

No. 880,343.

PATENTED FEB. 25, 1908.

H. WAGNER.

PRESS MOLD FOR MAKING INSULATORS.

APPLICATION FILED OCT. 24, 1906. RENEWED JAN. 9, 1908.

2 SHEETS—SHEET 1.

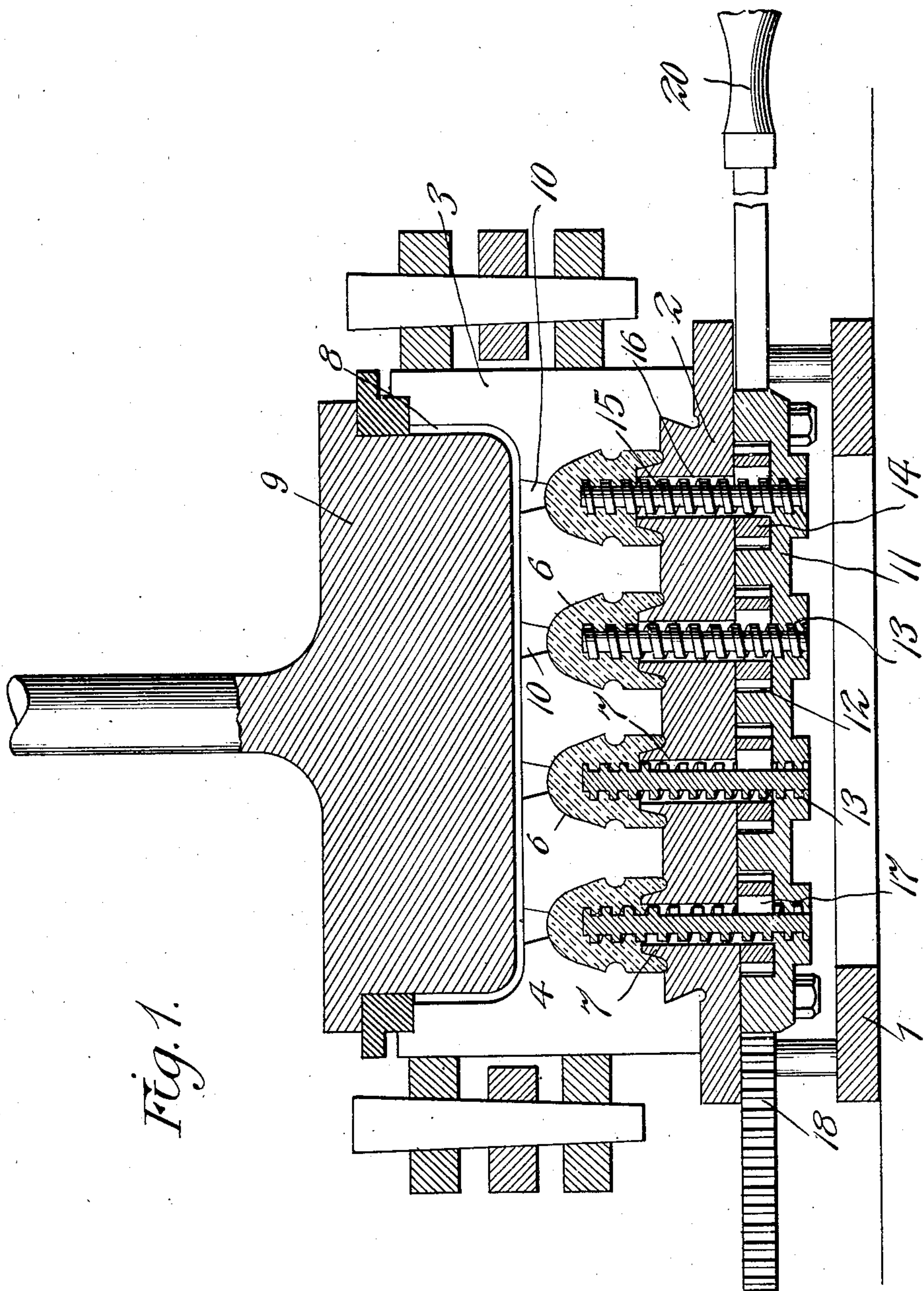


Fig. 1.

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2 SHEETS—SHEET 2.

Fig. 2.

