

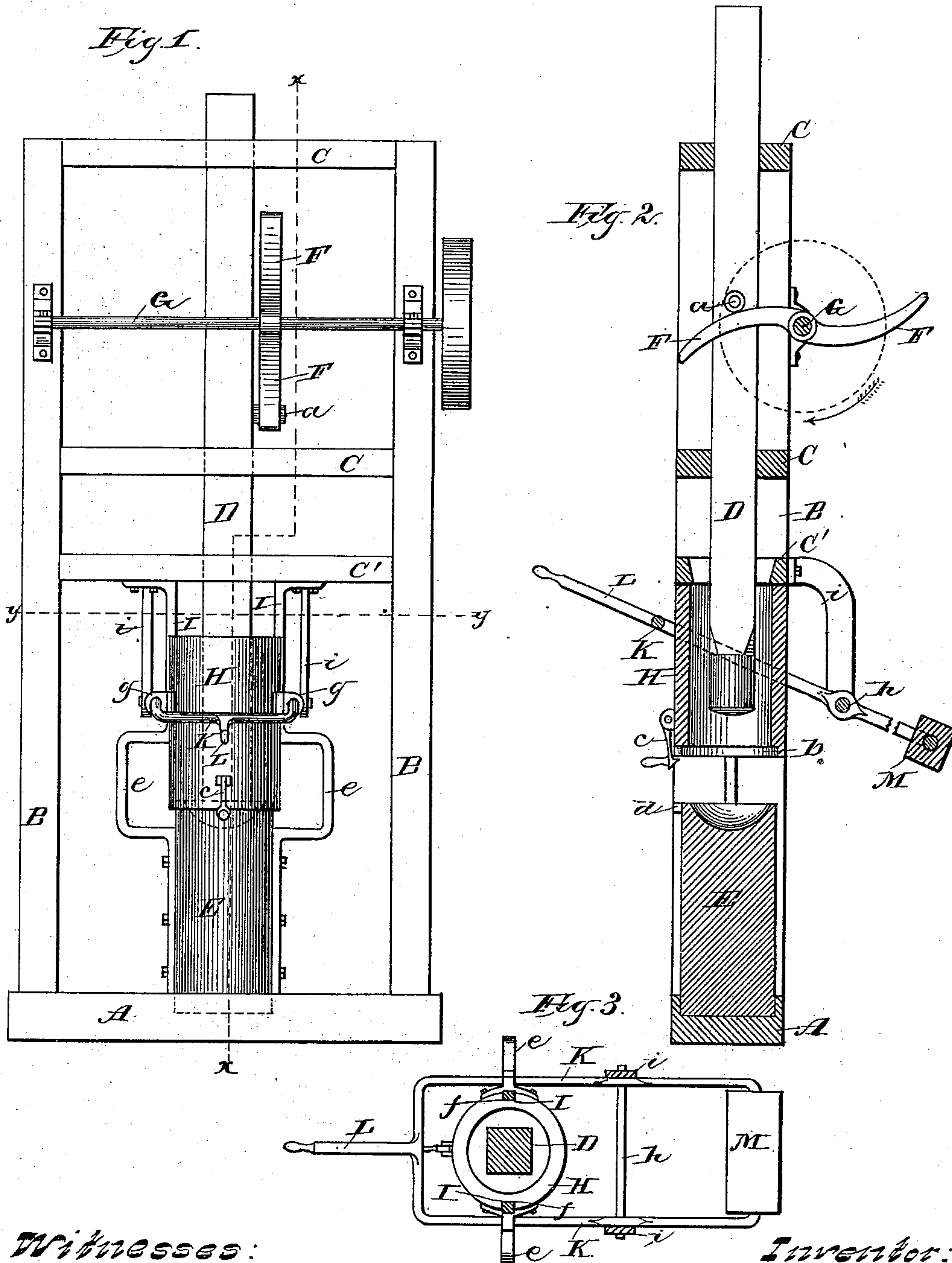
(No Model.)

R. W. SEGER.

PULVERIZER FOR DRUGS, &c.

No. 334,292.

Patented Jan. 12, 1886.



Witnesses:

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PULVERIZER FOR DRUGS, &c.

SPECIFICATION forming part of Letters Patent No. 334,292, dated January 12, 1886.

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To all whom it may concern:

Be it known that I, ROBERT W. SEGER, of Milwaukee, in the county of Milwaukee, and in the State of Wisconsin, have invented certain new and useful Improvements in Pulverizers for Drugs, &c.; and I do hereby declare that the following is a full, clear, and exact description thereof.

My invention relates to pulverizers for drugs and analogous materials; and it consists in certain peculiarities of construction and combination of parts, as will be hereinafter described and claimed.

In the drawings, Figure 1 represents a front elevation of my invention; Fig. 2, a vertical transverse section on line *xx*, Fig. 1; and Fig. 3, a horizontal section on line *yy*, Fig. 1.

