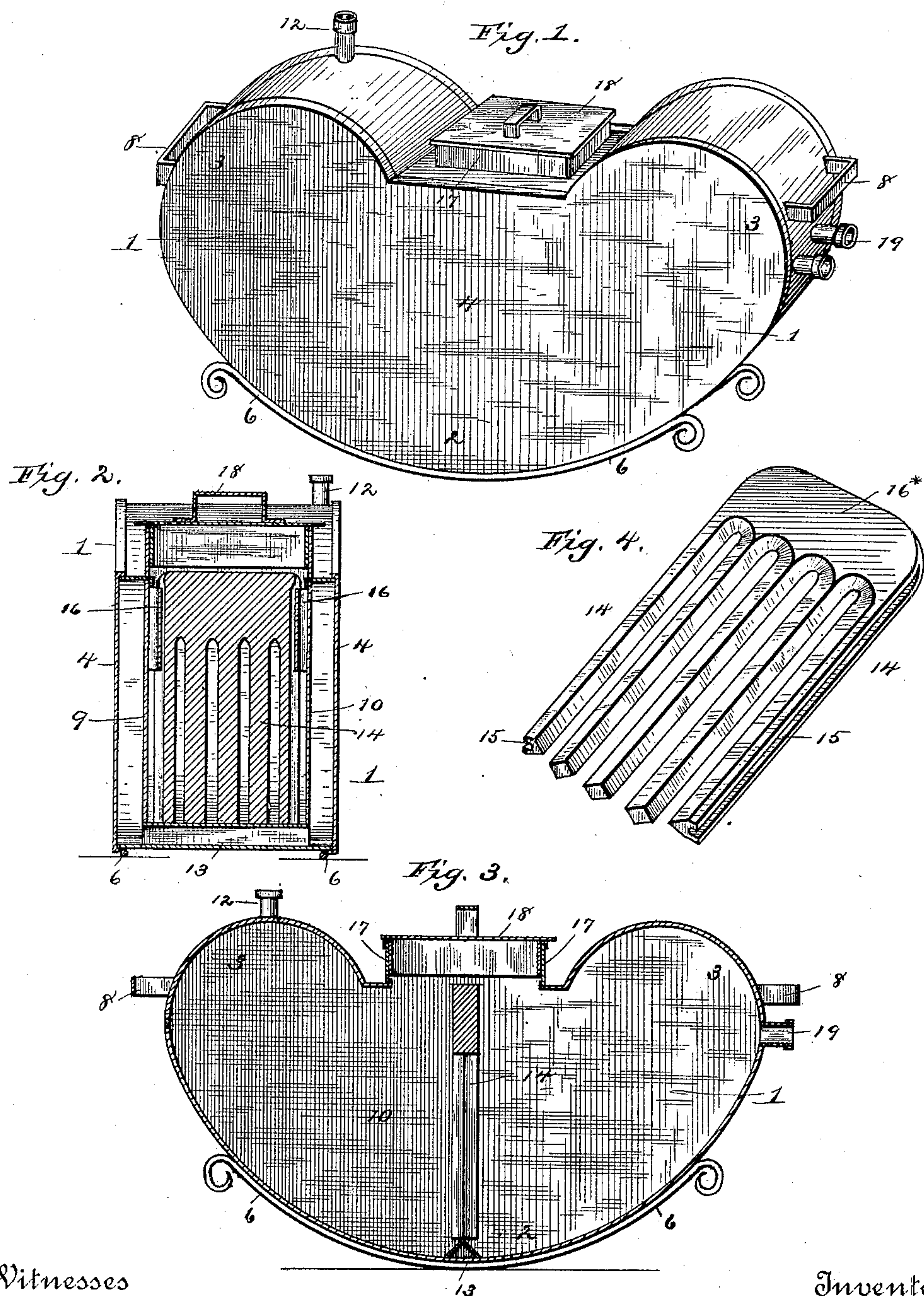


(No Model.)

W. H. DAY.  
CHURN.

No. 435,113.

Patented Aug. 26, 1890.



Witnesses

Harry L. Amer.

*H. L. Amer.*

Inventor

William H. Day.

By his Attorneys

*C. A. Snow & Co.*



# UNITED STATES PATENT OFFICE.

WILLIAM HOWEL DAY, OF MORGAN, TEXAS.

