

No. 755,157.

PATENTED MAR. 22, 1904.

T. F. MORAN.
DEVICE FOR CUTTING ASPHALT.

APPLICATION FILED MAY 28, 1903.

NO MODEL.

Fig. 1.

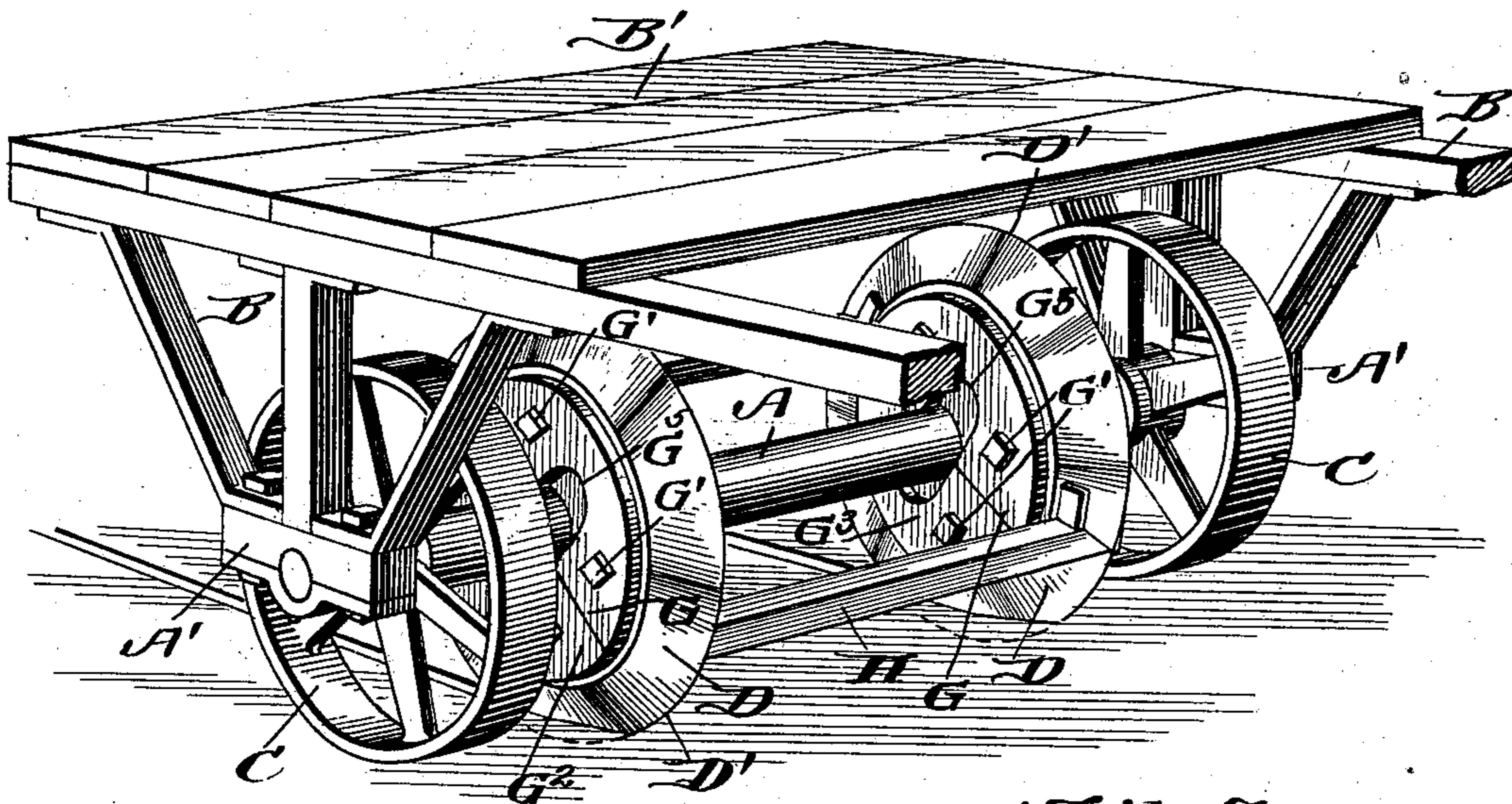


Fig. 2.

