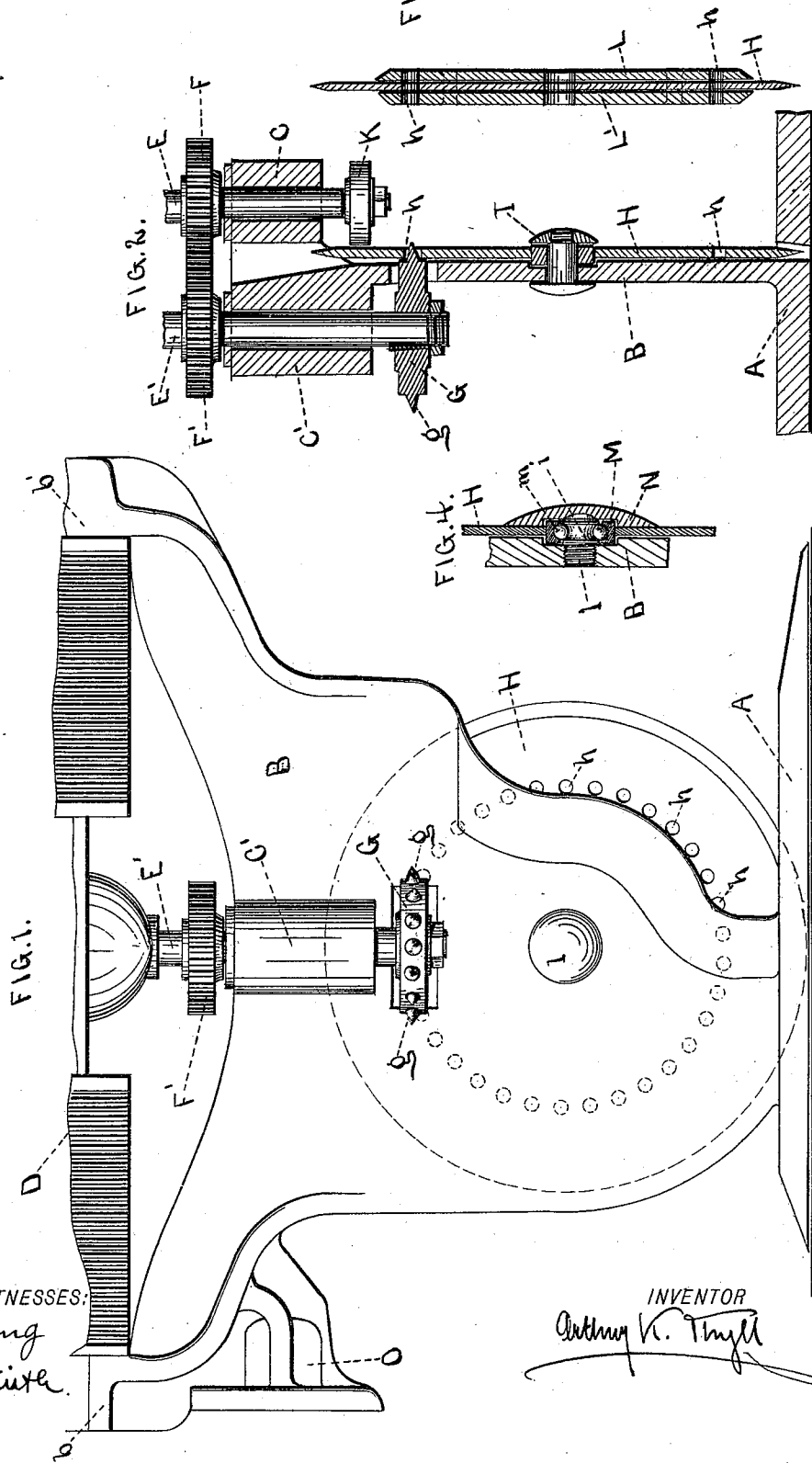


(No Model.)

A. K. THYLL.
CLOTH CUTTING MACHINE.

No. 511,563.

Patented Dec. 26, 1893.



WITNESSES:
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ARTHUR K. THYLL, OF NEW YORK, N. Y., ASSIGNOR TO THE ELECTRIC CUTTER COMPANY, OF SAME PLACE.

CLOTH-CUTTING MACHINE.

SPECIFICATION forming part of Letters Patent No. 511,563, dated December 26, 1893.

Application filed March 27, 1893. Serial No. 467,825. (No model.)

To all whom it may concern:

Be it known that I, ARTHUR K. THYLL, a subject of the Emperor of Austria-Hungary, and a resident of the city of New York, county of New York, and State of New York, have invented certain new and useful Improvements in Electric Cloth-Cutting Machines, of which the following is a specification.

