L. BEAN & J. M. BUTTERS.

Machine for Turning Bobbins.

No. 164,130. Patented June 8, 1875.

Fig. 1

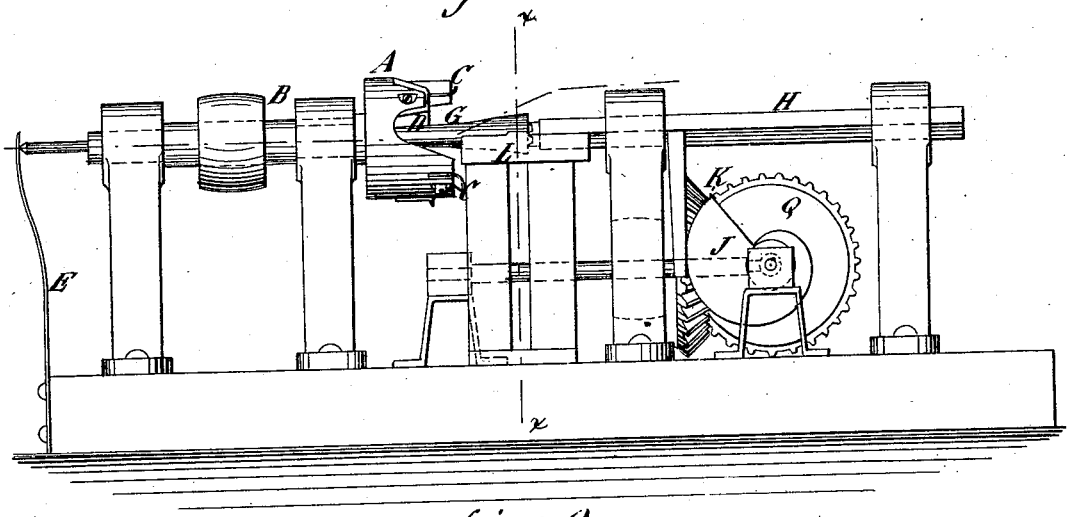


Fig. 2

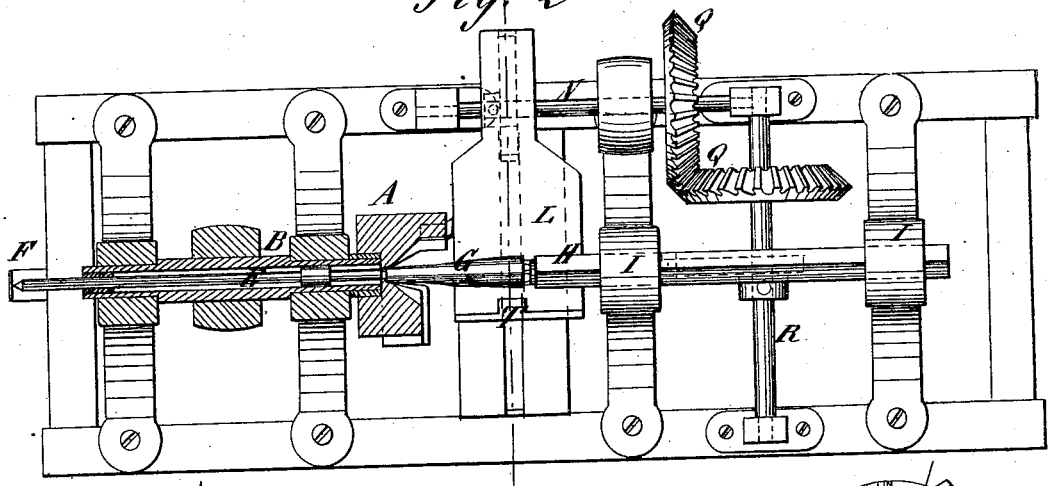


Fig. 3

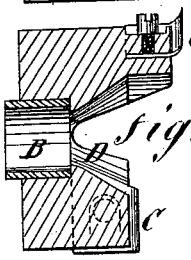


Fig. 4

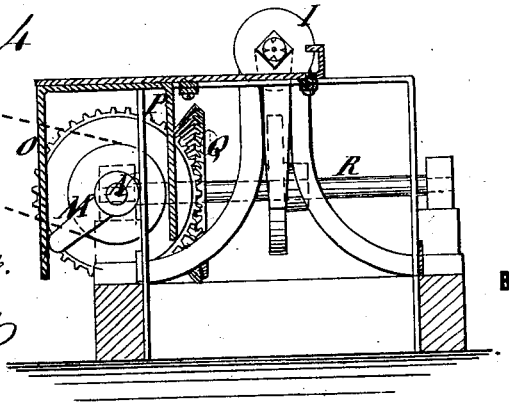
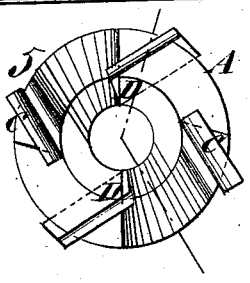


Fig. 5



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UNITED STATES PATENT OFFICE.

LUTHER BEAN AND JAMES M. BUTTERS, OF STRATFORD HOLLOW, N. H.

IMPROVEMENT IN MACHINES FOR TURNING BOBBINS.

Specification forming part of Letters Patent No. **164,130**, dated June 8, 1875; application filed October 24, 1874.

To all whom it may concern:

Be it known that we, LUTHER BEAN and JAMES M. BUTTERS, of Stratford Hollow, in the county of Coos and State of New Hampshire, have invented an Improvement in Machines for Turning Bobbins, of which the following is a specification:

My invention consists of a revolving cutter-head on a hollow mandrel, and having a sliding center, in combination with another sliding center, and a sliding table, all being worked automatically, and so arranged that the blanks, being supplied to the table by hand, will be automatically introduced between the centers, and turned, and discharged rapidly and efficiently.

Figure 1 is a side elevation of my improved machine. Fig. 2 is partly a plan view, and partly a horizontal section. Fig. 3 is a transverse section taken on the line *x x* of Figs. 1 and 2. Fig. 4 is a sectional elevation of the cutter-head, and Fig. 5 is a front elevation of it.

