

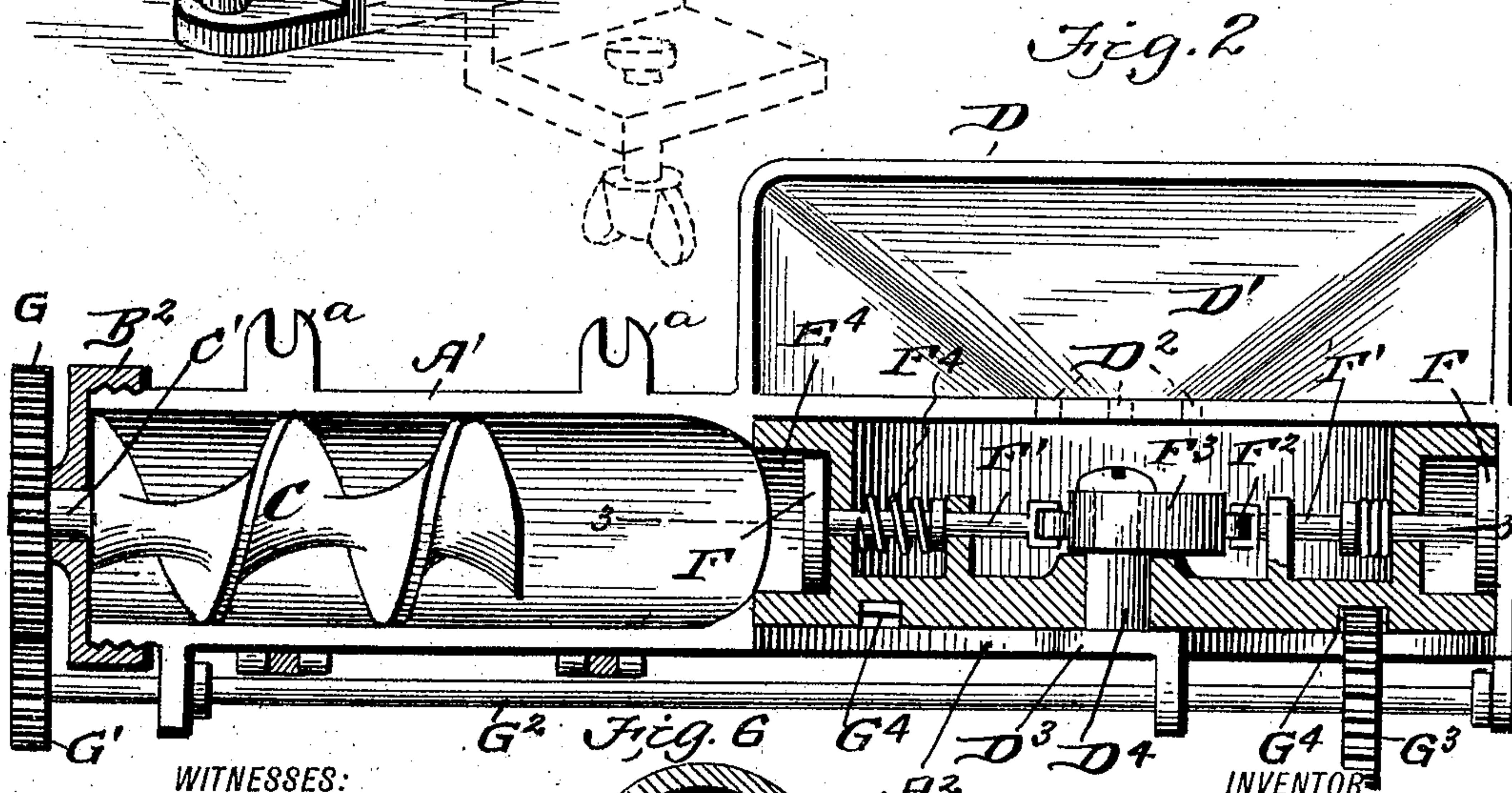
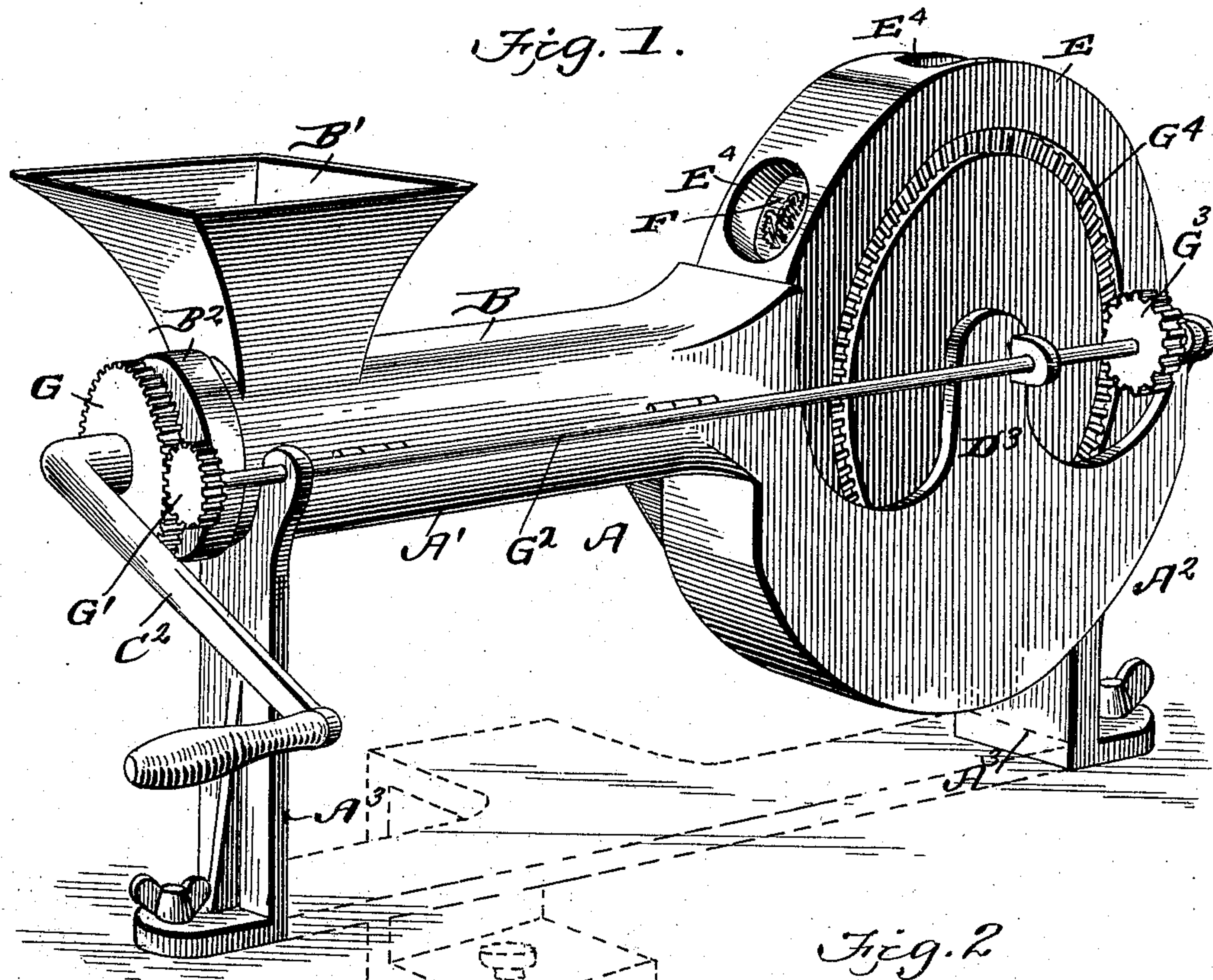
No. 815,896.

