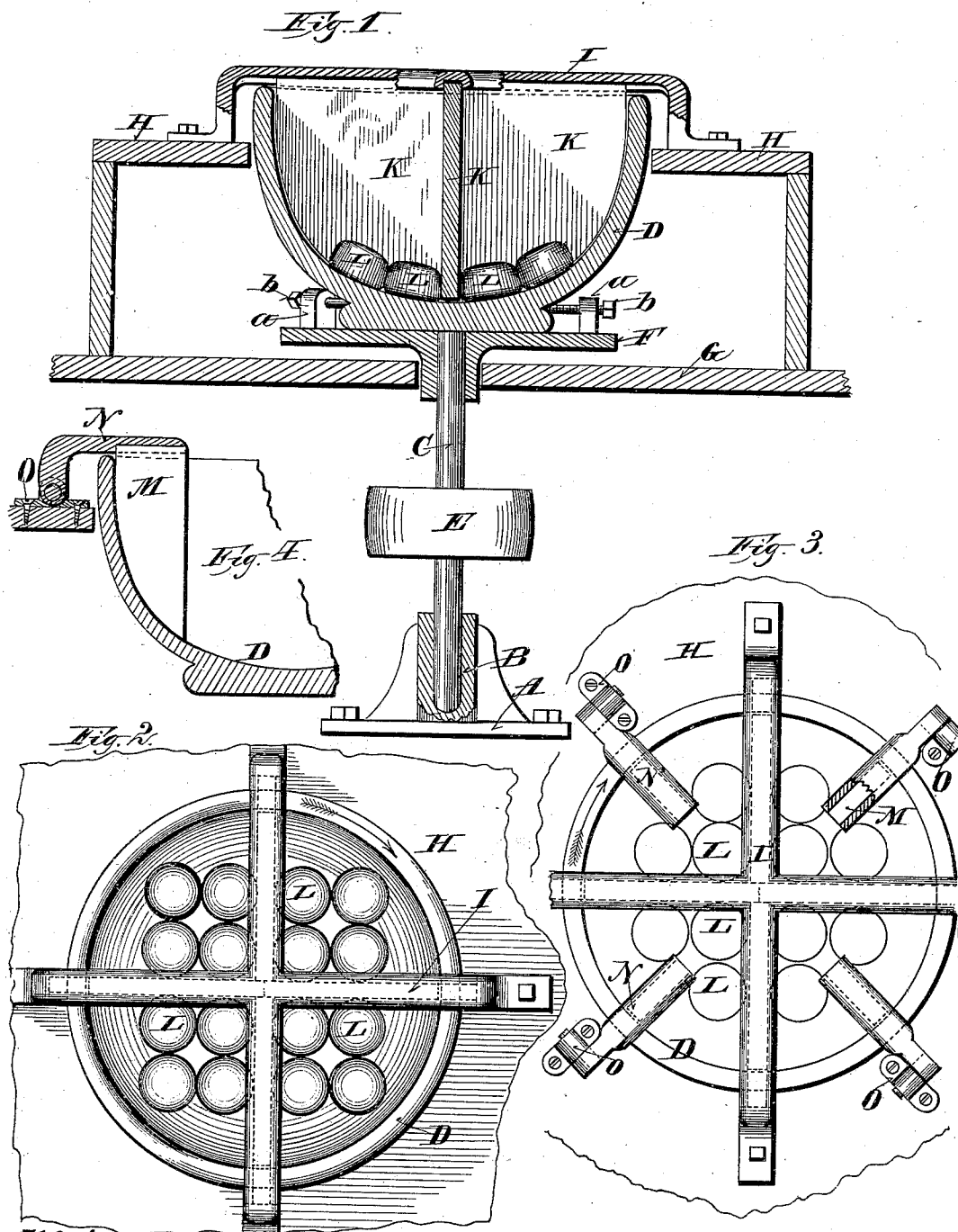


(No Model.)

L. SHERMAN.
TRITURATOR.

No. 383,020.

Patented May 15, 1888.



Witnesses:
E. G. Jones.
N. E. Olphand.

Inventor:
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UNITED STATES PATENT OFFICE.

LEWIS SHERMAN, OF MILWAUKEE, WISCONSIN.

TRITURATOR.

SPECIFICATION forming part of Letters Patent No. 383,020, dated May 15, 1888.