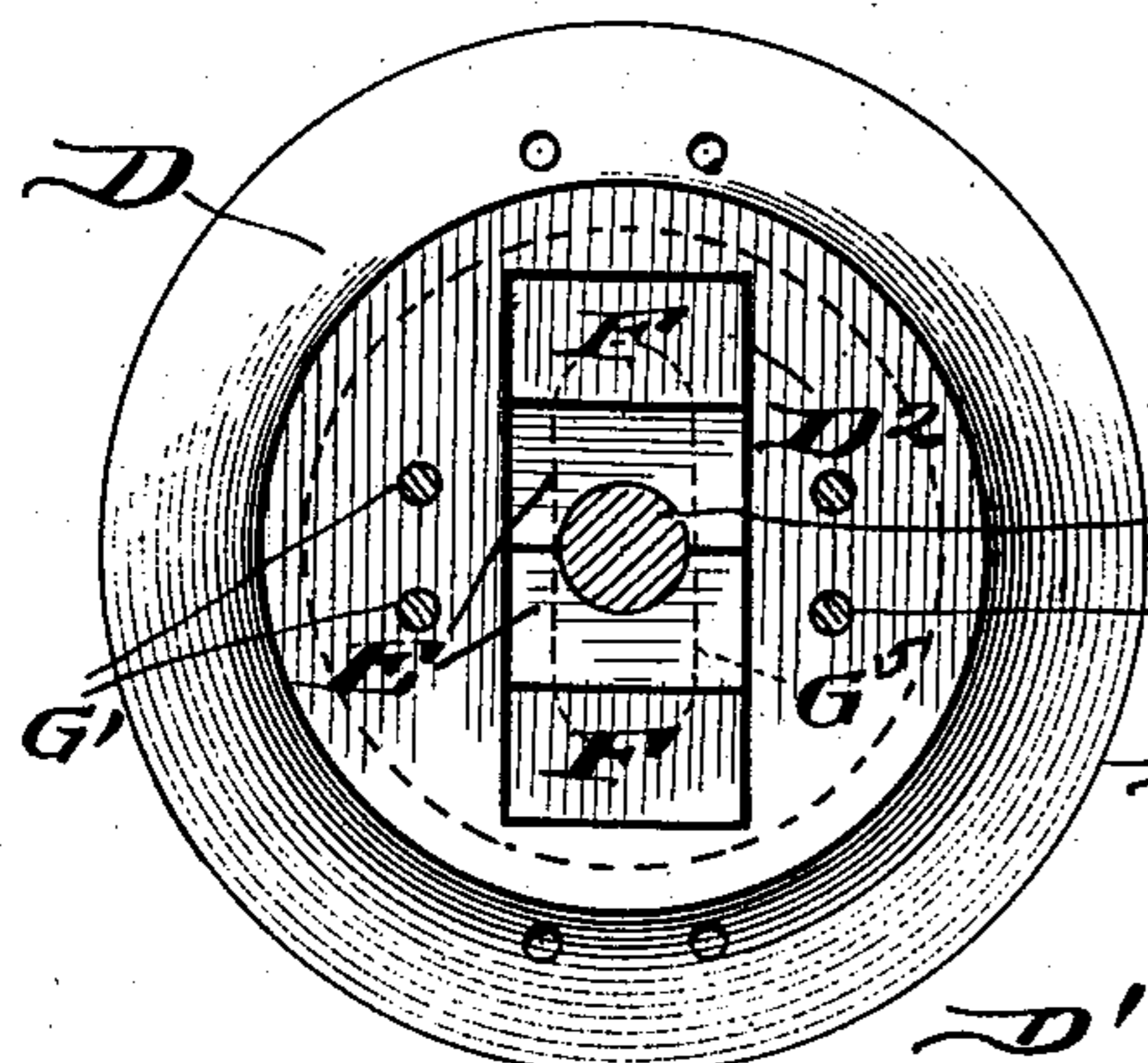


Fig. 3.

