

**J. DOOLING.**  
**Ice-Cream Freezers.**

No. 141,209.

Patented July 29, 1873.

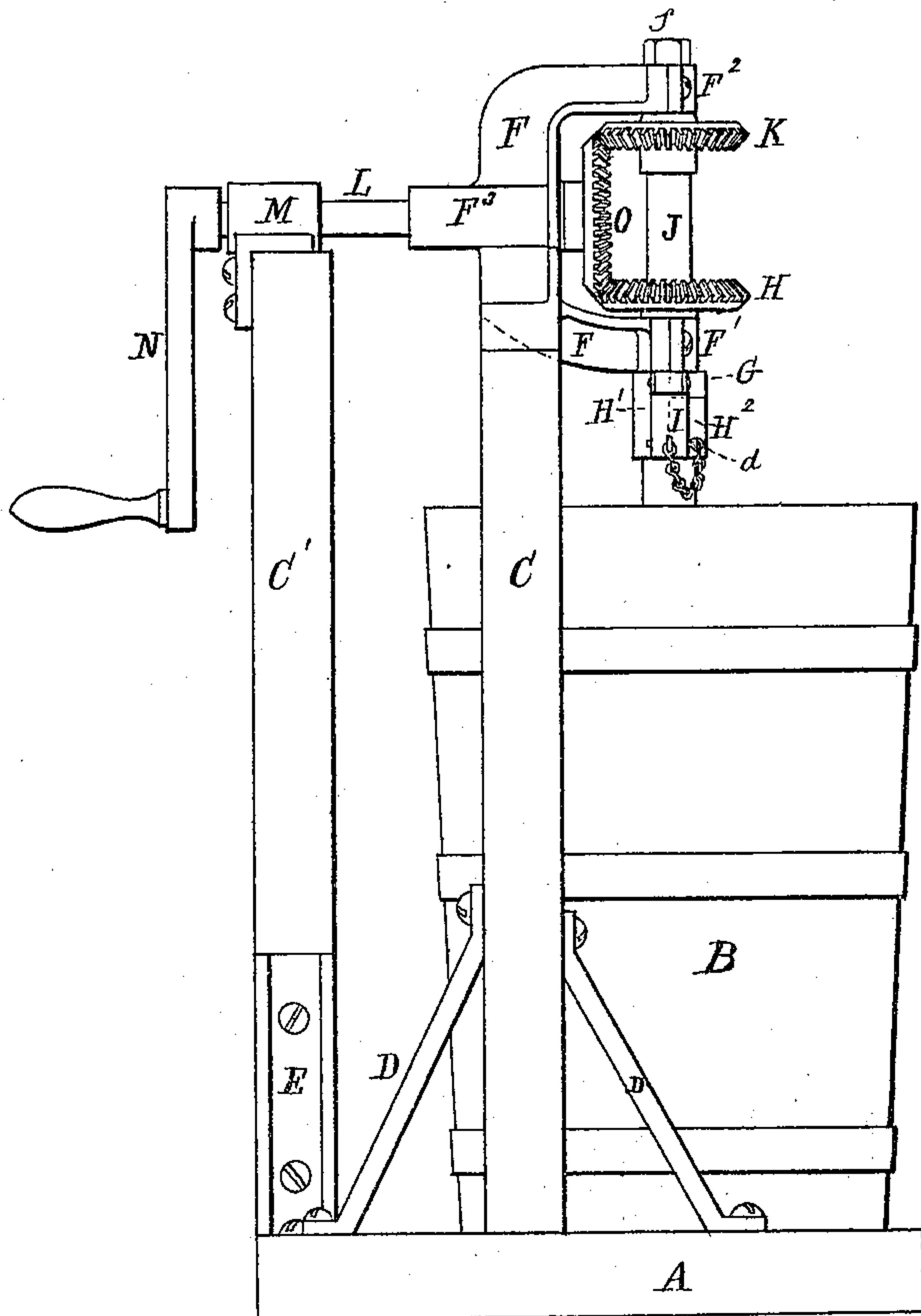


FIG. 1.