PATENTED MAR. 20, 1906.

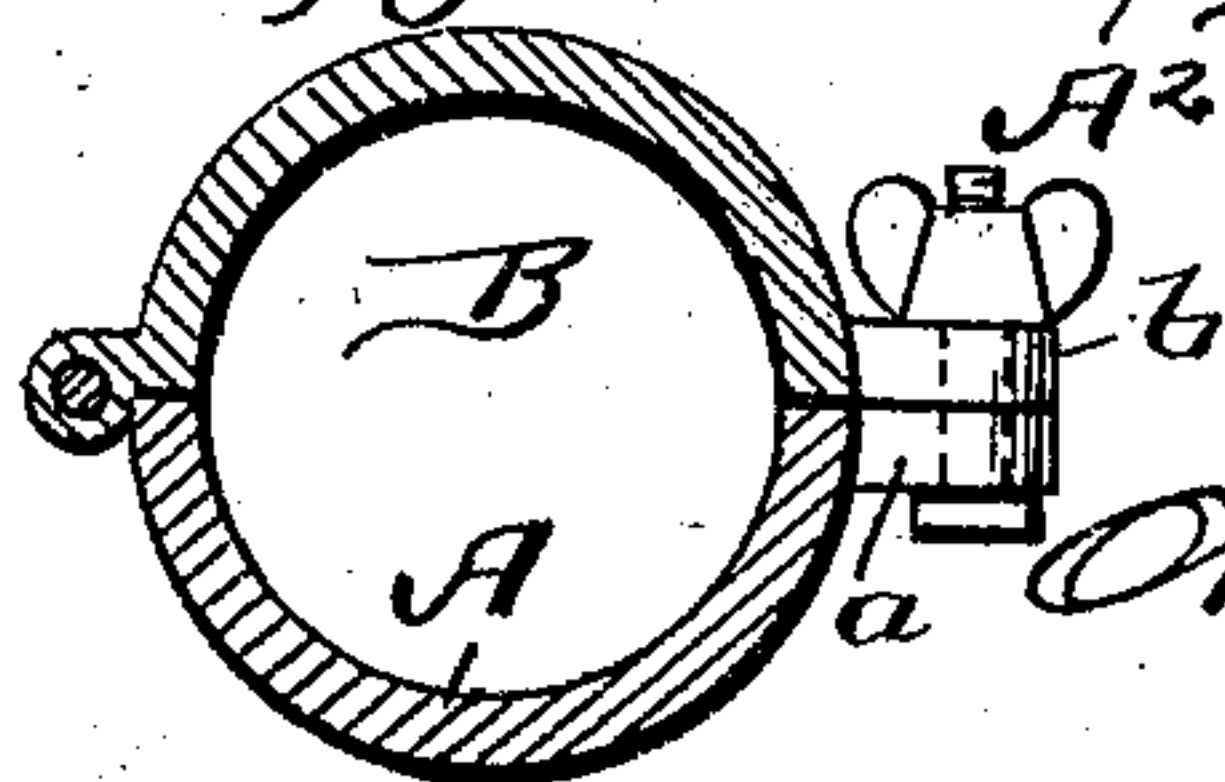
H. G. AHRWEILER.  
BUTTER PAT PRINTING MACHINE.

APPLICATION FILED JUNE 27, 1905.