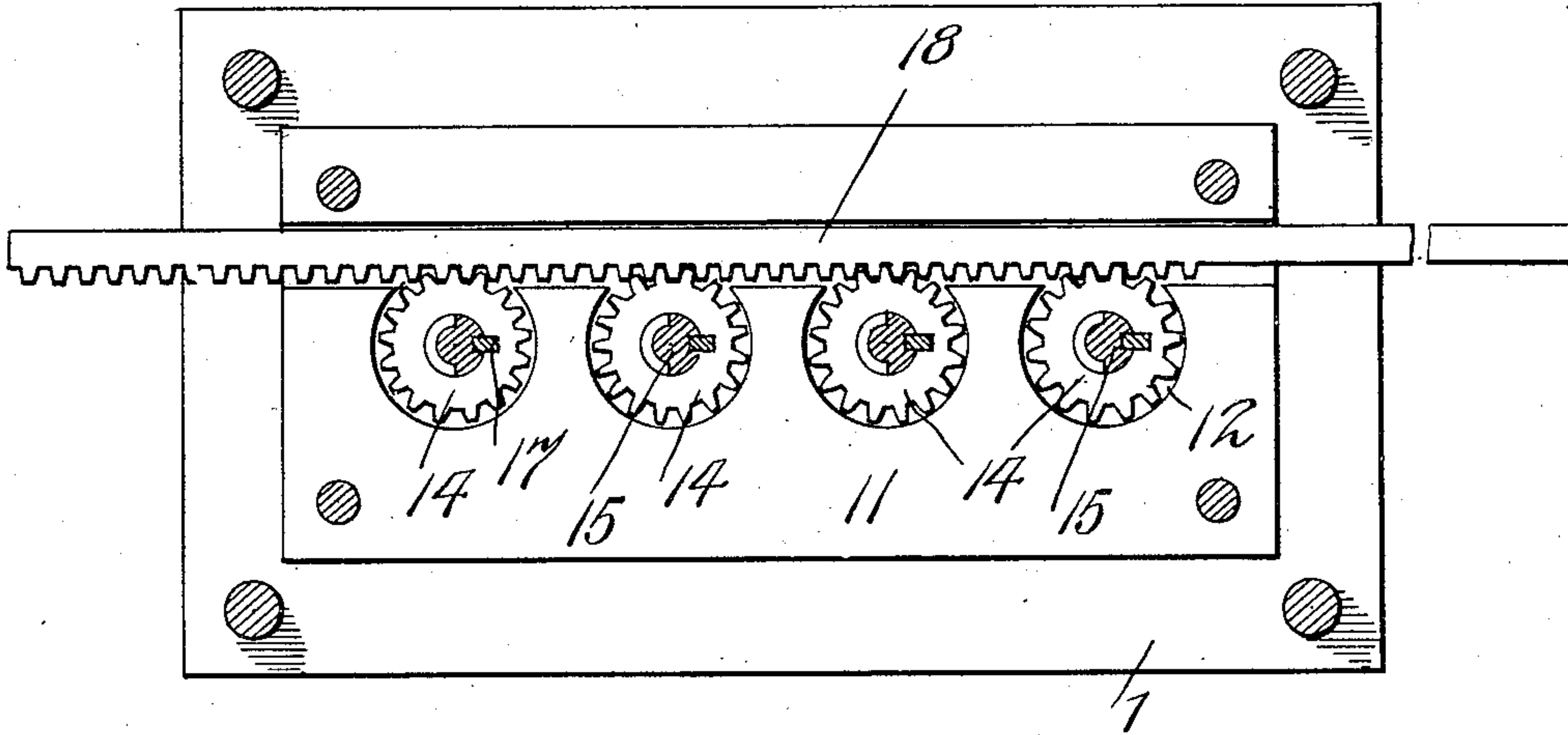
