

No. 734,450.

PATENTED JULY 21, 1903.

H. E. & H. F. WAITE.
STATIC MACHINE.
APPLICATION FILED APR. 4, 1903.

NO MODEL.

Fig. 1.

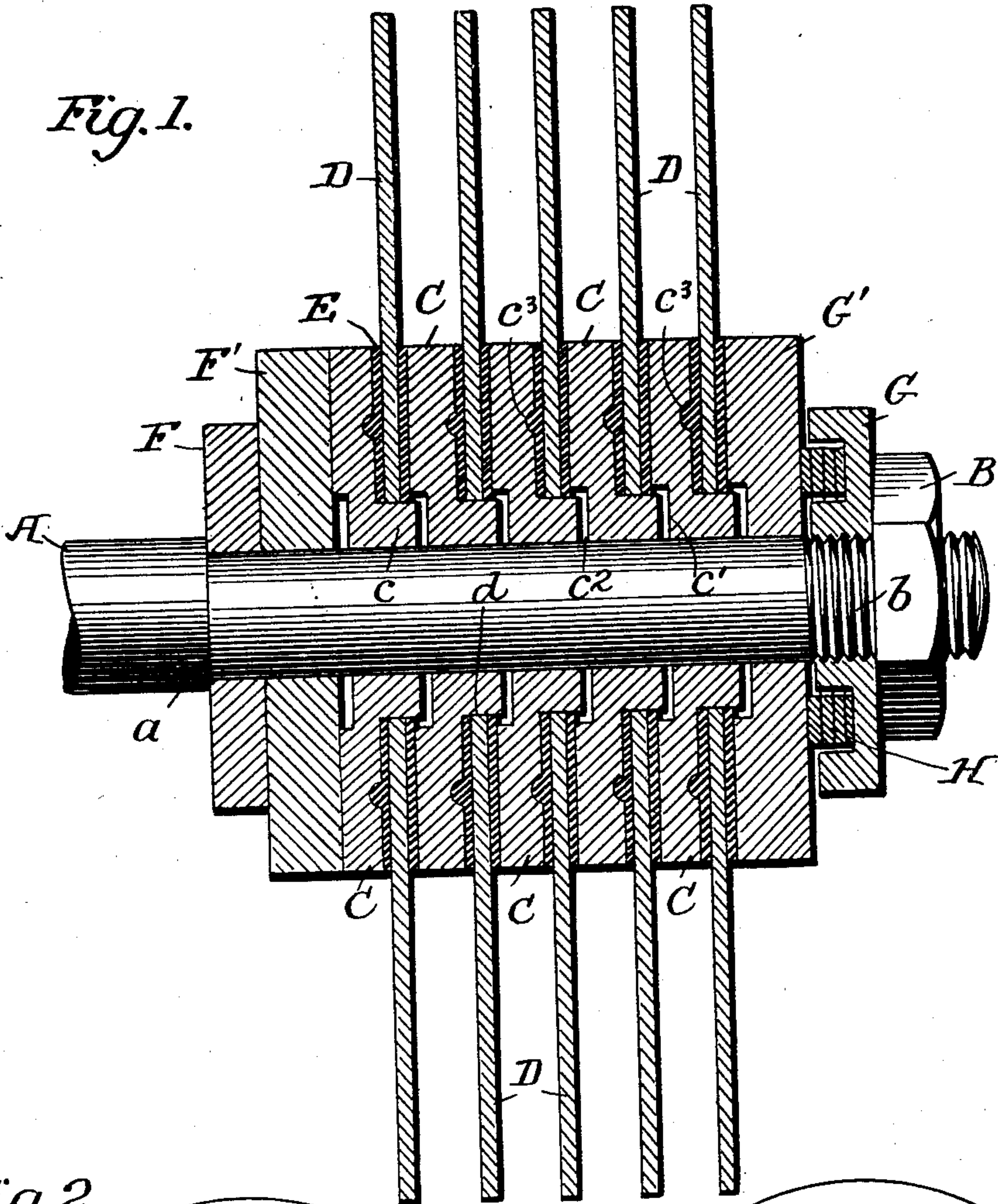
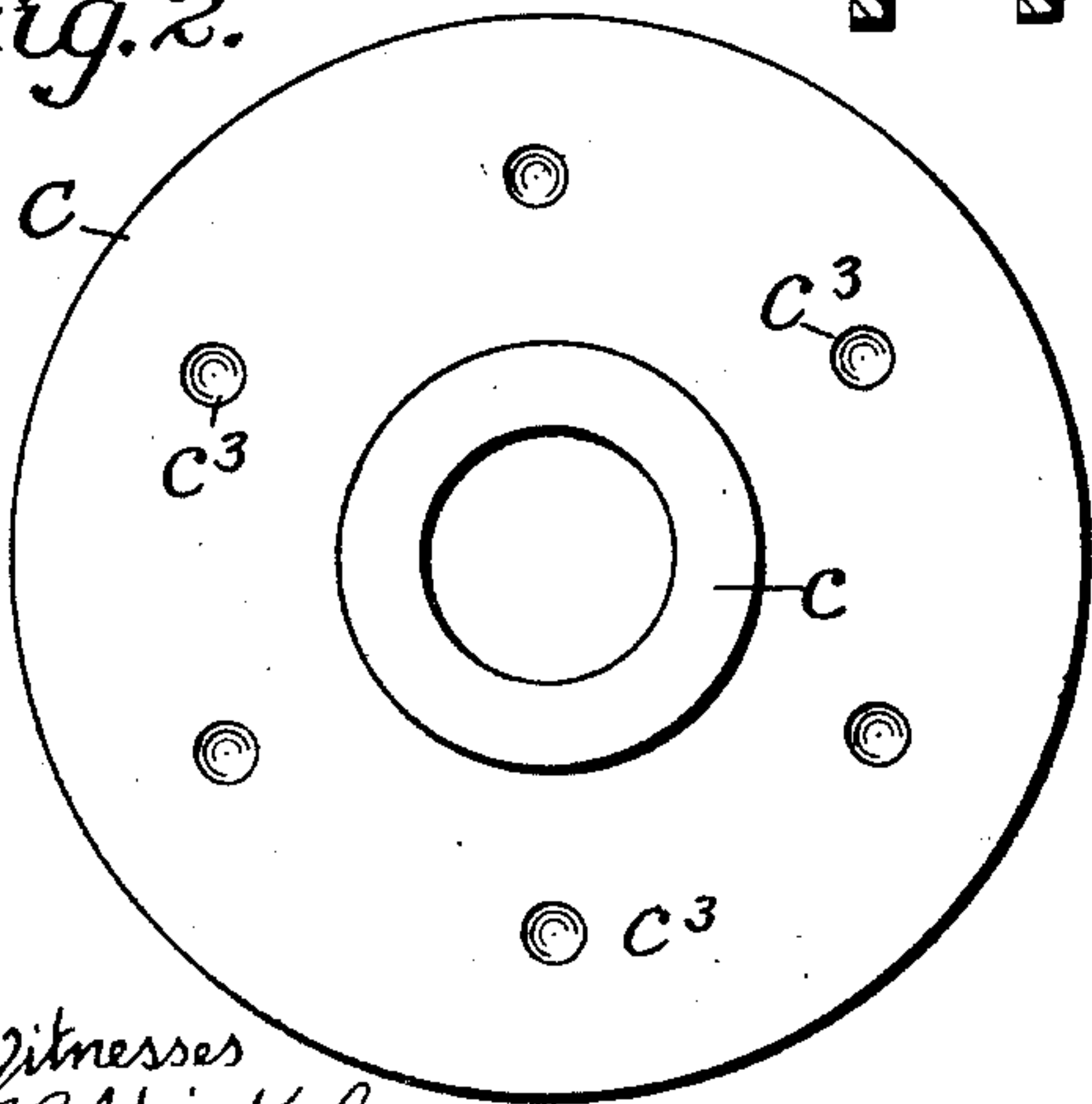
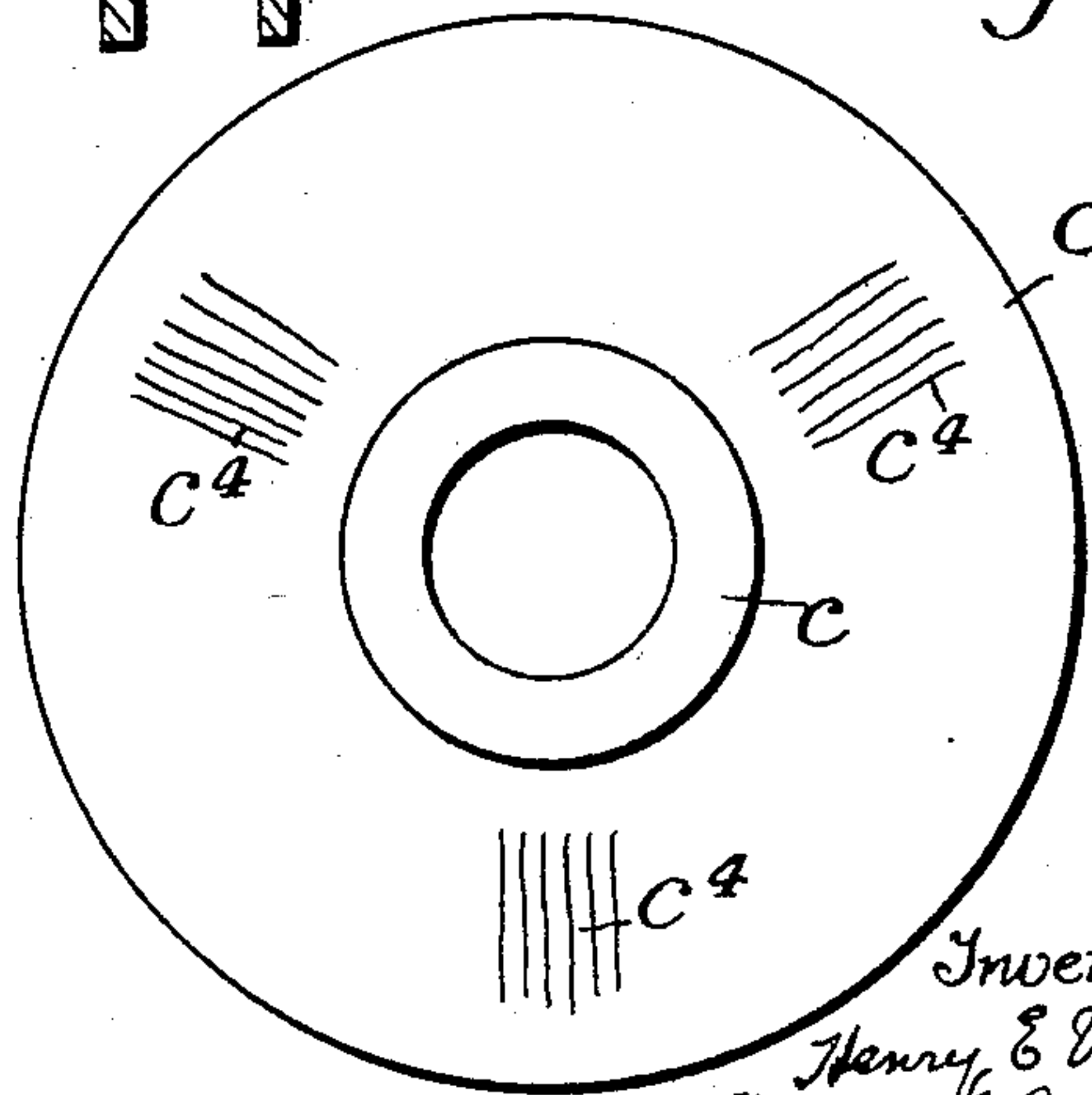


