

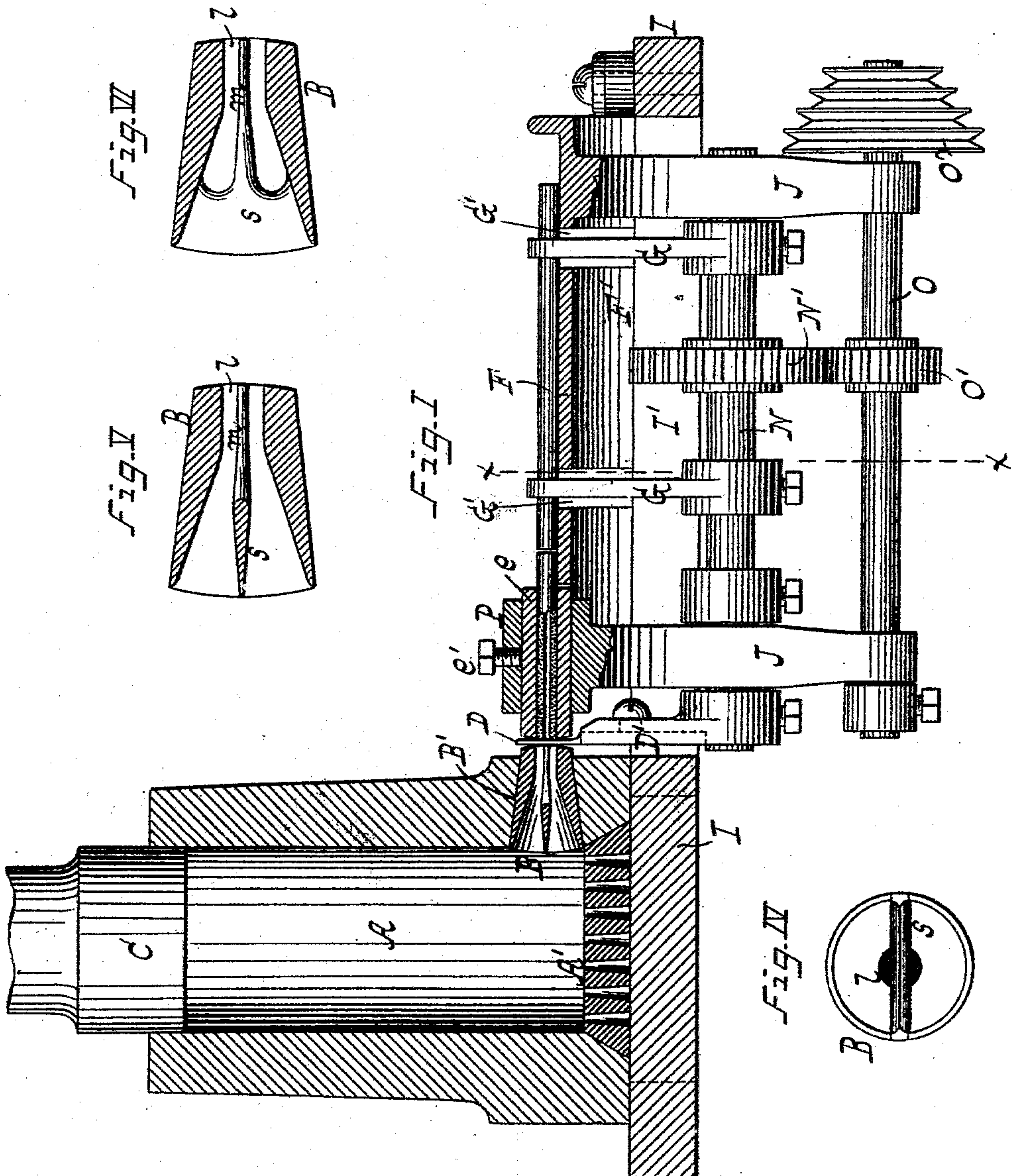
(No Model.)

