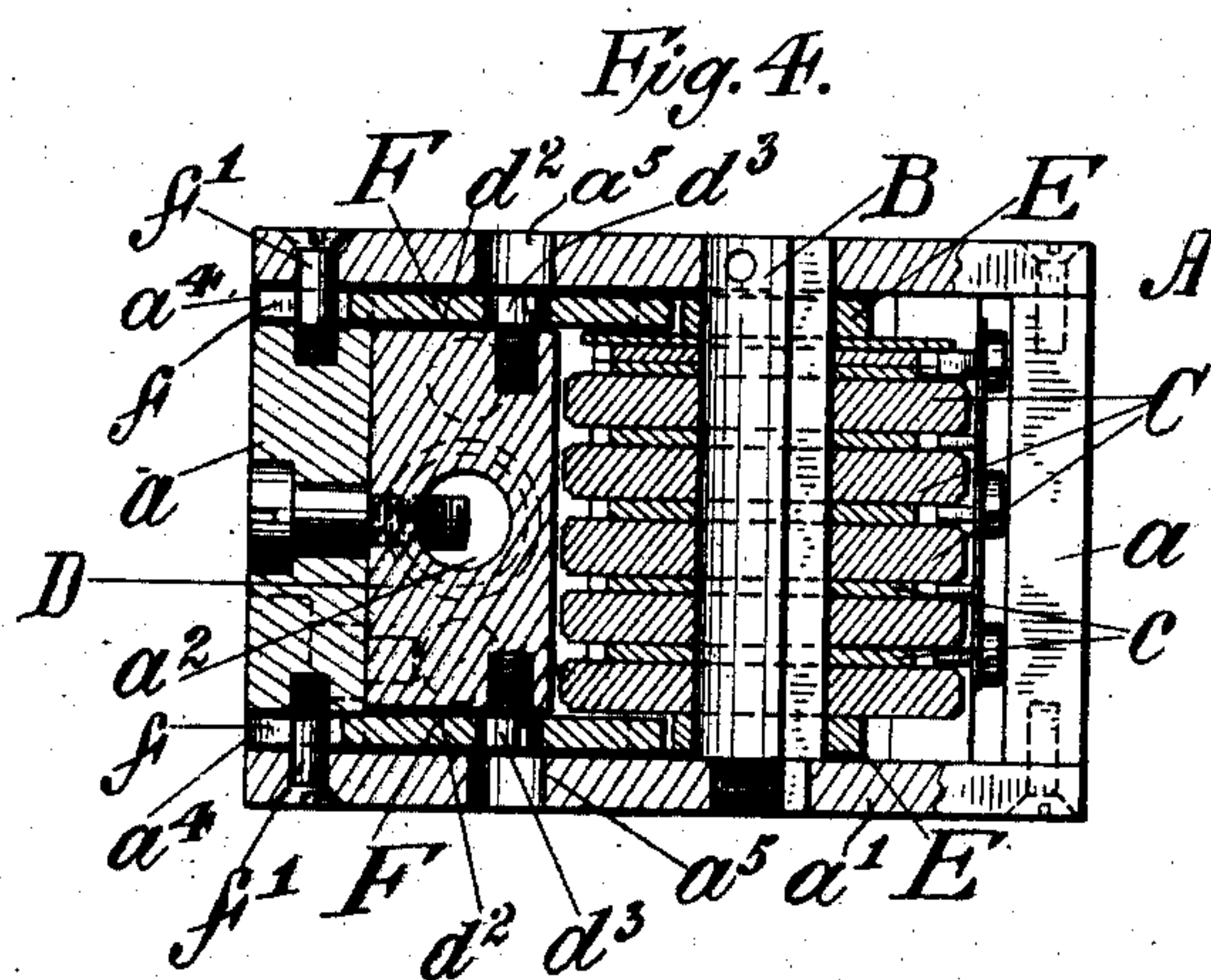
