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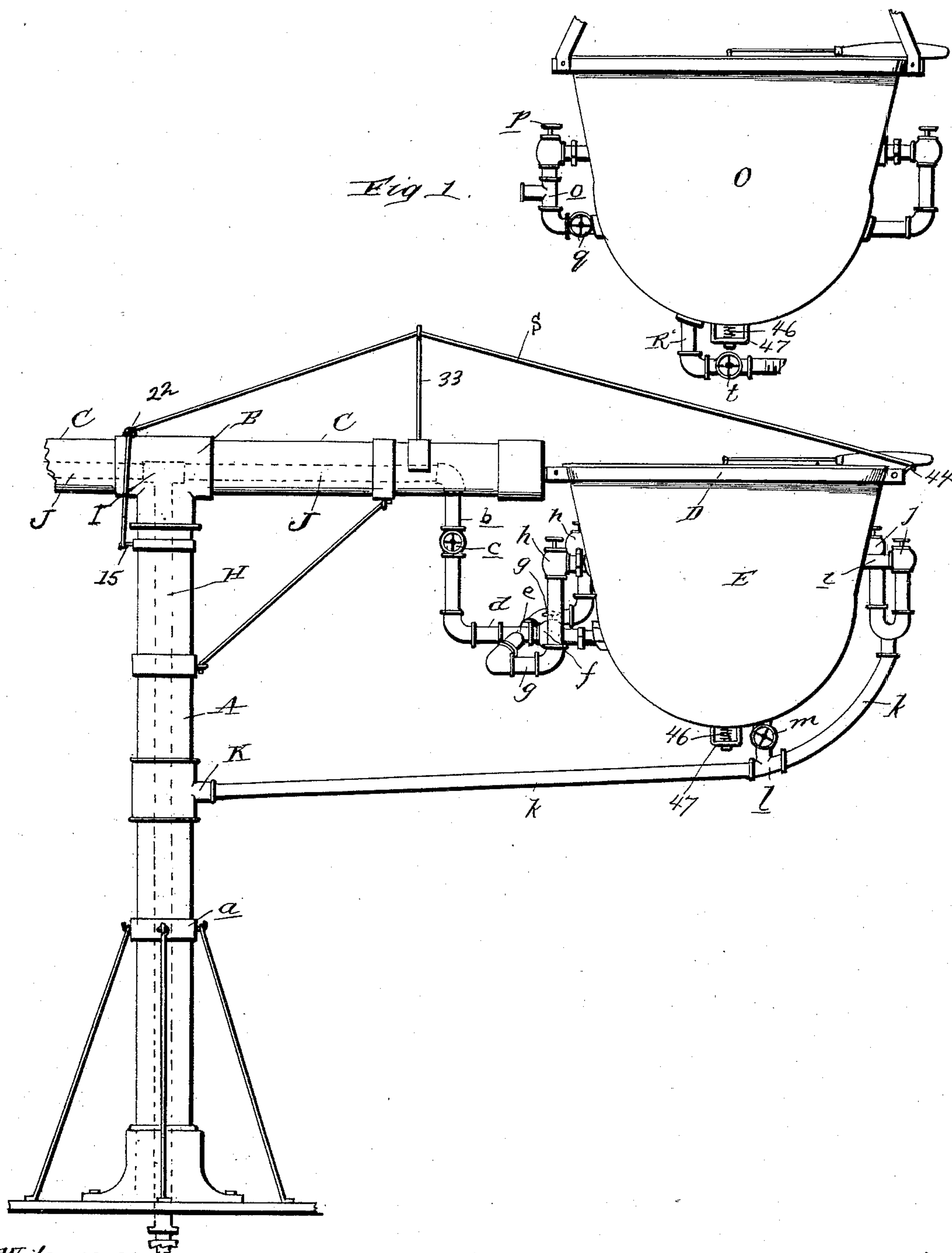
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C. M. HOLDEN & H. B. BOPP.