3 Sheets—Sheet 1.

E. WEISSENBORN.
MACHINE FOR MAKING PENCIL CASES.

No. 515,564.

Patented Feb. 27, 1894.



WITNESSES:

Chas. Wahlers
R. H. Prosser

INVENTOR

Edward Weissenborn

BY

Charles G. Lee

ATTORNEY

(No Model.)

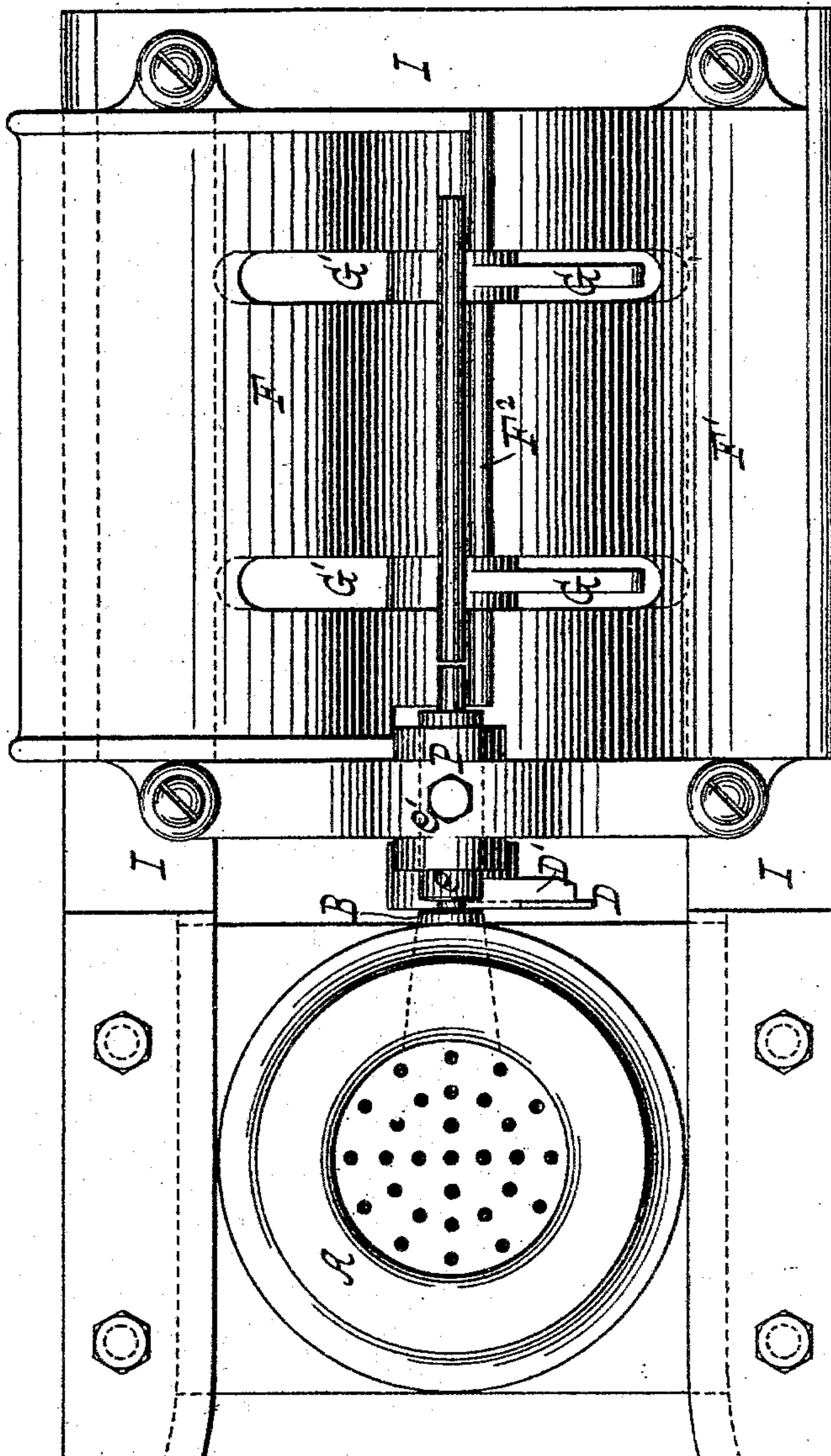
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Fig. II



