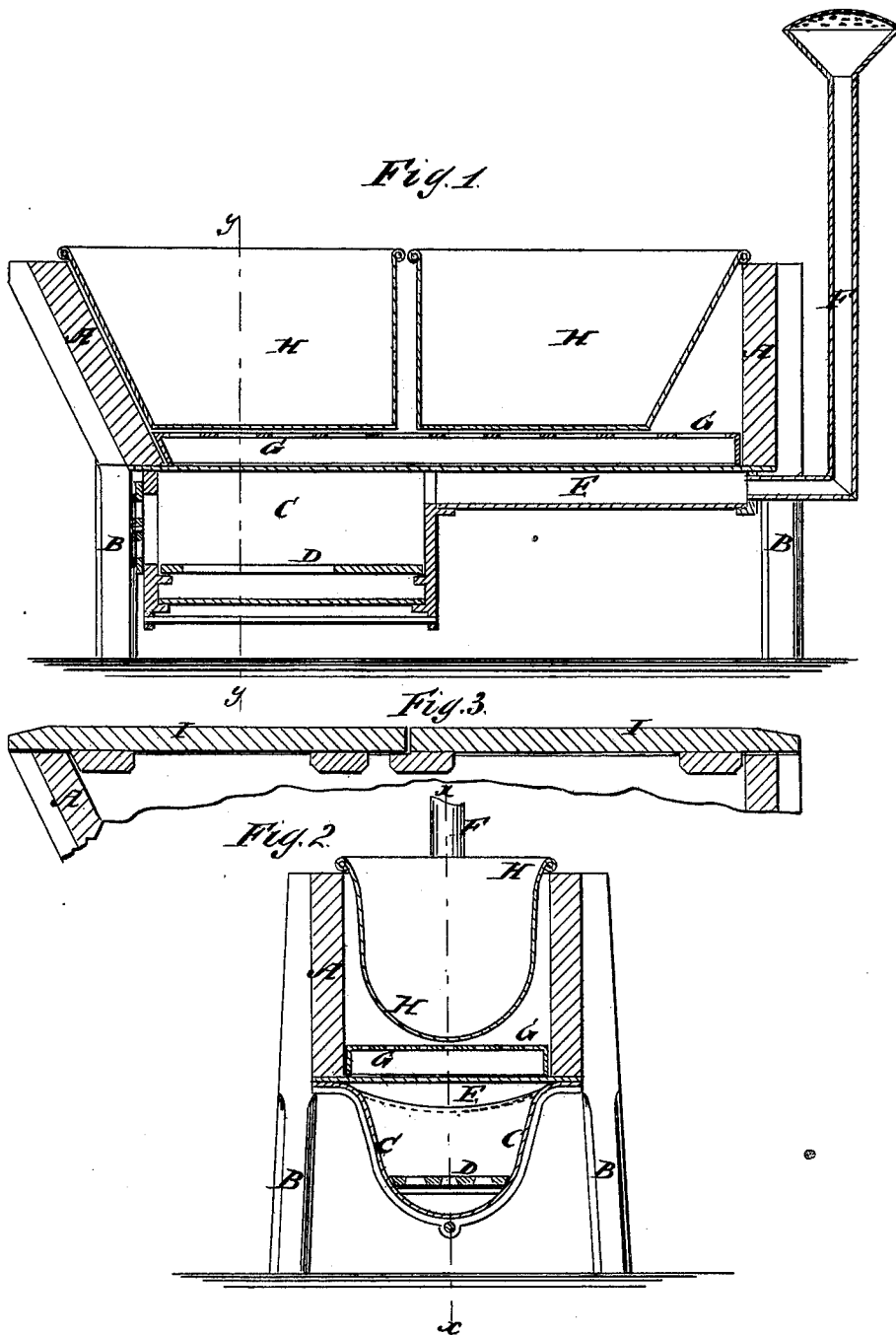


H. L., F. H., & I. G. HUMPHREY.

AGRICULTURAL BOILER.

No. 176,534.

Patented April 25, 1876.



WITNESSES:

E. Wolff.
John Gethals

INVENTOR:

H. L. Humphrey
F. H. Humphrey
BY *I. G. Humphrey*

ATTORNEYS

UNITED STATES PATENT OFFICE.

HENRY L. HUMPHREY, FREDERICK H. HUMPHREY, AND IRA G. HUMPHREY,
OF MONROE, MICHIGAN.

IMPROVEMENT IN AGRICULTURAL BOILERS.

Specification forming part of Letters Patent No. **176,534**, dated April 25, 1876; application filed
February 21, 1876.

To all whom it may concern:

Be it known that we, HENRY L. HUMPHREY, FREDERICK H. HUMPHREY, and IRA G. HUMPHREY, of Monroe, in the county of Monroe and State of Michigan, have invented a new and useful Improvement in Boiler and Furnace, of which the following is a specification:

Figure 1 is a longitudinal section of our improved boiler and furnace, taken through the line *x x*, Fig. 2. Fig. 2 is a cross section of the same, taken through the line *y y*, Fig. 1. Fig. 3 is a detail longitudinal section of the cover.

Similar letters of reference indicate corresponding parts.

The object of this invention is to furnish an improved boiler and furnace for cooking food, scalding hogs, boiling sap, boiling cider, making apple-sauce, heating curd for cheese, condensing milk, trying lard and tallow, and for various other similar uses, and which shall be simple in construction and convenient in use.

The invention will first be described in connection with drawing, and then pointed out in the claim.

A represents the box, one end of which is made inclined or flaring, and which is supported upon legs B of such a length as to raise it to a convenient height. The box A may be made of wood or other suitable material, except its bottom, which must always be made of metal. C is the fire-box, which is placed beneath, and is secured to the forward part of the bottom of the box A. The fire-box C is provided with a grate, D, and from the upper part of its rear end a wide and shallow flue, E, extends back to the rear end of the box or boiler A, so that the products of combustion may be close to and in direct contact with the entire bottom of the box A. The grate is made whole or solid in its rear part. At the

rear end of the box A the products of combustion enter the smoke-pipe F, which is connected with the rear end of the flue E. G is a slotted or perforated plate or board placed in the lower part of the box A and supported at a little distance above the bottom of said box A by cross-bars attached to it, or by cleats attached to the box A. The steam-board G may be formed of strips, resting upon cleats attached to the box A, if desired. H are two boilers fitting into the box A, and resting upon the steam-board G. One end of each of the boilers H is made inclined or flaring to correspond with the inclination or flare of the end of the box A. By this construction the contents of the boilers H will be heated by the water placed in the box A, or by the steam from said water.

The box A is provided with a cover, I, made in two parts, and so constructed as to fit snugly upon the mouth of the said box A when the boilers H are removed, so that the steam from said box may be conducted in pipes to a vat when desired.

Having thus described our invention, we claim as new and desire to secure by Letters Patent—

The combination of end-inclined tank A, supported on legs B, the fire-box C, the grate D, the flue E, the smoke-pipe F, the perforated plate G, and the end-inclined boilers H, all constructed and arranged as shown and described, to form an apparatus adapted to be used for the several purposes specified.

IRA G. HUMPHREY.
FRED. H. HUMPHREY.
HENRY L. HUMPHREY.

Witnesses:

CHAS. SISSON,
LEWIS MILLER.