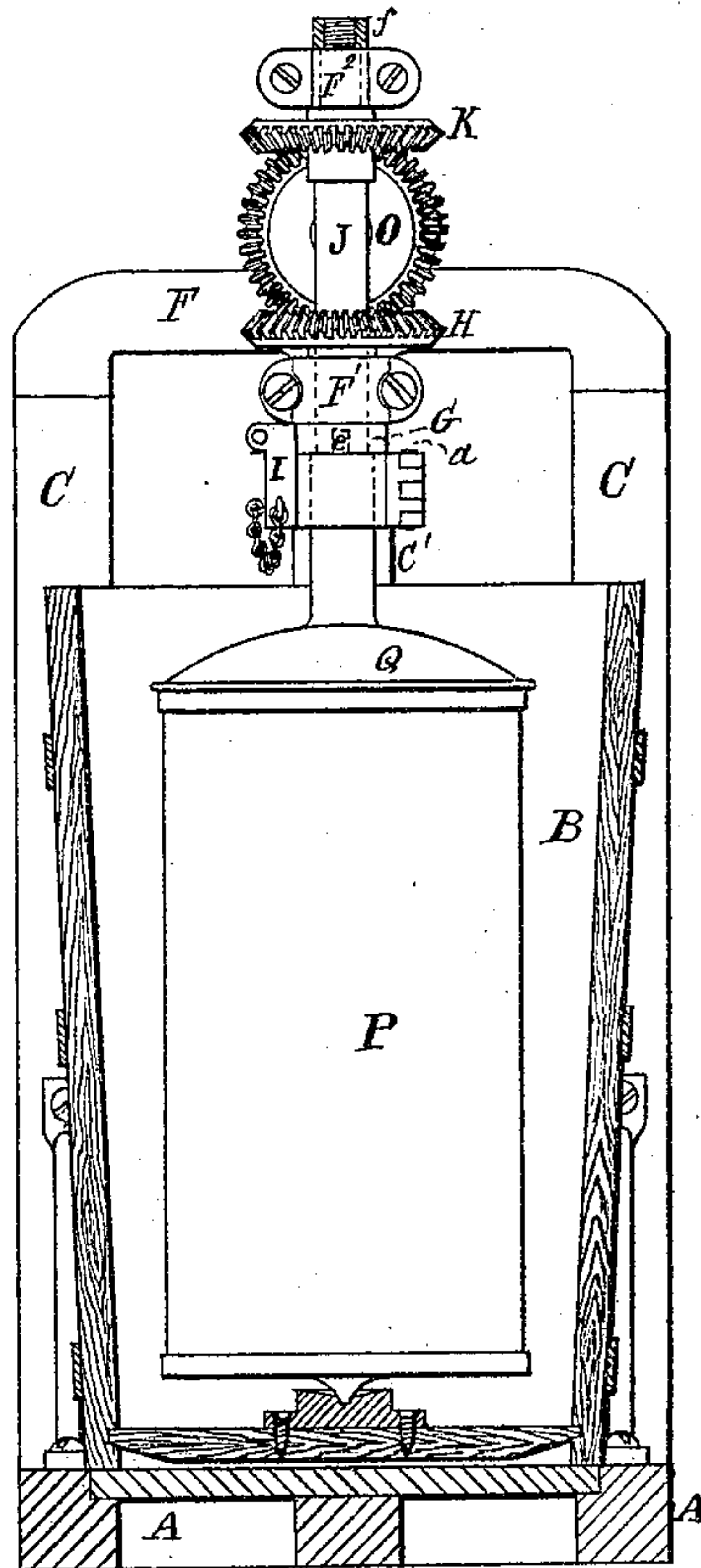


FIG. 2.