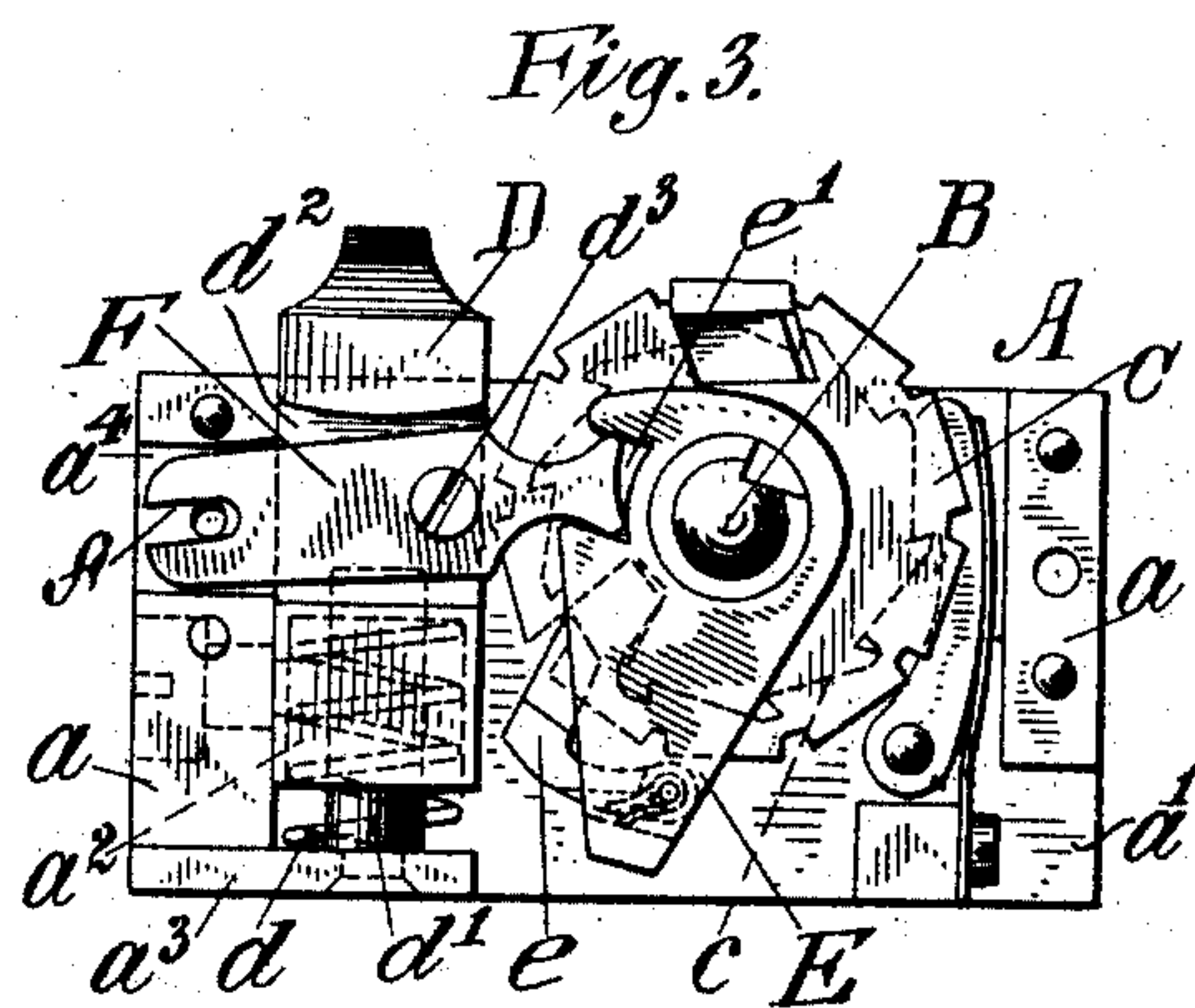
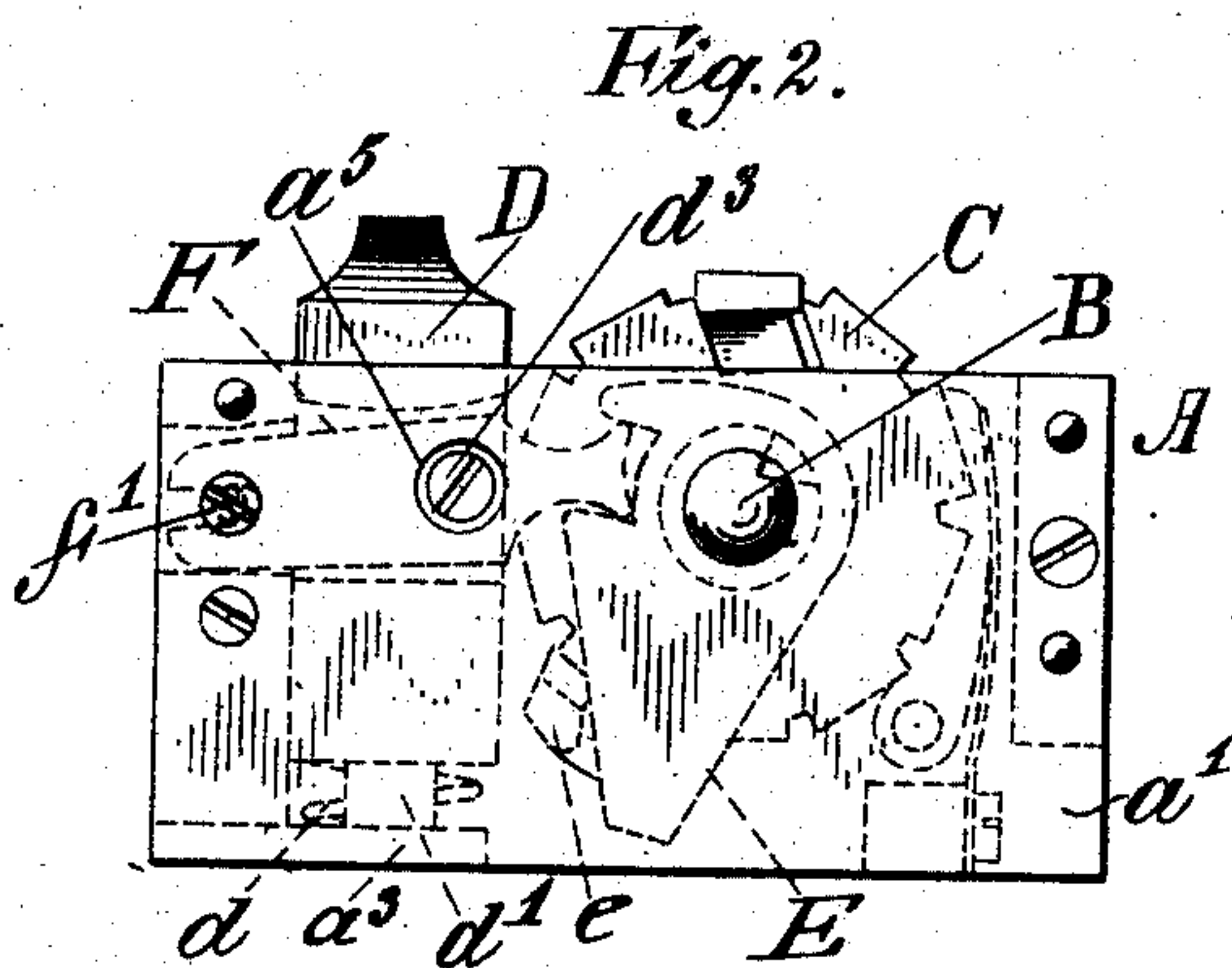
