

(No Model.)

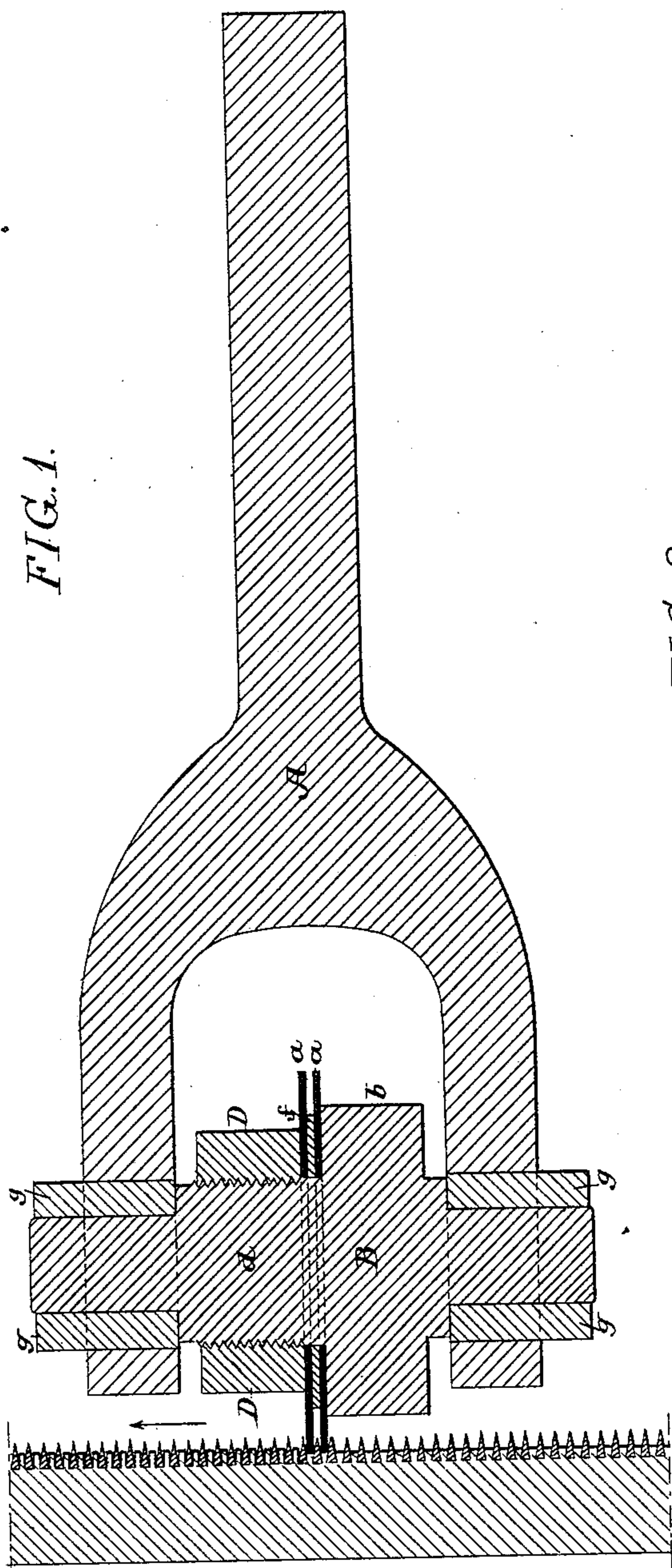
H. L. MOULTON & W. H. CLARKSON.

MANUFACTURE OF TOOTHED CYLINDERS.

No. 368,418.

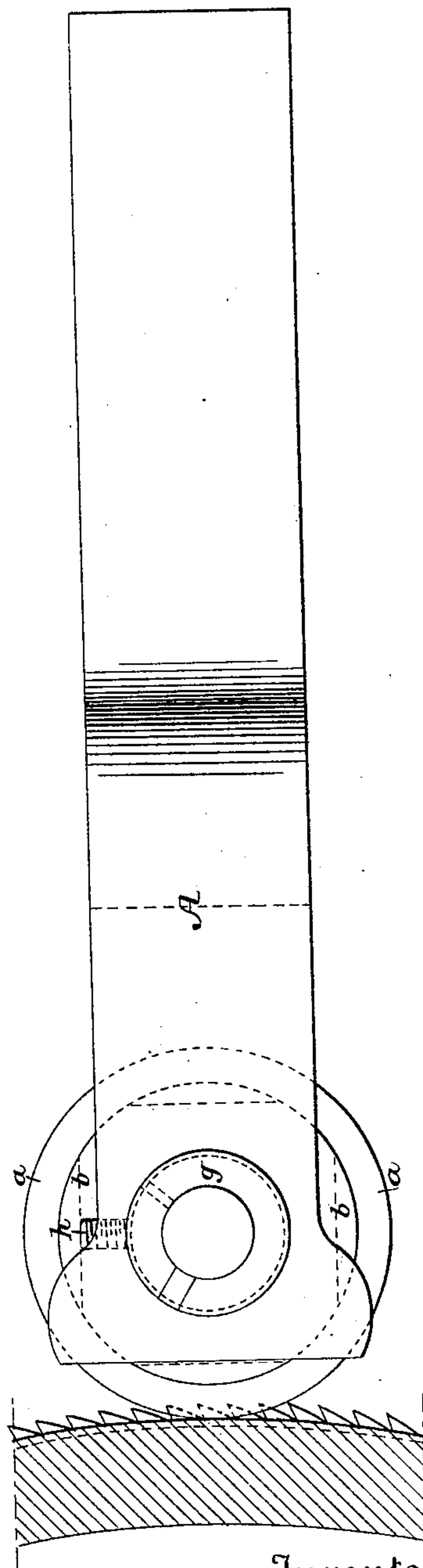
Patented Aug. 16, 1887.