WITNESSES:

Chas. Wahlers
R. H. Van Hookerck

INVENTOR

Edward Weissenborn

BY

Charles E. Fox

ATTORNEY

(No Model.)

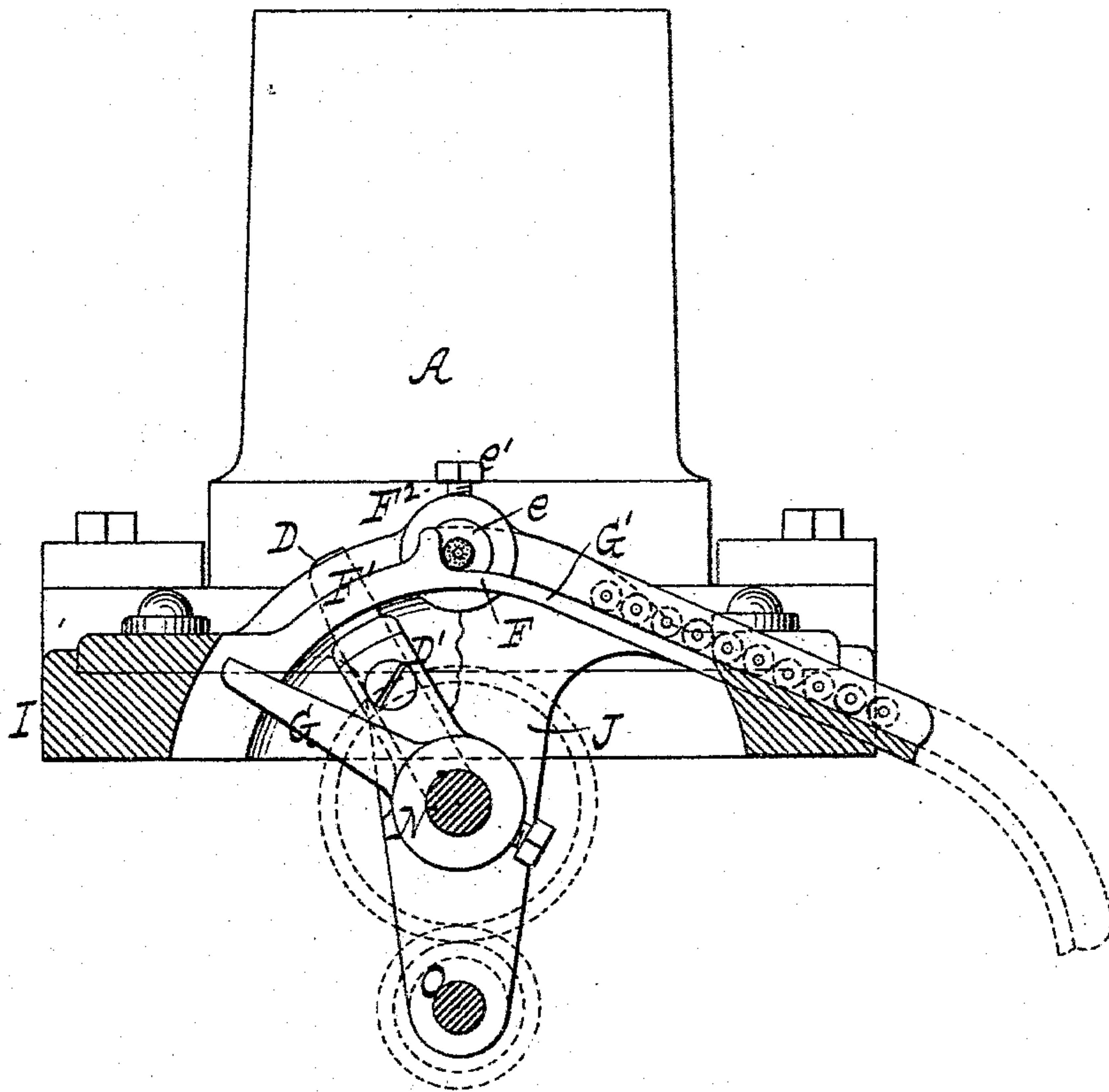
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Fig. III