2 SHEETS—SHEET 1.



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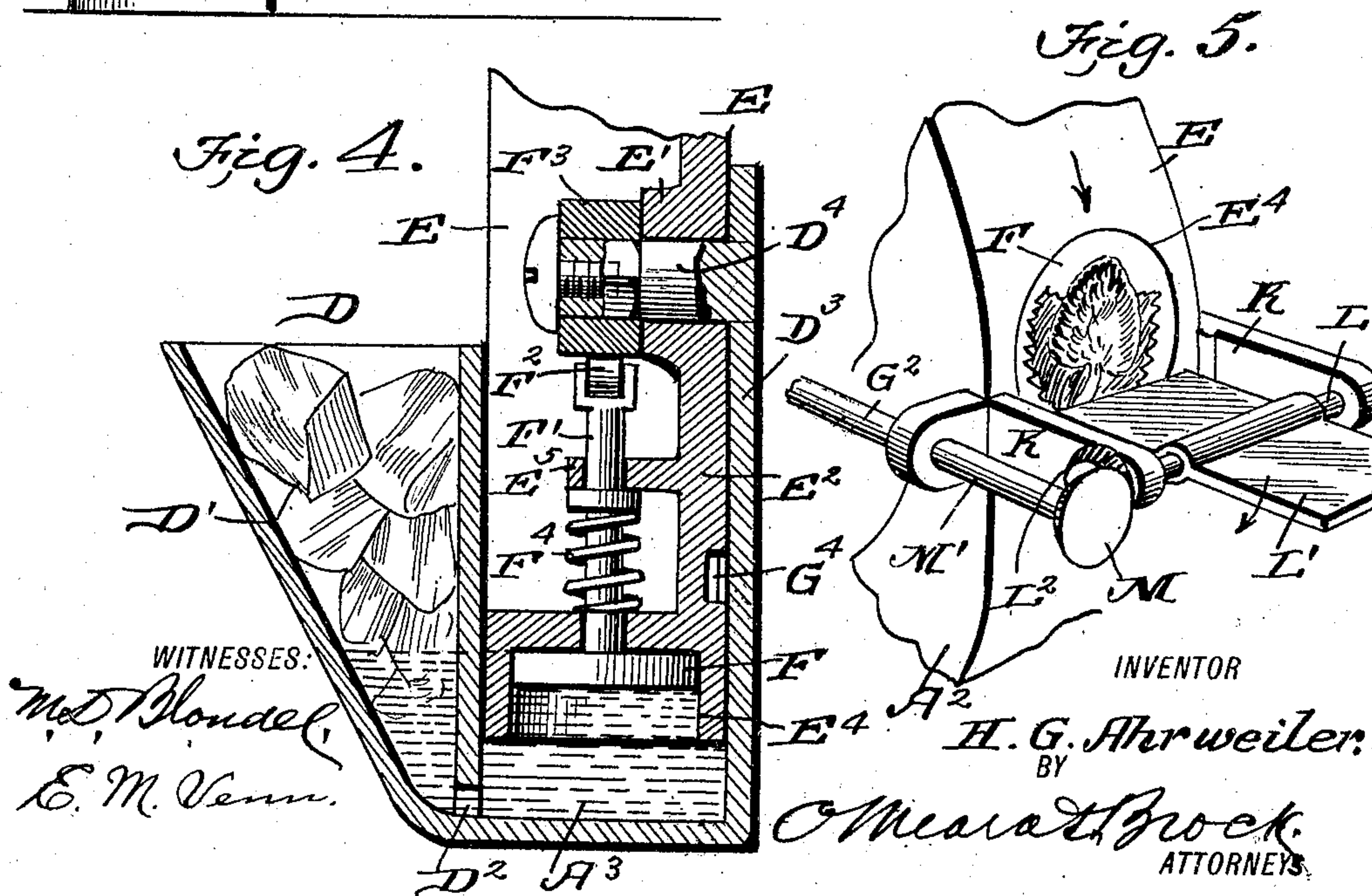