Application filed January 11, 1887. Serial No. 223,992. (No model.)

To all whom it may concern:

Be it known that I, LEWIS SHERMAN, of Milwaukee, in the county of Milwaukee, and in the State of Wisconsin, have invented certain new and useful Improvements in Triturators; and I do hereby declare that the following is a full, clear, and exact description thereof.

My invention relates to triturating devices; and it consists in certain peculiarities of construction, as will be fully set forth hereinafter, and pointed out in the claims.

In the drawings, Figure 1 is a vertical section of one form of my device. Fig. 2 is a plan view of the same. Fig. 3 is a plan view, and Fig. 4 is a detail sectional view of another form of the same.

A represents the base, having a step, B, for the upright shaft or spindle C, which supports the mortar D, and which spindle carries a pulley, E, by means of which power is applied to rotate the said mortar, a plate, F, being made fast to said spindle and carrying lugs *aa*, with screw-threaded perforations, through which screw-bolts *b b* pass and bear against the lower part of said mortar, which latter rests on the plate F.

G is a table or counter through which the spindle C passes, and H is the platform of a housing which surrounds the mortar, the said platform being preferably on a lower plane than the top of the mortar.

I is a spider (preferably a metal casting) extending over the top of the mortar, having in the illustration given four horizontal arms, (though the number may be more or less,) whose ends are bent downward to rest on the platform H, or other support, below, and to which they may be made fast by screws, as shown, or otherwise. The under sides of the arms of the spider are grooved out to receive segmental plates K, (preferably of porcelain or earthenware,) whose upper edges are slipped into the described grooves and secured therein by cement, or otherwise, forming partitions free from the inner surface of the mortar, though in close proximity thereto.

L L represent the pestles, which are without handles, and in the preferred form illustrated in the drawings are circular disks flattened at the bottom and rounded at top and bottom at their peripheries.

The operation of my device will be readily understood from the foregoing description. The material to be triturated and the loose independent stemless pestles are placed in the mortar, a certain number of these pestles—as three, four, or more—being placed in the space between each two of the described segmental plates, and then power is applied to revolve the mortar. Under some circumstances it may be desirable to more closely confine the pestles in their original positions, to prevent their piling one on top of another in the rapid revolution of the mortar; and to accomplish this I may add the devices shown in Figs. 3 and 4, wherein I represent additional division or separating plates M M, whose rounded edges are adjacent to the inner side of the mortar, but which only extend part way across the space between the segmental plates K K, and whose upper edges are secured in grooves in the under side of arms N N, which may be hinged to the platform H, as shown at O, so that these plates M may be lifted out of the way when not needed.

Of course the spider and plates K may be all in one piece, if desired, and the same is true of the arms N and plates M; but I prefer to make them as described, though it is obvious that all the plates could form part of, be attached to, or suspended from a common spider without departing from the spirit of my invention.

Having thus fully described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. The combination, in a triturating-machine, of a revolving mortar, a spider, a series of stationary division-plates suspended therefrom within the mortar, a series of independent stemless pestles, and a series of stationary separating-plates adjacent to the inner side surface of the mortar and extending only part way across the space between each two of the described stationary division-plates.

2. The combination, in a triturating-machine, of a revolving mortar, a housing surrounding the same, a spider above the mortar and secured to the upper platform of the housing, a series of stationary division-plates secured to and depending from the spider within the mortar and meeting at the center thereof,

a series of independent stemless pestles located within the spaces between the said division-plates, a series of arms hinged to the housing-platform and projecting over the mortar, and
5 a series of stationary separating-plates secured to said arms and suspended within the mortar adjacent to its inner side surface.

3. The combination, with a revolving mortar, of a series of triturating-disks or stemless
10 pestles, flattened at the bottom, loosely resting therein.

4. The combination, in a triturating-machine, of a revolving mortar, a series of sta-

tionary division-plates suspended within the same, free from contact with said mortar or its
15 shaft, and a series of flattened circular triturating-disks loosely resting in said mortar.

In testimony that I claim the foregoing I have hereunto set my hand, at Milwaukee, in the county of Milwaukee and State of Wisconsin,
20 sin, in the presence of two witnesses.

LEWIS SHERMAN.

Witnesses:

H. G. UNDERWOOD,
WM. SCHMIDTBAUER.