

No. 668,100.

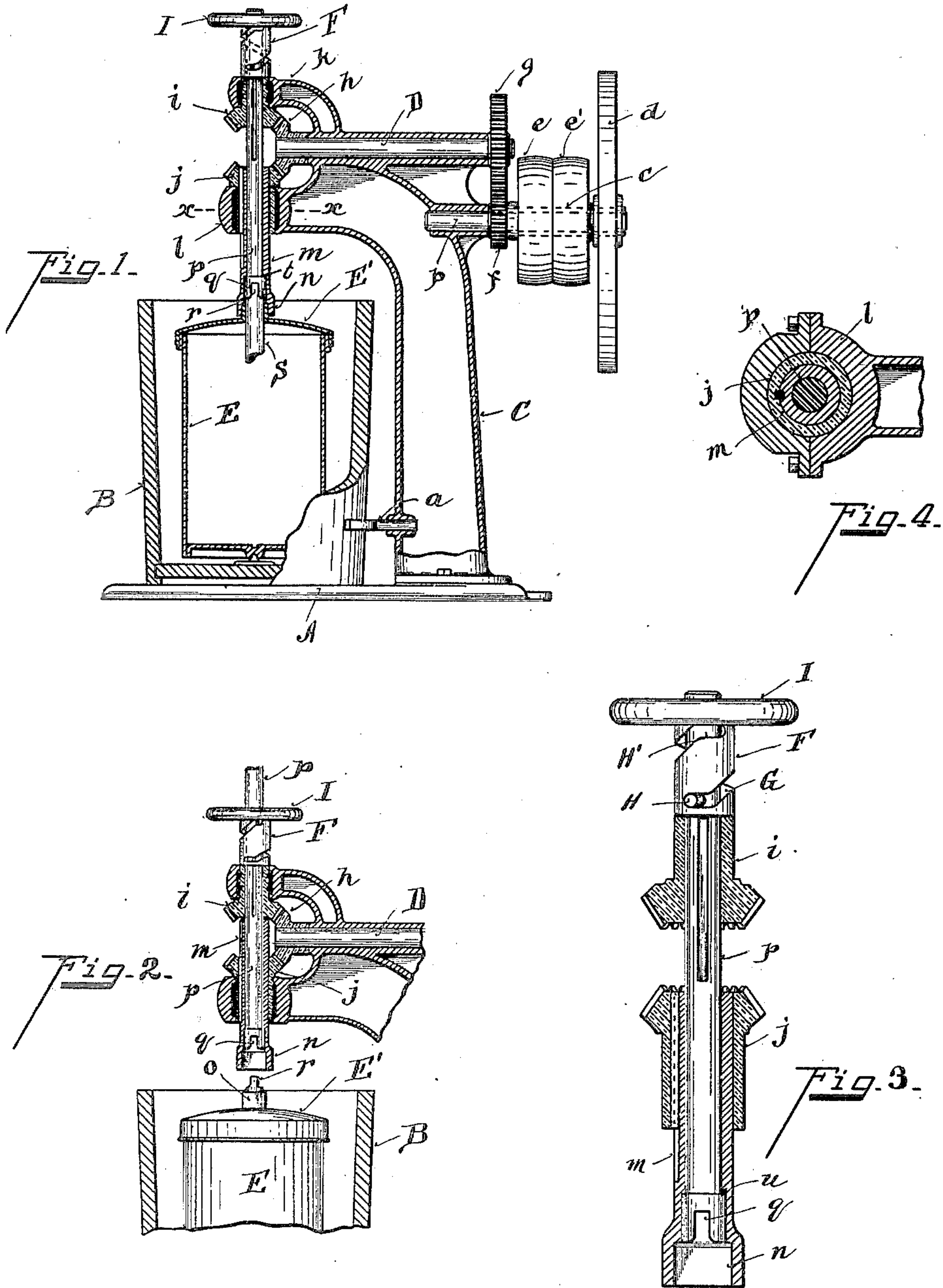
Patented Feb. 12, 1901.

C. HILBERT.

DRIVING MECHANISM FOR ICE CREAM FREEZERS.

(Application filed Nov. 12, 1900.)

(No Model.)



Witnesses

Oliver B. Kaiser
Pearl McMichael

Inventor

Charles Hilbert

By Ward & Ward

Attorneys

UNITED STATES PATENT OFFICE.

CHARLES HILBERT, OF CINCINNATI, OHIO.

DRIVING MECHANISM FOR ICE-CREAM FREEZERS.

SPECIFICATION forming part of Letters Patent No. 668,100, dated February 12, 1901.

Application filed November 12, 1900. Serial No. 36,253. (No model.)

To all whom it may concern:

Be it known that I, CHARLES HILBERT, a citizen of the United States, residing at Cincinnati, in the county of Hamilton and State of Ohio, have invented certain new and useful Improvements in Driving Mechanism for Ice-Cream Freezers, of which the following is a specification.

The object of my invention is to provide a power device for driving the dasher-shaft and can of an ice-cream freezer in opposite directions, with the devices so arranged that the driving-shafts may be elevated, leaving the can and freezer portion free for removal without disturbing the relative arrangements of the driving devices.

The features of my invention are more fully set forth in the description of the accompanying drawings, forming a part of this specification, in which—

Figure 1 is a central vertical section, partly in elevation, of my improvement in position for use. Fig. 2 is a central vertical section of parts of Fig. 1, showing the shafts in their elevated position. Fig. 3 is an enlarged vertical section of the driving-shafts, their gears, and the elevating mechanism. Fig. 4 is an enlarged section on line *x x*, Fig. 1.