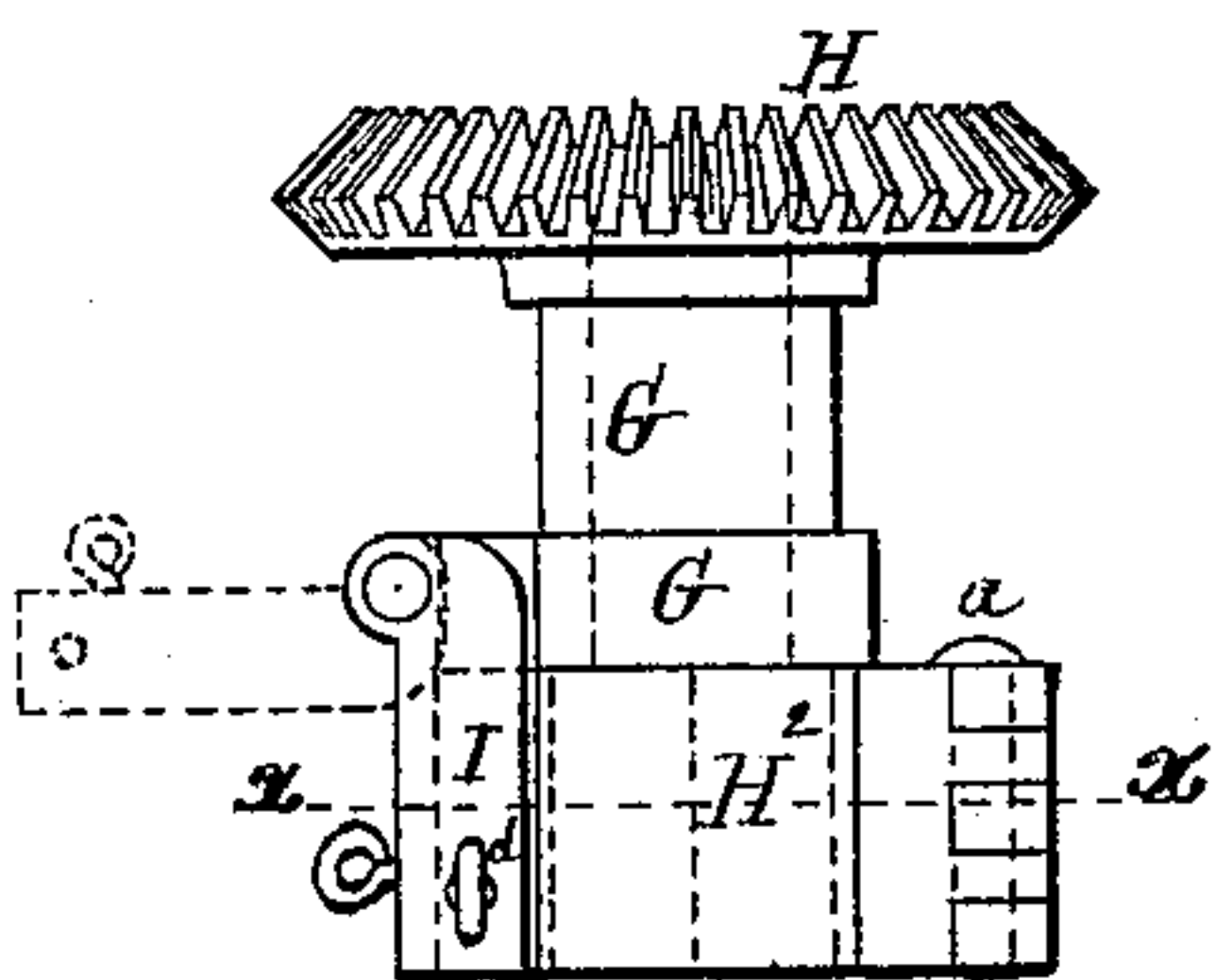


FIG. 3.

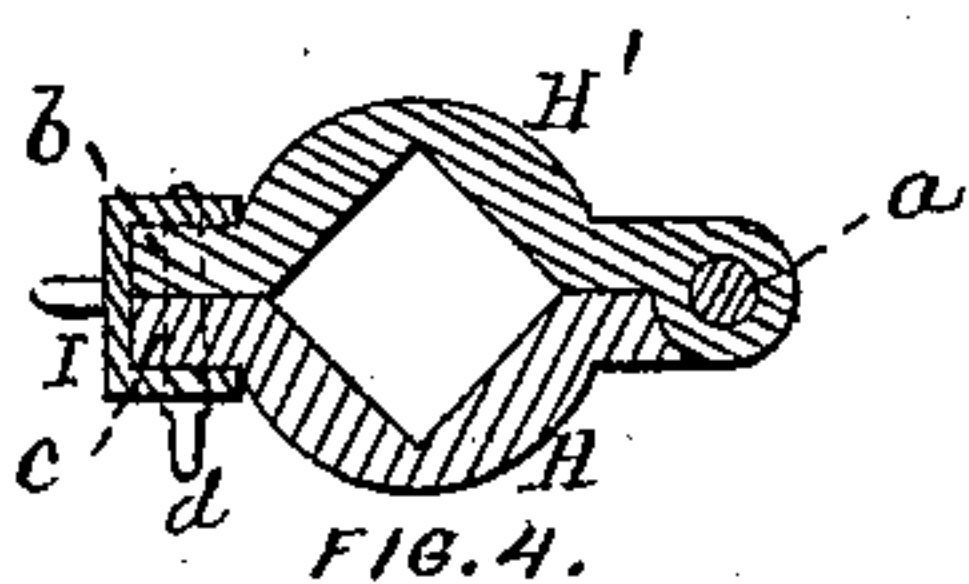


FIG. 4.

WITNESSES.

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# UNITED STATES PATENT OFFICE.

JAMES DOOLING, OF BOSTON, MASSACHUSETTS.

## IMPROVEMENT IN ICE-CREAM FREEZERS.

Specification forming part of Letters Patent No. **141,209**, dated July 29, 1873; application filed June 23, 1873.

*To all whom it may concern:*

Be it known that I, JAMES DOOLING, of Boston, in the county of Suffolk and State of Massachusetts, have invented certain new and useful Improvements in Ice-Cream Freezers, of which the following, taken in connection with the accompanying drawings, is a specification.