OPEN MOVABLE KETTLE FOR MELTING SACCHARINE MATTER, &c.

No. 432,620.

Patented July 22, 1890.



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Fig. 2.

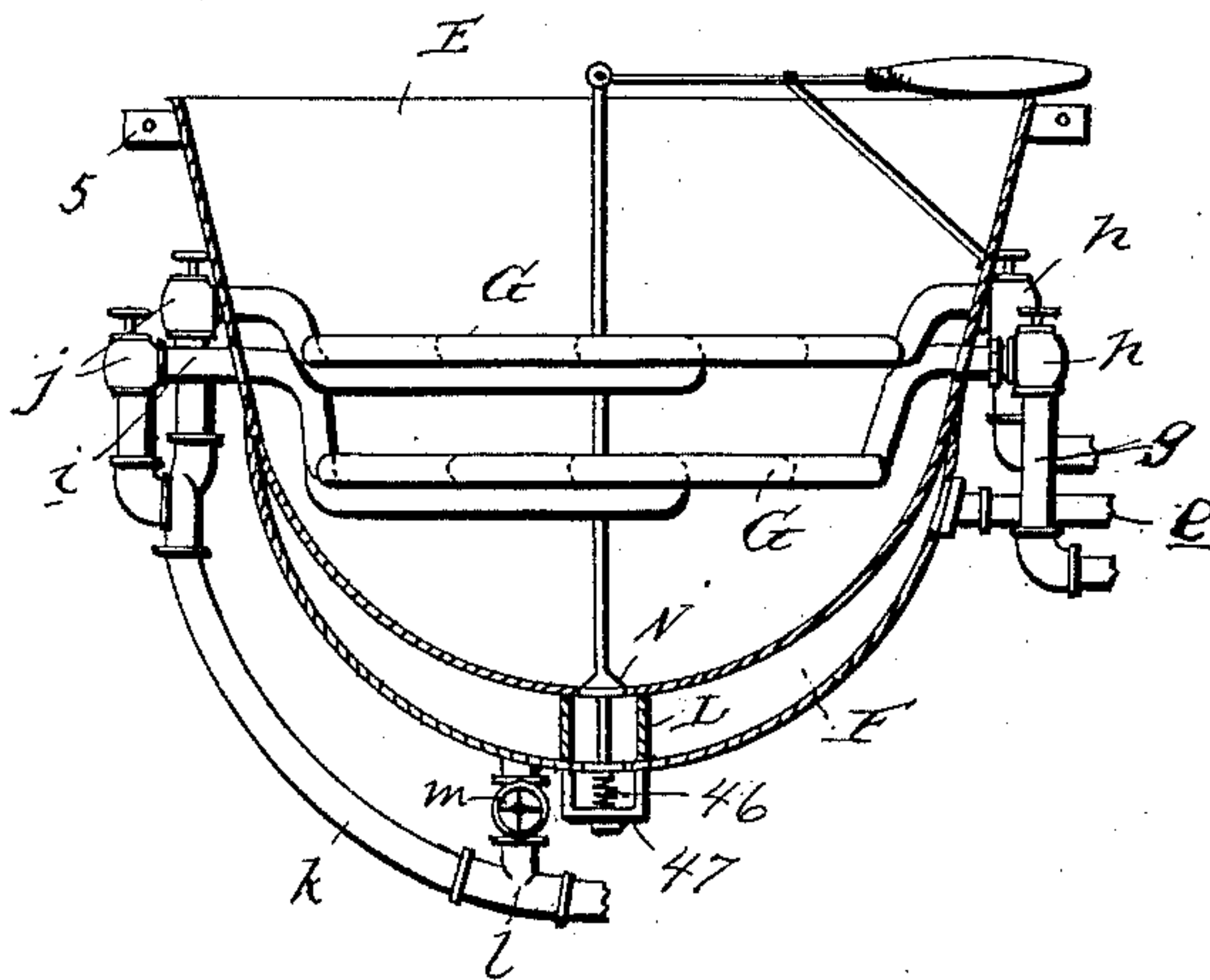
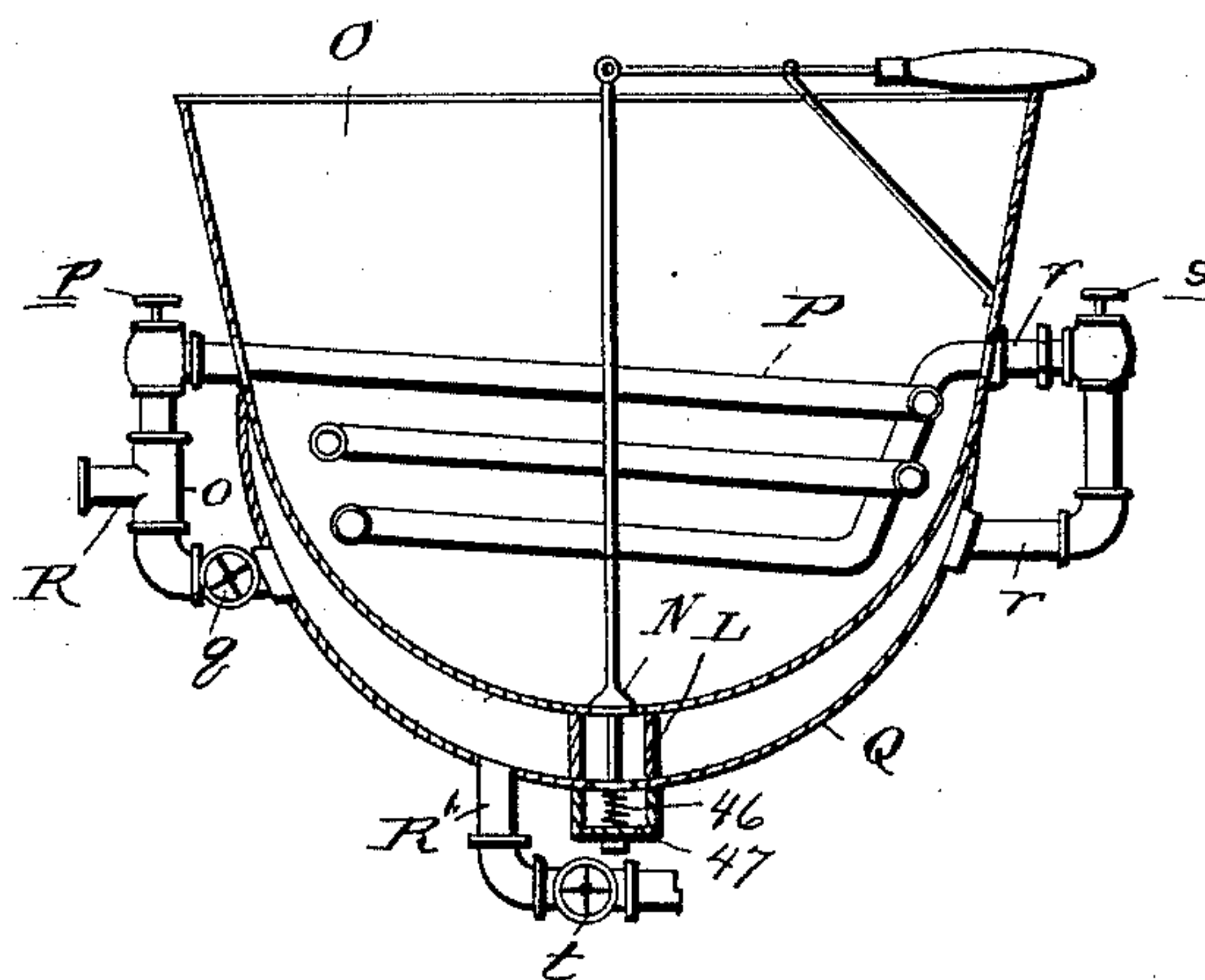


Fig. 3.