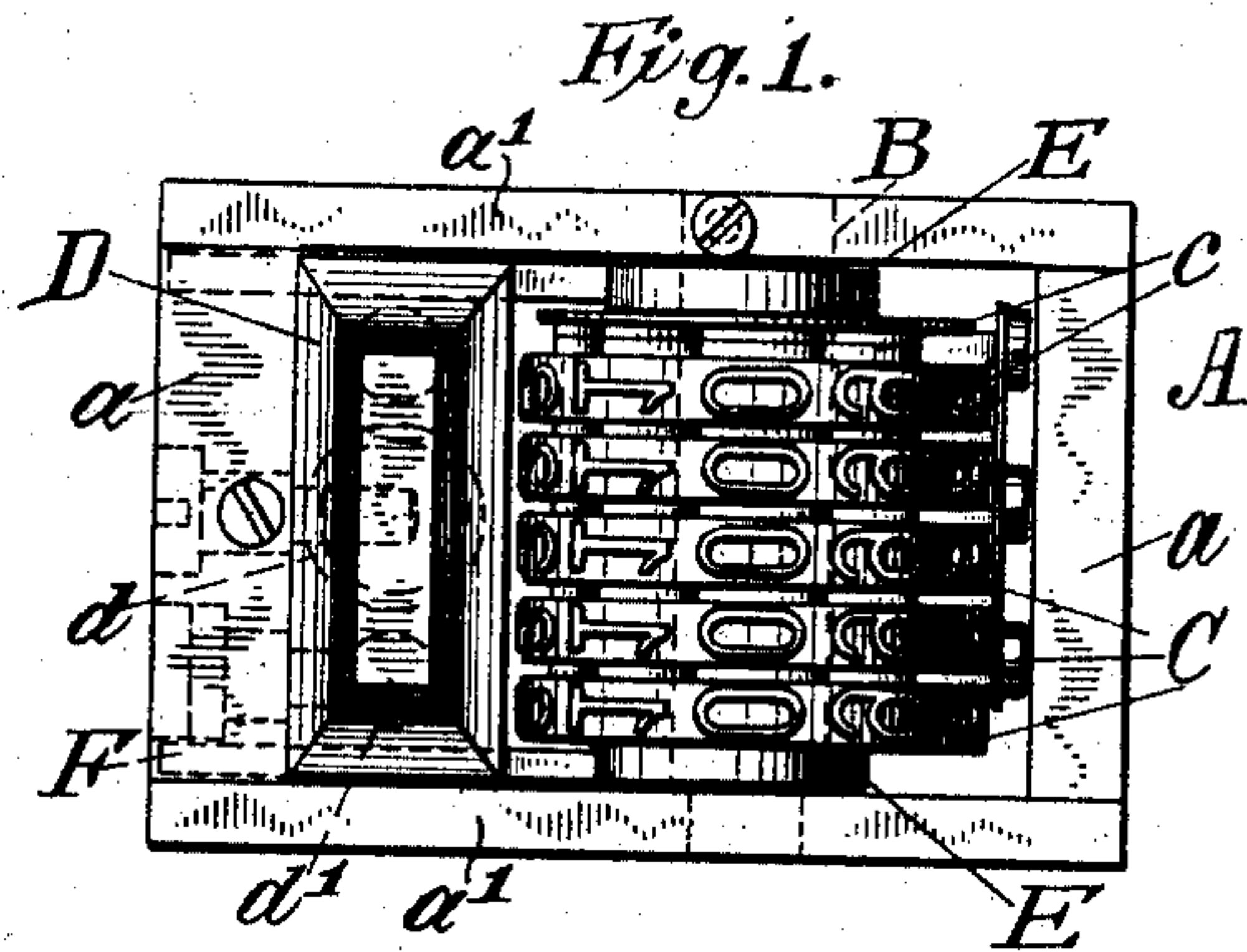


