

(No Model.)

H. GLÄSER.
STATIC INDUCTION MACHINE.

No. 401,156.

Patented Apr. 9, 1889.

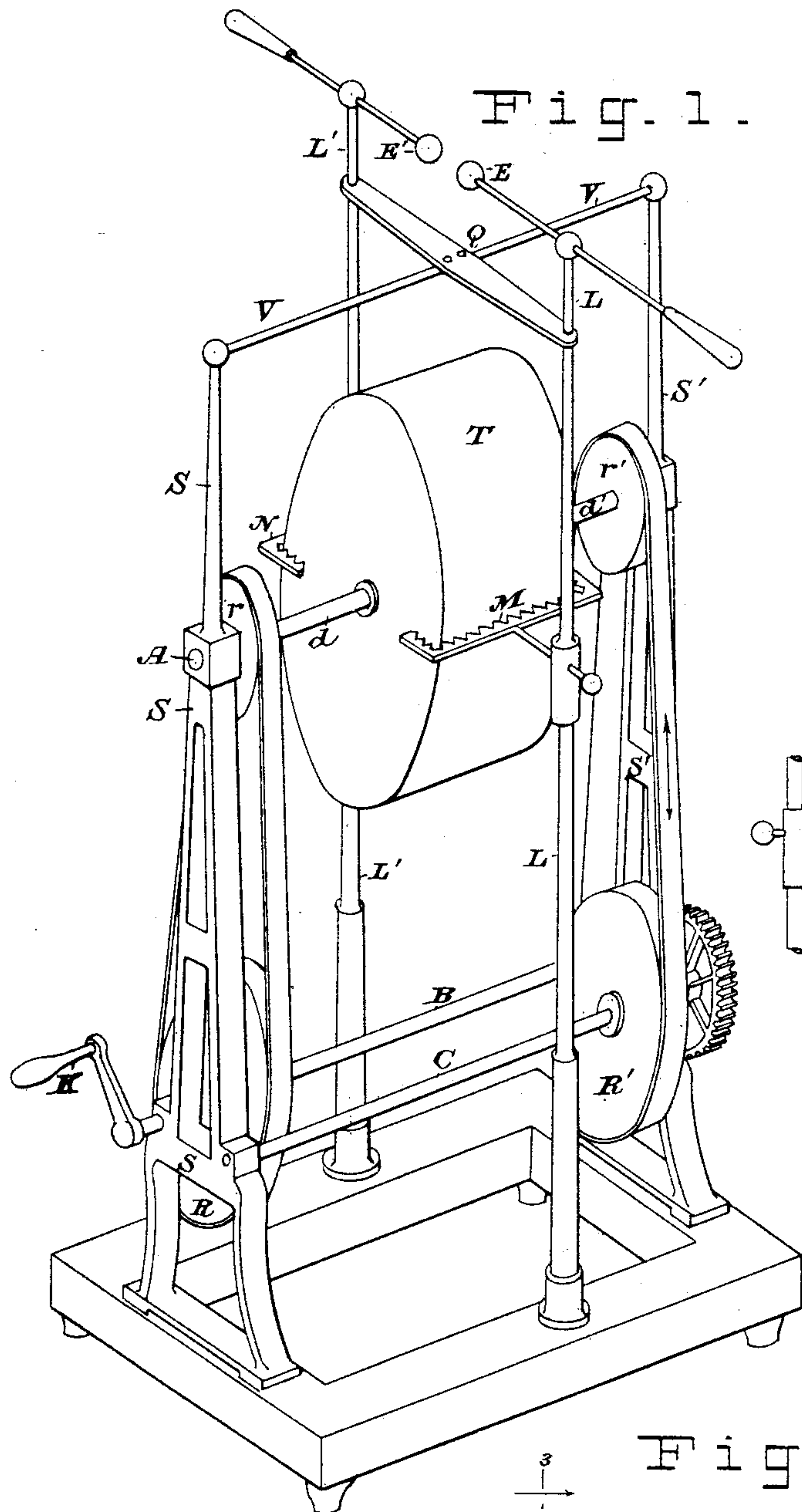


Fig. 3.

