

A. F. W. & W. F. A. NEYNABER.

PILL-COATING MACHINE.

No. 170,185.

Patented Nov. 23, 1875.

Fig. 1.

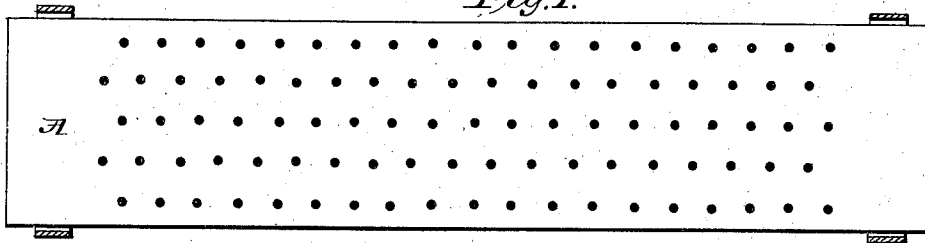


Fig. 2.

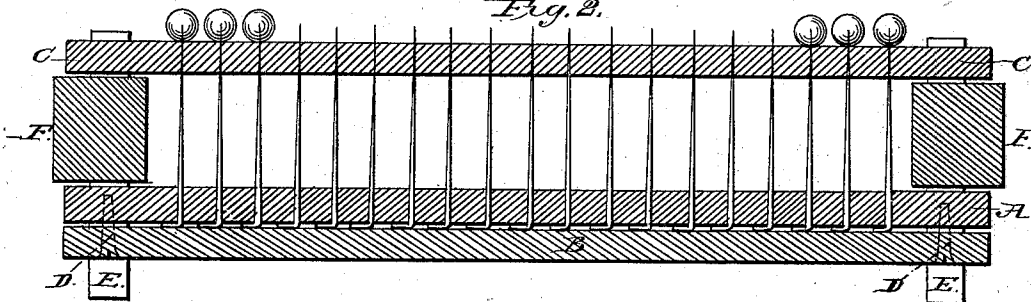


Fig. 3.

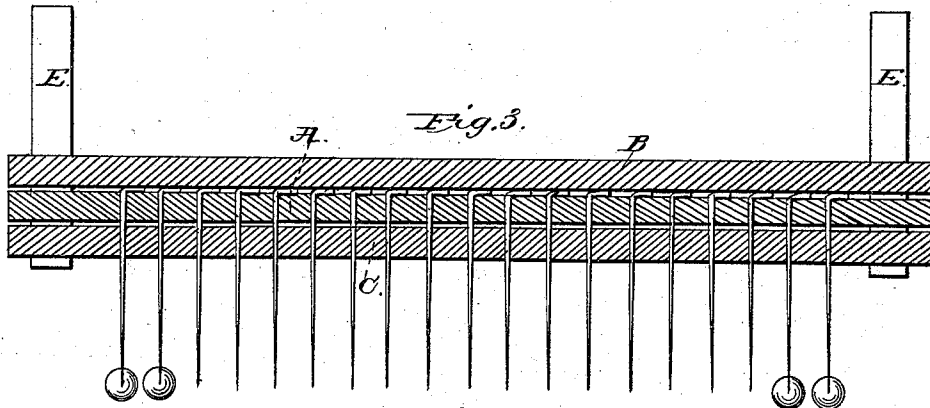
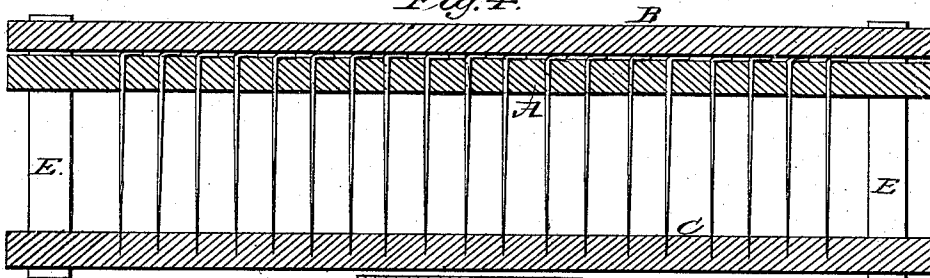
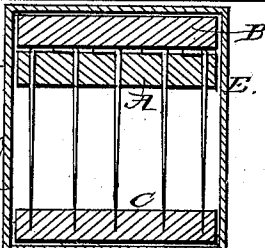


Fig. 4.



Witnesses:

Fig. 5
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UNITED STATES PATENT OFFICE.

ADOLPHUS F. W. NEYNABER AND WILLIAM F. A. NEYNABER, OF
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IMPROVEMENT IN PILL-COATING MACHINES.

Specification forming part of Letters Patent No. **170,185**, dated November 23, 1875; application filed
October 9, 1875.

To all whom it may concern:

Be it known that we, ADOLPHUS F. W. NEYNABER and WILLIAM F. A. NEYNABER, of New York city, State of New York, have invented a Pill-Coating Machine, of which the following is a specification:

Our invention consists in the construction of a needle-rack with a movable board, which we call the push-board, to be put in a certain position as a guide for putting pills on the needles for dipping them into a solution of gelatine, and also to be used for pushing off the pills when in the state of drying after they have been coated by dipping.

Figure 1 is a horizontal section of the needle-rack, showing the position of the needles. Fig. 2 is a longitudinal section, showing the needle-rack in the position as used for putting on the pills. Fig. 3 is the same section in the position as used for dipping pills into the solution of gelatine. Fig. 4 is the same section in the position after it has been used for pushing off the pills. Fig. 5 is a transverse section of the needle-rack in the position after pills have been pushed off.

A is a board of a suitable size. I prefer a board half an inch thick, three inches wide, and fifteen inches long, having any suitable number of holes for needles. I prefer twenty-five holes in one row, and five of such rows, making one hundred needles on one rack. I prefer having the holes five-eighths of an inch apart from each other. Into these holes are put needles which have been annealed on the upper part by holding them into a flame, and then bent as shown in Figs. 2, 3, 4, and 5, so that they will be held firmly in their places by board B, screwed by means of screws D to board A. F F are blocks of proper thickness, to be put between the board A and C for the

purpose of fixing the height of the needles projecting through board C when pills are to be put on the needles. For smaller pills the blocks should be thicker. E E are bands of brass, iron, or any suitable substance, to prevent the board C from slipping off the needles when the pills are pushed off. If new needles have to be inserted the screws D D are unscrewed, the board taken out from the side, the needles put in, and board C screwed again to board A, Fig. 2. Blocks F F of proper thickness are put between the board A and C, Fig. 2, and the pills are put on the needles with the fingers. The blocks F F are now taken out, board C is pressed close to board A, and the pills are dipped into the coating-solution. (See Fig. 3.) The pills are then allowed to dry off a little, the board C is pushed off as far as bands E E will allow, the pills drop down, and the hole left by the needle will be closed by contraction of the gelatine while in the state of drying. Thus the pills can be coated very quick, and the advantages of this apparatus are: The simple arrangement, requiring very little trouble of inserting new needles, and the saving of much labor in the working of the rack, as only one operation of dipping is required, since the pills can be pushed off without being injured when the gelatine is quite soft, and thus will close up the orifice while drying.

We claim as our invention—

The combination of the needles with boards A B C and bands E for coating pills, substantially as and for the purpose specified.

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Witnesses:

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1750 words.