My invention relates to the means of coupling the driving mechanism to the cream-holder; and it consists in the formation upon the lower end of a sleeve-shaft, and in one piece therewith, of one-half of a coupling-socket, and hinging thereto the other half of said socket by means of a pin, the axis of which is parallel to the axis of the sleeve, and a suitable clamping or locking device for securing the two parts of the socket together, as will be more fully described, the whole being so arranged that, by unclamping the coupling and swinging the movable portion of the coupling around at right angles to its former position in a horizontal plane, the cream-holder may be readily removed from connection with the driving mechanism, or placed in connection therewith and coupled thereto, by closing the hinged portion of the socket upon the flat-sided end of the hub formed upon the cover of the cream-holder, and clamping or pinning the two parts together, as will be more fully described.

In the drawing, Figure 1 is a side elevation of an ice-cream freezer, embodying my invention. Fig. 2 is a vertical section through the center of the ice tank or tub, and showing the other parts in front elevation. Fig. 3 is a front elevation of the sleeve-shaft, clamp, and the driving-gear; and Fig. 4 is a horizontal section through coupling on line *xx* on Fig. 3.

A is the platform upon which the ice-tank B is placed when in connection with the driving mechanism. C and C' are the standards erected upon the platform A and securely attached thereto by the braces D D and angle-irons E. F is a metallic frame secured to the tops of the standards C and provided with the boxes F<sup>1</sup> and F<sup>2</sup>. In the box F<sup>1</sup> is mounted the hollow shaft or sleeve G, upon which is cast or otherwise secured the bevel-gear wheel H, and upon the opposite end the half of a coupling-socket, H<sup>1</sup>. H<sup>2</sup> is the other half of the coupling-socket hinged to the part H<sup>1</sup> by means of the pin *a*, the axis of which is parallel, or

nearly so, to the axis of the shaft or sleeve G, so that the part H<sup>2</sup> may be swung away from H<sup>1</sup> in a direction at right angles to the axis of revolution of the sleeve-shaft G. I is a grooved clasp or clamp pivoted to an ear upon the side of the sleeve-shaft G, opposite the hinge-pin *a*, and above the movable portion H<sup>2</sup> of the coupling-socket, so that, when swung up to the position shown in dotted lines in Fig. 3, the part H<sup>2</sup> may be swung upon its hinge-pin *a* to open or close the coupling-socket, and, when in the position shown in full lines, to clamp the two parts of the coupling together by closing over projecting ears *b* and *c* formed respectively upon the parts H<sup>1</sup> and H<sup>2</sup> of the coupling-socket. The clamp I is secured in place by the pin *d*. Instead of the swinging clamp I to hold the coupling together the two parts of the coupling-socket may be connected together at both sides by a hinge-connection with one pin so constructed and applied that it may be withdrawn, while the pin upon the opposite side serves as a pivot on which the movable portion turns. J is a spindle having a bearing in the sleeve-shaft G and the box F<sup>2</sup>, and arranged to revolve freely therein, and having secured thereto the bevel-gear wheel K. L is the driving-shaft, having its bearings in the pipe-box F<sup>3</sup> of the frame F, and the box M secured to the top of the standard C' and operated by the crank N. Upon the inner end of the shaft L is mounted and firmly secured thereto the bevel-gear wheel O, meshing into the gear K upon its upper side, and the gear H upon its lower side; and it is evident that if the shaft L is revolved the sleeve-shaft G and the spindle J will both be revolved, but in opposite directions. The lower end of the spindle J has formed therein a slit, as indicated in dotted lines at *e*, in Fig. 2, for the purpose of coupling the same to the beater-shaft, not shown in the drawings. The spindle J is also provided with a collar, *f*, at its top end to prevent it from falling too low in the sleeve-shaft G. P is the cream-holder, constructed and arranged in the usual manner, and provided with a cover, Q, upon the upper side of which is a raised hub, the upper portion of which is made square to fit the socket in the lower end of the sleeve-shaft G, said cover being secured to the cream-holder, so

that the two will revolve together in the usual manner. The interior of the coupling-socket  $H^1 H^2$  may be square, as shown, semicircular, polygonal, or circular, with a spline groove cut therein, or a projecting rib formed thereon, and the upper portion of the hub on the cover of the cream-holder made of a corresponding shape.

What I claim as new, and desire to secure by Letters Patent of the United States, is—

In combination with a cream-holder provided with a cover having a square or other flat-sided hub thereon, or of circular form with a spline groove or rib formed thereon, and any suitable mechanism for imparting rotary motion thereto, a coupling for connecting the

cream-holder to the operating mechanism, made in two parts, one of which is made in the same piece with, or firmly secured to, the sleeve-shaft, through which motion is to be imparted to said cream-holder, and the other half is hinged thereto and arranged to swing in a horizontal plane at right angles to the axis of revolution of said shaft, and the two parts secured together by means of a clamp or pin, substantially as described.

Executed at Boston this 19th day of June, 1873.

JAMES DOOLING.

Witnesses:

N. C. LOMBARD,  
L. A. WOOD.