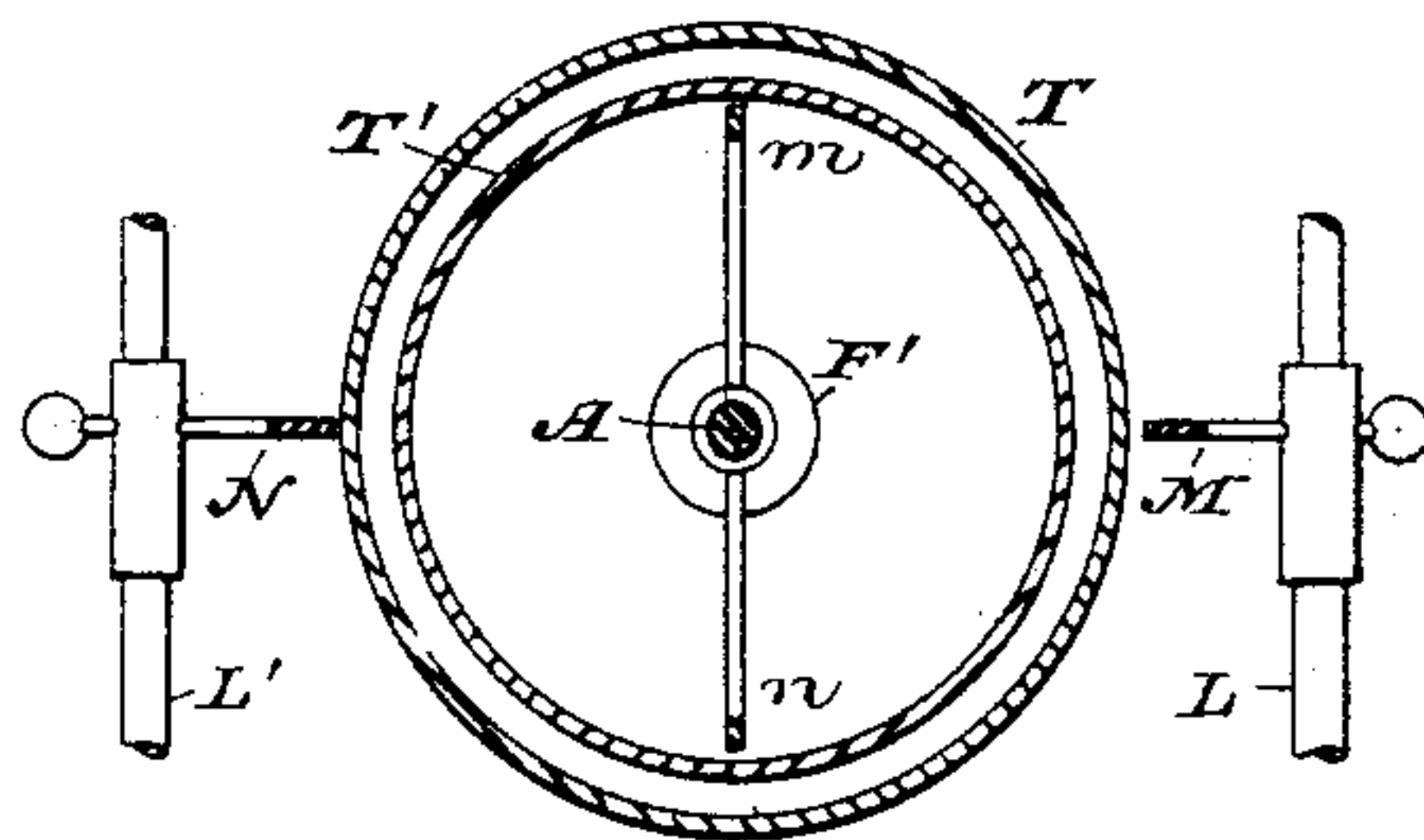
