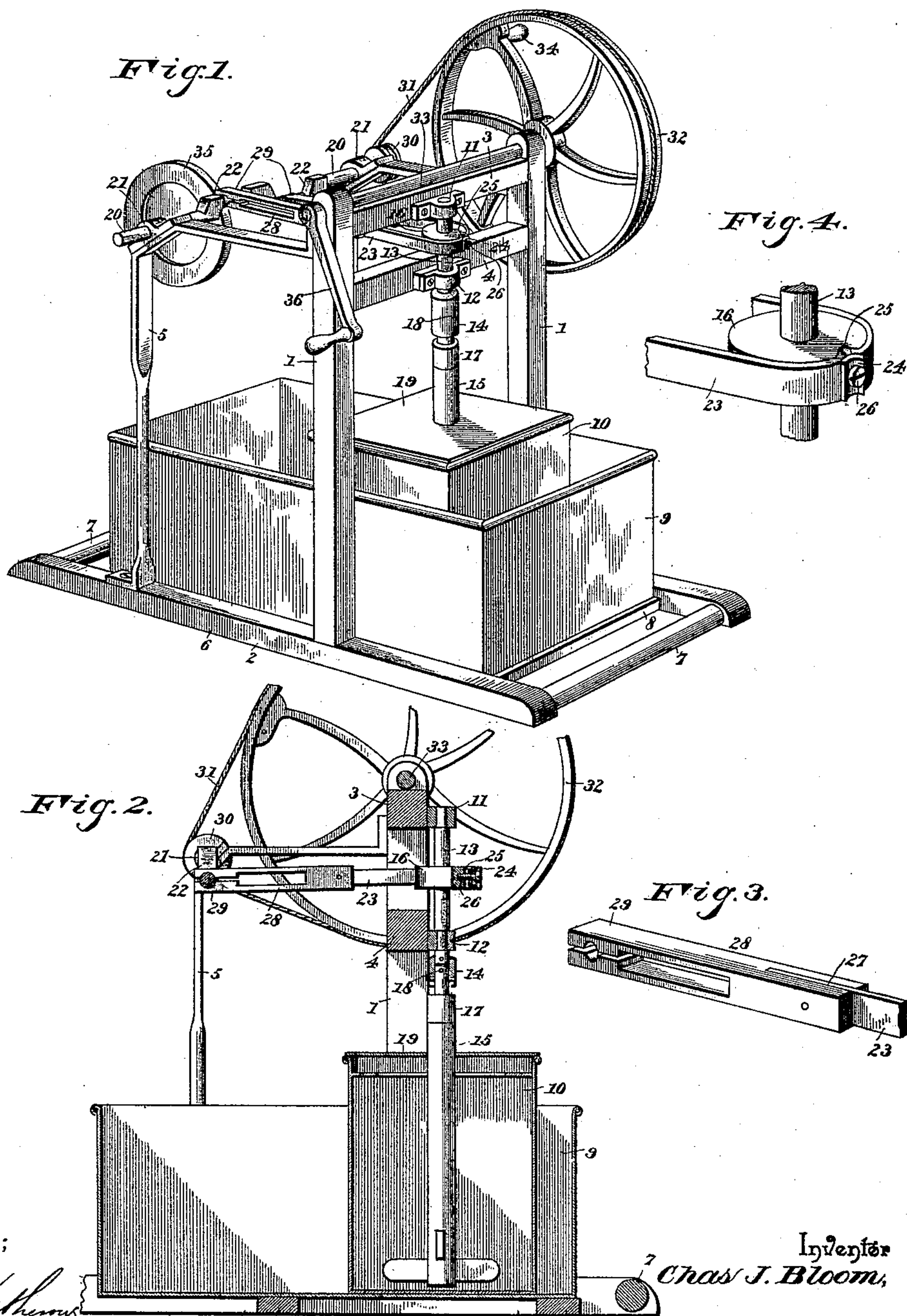


(No Model.)

C. J. BLOOM.
CHURN.

No. 465,335.

Patented Dec. 15, 1891.



Witnesses;

J. M. Withers
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Inventor

Chas. J. Bloom,

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UNITED STATES PATENT OFFICE.

CHARLES J. BLOOM, OF ELMO, MISSOURI.

CHURN.

SPECIFICATION forming part of Letters Patent No. 465,335, dated December 15, 1891.

Application filed September 4, 1891. Serial No. 404,690. (No model.)

To all whom it may concern:

Be it known that I, CHARLES J. BLOOM, a citizen of the United States, residing at Elmo, in the county of Nodaway and State of Missouri, have invented a new and useful Churn, of which the following is a specification.