A represents a suitable base adapted to support vertical posts B B, and C C C' are horizontal brace-pieces for said posts. The brace-pieces C C are formed with square central openings, and thus act as guides for the vertically-operating pestle D of a sectional mortar, the lower section, E, of the latter being set in the base A. The brace-piece C' is also provided with a central opening, which may be either square or round, and made larger than those in the brace-pieces C C, so that the material to be pulverized can be fed to the mortar from above said brace-piece C'. The pestle D is provided with a projection, *a*, adapted to come in contact with radial arms F F, secured to a revolving shaft, G.

The upper section, H, of the mortar has a central bore of larger diameter than that of the pestle D, which latter the said section surrounds. This upper section of the mortar has its lower portion recessed, as shown at *b*, so as to fit over the top of the lower section, E, and is provided with a latch, *c*, adapted to engage a lug, *d*, on said lower section, this engagement serving to retain the parts in contact and prevent waste of the material during the process of pulverizing.

As illustrated by Fig. 2, the lower section, E, of the mortar consists of a solid block having a depression in its upper end, the upper plane of this depression being of a diameter corresponding to that of the bore of the upper mortar-section, H, and said section E is retained in its position with relation to the base A by means of brackets I I, the latter having

their ends respectively secured to said lower section of the mortar and to the lower horizontal brace-piece, C'. These brackets I I are laterally extended, as shown at *ee*, so as to permit of easy access to the mortar-section E, and the upper portions of said brackets act as guides for the upper mortar-section, H, by engaging grooves *ff*, cut in the latter.

Projecting from the mortar-section H are ears *g g*, through which are passed the sides of a bail, K, rigidly connected to a rod, *h*, which rod is pivotally suspended pin hangers *i i*, said hangers being secured to and depending from the horizontal brace-piece C'. This bail is provided at its front end with a lever, L, and at its rear end with a counter weight or weights, M, the latter adapted to automatically elevate the upper section, H, of the mortar when the latch *c* is released from the lug *d* on the lower section of said mortar. If desired, the bail may be so constructed as to permit of the counter weight or weights being adjustable thereon.

In the operation of my invention, the lever L being depressed, the upper section, H, of the mortar is brought down so that its recessed portion *b* will cover the top of the lower section, E, and the latch *c* engage the lug *d* on the latter section, to retain the parts in contact during the process of pulverizing. The drug or other material to be pulverized is now introduced into the mortar from the top, and motion is imparted to the shaft G through the medium of suitable machinery. As this shaft revolves, it carries with it the radial arms F F, which latter alternately come in contact with the projection *a* on the pestle D. By this action the pestle is elevated by one arm a certain distance, when the latter passes out of contact with the projection *a*, and said pestle falls of its own gravity, to stamp the drug or other material in the mortar, and is again raised by the other radial arm coming into contact with the projection. When the substance in the mortar has been sufficiently crushed by the stamping of the pestle, the latch *c* is released and the counter weight or weights M automatically elevate the upper mortar-section, thus permitting the ready removal of the crushed material from the lower mortar-section without stopping the action of the pestle.

Having thus fully described my invention,

what I claim as new, and desire to secure by Letters Patent, is—

5 1. In a pulverizer for drugs or analogous materials, a mortar consisting of a lower section formed by a solid block having a depression in its upper end, in combination with a detachable upper section having a bore corresponding in diameter to that of the upper plane of the depression in said lower section, 10 substantially as set forth.

15 2. In a pulverizer for drugs or other analogous materials, a mortar composed of two detachable sections, in combination with means for retaining the two parts temporarily in contact during the process of pulverizing and a device for automatically separating the two parts of the mortar and elevating the upper portion thereof, substantially as and for the purpose set forth.

20 3. In a pulverizer for drugs or analogous materials, the combination of a sectional mortar and a pivotally-hung and weighted bail secured to the upper of said sections, substantially as and for the purpose set forth.

25 4. In a pulverizer for drugs or analogous materials, the combination of a sectional mortar, and a pivotally-hung bail secured to the upper of the mortar-sections, and provided at its front end with a lever and at its rear 30 end with a counter weight or weights, substantially as set forth.

5. In a pulverizer for drugs or analogous materials, a mortar composed of two detachable sections, the upper one of these sections being recessed and provided at its lower end 35 with a latch, and the lower one of said sections being provided with a lug adapted to engage the latch of said upper section, in combination with a pivotally-hung and weighted bail adapted to be secured to the upper mortar-section, substantially as and for the purpose set forth. 40

6. In a pulverizer for drugs or analogous materials having a sectional mortar, the combination, with the upper section of said mortar, having grooves, of laterally-extended 45 brackets secured to the lower mortar-section, as set forth.

7. A pulverizer for drugs or analogous materials, consisting of a sectional mortar having a pivotally-hung and weighted bail secured to the upper of the mortar-sections, in combination with a vertically-operating pestle, 50 as set forth.

In testimony that I claim the foregoing I 55 have hereunto set my hand, at Milwaukee, in the county of Milwaukee and State of Wisconsin, in the presence of two witnesses.

ROBERT W. SEGER.

Witnesses:

H. G. UNDERWOOD,
MAURICE F. FREAR.