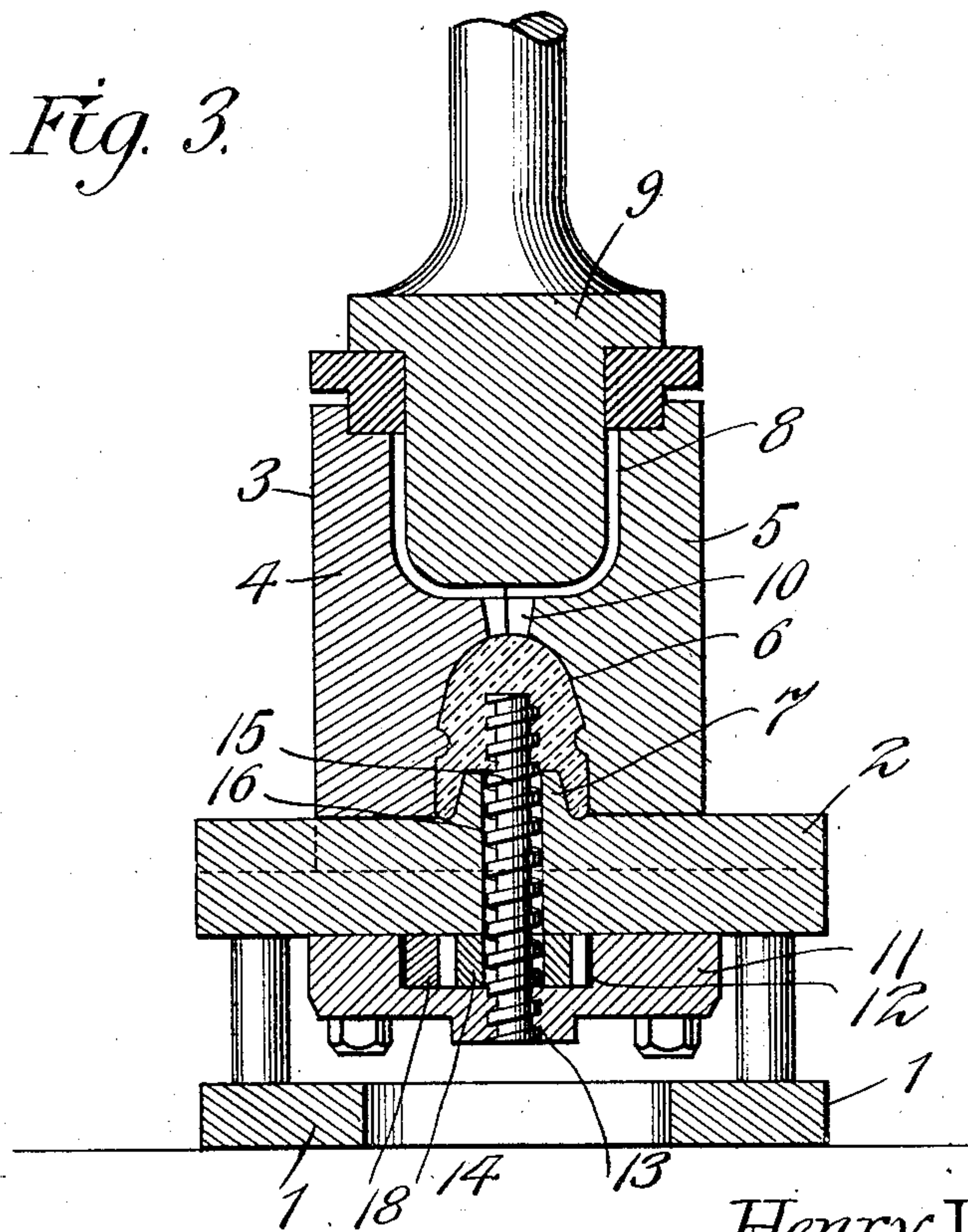