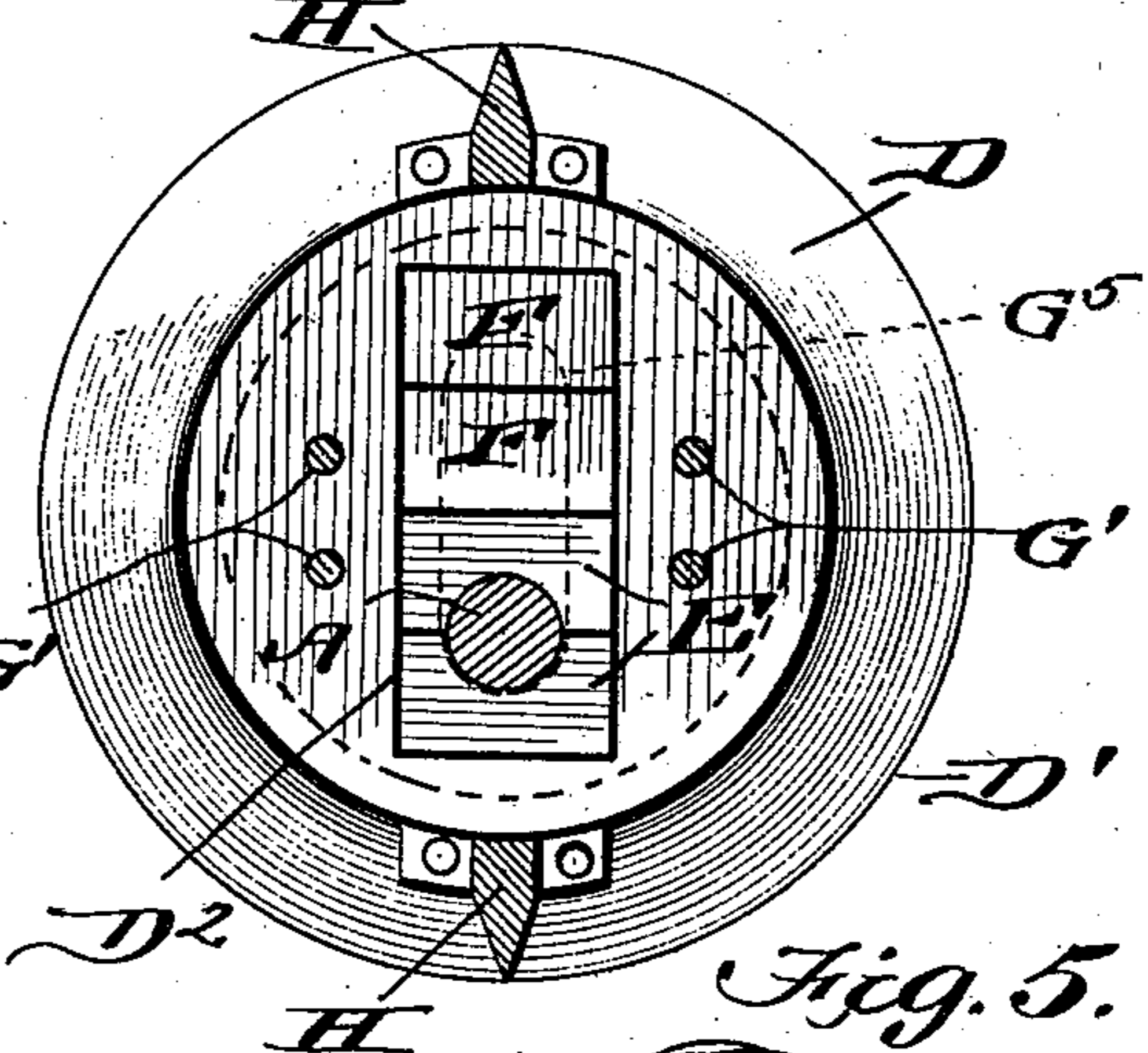


Fig. 4.

