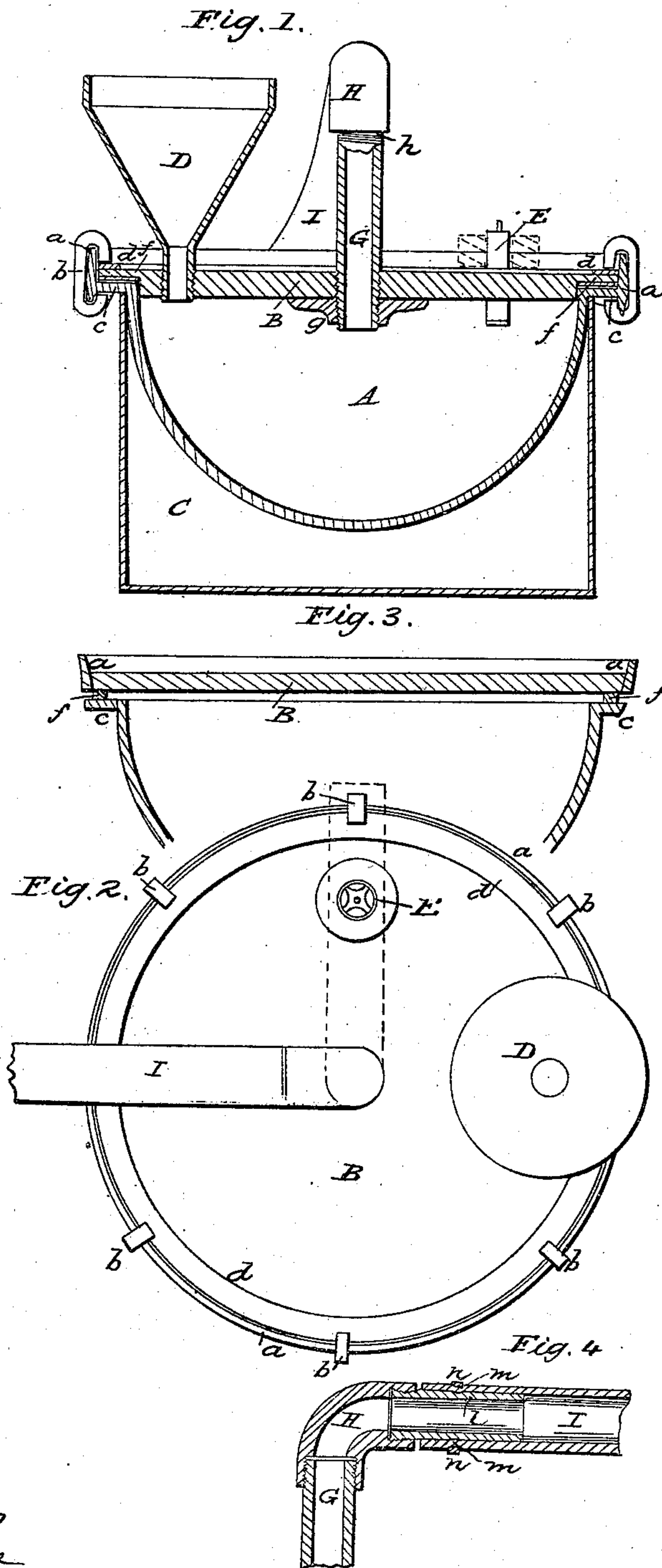


D. R. PRINDLE.
Agricultural Caldron.

No. 79,685.

Patented July 7, 1868.



Witnesses.
H. C. Smith
W. F. Browne

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By his atty.
J. A. Brown

United States Patent Office.

DANIEL R. PRINDLE, OF EAST BETHANY, NEW YORK.

Letters Patent No. 79,685, dated July 7, 1868.

IMPROVEMENT IN AGRICULTURAL BOILERS.

The Schedule referred to in these Letters Patent and making part of the same.

TO ALL WHOM IT MAY CONCERN:

Be it known that I, DANIEL R. PRINDLE, of East Bethany, in the county of Genesee, and State of New York, have invented an Improved Agricultural Caldron and Steamer; and I do hereby declare that the following is a full and exact description thereof, reference being had to the accompanying drawings, making part of this specification—

Figure 1 being a central, vertical section of the caldron.

Figure 2, a top view thereof.

Figure 3, a central vertical section of a portion, showing a modification of the construction.

Figure 4, a view of a part detached.