My invention has reference to improvements in cloth-cutting machines, especially to that class of cutting machines in which an electric motor is mounted upon and carried by the machine for operating a disk shaped knife.

The object of this invention is to reduce as much as possible the thickness of all the parts traveling through the cloth when the machine is in operation, and to impart a uniform rotary motion to the cutting knife.

Another object of said invention is to enable this machine to cut above the center of the rotating disk shaped knife, thus reducing the size of the knife without decreasing the cutting height of the same. As the aforesaid object will compel me to use a very narrow bearing for this knife, it is necessary to apply a special construction to said bearing.

My invention is applicable to cutting machines of any character, but is especially adapted and is herein illustrated in connection with a type of "over board" cutting machines, so called because of its being moved around by hand over the work table when in operation, the power for driving the machine being derived from some suitable source such as an electric motor mounted upon and carried by the machine, flexible shafting, or some other similar device.

In the accompanying drawings Figure 1, represents a side view of my improved electric cloth-cutter. Fig. 2, is a cross section, through the center of the same. Fig. 3, shows the section of a special construction of the disk shaped knife; and Fig. 4 is an enlarged cross section, and partly a front view of the knife in connection with the improved bearing.

Referring by letter to the accompanying drawings, A indicates a base, out of any suitable material, having a flat circular shape and if desired mounted upon anti-friction rollers (not shown), and B indicates a stand-

ard cast or secured in any other way to the base A near the center of the same, supporting on its upper end two bearings C C', and also having on its front and back, sidewardly, extensions carrying one, or if desired, and as herein illustrated, two electric motors D D'. The upper end of this motor is provided with a bracket (not shown) supporting the top bearings of the two armature shafts E E' the lower ends of which bear in the two bearings C C', secured to the standard B. Two gear wheels F F' are keyed to the armature shafts E E' and mesh into each other. The lower end of the armature shaft E' carries a sprocket wheel G. The circular shaped knife H, is carried by a pin I fastened to the standard B. The knife H has a circle of holes h, which are the same distance apart as the pins g on the sprocket wheel. The sprocket wheel meshes into these holes, thus imparting the rotary motion of the armature shafts E E' to the disk knife H.

To the lower end of the shaft E is fastened a smaller roller K bearing against the side of, and thus preventing the knife H from bending in the direction of the pressure imparted to the same by the sprocket wheel G.

To reduce the noise created by running this machine, it is advisable to provide the knife H, with side plates L L', Fig. 3, made out of fiber, raw hide, or any other suitable material.

The pin I (Fig. 4) has a semi-circular groove and is surrounded by a divided ring M which also is provided with a semi-circular groove in completing a circular canal around the pin I, which canal is filled with balls. The ring M is driven into the knife and so bound as to revolve with the same. Pin I also has a round head N, large enough to prevent a wobbling motion of the rotating knife. This arrangement is shown in Fig. 4, and it has the object to reduce the friction on the knife-bearing to a minimum, allowing also to make said bearing of a very small width, without any possible danger of injuring the same by running the knife at a very high speed.

Standard B has an extension O for fastening a handle, and the machine also carries a suitable switch for starting and stopping the electric motors.

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

1. In an electric cloth-cutting machine the combination of a base provided with a standard carrying two bearings, two electric motors mounted on the top of the same, two gear wheels fastened to the armature shafts of said motors and meshing into each other, and a disk shaped knife provided with a circle of holes and a pin carrying said knife, and a sprocket wheel fastened to the lower end of one armature shaft meshing into the holes of the knife, substantially as set forth.

2. In an electric cloth-cutting machine the combination of two motors, two gear wheels on the armature shafts of said motors meshing into each other, a sprocket wheel fastened to one armature shaft, a roller fastened to the other, a disk shaped knife having two side plates and a circle of holes.

3. In an electric cloth cutting machine, the combination of a base, with a standard having two bearings, two electric motors, the armature shafts of which are journaled in the said bearings and have gear-wheels meshing with each other, a sprocket-wheel keyed to one armature-shaft, a disk shaped rotary knife having noise-deadening side-plates, the knife and side-plates having a circle of perforations which correspond with the pins of the sprocket-wheel, and a roller, keyed to the second armature shaft and pressing upon the opposite face of the knife, substantially as set forth.

In testimony that I claim the foregoing as my invention I have signed my name, in presence of two witnesses, this 16th day of March, 1893.

ARTHUR K. THYLL.

Witnesses:

L. A. SMITH,

E. MILLINGTON WARING.