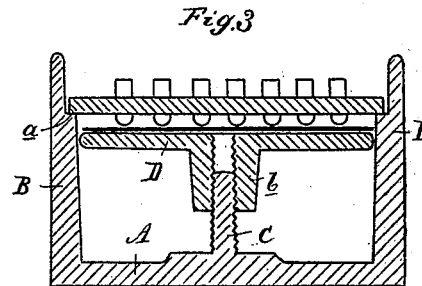
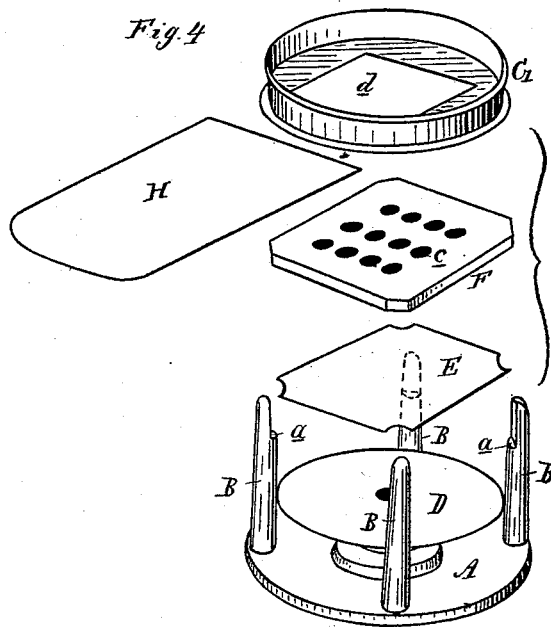
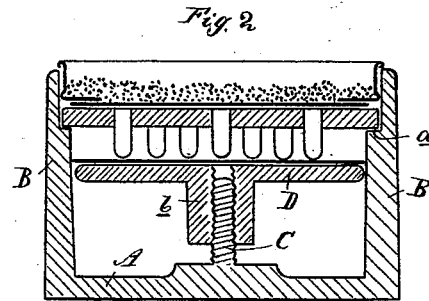
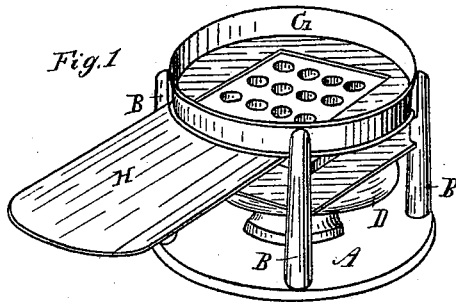


(No Model.)

J. KREHBIEL.
CAPSULE MACHINE.

No. 347,941.

Patented Aug. 24, 1886.



Attest:

John Schuman.
W. Sprague

Inventor:

John Krehbiel.

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UNITED STATES PATENT OFFICE.

JOHN KREHBIEL, OF DETROIT, MICHIGAN, ASSIGNOR TO THE GLOBE DRUG
AND CAPSULE COMPANY, OF SAME PLACE.

CAPSULE-MACHINE.

SPECIFICATION forming part of Letters Patent No. 347,941, dated August 24, 1886.

Application filed June 4, 1885. Renewed March 8, 1886. Serial No. 194,502. (No model.)

To all whom it may concern:

Be it known that I, JOHN KREHBIEL, of Detroit, in the county of Wayne and State of Michigan, have invented new and useful
5 Improvements in Capsule-Filling Devices; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, which form a part of this specification.
10 This invention relates to certain new and useful improvements in devices for filling empty capsules of that class which are after-
ward closed by means of a cap with dry powders, such as quinine, morphine, &c. Since
15 capsules of the description named, of different sizes, have come into such general use as a means of inclosing medicaments of different kinds a difficulty has arisen in their use
by druggists for putting up prescriptions,
20 which the present invention is designed to avoid. Most physicians prescribe after certain formulas, and for the sake of ease in putting up such prescriptions the druggists have
been in the habit of making them into a mass
25 which they afterward roll into pills. Now, if the patient is ordered to take two grains of such prescription at certain intervals, the pills are made up as two-grain pills. Now, as
the prescription powder has been mixed with
30 a mass, such mixture may not have been thoroughly and evenly made, so that the patient in taking one pill would get a larger proportion of the prescription in that pill
than he would in another, which might contain
35 but very little of the medicine; hence the preference given by physicians to the capsules of the description named, which are made to contain each just the amount of the
prescription desired to be given in a dose. To
40 be compelled to fill these capsules with such prescription divided into the necessary doses without some simple mechanism is a difficult and tedious work for the druggist, and the
object I have in view is the construction of a
45 very simple device, wherein the different powders named in the prescription may be mixed thoroughly and filled into the capsules, which are placed in the device for that purpose.