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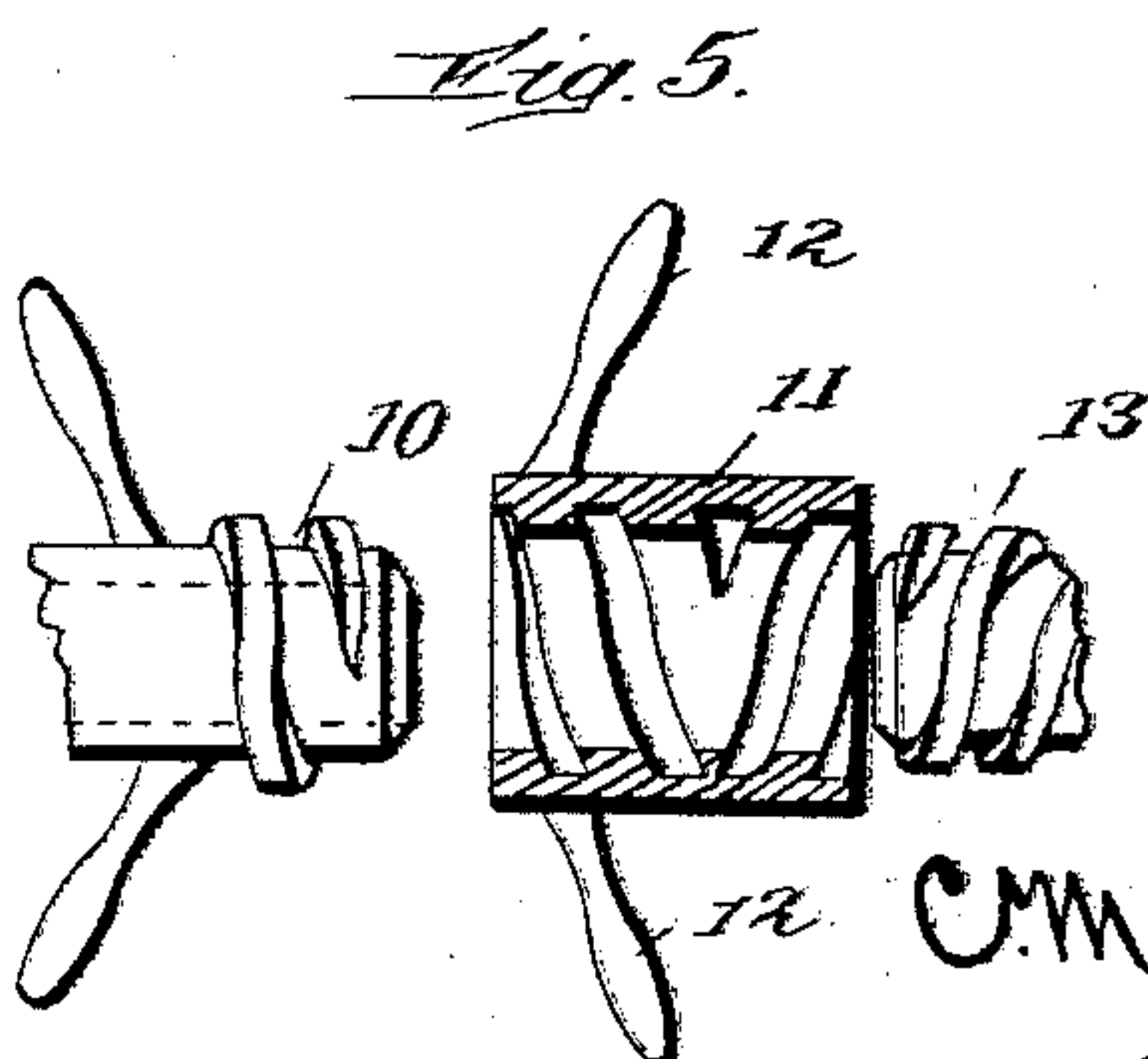