A represents the supporting-base, upon which the freezer-tub B is supported. C represents a standard erected on said base.

a represents a means projected from the standard for engaging and holding the tub.

b represents a stud projected from the standard, upon which is a sleeve-shaft *c*. The said sleeve-shaft supports a fly-wheel *d*, fast and loose pulleys *e e'*, and a spur-gear *f*, the fly-wheel, fast pulley, and spur-gear being fixed to turn with said sleeve-shaft. D represents a shaft journaled in the standard above the said sleeve-shaft and substantially parallel therewith, having fixed to its outer end a spur-gear *g*, meshing with the spur-gear *f* on sleeve-shaft *c*. On the opposite end of shaft D is a bevel-gear *h*. The upper end of the said standard is curved over the supporting-base and terminates in substantially Y-shaped journal-arms the upper limb *k* of which forms a journal-bearing for the bevel-gear *i* and the lower limb *l* forming a journal-bearing for the bevel-gear *j*, said gears being in mesh with the bevel-gear *h*, whereby they are revolved in op-

posite directions. The bevel-gear *j* is feathered and splined to a sleeve-shaft *m*, revolving in the journal-bearing *l*. The lower end of sleeve-shaft *m* is provided with a socket *n*.

E represents the ordinary freezer-can journaled in the tub B and provided with a top E'.

o represents a boss or stem projected from the can-top, which fits the socket *n* of the sleeve-shaft *m*. Within this sleeve-shaft *m* is a shaft *p*, feathered and splined to the bevel-gear *i*, the lower end of this shaft being provided with a socket *q*, which fits the boss *r* of the dasher-shaft *s*, projected through the boss *o* of the can-top.

The sleeve-shaft *m* has an internal offset *t*, and the shaft *p* has a shoulder *u* bearing against the same, so that when the shaft *p* is raised it raises with it the sleeve-shaft *m*.

In order to lift the two shafts *m p*, respectively, from the can-top, I provide the following instrumentalities; F represents a sleeve seated on the upper limb *k* of the standard and around the upper end of the shaft *p*. It is provided with a worm groove or slot G. H represents a stud on the shaft *p*, projected into said worm-groove. I represents a hand-wheel attached to the top of said sleeve F. It will be observed that the groove is inclined in the direction reverse to the direction of revolution of the shaft *p*, so that the stud on said shaft will bear against the lower extremity of the groove when the shaft is revolved and carries said wheel with it in its revolution. When it is desired to lift the driving-shafts, however, the hand-wheel is turned in the same direction and the stud on shaft *p* will travel up the incline and into the straight end of the incline H', which forms a rest, thus lifting the shafts *p m*, which slide respectively through their bevel-gears *i j* and free their sockets, respectively, from the dasher-shaft and can-top. The can is thus permitted to be taken from the tub without in any wise disturbing the arrangement of the driving parts. It will be observed that the upward movement of the said shafts is represented by the opposing faces of the bevel-gears *i j*; but this is sufficient to provide space for the removal of the can or tub.

Having described my invention, I claim—

1. The combination in a power device for ice-cream freezers of a standard, right and

left hand bevel-gears journaled one above
the other on the standard, a sleeve-shaft
splined to the lower gear and adapted to be
socketed to the can-top, an internal shaft
5 splined to the upper gear and adapted to be
socketed to the dasher-shaft, the said shaft
being offset into the sleeve-shaft, whereby
they will both be raised with the internal
shaft, a sleeve mounted on the internal shaft
10 above the journaled support for the upper
gear, a worm-groove formed in the said sleeve,
a projection on the internal shaft engaging
into this groove, and a hand-wheel on the said
worm-sleeve adapted to raise the said shaft,
15 substantially as specified.

2. The combination in a power device for
ice-cream freezers of a standard, right and
left hand bevel-gears journaled one above
the other on the standard, a sleeve-shaft
20 splined to the lower gear and adapted to be
socketed to the can-top, an internal shaft
splined to the upper gear and adapted to be
socketed to the dasher-shaft, the said shaft
being offset into the sleeve-shaft, whereby
25 they will both be raised with the internal
shaft, a sleeve mounted on the internal shaft
above the journaled support for the upper
gear, a worm-groove formed in the said sleeve,
in a direction of inclination the reverse to the

direction of rotation of the said shaft, a pro- 30
jection of the internal shaft engaging into
this groove, and a hand-wheel on the said
worm-sleeve adapted to raise the said shaft,
substantially as specified.

3. In combination with a power device for 35
ice-cream freezers, a standard, right and left
hand bevel-gears journaled thereon, a sleeve-
shaft and an internal shaft splined respec-
tively to the said gears and adapted to be
socketed respectively to the can-top and the 40
dasher-shaft, said shafts being adapted to be
raised in unison, the internal shaft projected
upwardly through the sleeve-shaft and hav-
ing a projection thereon, a worm-sleeve jour-
naled around the upper end of said internal 45
shaft having a groove inclined in a direction
reverse to the rotation of the shaft which re-
ceives the said projection in the shaft, the
said groove terminating in a straight hori-
zontal plane forming a rest for the internal 50
shaft when it is raised, and a worm-wheel on
the sleeve, substantially as specified.

In testimony whereof I have hereunto set
my hand.

CHARLES HILBERT.

Witnesses:

OLIVER B. KAISER,
PEARL McMICHAEL.