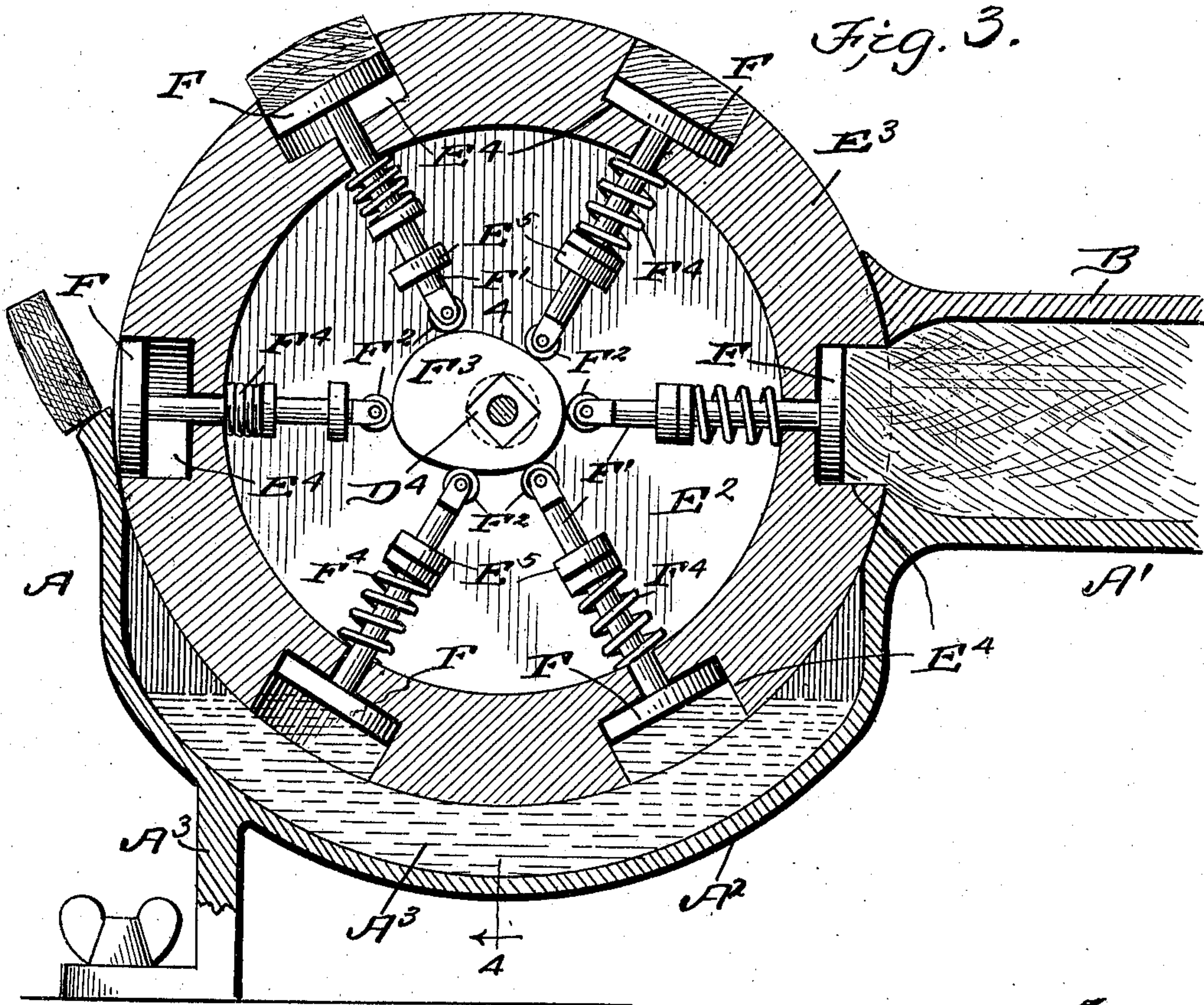
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# UNITED STATES PATENT OFFICE.