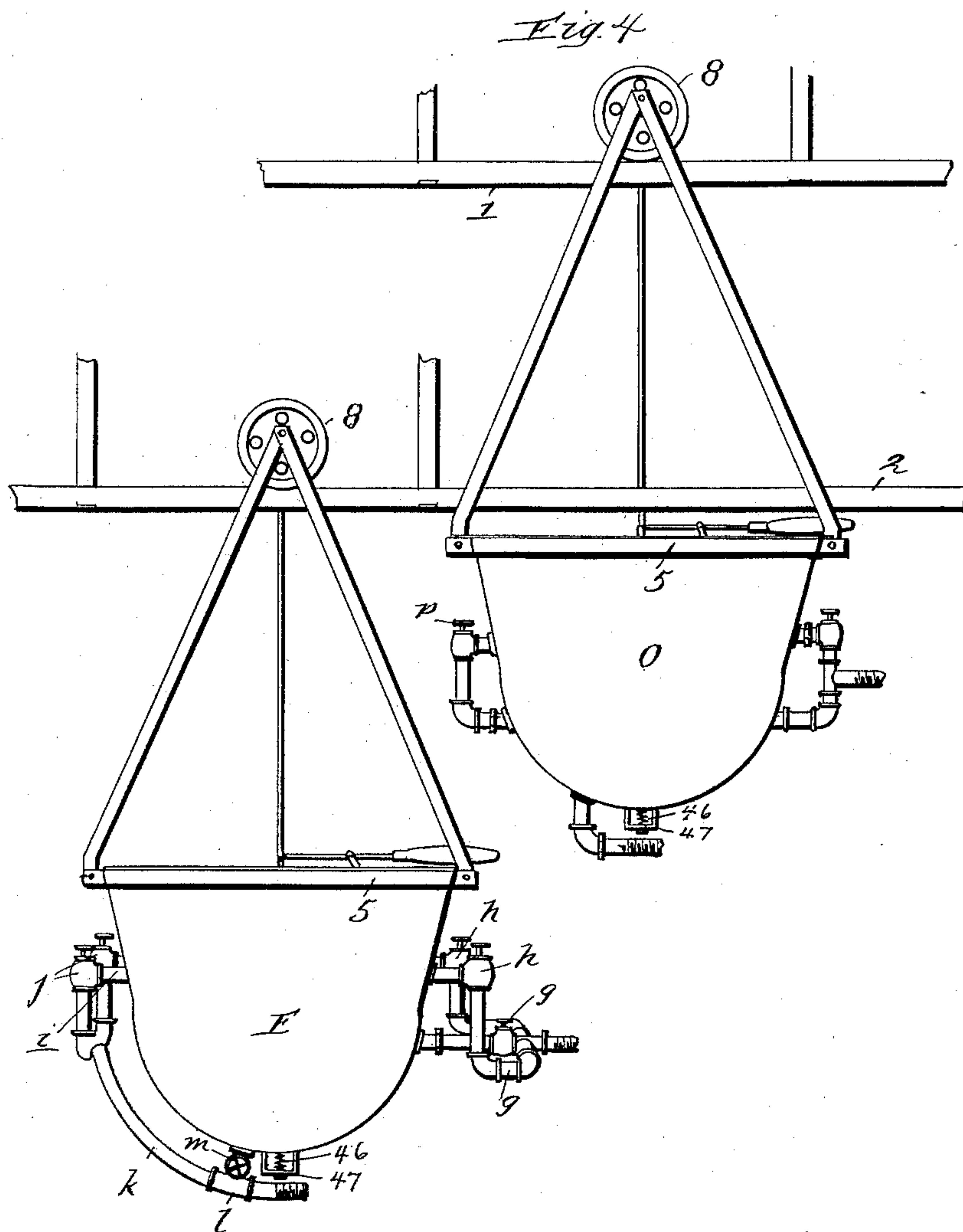
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# UNITED STATES PATENT OFFICE.

