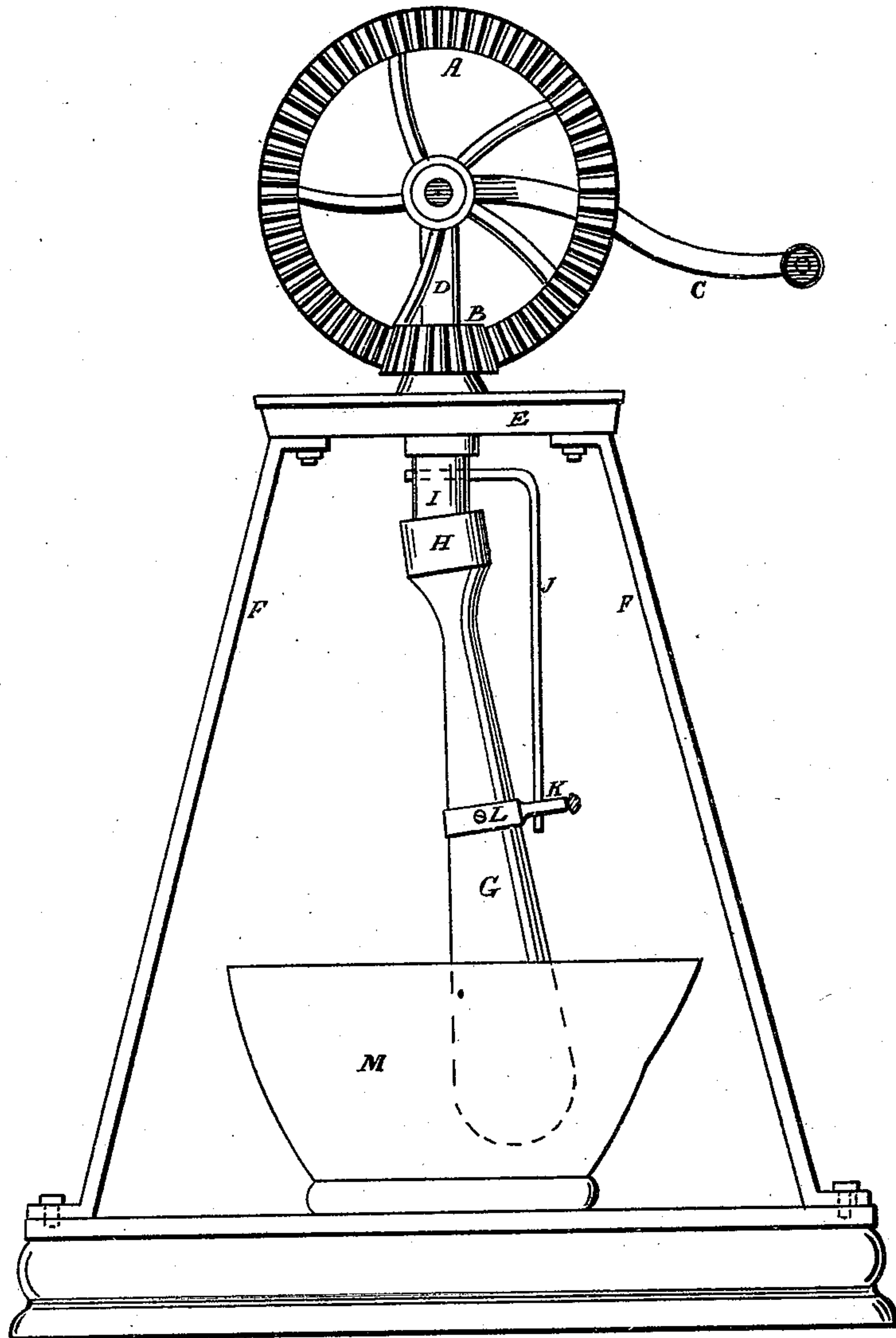


J. J. LANCASTER.

GRINDING AND TRITURATING APPARATUS.

No. 188,471.

Patented March 20, 1877.



WITNESSES

*Thomas Beech*  
*Philip J. Edmund.*

INVENTOR

*Joseph J. Lancaster*  
*by attorney*  
*Henry Beech*

# UNITED STATES PATENT OFFICE.

JOSEPH J. LANCASTER, OF LONDON, ONTARIO, CANADA.

## IMPROVEMENT IN GRINDING AND TRITURATING APPARATUS.

Specification forming part of Letters Patent No. **188,471**, dated March 20, 1877; application filed December 16, 1876.

*To all whom it may concern:*

Be it known that I, JOSEPH J. LANCASTER, of the city of London, in the county of Middlesex and Province of Ontario, Canada, have invented certain new and useful Improvements on Apparatus for Grinding Colors and Triturating Medicines; and I hereby declare that the following is a full, clear, and exact description of the same, reference being had to the annexed drawing.

My invention consists, briefly, of a device for the saving of labor in mixing colors or tritulating medicines, more especially in large quantities.

A is a bevel-wheel, and B a pinion operated by crank C. The upright standard D, which serves as a bearing for the bevel-wheel, is secured to a metal dish, E, supported on legs F in the form of a tripod, or in any suitable manner. Through the center of the dish E the axis of the pinion B passes, and all drippings of oil or metallic particles produced by friction will be caught in this dish, and prevented from falling upon the apparatus beneath.

G is a pestle of ordinary construction, having a cup-shaped head, H, into which the axis I of the pinion passes, and this cup H answers a similar purpose to the dish E—that is to say, it will receive any drippings of lubricating-oil coming from the axis I. J is a bent

rod, one end of which passes through a socket in axis I, the lower end passing through a slot in the projection K of a band, L, which encircles the pestle, and is secured thereto.

The revolution of the axis I, driven by the simple mechanism already described, causes the rotation of the rod J, and with it the pestle G, the lower end of which moves round the inside of mortar M, in which the color is mixed or the medicine trituated. The slot in the projection or lug K of band L is sufficiently large to allow of the extension of the rod J, and with it the pestle G, by the operation of centrifugal force, and in this way the whole of the contents of the mortar are effectually acted upon.

Having thus described my invention, what I claim is—

The combination of power-arm J, adjustably attached to rotating shaft I, with mortar M and pestle G, provided with band L, having projecting slotted bar K, substantially as described, whereby the pestle is given a rotatory motion, while at the same time it is allowed extension within the mortar by centrifugal force, for the purpose set forth.

JOSEPH J. LANCASTER.

Witnesses:

HENRY BEECH,  
THOMAS BEECH.