Fig. 2.



Witnesses
J. J. Stinkel
A. M. Gillman, Jr.

Fig. 3.



Inventors
Henry E. Waite
Harry J. Waite
Foster & Freeman, Attorneys

UNITED STATES PATENT OFFICE.

HENRY E. WAITE AND HARRY F. WAITE, OF NEW YORK, N. Y.

STATIC MACHINE.

SPECIFICATION forming part of Letters Patent No. 734,450, dated July 21, 1903.

Application filed April 4, 1903. Serial No. 151,187. (No model.)

To all whom it may concern:

Be it known that we, HENRY E. WAITE and HARRY F. WAITE, both citizens of the United States, residing at New York, in the county of New York and State of New York, have invented certain new and useful Improvements in Static Machines, of which the following is a specification.

This invention relates to static machines, and more particularly to the means employed for supporting and holding the plates of such machines, and our invention may be said in some respects to be an extension of and improvement on the structure shown in Patent No. 672,048, granted April 16, 1901.

The object of our present invention is to provide a construction whereby any desired number of plates may be mounted and arranged in a machine in a way to be effectively held and supported therein without danger of injuring the plates and to make what we have termed an "independent" collar for each plate and so construct and arrange it that they form a series of nesting collars supporting the plates; and our invention consists in a construction and arrangement of parts substantially as hereinafter more particularly pointed out.

Referring to the accompanying drawings, Figure 1 is a vertical section showing the preferred manner of carrying out our invention. Fig. 2 is a side view of one of the insulating-collars, and Fig. 3 is an opposite side view of a collar.