W. A. PORTER.
NUMBERING MACHINE.
APPLICATION FILED JUNE 10, 1908.

909,115.

Patented Jan. 5, 1909.



Witnesses:
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UNITED STATES PATENT OFFICE.

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NUMBERING-MACHINE.

No. 909,115.

Specification of Letters Patent.

Patented Jan. 5, 1909.

Application filed June 10, 1908. Serial No. 437,668.

To all whom it may concern:

Be it known that I, WILLIAM A. PORTER, a citizen of the United States, residing in the borough of Brooklyn, of the city of New York, in the State of New York, have invented certain new and useful Improvements in Numbering-Machines, of which the following is a specification, reference being had to the accompanying drawing, forming a part hereof.

10 This invention relates to consecutive numbering machines or other machines of like character in which the numbering wheels or other printing devices are advanced through the operation of a plunger which is actuated by the platen of the printing press or otherwise, and especially to machines of this general character which are commonly known in the art as "bottom plunger" machines, that is, machines in which the actuating plunger is placed at one side of or parallel with the series of numbering wheels rather than at one end thereof.

20 The object of the invention is to enable the necessary movement of the plunger to be made as small as possible while the construction of the machine, so far as concerns the actuation of the numbering wheels by the movement of the plunger, is exceedingly simple and the whole machine is very compact, as is required, for example, in the numbering of tickets, in which kind of work it is oftentimes necessary that the total width of a machine in a direction parallel with the axis of the numbering wheels shall not exceed one inch.

35 The invention will be more fully explained hereinafter with reference to the accompanying drawing in which it is illustrated and in which—

40 Figure 1 is a top view of a numbering machine which embodies the invention. Fig. 2 is a view thereof in elevation, some parts being indicated by dotted lines. Fig. 3 is also a view in elevation but with the proximate side plate removed. Fig. 4 is a view in horizontal section in a plane which passes through the supporting shaft of the numbering wheels.