CHARLES M. HOLDEN AND HENRY B. BOPP, OF NEW ORLEANS, LOUISIANA.

OPEN MOVABLE KETTLE FOR MELTING SACCHARINE MATTER, &c.

SPECIFICATION forming part of Letters Patent No. 432,620, dated July 22, 1890.

Application filed February 17, 1890. Serial No. 340,811. (No model.)

*To all whom it may concern:*

Be it known that we, CHARLES MORTIMER HOLDEN and HENRY BEAUREGARD BOPP, citizens of the United States, residing at New Orleans, in the parish of Orleans and State of Louisiana, have invented certain new and useful Improvements in an Open Movable Kettle for Melting Saccharine Matter and Cooking Candy; and we do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention has relation to improvements in apparatus for the manufacture of confectionery; and it consists in the construction, novel combination, and adaption of devices hereinafter described and claimed.

The improvements will be fully understood from the following description and claims, taken in connection with the accompanying drawings, in which—

Figure 1 is a view in elevation of a derrick or crane, showing a cooking-kettle in position upon one arm thereof, the other arm, which is of a similar construction, being broken away and the melting-kettle being shown in its relative position to the cooking-kettle, the hanger-arms of the latter being broken away. Fig. 2 is a vertical diametrical sectional view of one of the cooking-kettles removed from the crane or derrick. Fig. 3 is a similar view of one of the melting-kettles. Fig. 4 is a view of a modified form of shifting or transporting apparatus for the cooking and melting kettles, respectively, showing the same in position; and Fig. 5 is a view in detail of a construction whereby the supply and exhaust pipes of the kettles employed in connection with the tramway shifting apparatus may be readily and quickly connected and disconnected from pipes leading from a steam supply and an exhaust.

Referring to the said drawings by letter, A indicates the main vertical post of a revoluble crane or derrick. This post A, which is hollow for the passage of a steam-supply pipe, is provided with a bearing at its lower end in a journal box or casing, which in turn is secured to the floor of a room or other suitable base, the said post A being thus free to turn at the dictation of the attendant.

a indicates a band or collar, which is loosely placed upon the upright post A. This collar a is provided upon its periphery with hooks to receive eyes in the upper ends of the stations or braces, which in turn are secured to the floor and afford a brace for the main post. At the top of the main post A we provide a T-coupling B, the lateral branches of which are adapted to receive the inner ends of the radial branches of the crane.

C indicates the radial arms of the crane, which are of a similar diameter to the vertical post and are likewise hollow for the passage of the radial steam-supply pipes. These branches C are provided at their outer ends with sockets to receive the inner ends of the circular holder-arms, which encircle the cooking-kettles when in position and form a rest therefor.

S indicates brace-arms, of which there is one provided for each of the radial arms. These brace-arms S, which are formed from metal rod of a suitable diameter, are connected at 15 by a downwardly-disposed hook to the main post A. The rod then extends upward, and through the medium of a staple through which it passes at 22 it is secured to the T-coupling at the top of the main post. It then passes through an eye in the top of a supporting-bracket 33, and is attached at its outer end to a hook 44, secured to the outer end of the circular arms D.

The outer ends of the circular arms D are riveted or otherwise secured together, and the said arms are of a size and shape consistent with the kettle, which they are designed to receive.

E indicates the cooking-kettles, of which there are a number employed corresponding with the radial arms of the crane, as it is obvious that the crane might be provided with a four-branch coupling and corresponding radial arms; but where the tramway shifting apparatus presently to be described is employed any suitable number of cooking and melting kettles might be brought into use. These cooking-kettles E, which are open, are so constructed that a chamber or jacket F is formed at their bottom, extending a slight distance up the sides to afford a base-heating medium for the saccharine substance, the heating agent being supplied and carried off by sup-



ply and exhaust pipes, as will be presently described.