HENRY GUSTAVE AHRWEILER, OF NEW YORK, N. Y.

## BUTTER-PAT-PRINTING MACHINE.

No. 815,896.

Specification of Letters Patent.

Patented March 20, 1906.

Application filed June 27, 1905, Serial No. 267,246.

*To all whom it may concern:*

Be it known that I, HENRY GUSTAVE AHRWEILER, a citizen of the United States, residing at New York, in the county of New York and State of New York, have invented a new and useful Improvement in Butter-Pat-Printing Machines, of which the following is a specification.

This invention relates to an improved machine for printing or molding pats of butter and like substances, and has for its object to provide a device in which the pats are molded and delivered in compact solid unbroken prints.

With these briefly-stated objects in view the invention comprises certain details of construction and peculiar combination and arrangement of parts, as will be fully set forth in the following specification and pointed out in the claims, reference being had to the drawings, in which—

Figure 1 is a perspective view of my improvement as in use. Fig. 2 is a vertical longitudinal sectional view of the same. Fig. 3 is a sectional view drawn on the line 2 2 of Fig. 2 and looking in the direction indicated by the arrow. Fig. 4 is a detail sectional view drawn on the line 4 4 of Fig. 3. Fig. 5 is a detail view showing an addition which may be embodied in the invention, and Fig. 6 is a detail section drawn through the cylindrical portion of the casing.

In carrying out my invention I employ a casing A, which comprises a cylindrical section A' and a trough-section A'', the whole being supported by suitable legs A'', having foot portions by which the device may be securely positioned upon a table or other support. One end A' of the casing is semicylindrical in cross-section and has a semicircular-shape top B hinged thereto, which when folded over upon the section A' forms a complete cylinder, and this section B is provided with a hopper B', through which the material is fed into the cylinder.

When the sections are folded to form the cylinder, they are held together at their outer ends by means of a cap B'', which closes the end of the cylinder and also forms a bearing for the shaft C' of a conveyer or feed-screw C, and to the outer end of the shaft C' is held a crank-lever C'', by which the conveyer is operated.

At the opposite end of the semicylindrical section A' the casing terminates in a semicircular trough-shape section A'', whose sides

extend vertically and in parallel relation, one side of which has a lateral extension D, providing a hopper D' for the reception of ice, and the lower portion of the side adjacent 60 and at the base of the hopper is perforated, as shown at D'', through which the water from the melted ice may escape and flow into the trough for the purpose as will be explained later on.