FIG. 1.



Witnesses
Alex. Barkoff
William D. Bonner.

FIG. 2.



Inventors
Hamilton L. Moulton &
William H. Clarkson

By their Attorneys *Horton & Sons*

UNITED STATES PATENT OFFICE.

HAMILTON L. MOULTON AND WILLIAM H. CLARKSON, OF PHILADELPHIA, PENNSYLVANIA, ASSIGNORS TO THE JAMES SMITH WOOLEN MACHINERY COMPANY, OF SAME PLACE.

MANUFACTURE OF TOOTHED CYLINDERS.

SPECIFICATION forming part of Letters Patent No. 368,418, dated August 16, 1887.

Application filed April 30, 1887. Serial No. 236,627. (No model.)

To all whom it may concern:

Be it known that we, HAMILTON L. MOULTON and WILLIAM H. CLARKSON, both citizens of the United States, and residents of Philadelphia, Pennsylvania, have invented certain Improvements in the Manufacture of Toothed Cylinders for Textile Machinery, of which the following is a specification.

Our invention consists of an improvement in the mode of and means for securing toothed rings to cylinders of textile machinery, the objects of our invention being to facilitate this operation and to insure the proper action of the calking implement employed.

In the accompanying drawings, Figure 1 is a sectional view of part of a toothed cylinder and a calking-tool, illustrating our invention; and Fig. 2 is a view showing the tool in elevation and a part of the cylinder in section.

In making toothed cylinders for textile machinery it is a common practice to cut a thread on the cylinder and then to wind in the spiral groove thus formed a toothed strip of steel beveled in cross-section or expanded at the base, the thread or metal of the cylinder between the strips being then pressed down or calked against the expanded bases of the strips, so as to retain the same. This is usually done by mounting the cylinder in a lathe and securing to the tool-post a bar carrying a disk which is free to rotate and which presses upon and calks the thread of the cylinder, the rate of speed at which the disk is traversed laterally being regulated by the pitch of said thread. It has recently been proposed, however, to form in the cylinder a multiple thread and to use for clothing the cylinder as many independent toothed strips as there are threads, such invention forming the subject of our application for patent filed on the 26th day of March, 1887, Serial No. 232,591, and one feature of our invention is an expeditious plan of calking such multiple-thread cylinders.

In the accompanying drawings our invention is shown as applied to the calking of a cylinder having a double thread and two strips wound in the grooves between the threads.

A is the carrying-bar having a stem for adaptation to the tool-post of the lathe and

forked at the inner end to form bearings for a spindle, B, which carries a pair of calking-disks, *a*, said spindle having a collar, *b*, forming a bearing for the inner disk, and a threaded portion, *d*, to which is adapted a nut, D, bearing upon the outer disk, a washer, *f*, being interposed between the two disks, which washer, as well as each disk, is of a thickness determined by the gage of the thread on the cylinder. The spindle B has its bearings in split sleeves *g*, carried by the forked bar A and acted upon by set-screws *h*, so that they can be adjusted to take up wear.

It will be seen that by the use of the above-described tool both threads of the cylinder will be simultaneously calked over the bases of the adjoining toothed strips, the operation of calking being effected in one-half the time that would be required if but a single disk-tool were employed, and where the cylinder has more than two threads and the tool more than two disks the time gained in calking the cylinder will be increased in proportion.

In the usual calking-tool the disk turns on a fixed spindle; but such tool is objectionable because the rapid wear upon the disk and spindle soon causes the disk to run irregularly, an objection which we overcome by mounting the disks rigidly upon the shaft or spindle and permitting the latter to turn in bearings which can be readily adjusted to compensate for wear.

We claim as our invention—

1. As an improvement in the manufacture of toothed cylinders for textile machinery, the mode herein described, which consists in first forming a multiple thread on said cylinder, then winding independent toothed strips in the spiral grooves thus produced, and then applying pressure simultaneously to all of the threads of the set, so as to calk them against the bases of the toothed strips, all substantially as specified.

2. The within-described tool for calking toothed cylinders of textile machinery, said tool consisting of a bar and a spindle carried thereby, and having two or more calking-disks, all substantially as specified.

3. The combination, in a calking-tool, of a spindle, a series of disks carried thereby, and

an interposed washer or washers for separating said disks, all substantially as specified.

4. The combination, in a calking-tool, of a spindle, one or more calking-disks rigidly secured thereto, and a bar having bearings in which said spindle is free to turn, all substantially as specified.

In testimony whereof we have signed our

names to this specification in the presence of two subscribing witnesses.

HAMILTON L. MOULTON.
WM. H. CLARKSON.

Witnesses:

WILLIAM D. CONNER,
HARRY SMITH.