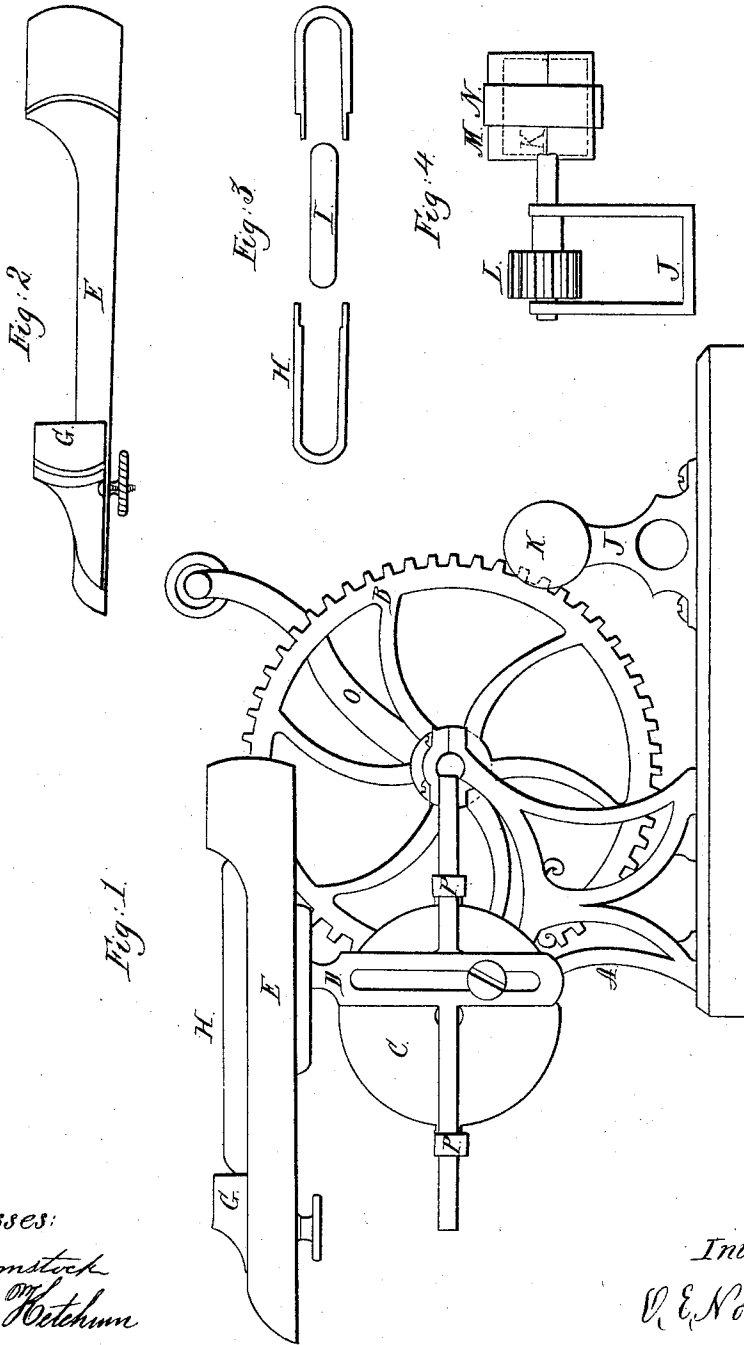


O. E. Noble,

Making Pharmaceutical Preparations,

No. 44,444,

Patented Sep. 27, 1864.



Witnesses:  
Wm. Lemstock  
Charles Hetchum

Inventor:  
O. E. Noble

# UNITED STATES PATENT OFFICE.

O. E. NOBLE, OF PENN YAN, NEW YORK.

## IMPROVED MACHINE FOR PULVERIZING AND LEVIGATING SUBSTANCES.

Specification forming part of Letters Patent No. **44,444**, dated September 27, 1864; antedated September 16, 1864.