The opposite side of the trough is provided with a central vertical extension D'', from the inner side of which extends a stub bolt or shaft D'', and upon the bolt or shaft is loosely mounted a mold-wheel E, said wheel comprising a hub E', a side E'', and the rim or periphery E'', the latter containing a series of depressions forming molds E'', which may be of any suitable shape or design, and operating in the molds are plungers F, carried by rods F', whose inner ends work through guide-lugs E'', formed upon the inner surface of the side of the wheel. The extreme inner ends of the rods are bifurcated and have anti-friction-rollers F'' journaled therein, that work 80 around an eccentric cam F'', securely held upon the outer end of the shaft D''. In order to normally hold the plunger in the inner ends of the molds, I employ springs F'', which surround the rods and bear between the inner 85 surface of the rim and collars held upon the rods.

In order to revolve the wheel to bring the mold opposite the inner end of the cylinder, I arrange a gear G upon the shaft C', which 90 bears against the head B' of the cylinder and is meshed by a pinion G', carried by a shaft G'', journaled upon the side of the casing, and upon the opposite end of this shaft is a pinion G'', which meshes a circular rack-section G'', 95 formed upon the outer side of the wheel E, and it will be readily understood that when the crank-handle C'' is turned motion will be simultaneously imparted to the conveyer to feed the material toward the open end of the 100 hopper and to the mold-wheel to bring the molds opposite the said open end of the cylinder, and in practice I propose to converge the open end of the cylinder to a size substantially that of the diameter of the molds. 105

The operation of my invention is as follows: Ice is first put into the hopper D', from which the drippings will flow through the perforations down into the trough A'', formed in the casing, and the material to be molded is then 110 placed in the hopper. The crank-handle is then revolved, which forcibly feeds the mate-



rial through the cylinder and into contact with the periphery of the mold-wheel, and as the molds are brought opposite the cylinder the material will be forced therein, where it  
 5 will remain until that portion of the periphery of the wheel is revolved to the opposite side or the end of the casing, and during this movement the rollers carried by the plunger-  
 10 rods will engage the eccentric portion of the cam and force the pistons outwardly, and likewise the pat of butter that has been formed, and as the wheel continues to re-  
 15 volve the pat of butter will strike against the end of the casing and drop off into a suitable pan or receptacle that has been placed adja-  
 cent the machine. As the wheel continues to revolve the molds are first passed through the water held in the trough, which com-  
 20 pletely saturates and prevents the butter adhering thereto or to the periphery of the wheel or plunger, and it will thus be seen that I provide an exceedingly efficient device  
 25 by which a quantity of pats or molds of butter may be made in a very short space of time and which will be found of great convenience to proprietors of hotels, cafés, and  
 such places, and much time will be saved over the slow tedious process of molding the pats by hand, as is now done.

30 In Fig. 5 I show a paddle-wheel for delivering the pats of butter as they are projected from the molds and which I may find it desirable to use in connection with my machine, and by reference to the said figure it will be  
 35 seen I provide the casing with rearwardly-extending ears K, in which is journaled a shaft L, having a paddle-blade L' fastened thereon, and upon one end of the shaft L is mounted a beveled pinion L<sup>2</sup>, which meshes a similar  
 40 pinion M, secured upon an extension M' of the shaft G<sup>2</sup>. By this arrangement it will be understood that as the wheel is revolved and the pat of butter reaches its extreme outer-  
 45 most position in the mold the paddle-plate will be revolved in a direction opposite that in which the mold-wheel is revolving and coming in contact with the pat of butter will  
 50 remove the same from the plunger and deliver it into any suitable receptacle placed adjacent the machine.

In practice I may connect the lower ends of the legs A<sup>3</sup> and provide the connecting-  
 strip with a lateral U-shape extension having a clamping-screw, by which the machine may  
 55 be securely clamped upon the edge of a table or bench, as shown in dotted lines in Fig. 1 of the drawings, and, further, I may provide the semicircular portions of the casing with  
 60 laterally-extending bifurcated lugs a and b, adapted to receive clamping-bolts, by which the sections may be securely held together, and when these lugs are provided I propose to dispense with the collar B<sup>2</sup> and form the  
 65 outer ends of each semicylindrical section with an end portion that is cast integral with

each section, and in this case the abutting edges will be recessed to provide a bearing for the shaft of the screw.