Fig. 3.



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PRESS-MOLD FOR MAKING INSULATORS.

No. 880,343.

Specification of Letters Patent.

Patented Feb. 25, 1908.

Application filed October 24, 1906, Serial No. 340,393. Renewed January 9, 1908. Serial No. 410,010.

To all whom it may concern:

Be it known that I, HENRY WAGNER, a citizen of the United States of America, residing at Anderson, in the county of Madison and State of Indiana, have invented new and useful Improvements in Press-Molds for Making Insulators, of which the following is a specification.

This invention relates to a press-mold especially designed for making glass insulators of that kind having internal screw-threaded sockets, and such as are used on telegraphic lines, although the press may be used for making other articles.

The objects of the invention are, first, to provide a press-mold whereby a series of insulators may be made at a single operation; second, to provide an improved construction and arrangement of the parts of the mold whereby a stronger mold is produced and a stronger and denser insulator may be made; third, to provide simple and efficient means for simultaneously projecting and retracting the socket-forming elements; and, finally to generally simplify and improve the construction and increase the practical efficiency of press-molds of this type.

In the accompanying drawings,—Figure 1 is a vertical longitudinal section through a press-mold embodying my invention. Fig. 2 is a horizontal section through the same. Fig. 3 is a vertical cross section.

Referring to the drawings, the numeral 1 designates a base, upon which is supported a mold comprising a bottom or base section 2 and a body or top section 3, the latter being constructed of two or more parts 4 and 5 adapted to be disconnected for the convenient removal of the formed insulators or other articles. The sections of the mold top or body 3 may be held connected by any preferred type of fastening means, which I have not deemed it necessary to describe.

The mold body 3 is provided with a series of mold chambers or cavities 6, while the base section 3 is formed with upwardly projecting core portions 7 which extend into the lower ends of said cavities and form the recesses in the lower ends of the insulators.

A chamber or recess 8 is provided in the top of the mold section 3 to receive the molten glass or other material and also to receive a plunger 9, whereby such material is forced through ducts or passages 10 into the respective mold chambers. The plunger may be operated in any preferred manner.

Arranged upon the underside of the base section 2 of the mold is a supporting plate 11 provided with chambers 12 equal in number to and arranged below the mold chambers, and also provided with threaded passages 13 communicating with said chambers 12. In the chambers 12 are arranged gear nuts 14. These gear nuts are arranged to operate forming devices 15, comprising screws fitted at their lower ends in the threaded openings 13 of the supporting plate and projecting upwardly through openings 16 in the mold section 2 into the mold cavity 6. The upper projecting ends of these screws form the usual threaded sockets in the insulators.

Each gear nut 14 comprises a pinion having a projection 17 engaging the threads of the cooperating screw, which extends through a central opening in the pinion, the construction being such that when the pinion is turned in one direction or the other the screws will be rotated by their threaded engagement in the bearing openings 13 and will be caused to move vertically, so that the upper ends thereof will move downward in the mold chambers to disconnect them from the formed insulators, while an upward movement thereof will project the screws into the mold chambers for the succeeding operation. A rack bar 18 is arranged to slide longitudinally in the supporting plate 11 with its teeth in meshing engagement with the teeth of the gear nuts 14 and is provided at one end with a handle or lever by means of which it may be manually reciprocated, although power mechanism of any preferred character may be employed for this operation. When the rack bar is moved in one direction all the pinions will be turned to project the forming screws, while a reverse movement of the rack bar will actuate the pinions in the opposite direction to retract the forming screws. By this means forming screws cooperating with the several mold chambers may be simultaneously projected and retracted for use in the operation of making a plurality of insulators and to release them from the formed insulators to permit of the removal of the latter.

It will be observed that the construction provides a plurality of independent molding devices, by which a series of insulators or other objects may be formed at one time, thus enabling a large number of insulators to be manufactured within a given period. It will also be observed that the projecting ends

of the screw formers project from below upwardly into the mold chambers and that the material is forced by the plunger into the mold cavities from above. By this construction and arrangement of the parts a stronger and more durable type of press-mold is provided, and the force and weight of the plunger are both exerted to press the molten material into the mold chambers, whereby the material may be compressed to a higher degree of density and stronger and more durable insulators formed.

Having thus described the invention, what is claimed as new, is:—

1. A mold of the character described comprising a base provided with chambers open at one side and having threaded openings below the chambers, a body supported upon the base, said body and base having cooperating portions forming mold cavities arranged above said chambers, said cavities being provided with inlets, means for forcing the plastic material through the inlets into the cavities, a series of forming screws projecting upwardly through the base and into said cavities, the screws being engaged at their lower ends with threaded openings, gear nuts engaged with the screws and arranged within the said chambers, said nuts being partially exposed through the open sides of the chambers, and a rack bar slidably supported on the base adjacent the open sides of the chambers and meshing with the gear nuts.

2. A mold of the character described comprising a base having a series of vertical openings, a mold body supported upon the base, the body and base being provided with cooperating portions forming a series of mold chambers above the openings, said mold chambers being provided at their upper ends with inlets, means for forcing the plastic material through said chambers into the inlets, a supporting plate detachably mounted below the base and provided with a series of chambers open at one side and threaded openings below and communicating with said chambers, forming screws projecting upwardly through the openings in the base, and engaging the screw threaded openings in the supporting plate, gear nuts engaging said screws and arranged in the chambers of the supporting plate, said nuts being partially exposed at the open sides of the chambers, and a rack bar slidably supported upon the supporting plate and meshing with the exposed portions of the gear nuts, whereby the latter may be turned in one direction or the other to simultaneously project or retract the forming screws.

In testimony whereof, I affix my signature in presence of two witnesses.

HENRY WAGNER.

Witnesses:

JULIA A. MOORE,
D. C. CHIPMAN.