50 The numbering machine in which the invention is represented as embodied is adapted to be locked in the frame with type and as shown comprises a frame or case A, having end plates a , a and removable side plates a' , a' , the latter supporting the shaft B with

its numbering wheels C. The latter are provided each with a ratchet wheel c , as usual, and are actuated by a swinging pawl frame E which is mounted to swing upon the shaft B and is provided with pawls e to engage the ratchet wheels c in the usual manner. The plunger D, which is adapted to receive the pressure of the platen of the press or to be actuated in any other suitable manner, is seated upon a spring d , by which it is lifted when the pressure is relieved, such spring being supported within a cavity a^2 formed therefor in the lower end of the plunger. Stud d' , secured in a bottom plate a^3 , enter the plunger D and guide and steady the same in its movements. One or preferably each end of the end plate a adjacent to the plunger is recessed, as at a^4 , to receive the end of a lever F which is fulcrumed on the end plate, preferably being slotted, as at f , to engage a fulcrum pin or screw f' which may be inserted through the side plate a' into the end plate a . Each end of the plunger D is recessed, as at d^2 , to receive the lever F and to permit free relative movement of the lever which, preferably, is pivotally connected to the plunger, as by a pivot screw d^3 , which is inserted through a hole a^5 formed in the corresponding side wall a' . At its free end the lever F engages the swinging pawl frame E as by having its extremity suitably shaped to enter a notch e' in the pawl frame.

85 It will now be understood that as the plunger D rises and falls, in the operation of the machine, it will cause the lever or levers F to oscillate upon their fixed fulcrum f' and, through the engagement of such lever or levers with the pawl frame, will cause the latter to oscillate upon its axis. Inasmuch as the point of application of the power of the plunger to each lever F is at a point between its fulcrum and its extremity, it will be seen that the movement of the plunger necessary to effect the proper movement of the swinging pawl is less than that which would be required if the plunger cooperated directly with the pawl frame. Furthermore, by seating the levers in the recesses in the end plate and in the recesses in the plunger, it becomes unnecessary to increase the width of the machine beyond what is required for the series of numbering wheels and the pawl frame. The machine,

therefore, not only provides for a reduced throw of the plunger, but is exceedingly compact and simple in construction.

I claim as my invention:

5 1. In a numbering machine, a frame or case comprising side and end walls; a shaft supported in the side walls of said frame or case and extending transversely thereof; a series of numbering wheels mounted upon
10 said shaft; a pawl frame supported by and adapted to swing upon said shaft and to operate said numbering wheels; a plunger located at one side of said series of numbering wheels and between the same and one
15 of the end walls of said frame or case; and a lever fulcrumed in the end wall of said frame or case adjacent said plunger, said lever extending parallel with the side walls of said frame or case and being operatively
20 engaged intermediate its ends by said plunger, and the free end of said lever being in operative engagement with said pawl frame.

2. In a numbering machine, a frame or case comprising side and end walls; a shaft
25 supported in the side walls of said frame or case and extending transversely thereof; a series of numbering wheels mounted upon said shaft; a pawl frame supported by and adapted to swing upon said shaft and to
30 operate said numbering wheels; a plunger located at one side of said series of numbering wheels and between the same and one of the end walls of said frame or case; and a lever located upon either side of said plunger

adjacent the side wall of said frame or case 35 and fulcrumed in the end wall thereof adjacent said plunger, said levers extending parallel with the side walls of said frame or case and being operatively engaged intermediate their ends by said plunger, and the 40 free end of said levers being in operative engagement with said pawl frame.

3. In a numbering machine, a frame or case comprising side and end walls; a shaft supported in the side walls of said frame or 45 case and extending transversely thereof; a series of numbering wheels mounted upon said shaft; a pawl frame supported by and adapted to swing upon said shaft and to operate said numbering wheels; a plunger 50 located at one side of said series of numbering wheels and between the same and one of the end walls of said frame or case, said plunger being provided with a recess; and a lever fulcrumed in a recess formed in the 55 end wall of said frame or case adjacent said plunger, said lever extending parallel with the side walls of said frame or case and through the recess in said plunger, and the free end of said lever being in operative 60 engagement with said pawl frame.

This specification signed and witnessed this 4th day of June, A. D., 1908.

WILLIAM A. PORTER.

Signed in the presence of—
H. MULLER,
LEICESTER DE RISSER.