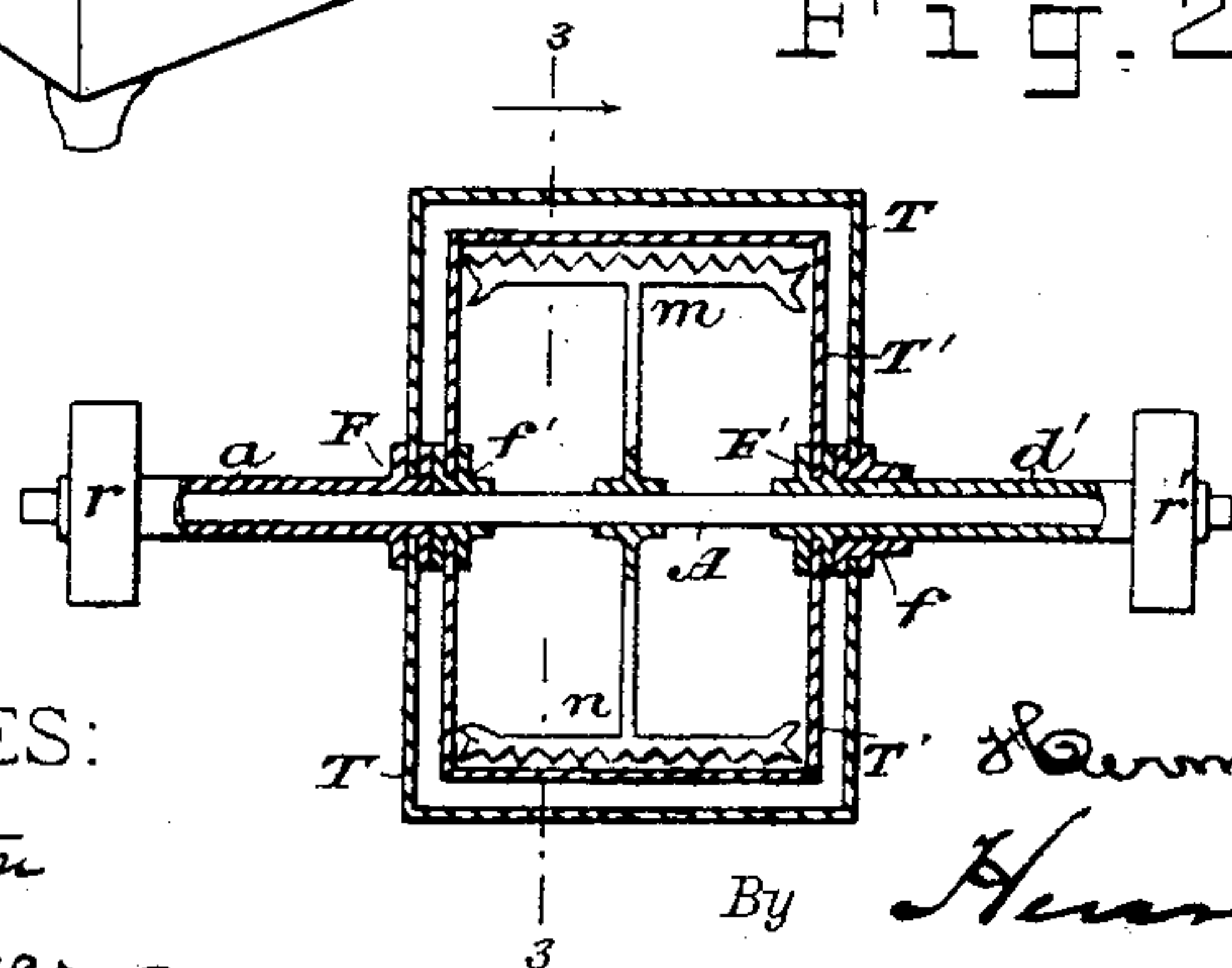