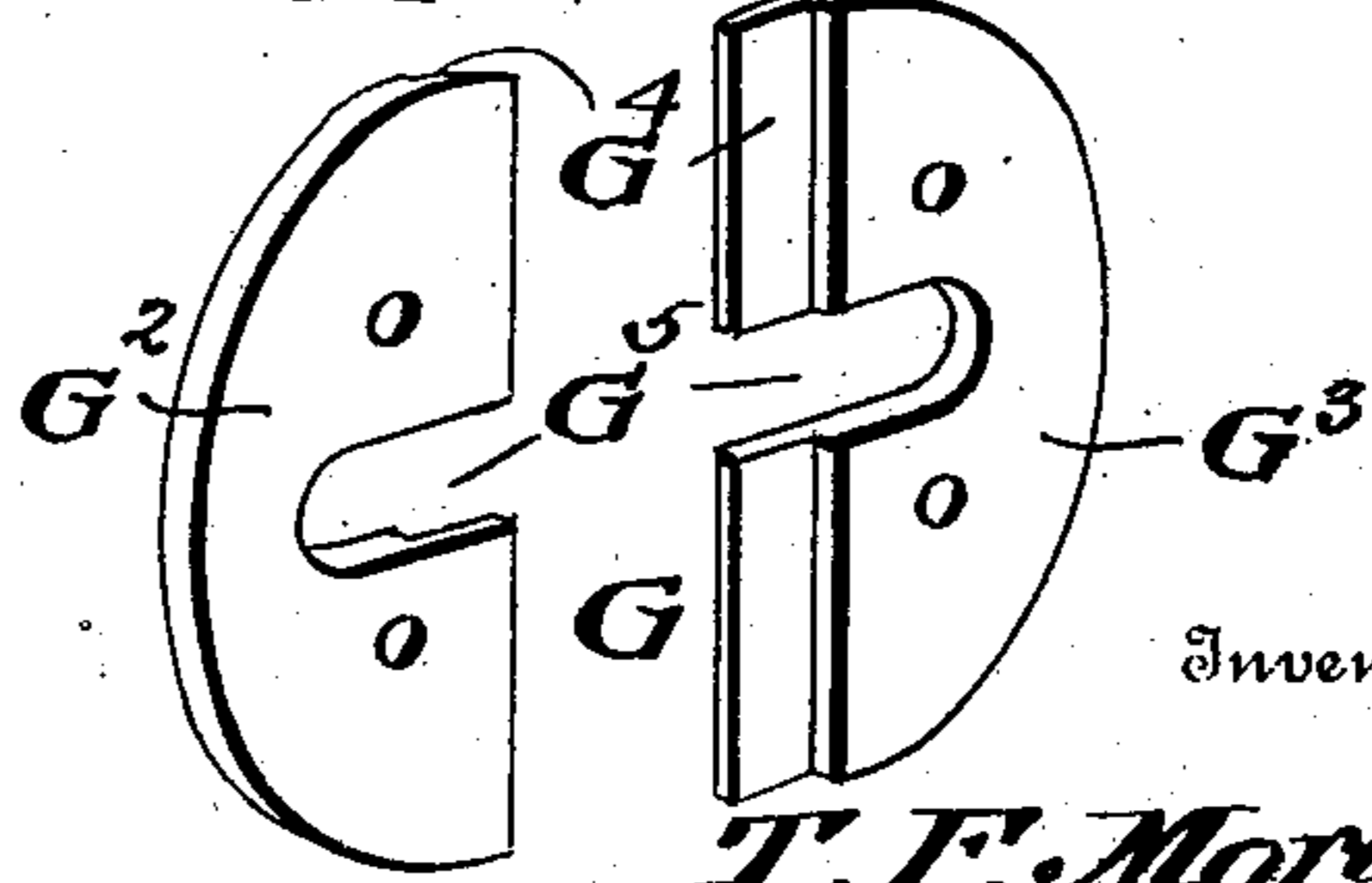


Fig. 5.