A represents the revolving cutter-head, and B its hollow mandrel. It contains one set of cutters, C, for roughing the blank, and another set, D, for producing the finished shape. The mandrel contains a sliding center, E, which has a spring, F, for pushing it forward out of the cutter-head to receive the blank G, and for discharging the bobbin. H is another sliding center, which is fixed in the heads I so as not to revolve, in order to hold the blank so that it will be turned by the revolving cutters. This center is pushed forward to feed the blank to the cutters by the cam J, which also pushes center E back against its spring. When the point K of the cam passes the end of the center H the spring F pushes the centers back and the bobbin out of the cutter to be discharged. L is a table or carrier, on which the blanks are placed to be delivered to the centers. It slides forward and backward in front of the cutter-head, being moved by the tappet M on the shaft N working against the pendent bars O P of the slide. This shaft gears by bevel-wheel Q and the shaft R, which carries the cam J, and the arrangement is so that the movement of the table is timed relatively to the movement of the centers, so as to present a new blank between them at the moment they are moved back by the spring F, and the finished bobbin is discharged. The center H moves enough farther back than the other one does to free the bobbin from the points of both centers, and the blank in the table pushes it away, takes its place, and is secured by the center H being pushed against it by cam J. T is a little clip on the table, which holds the blanks as they are carried into position between the centers.

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

1. The combination of the cutter-head A, hollow mandrel B, sliding centers E H, and the sliding table or carrier L, substantially as specified.

2. The combination of cam J, spring F, centers E H, sliding table L, tappet M, camshaft, tappet-shaft, and the gearing connecting the said shafts, all substantially as specified.

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