## CHURN.

SPECIFICATION forming part of Letters Patent No. 435,113, dated August 26, 1890.

Application filed March 22, 1890. Serial No. 344,905. (No model.)

*To all whom it may concern:*

Be it known that I, WILLIAM HOWEL DAY, a citizen of the United States, residing at Morgan, in the county of Bosque and State of Texas, have invented a new and useful Churn, of which the following is a specification.

The invention relates to improvements in working-body churns.

The object of the present invention is to provide a churn of simple and inexpensive construction adapted to convert the cream rapidly and economically into butter at the expense of but a small amount of labor.

The invention consists in the construction and novel combination and arrangement of parts, hereinafter fully described, illustrated in the accompanying drawings, and pointed out in the claim hereto appended.

In the drawings, Figure 1 is a perspective view of a churn constructed in accordance with this invention. Fig. 2 is a central vertical transverse sectional view. Fig. 3 is a vertical longitudinal sectional view. Fig. 4 is a detail view of the dasher.

Referring to the accompanying drawings, 1 designates the body of the churn, which is provided with a curved bottom 2 and rounded ends 3, and which is designed to be placed upon the floor or ground and be rocked or vibrated to throw the cream up the curved side and have the rounded ends 3 direct the same toward the center. The body of the churn consists of the bottom 2, which is curved and approximately semicircular, and which has rounded ends 3, that are slightly curved upon it to form the top at the ends of the churn and the sides 4, which are secured to the bottom 2, and the horizontal top portion that connects the curved ends of the bottom and that may, if desired, be constructed integral with the strip, forming the curved bottom and rounded ends; but the said strip is preferably constructed of sections suitably secured together. The churn is designed to be rocked or vibrated to convert the cream into butter, and is provided upon its bottom with wires 6, that are curved and conform to the configuration of the bottom and are designed to act as rockers to prevent the bottom of the churn coming in contact with the supporting-surface and being worn or otherwise injured, and the said wire strips have their ends slightly coiled to act as stops

to limit the vibratory motion of the churn-body, and by being coiled they are capable of a slight spring, which prevents injury to the churn-body should they receive a sudden blow. The churn-body is provided at each end with a handle 8, that enables the body to be readily grasped and operated. The churn-body is divided by partitions 9 and 10, that are similar in shape to the sides 4, and are arranged a short distance from the sides to provide water-compartments, which have an inlet-opening 12, and which enable the cream to be warmed and maintained at any desired temperature to facilitate churning, and the two compartments communicate at the bottom of the churn by a space formed by a transversely-arranged partition 13, which is bent longitudinally at an angle and has its apex extending across the body of the churn to form a support for a dasher 14, that has its sides provided with grooves 15 to engage ribs 16, that are formed by plates oppositely secured to the inner faces of the partitions 9 and 10. The dasher 14 consists of a series of blades or bars, that are preferably formed integral with the top portion 16\*. The cream, after passing up the curved sides of the bottom, is directed in a vortex by the curved ends 3 and then falls to the bottom of the churn, and is directed by the inclined sides of the transverse partition 13 against the sharp edges of the dasher-blades and forced through the narrow spaces between them to the other side of the churn, where the operation is repeated. By this means the cream is rapidly converted into butter.

The horizontal top portion of the churn-body is provided with a rectangular opening to provide an entrance for the cream, and the opening has a vertical flange 17, in which fits a cover 18, and the churn-body is provided at one end with an outlet-opening 19 to enable the liquid remaining in after churning to be readily drawn from the churn, and the water-compartments are also provided with an egress-opening to permit the warm water to be quickly removed after churning.

What I claim is—

A churn-body having a curved bottom and rounded ends and consisting of the bottom, the sides 4, the partitions 9 and 10, similar to the sides and arranged adjacent to the latter

and forming water-compartments, the trans-  
verse partition 13, providing a communica-  
tion between the water-compartments and  
being formed by a plate bent longitudinally  
5 at an angle and having its apex extending  
across the body of the churn, and the dasher  
arranged above the partition and suitably se-  
cured in place, substantially as described.

In testimony that I claim the foregoing as  
my own I have hereto affixed my signature in 10  
presence of two witnesses.

WILLIAM HOWEL DAY.

Witnesses:

WM. GILPIN,

J. A. McGEHEE.