50 The invention consists in the peculiar con-

struction of the parts, their combination, and operation, as more fully hereinafter described.

Figure 1 is a perspective view of my device. Fig. 2 is a vertical central section showing the capsules in place and the matter with
55 which they are to be filled in the receptacle ready to be put into the capsules. Fig. 3 is a like section showing the device without the mixing-pan. Fig. 4 shows in perspective detached details.

60 In the drawings, A represents the base, having posts B secured thereto or cast integral therewith at equal distances apart around the periphery of such base, such posts upon
their inner faces being cut away, as shown, 65 at certain distances from their top to form shoulders *a*, such shoulders being all in the same plane.

C is a screw centrally secured to the base A, and D is a disk fitting within the posts and
70 having a downwardly-projecting hub, *b*, which is centrally and interiorly threaded to engage with the screw C, so that by turning the disk in either direction its height from the base
may be varied and adjusted as occasion may re- 75 quire. I do not desire to confine myself to this method of adjusting the height of the disk by means of a screw, as any other known device which will accomplish the same purpose
will be equally efficient and come within 80 the spirit of my invention. The upper face of this disk is flat, and upon it is fitted a thin metallic plate, E, rectangular in form, with its corners cut away, as shown in Fig. 4, so
that each corner when the plate is in place on 85 the disk will engage with the post B, so that the disk when revolved upon the screw will not turn the plate.

F is a metallic plate, through which are drilled or otherwise formed a series of round
90 holes, *c*. This plate is also rectangular, and fits within the posts, and when in place rests upon the shoulders A, its corners being cut away, as shown in Fig. 4, for that purpose. For
each of these devices there are as many of 95 these plates as there are different sizes of capsules to be filled, and the holes through each one of these plates vary in size, so that one plate will fit a No. 1 capsule-body; but when
it is desired to use the device for filling No. 100

2 capsule-bodies, the plate is changed for another with holes corresponding to the size of No. 2.

G is a circular pan, adapted to fit within the posts and above the capsule-carrying plate F, and the bottom of this pan is cut out, as at *d*, to disclose the holes in the plate beneath it, as shown in Fig. 1.

H is a thin metallic slide, adapted to be slid in between the bottom of the pan G and the top of the plate F, to cover the holes in said plate and close the opening in the bottom of the pan.

We will now suppose that the druggist receives a prescription requiring him to put one, two, or more powders in certain proportions thoroughly mixed into proper condition to be given to the patient in two-grain doses, and that there is to be a dozen of these doses. The druggist takes twelve capsule-bodies and inserts them through the holes in the plate F, their bottoms resting upon the plate E, and then by means of the screw runs the disk D down until the open and upper ends of such capsule-bodies are presented on a level with the top of the plate F, or slightly below the same. He then pushes in the slide-plate H, thereby closing the entrance to said capsules, weighs out the measures or ingredients named in the prescription, puts them into the pan, and mixes them therein thoroughly, as shown in Fig. 2. After this mixture has been perfected, the slide H is withdrawn, as shown in Fig. 1, and the compound is then, by a very simple process, dropped into the capsule-bodies, and as they are each designed to hold one-twelfth of the prescription the doses will be equally divided after the capsule-bodies have been filled, as described. Then the disk may be run up, as shown in Fig. 3, which projects the top of such capsule-bodies far enough above the plate F, which retains them in a vertical po-

sition, to allow the caps to be placed upon the capsules, when they are ready for removal and delivery to the patient. It will readily be seen that by a simple device of this kind the labor to the druggist of putting up the prescription is so far lessened that it is easier for him to fill the capsules than it is to make the mass into pills.

What I claim as my invention is—

1. A device for the purpose described, having a vertically-adjustable bed held in position by suitable guides, in combination with a perforated plate to hold the capsule-bodies while being filled, substantially as set forth.

2. A device for the purposes described, having a vertically-adjustable bed held in position by suitable guides, in combination with a perforated plate to hold the capsule-bodies while being filled, and a mixing-pan with a removable bottom, which will discharge the contents of the pan into the capsules, as specified.

3. In a device for the purposes described, a mixing-pan having a removable bottom, a capsule-holding perforated plate below said mixing-pan and resting upon the shoulders of suitable guides, and a vertically-adjustable bed, the parts being constructed, arranged, and operating substantially as set forth.

4. A device for the purposes described, consisting of a base having upwardly-projecting guide-posts, a vertically-adjustable bed, a perforated capsule-body-retaining plate resting upon shoulders on said guide-posts, an open-bottomed mixing-pan resting upon such plate, and a slide which will close the opening in the bottom of said pan, the parts being constructed, arranged, and operating substantially as specified.

JOHN KREHBIEL.

Witnesses:

H. S. SPRAGUE,
E. I. SCULLY.