WITNESSES

Chas. Wahlers
R H Van Roskerck

INVENTOR

Edmund Weissentum

BY

Charles G. Lee
ATTORNEY

UNITED STATES PATENT OFFICE

EDWARD WEISSENBORN, OF JERSEY CITY, NEW JERSEY.

MACHINE FOR MAKING PENCIL-CASES.

SPECIFICATION forming part of Letters Patent No. 515,564, dated February 27, 1894.

Application filed February 24, 1893. Serial No. 463,535. (No model.)

To all whom it may concern:

Be it known that I, EDWARD WEISSENBORN, a citizen of the United States, residing in Jersey City, Hudson county, New Jersey, have
5 invented certain new and useful Improvements in Machines for Making Pencil-Cases and Similar Articles, of which the following is a specification.

My invention is a machine which is designed to be used chiefly for making pencil cases from a plastic substance or composition according to the method described in my application for Letters Patent filed October 2, 1890, Serial No. 366,885, and renewed July 21,
15 1893, Serial No. 481,138; the same being however adapted to the purpose of producing various other articles similar in contour to pencil cases, and whether hollow or solid.

In the construction of my machine I employ
20 a hollow cylinder to receive the plastic substance, a forming die of novel arrangement in a tapering outlet of the cylinder, a plunger within the cylinder, for expelling the substance therefrom through the forming die so
25 as to produce a continuous molded article, and a knife, operating to cut the continuous article into sections of equal length. I also employ a guide for receiving the continuous molded article issuing from the forming die,
30 so as to afford a support thereto in the action of the knife; a tray for receiving the cut sections of the molded article, and tappet-arms operating to successively remove the sections from the tray, the whole being hereinafter
35 more fully described.

In the accompanying drawings:—Figure I represents a vertical longitudinal section of a machine embodying my invention. Fig. II represents a plan or top view thereof. Fig.
40 III represents a vertical cross-section thereof on the line $x-x$ of Fig. I. Fig. IV represents an inner end view of the forming die. Fig. V represents a longitudinal section thereof. Fig. VI represents a like section thereof at a
45 right angle to Fig. V.

Similar letters of reference indicate similar parts.

The letter A indicates the hollow cylinder, which in practice occupies a vertical position
50 and is open at the top, while it usually has a

perforated bottom A' for the purpose herein-after explained.

B indicates the forming die, which is fitted in an outlet B' in the side of the cylinder A, near its bottom; C the plunger, which is fitted into the cylinder; D the knife for cutting
55 the molded article; e the guide therefor; F the tray or receptacle for the cut sections of the molded article, and G the tappet-arms for their removal from the tray. 60

The cylinder A, rests on a bed plate I, on which also rests an arched hood F', a portion of which constitutes the tray F. The hood F' surmounts an opening I' (Fig. I) in the bed plate; and from the hood project hangers
65 J, through said opening; in which hangers are mounted two shafts N, O, parallel to each other, one constituting a main shaft and the other a driving shaft. The main shaft N, carries the stock D' of the knife D, in form of a
70 crank piece, and also carries the tappet arms G, which in this example are two in number. The driving shaft O, is geared with the main shaft N, by cog wheels N', O', and it carries a graduated speed pulley O², by means of
75 which motion may be imparted thereto from any suitable source of power.

