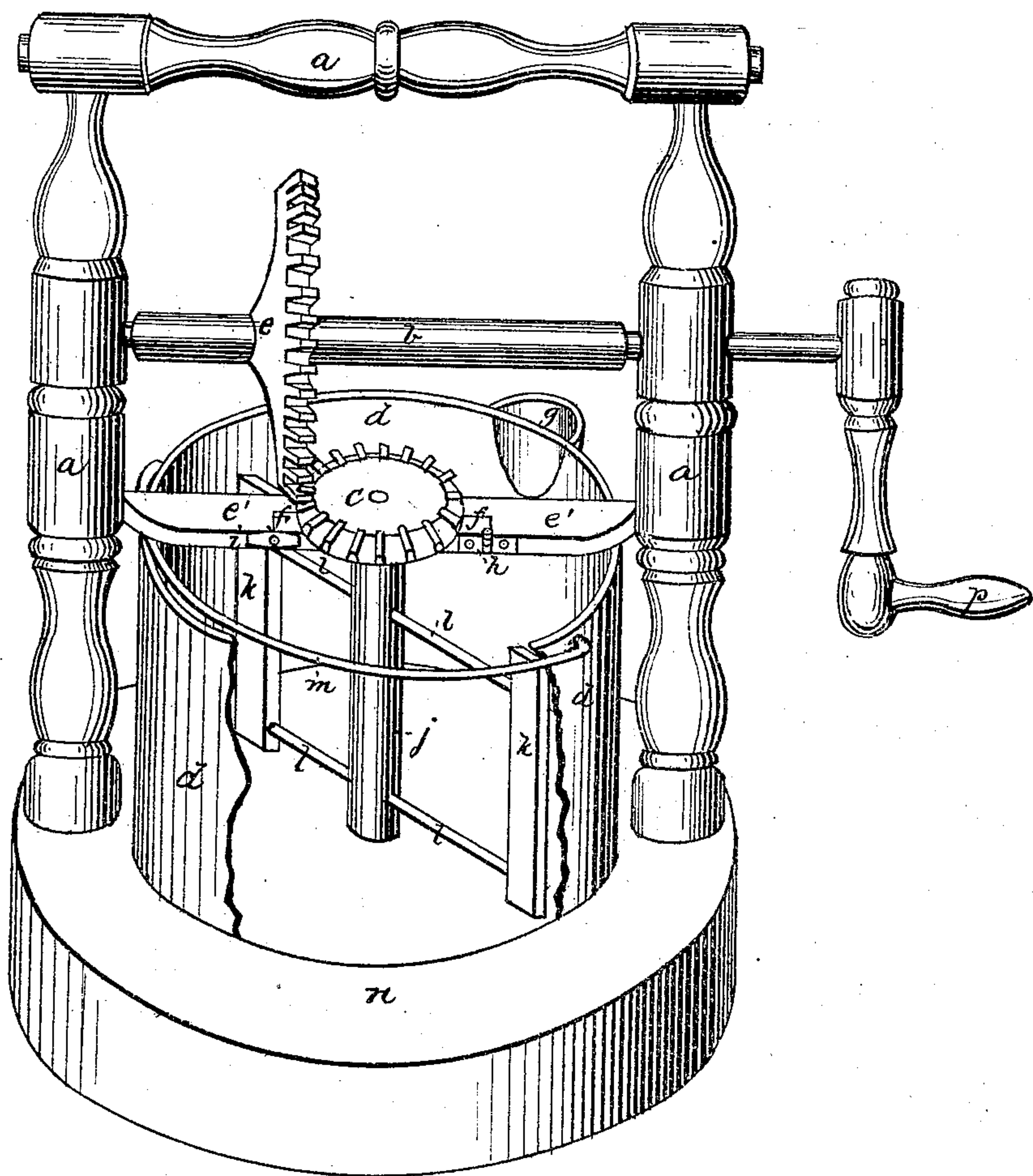


F. B. GRAVES.  
Stirrers for Maple Sugar.

No. 140,361.

Patented July 1, 1873.



Witnesses.

*Morgan Webb*  
*Eugene Baker*

Inventor.

*Furman B. Graves*

# UNITED STATES PATENT OFFICE.

FURMAN B. GRAVES, OF CORTLANDVILLE, NEW YORK.

## IMPROVEMENT IN STIRRERS FOR MAPLE-SUGAR.

Specification forming part of Letters Patent No. **140,361**, dated July 1, 1873; application filed March 8, 1873.

*To all whom it may concern:*

Be it known that I, FURMAN B. GRAVES, of Cortlandville, in the county of Cortland and State of New York, have invented certain Improvements in Machines for Stirring Maple-Sugar while the same is graining and being cooled and caked, of which the following is a specification:

The object of my invention is to provide a cheap device for assisting in the manufacture of maple-sugar, by stirring equally and rapidly the sirup when at the proper stage, such device being portable, and designed to be used by farmers in their houses or in the woods, as this manufacture is usually carried on.

Heretofore this stirring has been done by pouring a small quantity of the sirup into some dish or pan, and then stirring it with a stick or ladle by hand. This is a laborious operation, and uncertain in its results, owing to the difficulty of stirring with sufficient rapidity and evenness.

My invention consists in a portable frame containing slight machinery driven by hand-power, which operates a stirrer revolving in a common pail or tub, which may be placed in the frame and taken out at will, and may be used for other purposes when not wanted for this business.

The accompanying drawing is a perspective representation of the device.

N is a base, upon which is erected a frame, *a*. *b* is a horizontal crank-shaft, upon which is the beveled cog-wheel *e*, meshing into the beveled cog-wheel *c* upon the vertical shaft *j*. Through this shaft run parallel rods *l l*, upon the ends of which are the vertical beaters or

stirrers *k k*. The shaft *j* has its journal in the cross-piece *e'* of the frame. *f* is a block fitted into such cross-piece *e'*, and hinged thereto at *h*, and held in place by a button, *i*. This block forms part of the journal-box, and when in place holds the shaft *j* in place; but when open allows the shaft and stirrers to be removed from the frame. The shaft at its lower end rests in a slight socket in the bottom of the pail. *d* is a pail or tub resting on the base of the frame. The side of the pail is represented as broken away, for the purpose of showing the stirrers.

In operation the block *f* is swung open, and the shaft *j* and stirrers taken out of the frame, and the pail adjusted with the sirups therein. The shaft and stirrers are then replaced, and the block *f* buttoned in place. Motion is then given the stirrers from the crank *p* with such velocity and for such length of time as may be required to bring the sirup to the proper grain and consistency, when the stirrers are again removed, the pail taken out, and its contents poured into the molds to cool and form.

I claim—

The combination of the removable shaft *j* with the stirrers *k k* and the pail or tub *d*, when placed in a portable frame, substantially as and for the purpose above described.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

FURMAN B. GRAVES.

Witnesses:

MORGAN L. WEBB,  
EUGENE BATES.