

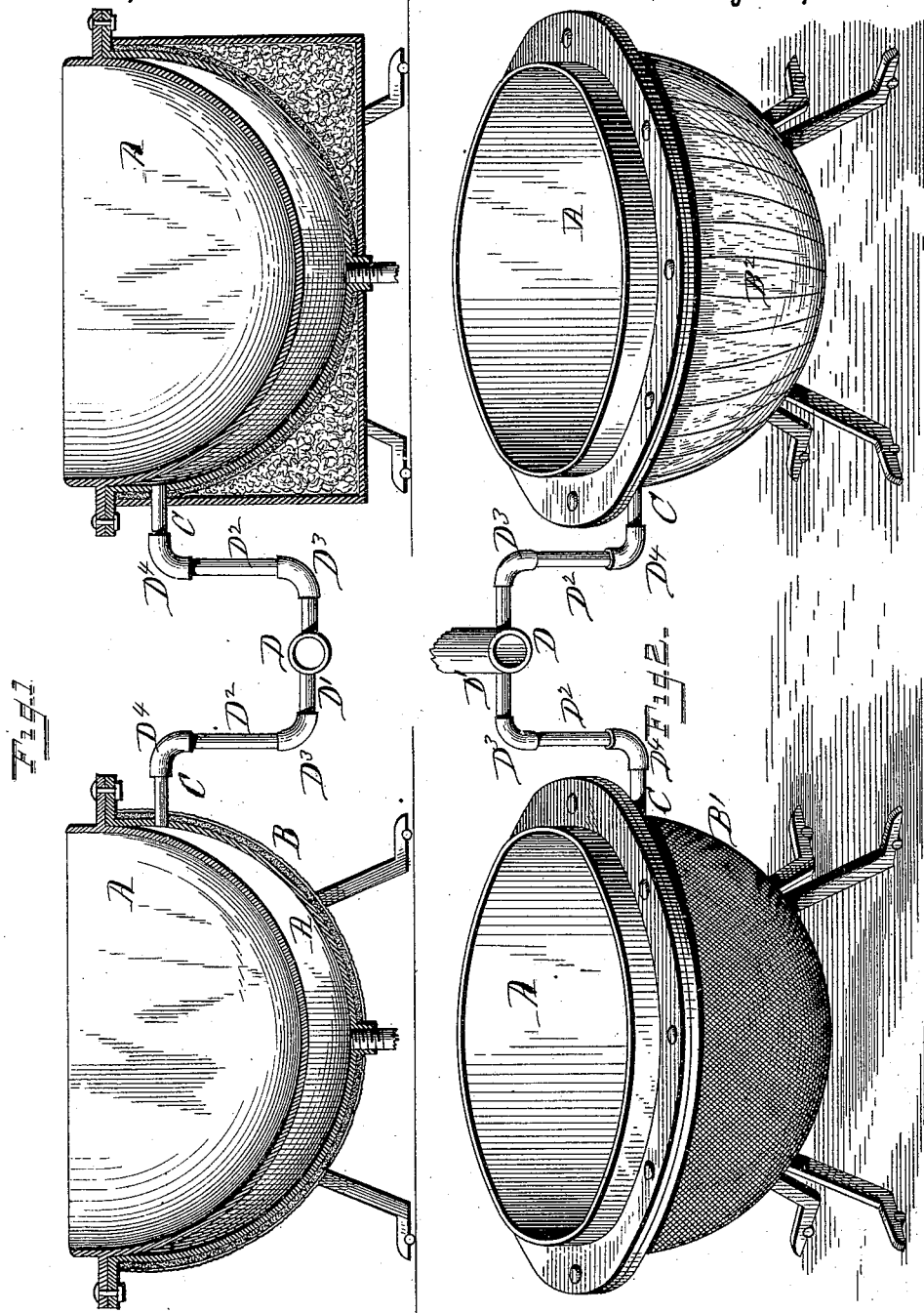
(No Model.)

J. A. COOK.

APPARATUS FOR THE MANUFACTURE OF SUGAR AND SALT.

No. 342,683.

Patented May 25, 1886.



WITNESSES

F. L. Curand
Hubert S. Wallace

INVENTOR

Joseph A. Cook
by Alex Mahon
Attorney

UNITED STATES PATENT OFFICE.

JOSEPH A. COOK, OF AUBURN, NEW YORK.

APPARATUS FOR THE MANUFACTURE OF SUGAR AND SALT.

SPECIFICATION forming part of Letters Patent No. 342,683, dated May 25, 1886.

Application filed January 4, 1886. Serial No. 187,561. (No model.)

To all whom it may concern:

Be it known that I, JOSEPH A. COOK, of Auburn, county of Cayuga, State of New York, have invented certain new and useful Improvements in Apparatus for the Manufacture of Sugar and Salt, of which the following is a full and exact description, reference being had to the accompanying drawings, making part of this specification.