In the hood F', are two slots G', one opposite to each of the tappet-arms G, for the passage of these arms in their motion together
80 with the main shaft.

The outlet B' of the cylinder A, tapers in a direction outward to the cylinder, and the forming die B, corresponds exteriorly thereto, as shown, it being fitted therein from the interior of the cylinder so as to retain its position without fastening, the pressure of the substance entering the die, from the cylinder, tending to wedge and tighten it in the outlet. Another effect of this arrangement of the die
90 B, is to render it easily removable, for its renewal when necessary, or its replacement by one of another character. The interior of the forming die B, is shaped according to the article which it is desired to produce, and is
95 susceptible of many variations. When the die is to be used for producing pencil cases, its interior converges into a cylindrical or other shaped orifice l (Figs. IV, V, and VI) of about the diameter of the desired case, and is
100

provided with a central core *m* of about the thickness of the lead or crayon to be inserted in the case, said core being held in place in the die by means of wings *s*.

5 The plane or position of the knife *D*, is immediately next to the forming die *B*, and between it and the guide *e*, and in the action of the knife, the article cut is sustained jointly by the die and the guide. The guide *e* is preferably of tubular form, and it is fitted in a
10 suitable housing *P*, resting on the bed plate *I*, for its adjustment in relation to the knife, a set screw *e'*, retains it in the desired position. Said guide *e*, moreover, coincides axially with the forming die *B*, and its lowest
15 point is about on a level with the higher part of the tray *F*. The border of the tray *F*, is a longitudinal rib or shoulder *F*², (Figs. II and III) at one side of the center of the arched hood
20 *F'*; and if desired that portion of the hood in rear of this rib may be omitted. The tappet arms *G*, are arranged to coincide with each other and to follow closely the motion of the knife *D*, as the parts revolve with the main
25 shaft.

When the machine is to be applied to use, the desired plastic substance is introduced into the cylinder *A*; and when the perforated bottom *A'* is employed the substance may be
30 forced through it by means of the plunger *C*, placing the cylinder over an opening in the bed plate, with a view to rendering the substance more homogeneous and expelling air therefrom. In the practical operation of the
35 machine, however, the cylinder *A*, is brought over a solid part of the bed plate *I*, or a solid bottom is substituted for the perforated bottom *A'*. Pressure being now applied to the plunger *C*, it forces and expels the plastic
40 substance from the cylinder *A*, through the forming die *B*, producing a continuous molded article of the shape of the die. As the molded

article issues from the forming die *B*, it is received in the guide *e*, and thence on the tray
45 *F*, while at fixed intervals of time the article is cut by means of the knife *D*, dividing it into sections of equal length. As each cut section of the molded article clears the guide
50 *e* and takes its place on the tray *F*, it is brought into the path of the tappet-arms *G*, traveling in the slots *G'*, and thereby removed from the tray, whence it may be permitted to roll into a suitable receptacle.

What I claim as my invention, and desire to secure by Letters Patent, is—

1. The hollow cylinder having an outlet with a forming die, the plunger fitted in the cylinder, the guide coinciding axially with the forming die, and the knife lying in a plane between said die and guide, substantially as
60 and for the purpose herein described.

2. The hollow cylinder having an outlet with a forming die, the plunger fitted in the cylinder, the guide coinciding axially with the forming die, the knife lying in a plane between said die and guide, the tray, and the
65 tappet arms traveling in slots of the tray, all substantially as and for the purpose herein described.

3. The hollow cylinder having an outlet with a forming die, the plunger fitted in the cylinder, the guide coinciding axially with the forming die, the knife lying in a plane between said die and guide, the tray, the tappet
70 arms traveling in slots of the tray, the main shaft carrying the stock of the knife and the tappet arms, and the driving shaft geared with the main shaft, all substantially as and for the purpose herein described.

EDWARD WEISSENBORN.

Witnesses:

CHAS. WAHLERS,
CHARLES G. COE.