

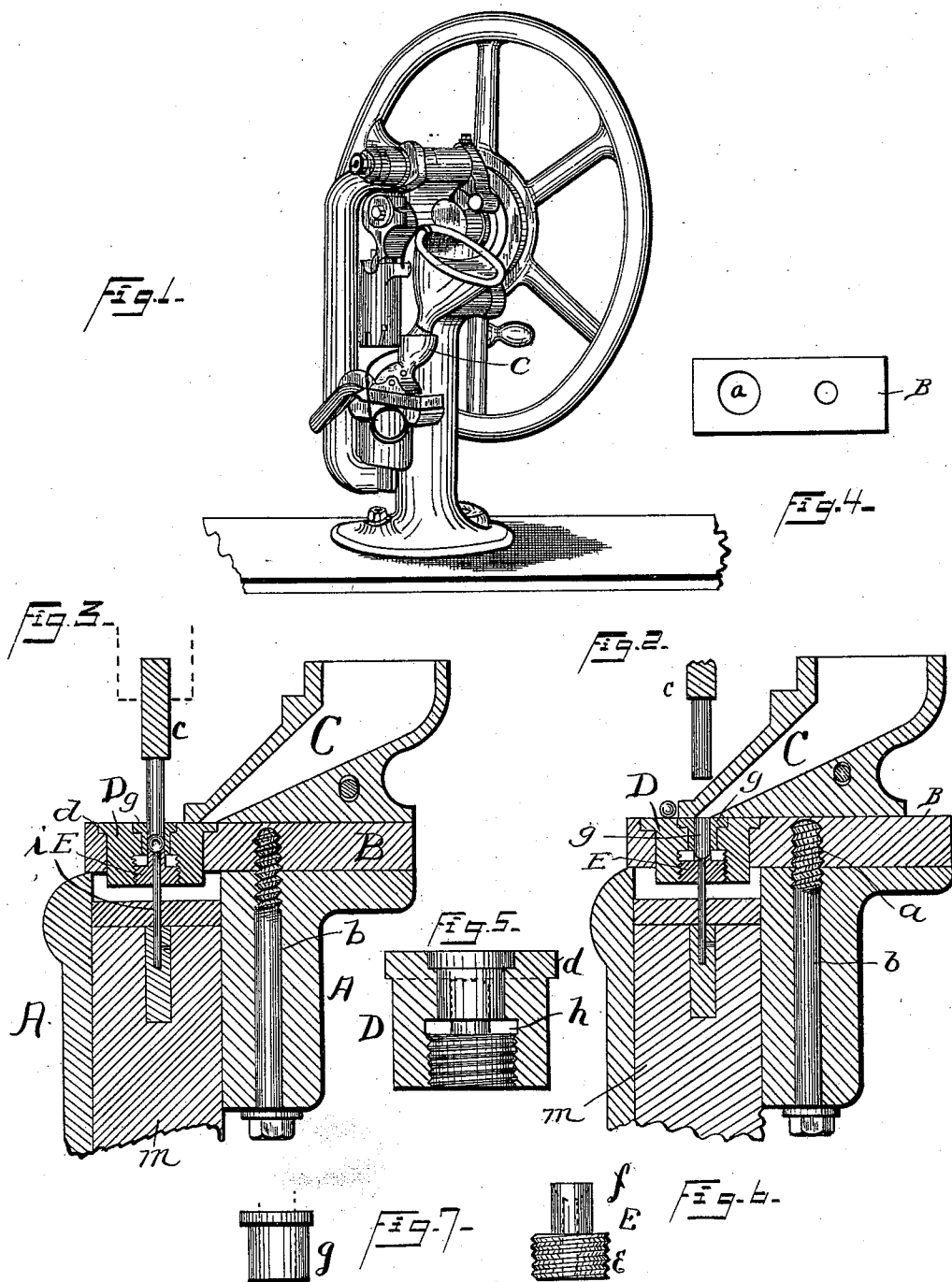
(No Model.)

2 Sheets—Sheet 1.

M. R. CHRISLER & H. M. SMITH.
PILL MACHINE.

No. 523,785.

Patented July 31, 1894.



WITNESSES:

Chas W. Marvin.
M. M. Bost.

INVENTORS:
Monroe R. Chrisler.
Herbert M. Smith.

BY
Smith & Wrenshaw
ATTORNEYS.

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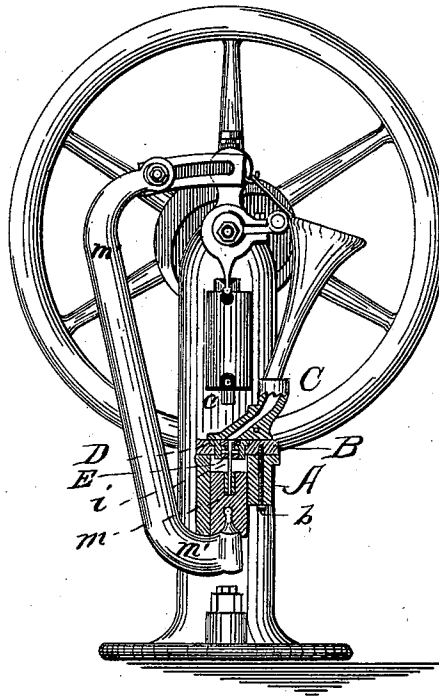


Fig. 8.