Within the cooking-kettles we place two or more coils or worms of heating-piping G, the function of which is to keep the saccharine matter at the middle and top of the kettle at a temperature similar to that at the bottom and thus prevent any portion of the substance from burning, as it will be hereinafter explained that the coils and the heating-jacket are fed by the same source of supply and are provided with equal facilities for exhausting the steam, thus creating and preserving an analogous temperature in the jacket and the worms. The ends of the respective worms in the cooking-kettles pass through the walls thereof at opposite sides, and are connected, respectively, with the steam supply and exhaust pipes now to be described.

H indicates the steam-supply pipe for feeding steam to the heating-jacket and worms of the respective cooking-kettle. This supply-pipe H, which is connected by a swivel-joint at its bottom to a pipe leading from a boiler or similar source of supply passes up through the hollow main post of the crane to the top thereof, where it is provided with a T-coupling I, the radial branches of which are connected in turn with radial pipes J, which occupy the same relative position with respect to the radial arms of crane as the main pipe occupies to the main hollow post. The radial arms J of steam-pipe extend through the radial arms of crane to a point adjacent to the end thereof, where they are provided with an elbow-joint, the depending branch of which passes through the wall of crane-arm to receive another pipe b, which leads down a short distance, and is provided with a valve c for regulating the supply. This pipe b in turn is provided at its lower end with an elbow-joint, the free end of which receives a pipe d, which is provided, as indicated at e, with a four-way coupling, the forward branch of which receives a pipe which leads into the lower heating jacket or chamber. This latter pipe, which leads into steam-jacket F, is provided with a valve at f, whereby the supply to said jacket may be independently regulated. The lateral branches of the coupling e receive pipes g, which lead up to and are connected with the ends of the worms G, and the supply of steam thus effected. These pipes g are provided, respectively, as indicated at h, with valves, whereby the supply of steam to them may be independently regulated, when desired. The ends of the coils opposite to those connected with pipes g are connected with pipes i, which are provided with regulating-valves j, and which lead down a short distance, where they are provided with a three-way Y-coupling, and are thereby connected with pipe k, which leads down under bottom of kettle to main post A, into which it exhausts, as indicated at K, the steam being carried off through said hollow post. This pipe k is provided at l with a T-

coupling, the upper branch of which leads from the chamber or jacket, and is provided with a valve or cock m to regulate the exhaust thereof, which is effected through the medium of T-coupling and pipe k.

L indicates a channel-outlet or discharge-tube for the withdrawal of the cooked substance from the cooking-kettles. This outlet L, which is of a diameter sufficiently large to allow of the free flow of the candy, is seated in openings cut in the center of the walls of the heating-jacket F, and it is provided with a check valve or stop for regulating the flow.

N indicates the stop-valve, which rests upon the upper end of the discharge-tube L. This valve-stop N, which is capable of vertical movement, is actuated by a vertical rod and lever-handle, as illustrated, and it is connected by a helical tension-spring 46 to a bracket 47, depending from the bottom of kettle, whereby the valve is held normally in a closed position.

O indicates our improved melting-kettle, of which any suitable number may be employed consistent with their relative capacity to the cooking-kettles. These melting-kettles O, which are designed to reduce the saccharine substance to a sirup, are arranged at a convenient point with respect to the cooking-kettles for the ready discharge of their contents into the same.

By reference to Fig. 3 of the drawings it will be seen that the melting-kettles are of a construction similar to the cooking-kettles, with the exception that but one coil or worm of heating-pipe is employed in the melting-kettle, it being obvious that a less heat is required to melt the saccharine substance than to cook it. The said melting-kettles are mounted upon a suitable frame, preferably at a greater elevation than the cooking-kettles, and the supply and exhaust of the steam to the coil thereof are effected independently of the supply and exhaust of the cooking-kettles.