The invention relates to improvements in churns.

The object of the present invention is to simplify and improve the construction of churns, to enable a rapid motion to be imparted to the dasher, and to provide means for regulating the temperature of the cream during the operation of churning.

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 claims hereto appended.

In the drawings, Figure 1 is a perspective view of a churn constructed in accordance with this invention. Fig. 2 is a vertical sectional view of the same. Fig. 3 is a detail perspective view of one of the clamps. Fig. 4 is a detail perspective view of the disk and the clamping-plate.

Referring to the accompanying drawings, 1 designate uprights rising from a base 2 and connected at their upper ends by horizontal bars 3 and 4 and supported by standards 5, having their lower ends secured to the base and their upper ends bent horizontally and secured to the uprights. The base is composed of side bars 6, end connecting-bars 7 and supporting-bars 8, upon which is placed a tank 9, adapted to contain water to regulate the temperature of the cream within a churn-body 10, located within the tank. The horizontal bars 3 and 4 are provided with bearings 11 and 12, in which is journaled a vertical dasher-shaft 13, provided at its lower end with a socket 14 to receive the upper end of a dasher-rod 15, and it is provided intermediate its ends with a wheel or disk 16. The dasher-rod carries at its lower end a dasher, and is provided at its upper end with a ferrule 17, having a transversely-perforated stem, which is secured in the socket 14 by a pin 18 and is detachable, and the said dasher-rod passes through an opening in the cover 19 of the churn-body in the usual manner.

The dasher-shaft is reversely rotated and receives its motion from a shaft 20, journaled in bearings 21 of the standard and having intermediate its ends oppositely-disposed cranks 22, and the disk 16, which is carried by the dasher-shaft, is secured to the front ends of straps 23 by a plate 24, which clamps the straps into a curved recess 25 and is itself curved and secured to the disk by a screw 26. The rear ends of the straps are secured in kerfs 27 of spring-clamps 28, which are constructed of suitable material, and are provided with spring clamping-jaws 29, having bearing-recesses at their outer ends arranged in the inner faces and adapted to receive the cranks of the shaft 20. These spring-clamps enable the straps to be readily disconnected from the cranks of the shaft 20. One end of the shaft 20 carries a grooved pulley 30, and motion is conveyed to the shaft 20 by a belt 31, which passes around the groove 30, and a large drive-wheel 32, which is grooved and is mounted upon a drive-shaft 33 and provided with a handle 34. The other end of the shaft 20 carries a fly-wheel 35, which causes the cranks to readily pass over the dead-center and to make the operation of the parts more regular. The drive-shaft is provided at the end opposite that on which the drive-wheel is arranged with a supplemental handle 36 to enable the churn to be operated from either side.

From the foregoing description and the accompanying drawings, the construction, operation, and advantages of the invention will be readily understood.

What I claim is—

1. In a churn-motor, the combination of the frame, a drive-shaft, the shaft 20, provided with oppositely-disposed cranks, a vertical dasher-shaft, straps secured to the shaft, and spring-clamps secured to the ends of the straps and adapted to clamp the cranks of the shaft 20, substantially as described.

2. In a churn-motor, the combination of the frame, a drive-shaft, the shaft 20, provided with oppositely-disposed cranks, a vertical dasher-shaft carrying a disk, straps secured to the disk, and spring-clamps attached to the ends of the straps and provided with spring-actuated jaws having bearing-recesses in

their inner opposed faces adapted to receive the cranks of the shaft, substantially as described.

3. In a churn-motor, the combination of the
5 vertical dasher-shaft, a disk mounted on the shaft and provided in its periphery with a curved recess, the straps, a curved plate clamping the straps in a recess, and a screw securing the curved plate to the disk, sub-
10 stantially as described.

4. In a churn-motor, the combination of the
frame comprising the base, the uprights ris-
ing from the base, the horizontal bars con-
necting the upper ends of the uprights, and
15 the standards secured to the base and having
their upper ends bent horizontally and se-
cured to the uprights and provided at their

angles with bearings, a drive-shaft journaled
in suitable bearings of the uprights, a shaft
20, provided with oppositely-disposed cranks 20
and journaled in the bearings of the stand-
ards and receiving motion from the drive-
shaft, a vertical dasher-shaft journaled in
suitable bearings of the horizontal bars, and
straps connecting the dasher-shaft with the 25
crank-shaft, substantially as described.

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

CHARLES J. BLOOM.

Witnesses:

W. A. Cox,

FRANK KIDDER.