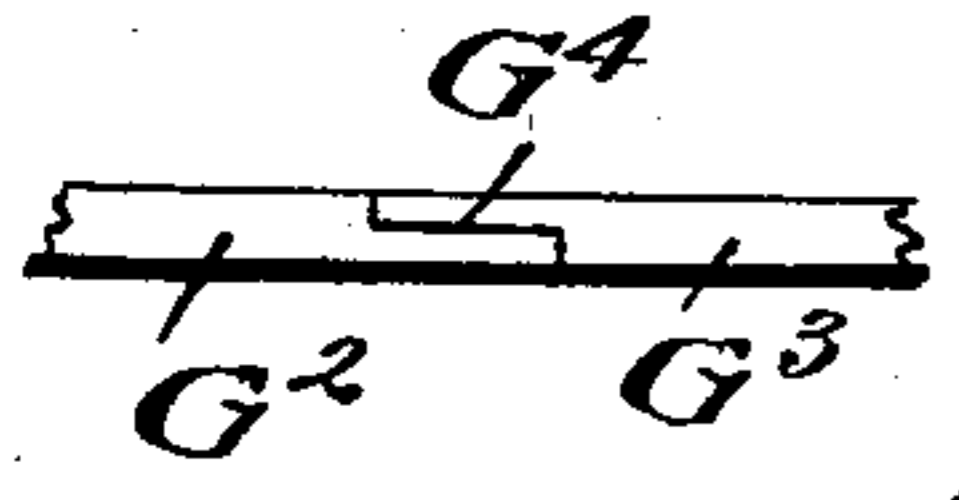
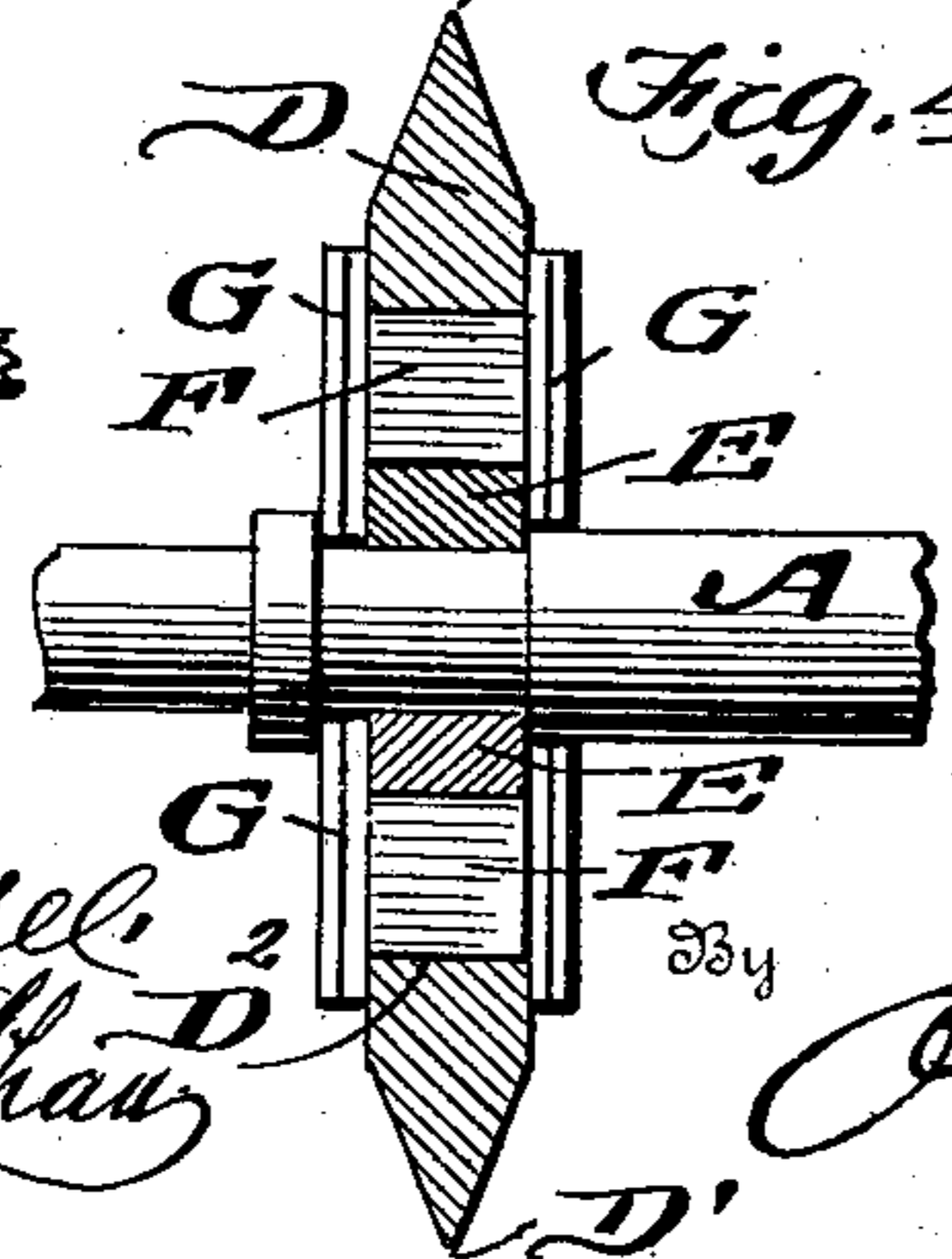