### *To all whom it may concern:*

Be it known that I, O. E. NOBLE, of Penn Yan, in the county of Yates and State of New York, have invented a new and useful Improvement in Attenuating-Machines; and I do hereby declare that the following is a full, clear, and exact description of the construction and operation of the same, reference being had to the annexed drawings, making a part of this specification, in which—

Figure 1 is a side elevation of the whole machine. Fig. 2 is a longitudinal section of the receptacle. Fig. 3 is a longitudinal section of the mortar and pestle. Fig. 4 is a front view of the cylindrical triturator.

The letters of reference refer to the same parts in each figure.

A represents the frame that holds the various parts of the machine. It may be made in any convenient manner so as to hold the journals of the wheels B and C and hold the supports P P.

B is the driving-wheel of spur-gear. It drives a pinion on the journal of the wheel C and the pinion L. (Represented in Fig. 4.)

C is a blank wheel having the properties of a balance-wheel. It is provided with a crank-pin put in the face of it at a proper distance from the center to give the required motion to the slotted rod D. It is overhung, as represented in Fig. 1.

D is a slotted rod, the slot in the middle. At the upper end is a cross-piece that holds the receptacle E. It is supported by the boxes P and P, and by them held close to the face of the wheel C. It is given a reciprocating motion by means of the pin F, and when this portion of the machine is not needed the pin F may be taken out to stop the motion of the receptacle E.

E is the receptacle that receives and holds the mortar, vial, or whatever contains the medicine that requires attenuating. It is made cylindrical in form at one end, and semi-cylindrical at the other, as shown in Figs. 1 and 2. At the round end is a spring with a pad or cushion attached, against which the mortar is placed. The use of the spring is to allow the mortar or vial to be put in its place without moving the sliding-head G; also to give unelastic support to the mortar.

F is the crank-pin in the face of the wheel C that drives the slotted rod D.

G is the sliding head of the receptacle E. It is made in shape as shown in Fig. 2. It is cushioned inside to make an easy and safe berth for the mortar, for the purpose of preventing breaking mortars when they are made of glass or porcelain. It is provided with a screw that passes down through the receptacle, the screw having a nut upon it. By means of the screw and nut the head may be moved to suit the length of the mortar.

H is a cylindrical-shaped mortar. It is represented in Fig. 3. It may be made of any material desired, with a joint at or near the middle. Medicine is put into it with the pestle I. The mortar is then closed and placed within the receptacle for operation.

I is the sliding pestle. It may be made of any desirable material, and made round and solid, with each end made oval, to suit the shape of the inside of the mortar H.

J is a frame that supports the other triturating part of the machine. It is shown in Fig. 4. It is made adjustable by means of slots in the bottom, through which screws are passed when this portion of the machine is not used. It may be put out of gear by moving the frame back far enough to release the pinion L from the wheel B.

K is the triturating-cylinder. It may be made of metal, glass, or porcelain. It is securely fastened to the journal that passes through the pinion L and frame J.

L is a pinion attached to the journal of the cylinder K.

M is the hollow cylinder, made in two parts, divided horizontally, with holes at the end for the cylinder-journal to pass through. It may be made of any desirable material or size required. It is used to perfect the trituration after leaving the mortar H.

N is an elastic band that holds the parts of the cylinder M together. A metallic clasp may be used, if desired.

O is the crank. By it the whole or any part of the machine may be put in motion, as required.

P and P are slide-boxes for the ends of the slotted rod D to pass through, and support the same. They are made secure to the frame

A in any convenient manner, and should be made of some good anti-friction material.

What I claim as my invention, and desire to secure by Letters Patent, is—

1. The wheels B and C' and slotted rod D, when arranged as specified, and used for the purpose set forth.

2. The receptacle E, mortar H, pestle I, cylinder K, and concave M, when made as specified, and used for the purpose set forth.

O. E. NOBLE.

Witnesses:

WM. COMSTOCK,

CHARLES KETCHUM.