P indicates the heating-coil, and Q the jacket or chamber of the melting-kettles. The ends of the heating-coils P pass through the wall of kettles at opposite points and the supply and exhaust of both coil and steam jacket are effected as follows:

R indicates the steam-supply pipe, which leads from a boiler or other source of supply. This pipe R is provided, as indicated at o, with a T-coupling, the lateral branches of which receive upwardly and downwardly directed pipes for the supply of the coil and jacket, respectively. The upwardly-directed pipe is provided at p with a valve for regulating the flow, and is then coupled with the end of the steam-coil. The downwardly-directed pipe is also provided with a regulating-valve q and then passes through wall of chamber Q.

The exhaust is as follows: The exhaust end of coil P is connected with a pipe r, which is provided with a regulating-valve s. This pipe r leads down and discharges into the cham-



ber Q. At a suitable point in the bottom of chamber Q we cut an opening to receive an exhaust-pipe R' for the discharge of the steam. This pipe R', which may lead to any desired point, is also provided with a regulating-valve, as indicated at t.

In Fig. 4 of the drawings we have illustrated a modified means of shifting the melting and cooking kettles from point to point in the room, the said kettles being shown in position upon their respective tramways. In the said figure 1 indicates the tramway or track for the travel of the roller of the melting-kettle. This track 1, which may be of any preferable construction, is either secured to the wall of the room by brackets or otherwise, and it may be of any length and may extend to any point desired. 2 indicates the tramway or track for the roller of the cooking-kettles, it being preferable to construct the same beneath the tramway of the melting-kettles, whereby the contents of the latter may be readily discharged into the cooking-kettles. O and E indicate, respectively, the melting and cooking kettles proper, which are of a construction similar to those employed in combination with the crane-shifting device. 5 indicates the encircling holder-arms for the support and carriage of the kettles. These encircling arms, which are secured together at their opposite ends by rivets or otherwise, have attached thereto upwardly-extending bail or supporting arms, the upper ends of which are so secured together as to afford a shaft-bearing for a traveling roller 8 on the tracks 1 and 2, respectively.

At suitable points in the room we provide steam supply and exhaust pipes, whereby the contents of the melting and cooking kettles may be heated, and we provide means, hereinafter described, whereby the melting and cooking kettles may be readily and quickly attached and detached from said supply and exhaust when the cooking is finished, and the kettles may then be moved to any point of the room for working.

As has been stated, we illustrate in Fig. 5 of the drawings a means of readily connecting the steam supply and exhaust pipes of the

kettle with pipes, which supply and exhaust said pipes of kettles. In the said figure 10 indicates the end of the steam supply or exhaust pipe of the kettle. This pipe 10 is externally threaded, as illustrated, to engage internal or female threads in a junction or union 11, which is provided with lever-arms 12. 13 indicates the end of the steam supply or exhaust pipes, which is also externally threaded to engage the female threads of the union.

By the construction shown it will be seen that we have a means of readily connecting and disconnecting the heating coils and jackets with a steam supply and exhaust pipe. It is obvious that any preferable means of connection may be employed.

Having described our invention, what we claim is—

1. The combination, with a revoluble crane or derrick having a hollow main post and radial arms carrying a steam-supply pipe, of cooking-kettles carried by said crane and provided with a base-heating chamber and a steam-coil connected, respectively, with the steam-supply pipe and provided with an exhaust-pipe leading into the main hollow post of crane, substantially as specified.

2. The combination, with a track or tramway, substantially as described, and steam supply and exhaust pipes for heating the melting and cooking kettles, of the respective kettles provided with means for traveling upon the tracks and having a base-heating chamber with induction and exhaust pipes, and a steam-coil of piping arranged in the body of said kettle, its ends being passed through the wall thereof, and suitable means for connecting the supply and exhaust pipes of the kettles with the steam supply and exhaust pipes, all adapted to operate substantially as specified.

In testimony whereof we affix our signatures in presence of two witnesses.

CHARLES M. HOLDEN.  
HENRY B. BOPP.

Witnesses:

HELMUTH HOLTZ,  
PERCY D. PARKS.