of which the following is a specification.

This invention relates to improvements in cask-pitching apparatuses generally, but more particularly to that form or kind of such apparatuses as I have described in my United States Patent No. 599,476, dated February 22, 1898. The apparatus described in this patent consists, briefly, of a kettle to receive the pitch, arranged over a suitable furnace and having below its bottom and preferably cast integrally with it one or more tanks to receive, through a valve-controlled inlet, pitch from the kettle. This tank, or each tank, if there be more than one, has an upright outlet-pipe with a spray-nozzle on its upper end to deliver the pitch in the form of spray into a cask supported on the cover of the kettle. The pitch is ejected from the tank by the admission of compressed air on it from some source of compressed air. So far as above described the apparatus is the same and operates the same as that described in my former patent. In operating such an apparatus a difficulty is apt to arise. The molten pitch left in the kettle after the pitching operation flows down into and fills the tank, and when the apparatus cools this mass of pitch in and filling the tank hardens. Consequently it is only with great care and skill that the apparatus can be reheated without creating in the tank such an internal pressure, due to expansion and to the generation of gases from the pitch, as will crack the walls of the full tank before the entire mass of pitch therein can melt. To obviate this danger of cracking the tank and to enable any ordinary workman to fire up under the kettle and operate the apparatus is the purpose of the present invention, which consists in providing the tank with a relief device for the expansion and the generated gases, so that the latter may escape as generated until the entire mass of pitch shall have melted.

In the accompanying drawings an embodiment of the invention is illustrated as applied

to an apparatus constructed in other respects like that shown in my former patent.

Figure 1 is a vertical mid-section of the apparatus in the plane indicated by line  $x'$  in Fig. 2; and Fig. 2 is a fragmentary plan of the same. Fig. 3 illustrates the preferred form of the relief device.

A represents the kettle or reservoir set in walls X over a furnace Y. This kettle has a cover A<sup>x</sup> with a covered opening  $a$  therein for feeding in the pitch, a screen  $b$  to screen out foreign substances from the pitch, and one or more tanks B below the bottom  $c$  of the kettle to receive a predetermined quantity of the molten pitch, which latter flows down into the tank through a valve-controlled inlet  $d$ . As here shown, there are four tanks B under the kettle, as indicated by the dotted lines in Fig. 2, which show the positions of the partition-walls between the tanks. With four tanks four casks may be pitched at the same time. The compressed air is admitted to the tank by a pipe  $e$ , and the pitch is discharged into the cask through an upright pipe  $f$ , having on its upper end a nose-nozzle  $g$ . All of the above is illustrated and fully described in my former patent, and the operation in detail will not need to be described herein. It will be sufficient to say that after the pitching operation of the day is completed the apparatus is allowed to cool off and the mass of pitch  $z$  in the tank B becomes hard.

The relief device which forms the subject of this invention is designed to allow for expansion at the time of heating up the apparatus for operation again while the tank B contains the hard pitch. Ordinarily under these conditions the tank will be absolutely full of the pitch, and it is necessary to provide relief. The preferred form of relief device (designated as a whole by C) will now be described.

A tube  $h$  extends down through the cover of the kettle A and through the bottom  $c$  of the same, so as to open communication between the interior of the tank B and the outer air. This tube  $h$  will be secured permanently in position in the kettle. A vent-tube  $i$ , which is adapted to fit into and be slipped down through the tube  $h$ , extends down into and nearly to the bottom of the tank B, as seen in Fig. 1. In the bottom of the tube  $i$  is an



aperture *j*, Fig. 3, and at its top it may have a flange *k* to rest on the top of the outer fixed tube *h*. This flange limits the depth to which the vent-tube *i* may enter the tank.

5 Within the tube *i* is a valve-rod *m*, which has a conical valve *m'* at its end to fit into a seat at the aperture *j* and close the latter. At its upper or outer end the rod *m* has a screw *m<sup>2</sup>*, which screws into the upper end of  
10 the tube *i* in seating the valve. It also has an eye *m<sup>3</sup>* or some equivalent means of grasping it at its outer end.

At the close of the day's operations with the pitching apparatus and while the pitch is  
15 yet hot the workman inserts in the tube *h* the vent-tube *i*, the latter having in it the valve-rod *m*, with the valve thereon screwed down to its seat, as seen in the view at the left in Fig. 3. As the tube *i* fits the outer tube quite  
20 snugly, it acts as a plunger and forces the liquid pitch out from the tube *h*. The position of the relief device will now be as represented at the left in Fig. 1, the tip of the valve *m'* resting on or being quite near down  
25 to the bottom of the tank B. In the morning before starting a fire under the kettle the workman unscrews the valve-rod and withdraws it. This he will not find difficult, as the solidified pitch only has access for adher-  
30 ence to its exposed tip below the end of the vent-tube *i*; but this tube will itself be sealed fast by the pitch. The fire being now started, the pitch, melting first at the bottom of the tank, finds a vent for expansion and for the  
35 gases generated through the tube *i*. In a little while the pitch will be so softened that the vent-tube *i* can be withdrawn. After the pitch is thoroughly heated the tube *h* may be closed by a screw-cap *n*. (Seen detached in  
40 Fig. 3.)

I have given above the mode of using the relief device; but it will be understood that this forms no part of the invention.

Having thus described my invention, I claim—

1. The combination with a cask-pitching apparatus having a kettle, a tank connected therewith, and means for forcing the liquid pitch from the tank up into the cask, of a relief device, consisting of a tube extending  
50 into said tank and having an aperture and valve-seat at its lower end, means for closing the aperture at which said tube is inserted, and a valve-rod to extend through said tube, said rod being provided with a valve at its  
55 end to close the aperture in the tube, substantially as set forth.

2. The combination with a cask-pitching apparatus having a kettle A, a tank B below the bottom of the kettle and formed integrally  
60 therewith, and means for forcing the liquid pitch from said tank up into the cask, of a relief device comprising a tube *h*, extending down into the tank and open at its ends, means for closing the outer end of said tube *h*, a  
65 vent-tube *i*, which fits into the tube *h* and is adapted to extend down nearly to the bottom of the tank, said tube having a valve-seated aperture *j* in its lower end, and a valve-rod  
70 *m*, provided with a coned valve *m'*, to close the aperture *j*, and a screw *m<sup>2</sup>* to screw into the upper end of the vent-tube, substantially as set forth.

In witness whereof I have hereunto signed my name, this 22d day of March, 1898, in the  
75 presence of two subscribing witnesses.

HENRY RAUCH.

Witnesses:

HENRY CONNETT,  
PETER A. ROSS.