In the construction shown in the patent referred to there was a sleeve of hard rubber or similar material mounted on a shaft and the glass plates were supported on this sleeve, and in assembling the parts it was necessary to push the plates along over this sleeve, the sleeve extending through a central opening in the plate. Experience shows that sometimes in mounting the plates on the collar they would catch or tip or there would be other difficulty in assembling the parts, and sometimes the result would be that the plates would be broken or injured or even destroyed. By our present invention each plate is mounted upon an individual or independent collar and the various plates and collars can be assembled on the shaft in any desired number and be securely clamped and held thereon,

and the danger of breaking or injuring the parts is avoided, as well as a more efficient and satisfactory support for the plates provided.

Referring to the drawings, A represents any suitable shaft for use in a static machine, and it is shown as provided with an abutment *a* and with some sort of means for securing the supports and plates thereon—as, for instance, the nut B, engaging the screw-threads *b* on the shaft—or any other suitable means for accomplishing this result may be used.

C represents one of the independent insulating supports or collars, and this may be made of any suitable material and is provided on one side with a projecting hub *c*, which is adapted to support the plate D by fitting an opening *d* in the plate. This hub *c* is preferably of a width somewhat greater than the width of the plate, so that room is provided for the use of elastic washers E when desired, which washers are arranged on one or both sides of the plate, as preferred. The collar is also provided on its opposite side with a recess *c'*, which is of a suitable size to receive the projecting hub *c* of an adjacent collar and is preferably of a depth so as to leave a clearance-space, as *c''*, between the two adjacent collars when they are in position. It will thus be seen that each collar has a laterally-extending hub on one side adapted to support the plate and the elastic washers when used, and it is also provided with a recess upon its other side adapted to receive the projecting hub of a similar collar. The faces of the collars are preferably provided with some sort of an irregular surface which will aid in holding the plate or the soft-rubber washers, or both, in position and keep them from slipping, and while this surface may be formed in different ways we have shown in Fig. 2 slight depressions *c'''* and in Fig. 3 a roughened surface *c''''*, and there may be any desired number of these irregular surfaces, or the whole surface of the plate may be roughened, although, preferably, we roughen only a portion of the surface.

In using our independent collars as above intimated any desired number may be assembled and mounted on the proper support and held in any desired way, and in the present instance we have shown as mounted on the

shaft a supporting-collar F, bearing against the abutment *a*, and another similar collar F', but preferably of larger size and having a diameter practically equal to the diameter
 5 of the insulating-collars. Against this latter collar is arranged one of the insulating-collars supporting the plate, and against this is arranged another insulating-collar, and it will be seen that the extending hub of the
 10 first collar enters the recess of the second collar and practically nests therein and any desired number of collars can be so arranged and then they may be clamped by means of the supports G' and G, and this latter is preferably provided with some sort of an elastic
 15 cushioning device, as H, fitted in a recess of the support and shown in the form of an elastic spring, and the whole can then be secured by the nut B. In this way we find that the
 20 separate plates can be readily mounted upon the independent collars with or without the elastic washers, and all the parts can then be readily assembled and secured, and when secured the plates are held in proper relation
 25 to each other without danger of slipping and without danger of breaking.

While we have illustrated one preferred way of embodying our invention, it is manifest that the general principles of our invention may be applied in different ways to suit
 30 the requirements of any particular case without departing from the spirit of the invention.

What we claim is—

35 1. In a static machine, as a means of sup-

porting the plates, independent collars each having a laterally-extending hub on one side and a recess on the other, the hubs serving to support the plates, substantially as described. 40

2. In a static machine, the combination of a series of collars each having a hub and a recess, of plates mounted on the hubs, and means for clamping the plates between the collars, substantially as described. 45

3. In a static machine, the combination with a shaft, of a series of independent collars, each collar having a hub on one side and a recess on the other side, whereby the collars can be nested, a series of plates mounted on the hubs, elastic washers between the plates and the collars, and means for clamping the collars, substantially as described. 50

4. In a static machine, the combination with a shaft, of supporting-collars, independent insulating-collars each provided with a laterally-extended hub on one side and a recess on the other to receive the hub, a plate mounted on the hub of each independent collar, and adjustable means for clamping the independent collars and plates, substantially as described. 60

In testimony whereof we have signed our names to this specification in the presence of two subscribing witnesses.

HENRY E. WAITE.
 HARRY F. WAITE.

Witnesses:

E. H. OPITZ,
 EDWARD A. DUNN.