Fig. 2.



INVENTOR:

WITNESSES:

E. B. Bolton
J. H. Leasinger

By

Hermann Gläser
Henry Cornwell
Attorney.

UNITED STATES PATENT OFFICE.

HERMANN GLÄSER, OF VIENNA, AUSTRIA-HUNGARY.

STATIC-INDUCTION MACHINE.

SPECIFICATION forming part of Letters Patent No. 401,156, dated April 9, 1889.

Application filed December 28, 1887. Serial No. 259,271. (No model.) Patented in England August 29, 1887, No. 11,718; in Austria-Hungary January 15, 1888, No. 317,118 and No. 64,906, and in Belgium August 14, 1888, No. 61,753.

To all whom it may concern:

Be it known that I, HERMANN GLÄSER, of the city of Vienna, in the Austro-Hungarian Empire, have invented certain new and useful Improvements in Static - Electric Machines, (for which patents have been granted to me in Austria-Hungary, No. 317,118 and No. 64,906, dated January 15, 1888; in Belgium, No. 61,753, dated August 14, 1888, and in Great Britain, No. 11,718, dated August 29, 1887,) of which the following is a specification.

My invention relates to an improved electric machine; and it consists, chiefly, in that the electric generator is composed of two hollow drums of idioelectric material, of which the smaller is arranged air-tight within the other and both arranged to rotate around a common axle, but in opposite directions.

In the accompanying drawings, Figure 1 is a perspective view of a machine constructed according to my invention, and Fig. 2 a longitudinal section of the main shaft and the two air-tight drums. Fig. 3 is a transverse section in the plane indicated by line 3 3 in Fig. 2.

Two vertical standards, S S', are arranged in the base, and are connected at their upper ends by the connecting-rod V, and serve as bearings for three parallel spindles.

The main shaft consists of a stationary axle, A, Fig. 2, and two sleeves, $a a'$, mounted on the same, each of the said sleeves being provided with a small strap-drum, $r r'$. On the sleeves $a a'$, and at appropriate distance from the strap-drums $r r'$, I mount two drums, T T', of ebonite, vulcanite, glass, sulphur, or other idioelectrical material, the drum T only being visible, while the smaller drum, T', is arranged within the drum T, and is inclosed air-tight in the same, which is of such size that it fits so snugly around the smaller drum that the same is just able to rotate within the larger drum without contact with the same.

The outer drum is attached at one end to the hollow axle or sleeve a by means of the flange or nave F, while the inner-smaller drum is concentrically attached to the sleeve a' by the flange or nave F'. The other disk-shaped end of the drum T is held in a suitable nave,

f , which is arranged loosely on the sleeve a' , while the opposite end of the inner drum is held in a like nave, f' , on the stationary shaft A. The two lower parallel spindles, B and C, Fig. 1, carry each a toothed wheel, which are in gear with each other and are located outside the standard S'. The strap-drums R R' on the spindles B C are mounted between the two standards S S', and are connected by means of suitable straps with the upper strap-drums, $r r'$. The spindle B serves also as driving-spindle, and is at the one end provided with a crank, K. For larger induction-machines, or for special purposes—for instance, in machines operated by a motor for surgical or medical purposes—the crank is replaced by a strap-drum. The base-frame carries, furthermore, two standards, L and L', which are connected at their upper ends by means of the cross-beam Q, and serve to carry the horizontal rakes M N, while a vertical double rake, $m n$, attached to the fixed shaft A, is arranged within the smaller drum, T'. The discharger E E' is arranged on the upper ends of the standards L L'.

The operation of the parts is as follows: The rotary movement of the crank K is transmitted by the strap-drums R r in the same direction to the outer drum, T, while the said movement is transmitted to the smaller drum, T', but in the opposite direction, through the toothed wheel on the spindle C and the strap-drums R' r' . If the machine is in operation, it will only be necessary to bring a strip of ebonite or its equivalent, which has been rubbed a little with a cloth, near to the outer drum in order to excite (charge) the machine. If the movement is stopped, the electric charge of the drums from one single exciting will last for hours.

The advantages of my improved construction in comparison with the existing induction-machines are, first, the large quantity of electricity generated in proportion to the dimensions of the machine and the motive force employed; second, the ready exciting of the machine, even in unfavorable positions and damp air, in consequence of the two drums being hermetically sealed, so that three surfaces of the hollow induction-drums are her-

metically closed from all communication with the atmosphere; third, the long duration of the storage of the electricity when once excited, even after the stoppage of the machine, 5 in consequence of the drums being hermetically closed; fourth, the possibility of erecting induction (Holtz) machines in hitherto unprecedented dimensions.

Having now particularly described my said 10 invention and in what manner the same is to be performed, I claim—

An induction electric machine consisting of two rotary drums of idioelectrical material

arranged one within the other and hermetically closed against the entrance of air without frictional materials or brushes, the two 15 drums rotating in opposite directions, substantially as herein described, and shown on the accompanying drawings.

In witness whereof I have hereunto signed 20 my name in the presence of two subscribing witnesses.

HERMANN GLÄSER.

Witnesses:

EDMUND JUSSEN,

VICTOR TISCHLER.