It may be stated that in practice I also propose to make the face of the plungers with  
 70 a suitable design, such as a clover, strawberry, or, in fact, any design that may be found to one's taste.

Of course it will be understood that as the plungers have been pushed to the ends of the  
 75 molds by the cam and the wheel continues to revolve the springs surrounding the plunger-rods will force them inwardly to the bottom of the molds.

Having thus fully described my invention, 80 what I claim as new, and desire to secure by Letters Patent, is—

1. A butter-printing machine comprising a horizontally-arranged cylinder, a feed-screw arranged in said cylinder, a hopper carried by  
 85 one end of the cylinder, a trough adapted to contain a liquid carried by the opposite end of the cylinder, a rotatable mold-wheel journaled in the sides of said trough and extending into the liquid and forming an end for the  
 90 cylinder, and means for rotating the feed-screw and the mold-wheel simultaneously.

2. In a machine of the kind described, the combination with a casing, comprising a semi-cylindrical portion and a semicircular trough  
 95 portion, a semicylindrical top hinged to the semicylindrical portion of the casing, which with the latter forms a complete cylinder, of a cap held upon the end of the cylinder, a conveyer-screw operating within the cylinder,  
 100 said conveyer-screw having a shaft portion which extends through the said cap, a wheel mounted to revolve within the said trough-section of the casing, said wheel having a series of molds in its periphery, plungers op-  
 105 erating within the molds, means for projecting the plungers through the molds and also means for conveying motion from the conveyer to the wheel.

3. In a machine of the kind described, the  
 110 combination with a casing, comprising a semi-cylindrical portion and a semicircular-shape trough portion, of a semicylindrical cap hinged to the semicylindrical portion of the casing, and forming when folded upon the  
 115 same, a complete cylinder, the said semicircular-shape trough portion having a lateral extension forming a hopper which communicates with the trough portion through perforations formed in the latter, the said trough  
 120 portion also having a stub-bolt projecting therefrom, a mold-wheel loosely mounted upon the bolt, a cam fixedly held upon the bolt, plungers carried by the wheel and operating in the molds, said plungers having rods  
 125 projecting therefrom whose inner ends contact with the cam, a conveyer-screw mounted in the cylinder, a gear carried by the conveyer-screw, a shaft journaled upon the casing and having a pinion meshing the said  
 130



gear, said shaft also having a second gear which meshes a rack-section upon the side of the wheel, and a crank for operating the conveyer.

5 4. A machine of the kind described, comprising a casing, one end of which is formed with a semicylindrical section, and its opposite end with a semicircular trough-section, the said trough-section having a lateral projection upon one side, which forms a hopper, and a bolt projecting inwardly from its opposite side, a semicylindrical section hinged to the semicylindrical portion of the casing, a hopper formed upon the said section, a cap 10 arranged upon the ends of the said semicylindrical portion and section, to hold the sections together to provide a cylinder, a conveyer arranged within the cylinder and having a shaft portion projecting through the cap, 20 a gear mounted upon the shaft, a wheel mounted upon the bolt within the trough, said wheel having its periphery contacting with the open end of the cylinder, said wheel having a series of depressions in its periphery 25 forming molds, plungers operating in the molds, an eccentric cam held upon the said bolt, rods projecting from the plungers and having antifriction-rollers at their free ends

which engage the cam, springs surrounding each plunger-rod for normally holding the 30 plungers in the inner ends of the molds and the rollers in engagement with the cam, a shaft journaled upon the side of the casing and having a pinion meshing the gear carried by the conveyer, a second pinion meshing a 35 rack-section formed in the wheel, and a crank-handle carried by the conveyer-shaft, all for the purpose specified.

5. In a machine of the kind described, the combination with a casing, comprising a cy- 40 lindrical section, and a semicircular trough-section, the latter having a hopper upon one side thereof, adapted for the reception of ice, and which communicates with the trough-section, of a mold-wheel journaled within the 45 trough-section, the periphery of said wheel extending down into the trough portion of the said section, a conveyer operating in the cylindrical portion, and means connecting the conveyer and mold-wheel and imparting 50 motion to the latter when the conveyer is operated.

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