Fig. 6.



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UNITED STATES PATENT OFFICE.

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DEVICE FOR CUTTING ASPHALT.

SPECIFICATION forming part of Letters Patent No. 755,157, dated March 22, 1904.

Application filed May 28, 1903. Serial No. 159,196. (No model.)

To all whom it may concern:

Be it known that I, THOMAS F. MORAN, a citizen of the United States, residing at Philadelphia, in the State of Pennsylvania, have invented a new and useful Device for Cutting Asphalt, of which the following is a specification.

This invention is an improved device for cutting concrete or asphalt, the object being to provide an appliance by means of which an incision can be quickly and easily made in the surface of an asphalt or concrete pavement.

At the present time whenever it is desired to cut a trench or other excavation in a street having an asphalt or concrete pavement it is necessary to first cut the asphalt or concrete by means of chisels or wedges driven into the asphalt or concrete by means of sledges, and this operation requires a great deal of time and is consequently expensive, and, furthermore, the flying particles frequently do considerable damage.

It is with the object of avoiding all these defects and producing a device for quickly and easily cutting the asphalt or concrete that my present appliance has been devised; and, broadly speaking, the invention consists of a pair of cutting-disks arranged upon an axle, said axle being mounted in a suitable frame and carrying ground or supporting wheels at each end, the cutting-disks being of greater diameter than the supporting or ground wheels, so that when said wheels are moved along the surface the cutting-disks will cut into and through the asphalt or concrete covering.

The invention consists also in providing a transverse cutting-blade connecting the circular cutting-disks, by means of which the asphalt to be removed can be subdivided into blocks, thereby facilitating its removal.

The invention consists also in certain details of construction hereinafter fully described, and pointed out in the claims.

In the drawings forming part of this specification, Figure 1 is a perspective view showing the practical application of my invention. Fig. 2 is a side elevation of the cutting-disk arranged for operation. Fig. 3 is a side elevation of the same, showing the position the disk occupies when elevated and not in use.