Like letters designate corresponding parts in all of the figures.

The features of novelty in this invention, in addition to what are embraced in my former patents for agricultural caldrons and steamers, are, first, the employment of a wooden cover, and the means devised for keeping it from shrinking and swelling and warping; second, the use of a swivelled or revolving elbow for the steam-pipe; and, third, the mode of attaching the flexible pipe to the revolving elbow.

One feature of my invention consists in a construction by which I am enabled successfully to use a wooden cover, B, for the caldron A. Heretofore it has been found impracticable to use wooden covers, which, if they could be used, would be desirable on account of their cheapness, lightness, and strength. The great difficulty in their use arises from their being alternately, or on opposite sides at the same time, exposed to great variations of temperature, and moisture or dryness, thereby warping and shrinking or swelling out of proper shape.

The method by which I render the use of wooden covers practicable consists in keeping them covered with water. To accomplish this, a raised rim or flange, to surround the cover and contain sufficient water for the immersion thereof, is employed. There are two ways of applying this rim or flange. First, as represented in figs. 1 and 2, where a raised rim, *a*, is formed on the upper edge of the caldron A, of sufficient height to contain water to immerse the cover B. This rim may also serve to receive the clamps *b b*, for fastening on the cover, as indicated in the drawings. There is a ledge, *c*, inside of the rim, for the edge of the cover to rest on, and to receive the packing *f* under the cover. The other mode of applying the raised flange is indicated in fig. 3, at *a*, and consists in attaching it to the edge of the cover itself. It may be of lead, zinc, or any other suitable or desired material. The caldron, in this case, must still have the ledge *c*, as shown, for the cover to rest and pack upon.

The cover has a metallic band, *d*, upon its edge, as shown, for the clamps to bear on. It might be entirely lined with sheet metal, though this is not necessary.

The steam-pipe G is screwed into the wooden cover. But, to give greater security, it is preferable to attach also a metallic flanch or bush-nut, *g*, either secured to the under side thereof, as shown, or to the upper side.

Another feature of my invention consists in connecting the flexible or shifting-pipe I with the stationary steam-discharge pipe G by means of a swivelled or turning elbow, H, which may be screwed upon the steam-pipe G, but must fit freely, so as to enable it to be turned to any direction required. This gives the flexible pipe I a horizontal direction at start, so that it is not liable to become kinked in bending down and in different directions. Here it can, with the greatest ease, be turned to any direction for conveying steam, without any inconvenience whatever. The free-turning joint may be packed or luted with any substance that will tighten it, without causing it to stick and impede the free revolution of the elbow. This freely-revolving elbow is to be distinguished from the ordinary elbow-connection for sections of gas-pipe or waste-pipe, which are not capable of movement after being applied. It forms a special free-joint connection between a flexible movable pipe and its immovable attachment, and thus enters into a new combination, with new capabilities and effects.

Another feature of my invention consists in the means of attaching the flexible rubber pipe to the elbow H, as indicated in fig. 4. The barrel *l* of the elbow is made only large enough to receive the rubber pipe, with just sufficient expansion to hold it in place, without being enlarged in any place. This will ordinarily retain

the flexible pipe upon the elbow, and yet allow it to be readily removed when required. But to secure it, in case the pipe becomes stretched, I make a small groove, *m*, around the barrel *l*, into which the elasticity of the rubber pipe indents it; and, as a further security, I use a compressing-band or clip, *n*, around the flexible pipe, to compress it into the groove. This band may be elastic.

In order to prevent adhesion between the pipe and the elbow, the latter should be polished smooth, or, preferably, galvanized or equivalently covered, or a lubricator, of oil, plumbago, or other substance, may be employed.

The filling-funnel is represented at D, and the valve at E. They offer no special novelty in my present invention.

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

The combination of the caldron A and cover B, so constructed as to enable the cover to be kept immersed in water, substantially as and for the purpose herein specified.

I also claim the revolving elbow H, in combination with the stationary steam-pipe G and flexible shifting-pipe I, for the purpose set forth.

I also claim the mode of attaching the flexible pipe to the elbow H, substantially as herein specified.

I also claim the metallic band *d*, on the edge of the wooden cover, in combination with the fastening-clamps, for the purpose set forth.

The above specification signed by me, this 20th day of March, 1868.

DANIEL R. PRINDLE.

Witnesses:

N. F. MINER,

D. R. PRINDLE, Jr.