WITNESSES:

James E. Murray
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Monroe R. Chrisler & INVENTORS:
Herbert M. Smith

BY

Smith & Denison
ATTORNEYS.

UNITED STATES PATENT OFFICE.

MONROE R. CHRISLER AND HERBERT M. SMITH, OF ELMIRA, NEW YORK.

PILL-MACHINE.

SPECIFICATION forming part of Letters Patent No. 523,785, dated July 31, 1894.

Application filed January 6, 1894. Serial No. 495,966. (No model.)

To all whom it may concern:

Be it known that we, MONROE R. CHRISLER and HERBERT M. SMITH, of Elmira, in the county of Chemung, in the State of New York, have invented new and useful Improvements in Pill-Machines, of which the following, taken in connection with the accompanying drawings, is a full, clear, and exact description.

This invention relates to machines for manufacturing compressed pills, and more particularly to the interchangeable dies for the purpose of forming a pill of any size or shape desired without changing the machine.

Our object is to improve the dies or pill forming apparatus in the machine patented by Smith and Mulford, under date of October 22, 1889, and numbered 413,310, so that we can make a pill of any size desired by merely changing the dies; cheap and durable in its construction and of great utility; and to that end our invention consists in the several new and novel features and combination of parts hereinafter described, and which are specifically set forth in the claims hereunto annexed.

It is constructed as follows, reference being had to the accompanying drawings, in which—

Figure 1, is a view of the machine, complete. Fig. 2, is a vertical section through the hopper, die plate, upon which the hopper is slidingly mounted, also showing the dies and bushing, the hopper being in position to deliver the material of which the pill is made to the die, and the lower end of the upper plunger, the block carrying the punch being broken off near its lower end. Fig. 3, is a similar view, showing the plunger in engagement with the pill material within the dies, the block carrying the punch being also broken off near its lower end. Fig. 4, is a top plan view of the die plate. Fig. 5, is a vertical sectional view of the die which fits into the die plate. Fig. 6, is a side view of the pill die. Fig. 7, is a view of the bushing which fits around the die. Fig. 8 is a front elevation of the machine, partly sectional to illustrate the detail construction.

Inasmuch as the machine is constructed and operated in accordance with the aforesaid Letters Patent, it will not be necessary to describe the machine other than the con-

struction and operation of the interchangeable dies.

A— is the frame, constructed substantially as shown, and having a removable die plate 55 —B— secured thereon, said plate being provided with an opening —a— and suitable means for securing it to the frame as, for illustration, by the bolt or screw —b—, although I do not limit myself to this construction or 60 method, as it will be evident that it may be secured in any other well-known manner.

C— is the hopper slidingly mounted upon the die plate —b— and adapted automatically to deposit a portion of its contents into 65 the die as the machine is operated, and is provided with a reciprocating plunger —c—, operated as in said Letters Patent set forth.

D— is a socket having its lower portion threaded internally and a flange —d— upon 70 its upper periphery as shown, so as to adapt it to set within the recess —a— in the die plate, which is adapted specially for receiving it.

E— is a forming die having a screw thread 75 —e— upon its lower end by which it is adapted to be screwed into the thread within the socket —D—, and has the die forming the pill in the upper end, as shown at —f—, and —g— is a bushing which fits around this 80 die and within the socket —D—. The lower end of the upper plunger —c— is constructed substantially similar to the die —f— so as to make the pills similar in form.

It will be observed that centrally within 85 the socket —D— is a space —h—; this permits of raising or lowering the die so as to obtain greater compression upon the pill by the reciprocating motion of the machine.

i— is a punch mounted vertically within 90 the frame, having its upper end extend up through the die —E— for the purpose of carrying the pill to the surface of the die, and having its upper end concaved concentrically with the concavity of the die, of which it in 95 fact forms a part, then when the hopper comes forward to deposit the material in the die, it pushes the pill forward to the chute where it drops downward and out.

It will be observed that a reciprocating motion 100 is imparted to the punch —i— to force the pill out when the hopper is being with-

drawn, in substantially the same manner as is shown and described in the Letters Patent hereinbefore mentioned or by any equivalent means which could readily be adopted by an intelligent mechanic.

5 The punch —*i*— is mounted in a block —*m*— (Fig. 8) and —*m'*— is an angular lever connected to it, in the same manner as is shown in said patent, and said lever is rocked
10 or vacillated to reciprocate said punch in the same manner as is shown and described in said patent.

What we claim is—

1. The combination with the frame and bed
15 of a pill machine, and a die plate mounted upon said bed, of a die socket in said plate, a die seated in said socket and a bushing in

said socket surrounding the upper part of said die.

2. The combination with the frame and bed 20 of a pill machine and a die plate mounted in said bed, of a die socket in said plate a die seated in said socket, and provided with a central opening, a bushing surrounding the upper portion of said die, and a vertically 25 mounted punch adapted to remove the pill from the die.

In witness whereof we have hereunto set our hands this 2d day of January, 1894.

MONROE R. CHRISLER.
HERBERT M. SMITH.

In presence of—

SALLIE S. TYLER,
LAMI A. BONHAM.