Fig. 4 is a sectional view taken through the cutting-disk, the axle being shown in elevation. Fig. 5 is a detail perspective view showing the sectional plates, and Fig. 6 is a detail view showing an edge view of said plates interlocked.

In carrying out my invention I employ an axle A, which is journaled in suitable bearings A', connected to any construction of frame B, said frame being preferably provided with a platform portion B', upon which any desired weight may be placed. This frame B can be connected to a steam-roller, or it can be moved or drawn by any suitable power. The axle A has the ground-wheels C mounted thereon, and intermediate the wheels C the cutting-disks D are journaled upon the axle, said disks having a cutting edge D', preferably in the form of a double bevel or knife-edge. These cutting-disks are of a diameter greater than the ground or supporting wheels, so that as the frame is drawn along the cutting-disks will cut into the surface over which the ground-wheels pass. Each cutting-disk is formed with a rectangular-shaped opening D², through which the axle passes, and journal-boxes E are arranged in said opening upon opposite sides of the axle, and blocks F are fitted also in the opening for the purpose of holding the sections of the journal-box together, and the journal-box and packing-blocks are held in their proper positions by means of plates G, arranged upon the opposite sides of the disk, said plates being bolted to the disk by means of bolts G'. Each plate G is made in two sections G² and G³, the edges being rabbeted, as shown at G⁴, each plate-section being cut at the center, as shown at G⁵, to accommodate the axle. The cutting-disk D can be made from a single piece of metal, or it can be built up from a series of layers. Transverse cutting-blades H connect the cutting-disks at diametrically opposite points, the cutting edge of each blade extending flush with the cutting edge of the disks. When it is desired to cut the asphalt or concrete, the cutting-disk is arranged upon the axle as shown in Figs. 1 and 2 and the frame is rolled along the surface of the asphalt. The disks being of a diameter greater than the ground-wheels, they will cut

into the asphalt or concrete a distance equal to the excess of diameter, and the operation will be quickly and easily performed, dependent entirely upon the speed at which the frame is rolled.

When it is desired to transport the cutter from place to place, the packing-block below the axle is removed and placed above the upper packing-block, thereby leaving the cutting edge of the disk clear of the surface, as most clearly indicated in Fig. 3.

Any suitable fastening means may be employed for locking the disks against rotation upon the axle when they are lifted to an operative position.

It will thus be seen that I provide an exceedingly cheap, simple, and efficient construction of device for cutting asphalt and which will effectively perform all the objects hereinbefore mentioned.

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

1. A device for cutting asphalt, comprising an axle mounted upon ground-wheels, and a cutting-disk mounted also upon the axle independent of the said ground-wheels, and of a diameter greater than the diameter of the ground-wheels.

2. A device for cutting asphalt comprising an axle mounted upon ground-wheels, and a pair of cutting-disks mounted also upon the

axle, said cutting-disks being of a diameter greater than the ground-wheels and independent of the said ground-wheels, and the frame for carrying the axle, as specified.

3. In a device of the kind described, the combination with the frame, axle and ground-wheels, of the cutting-disks mounted upon the axle, and the cutting-blade connecting the cutting-disks, as specified.

4. In a device for cutting asphalt the combination with the frame, axle and ground-wheels, of the cutting-disks mounted upon the axle, and means for adjusting said cutting-disks upon the axle, as specified.

5. The combination with the frame, axle and ground-wheels, of the cutting-disks arranged upon the axle, the journal-boxes, the packing-blocks, and the plates for holding the journal-box and packing-blocks in place, substantially as described.

6. The combination with the frame, axle and ground-wheels, of the cutting-disks arranged upon the axle, the journal-boxes, the packing-blocks, and the plates for holding the journal-box and packing-blocks in place, and the cutting-blades connecting the cutting-disks at diametrically opposite points.

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