10 In the process of manufacturing sugar and salt, where steam is used as the heating medium, and where it is necessary to coat the outer face of the jacket with a non-conducting material to retain the heat, great difficulty has been experienced in holding the non-conducting material upon said jacket, and especially upon salt-kettles, to which my invention is particularly applicable, for the reason that the salt-water would work between the jacket and non-conducting material and force the material away from the jacket and cause the same to drop off. One of the devices heretofore used to remedy this defect consisted of a series of bands or wires connected to the outer face of the jacket, and having the asbestos or non-conducting material applied thereto; but this construction also has been found defective, as the salt-water would penetrate the non-conducting material, and coming in contact with the bands or wires would rust them to such an extent as to render them useless or cause them to break and allow the non-conductor to drop off.

Another difficulty in the same class of kettles has been caused by the expansion and contraction of the pipes and laterals for conveying the steam from the boiler to the kettles, and which caused the laterals to break off or become loosened at the point of connection with the main supply-pipe or kettles; and the object of my invention is to remedy the above-named defects, and to provide a simple and effective means for holding the non-conductor upon the kettles, and to connect the main steam-pipe with the kettles in such manner as to provide for the expansion and contraction; and to this end my invention consists in a novel construction of case or jacket composed of wood, bands of cane or willow, or of woven willow or cane, or similar material adapted to surround and hold a non-conducting material in close contact with the jacketed kettle.

It further consists in running the main sup-

ply-pipe between the rows of kettles, at a point sufficiently above or below the inlet to the kettles, and in connecting the same to the kettles by means of double-elbow pipes, all as hereinafter explained.

Figure 1 is a sectional view through two kettles, showing two forms of case or non-conductor holder, and also one manner of connecting the kettles with the supply-pipe; and Fig. 2 is a perspective view of two kettles, to one of which is shown applied a woven cane or willow case and in the other another form of wooden case; also another manner of connecting the main supply-pipe with the kettles.

The kettles and jackets may be constructed in any usual or preferred way, or similar to those described in Letters Patent granted to me May 15, 1885, No. 277,833, except that the outer kettle or jacket, instead of being provided with flanges, as described in said patent, may be made with a smooth face to receive the asbestos or other non-conducting covering, if found desirable. The cases or covers are either composed of wood, bands of cane or willow, or woven cane or willow or similar material, as shown at B B', conforming in shape to the kettle, or they may be made of tongue-and-grooved strips of wood, as shown at B², Fig. 2, or the case may be made in box shape, as shown at B³, Fig. 2. Where the cases are made of cane or willow or similar material, as shown at B B', they are made in semicircular form, or conforming in shape to the outer kettle or jacket, and are attached to the rim thereof in any preferred way. They are also made in similar shape when composed of tongue-and-grooved strips, as shown at B².

At B³ a different form of case is shown, wherein the same is made in box shape, in which case the spaces left between the outer face of the semicircular kettle and the box is filled in with wood, stones, sand, or any suitable material, as shall be found most convenient.

The cases or covers may be painted or coated with any desirable substance.

By the use of these forms of cases or covers it will be readily seen that the asbestos or non-conducting material is held in close contact with the kettles or jackets, and that the cases or covers, instead of being liable to be injured by the salt-water, will be preserved thereby.

The kettles are arranged in rows in the

usual manner, and are provided with the usual inlet-pipe, C, arranged at any desired point below the rim of the kettles, and between which kettles a main steam-supply pipe, D, is run. 5 This pipe is supported either some distance below or above the inlet-pipe C, about midway between the rows of kettles, as shown, and from which extend short horizontal pipes D', which are in turn connected with perpen- 10 dicularly-arranged pipes D², through suitable elbows, D³, and said horizontal pipes being again in turn connected with the inlet-pipes of the kettles by means of another elbow, D⁴. By 15 this means of running the main supply-pipe between the rows of kettles and connecting it with each kettle by means of the double elbows, as described, it will be readily seen that the pipes are allowed to expand and contract without danger of breaking the connections be- 20 tween said parts.

The particular form of the case or cover, and the manner of connecting the same to the kettle may be varied without departing from the spirit or intent of my invention.

25 What I claim as new, and desire to secure by Letters Patent, is—

1. The case for holding the non-conducting material upon the face of the jacketed kettle, composed of wood, cane, willow, or similar material, substantially as described. 30
2. A case for holding the non-conducting material upon the face of the jacket, composed of wood, cane, willow, or similar material, conforming in shape to the jacketed kettle, substantially as described. 35
3. The jacketed kettle having the non-conducting material applied thereto, in combination with a case composed of wood, cane, willow, or similar material, substantially as described. 40
4. The kettles, arranged in rows, having a main supply-pipe running between the same, substantially as described, in combination with the double-elbow pipes for connecting the main supply-pipe with the kettles, substan- 45 tially as and for the purpose set forth.

JOSEPH A. COOK.

Witnesses:

R. M. VAIL,
T. A. GIBBS.