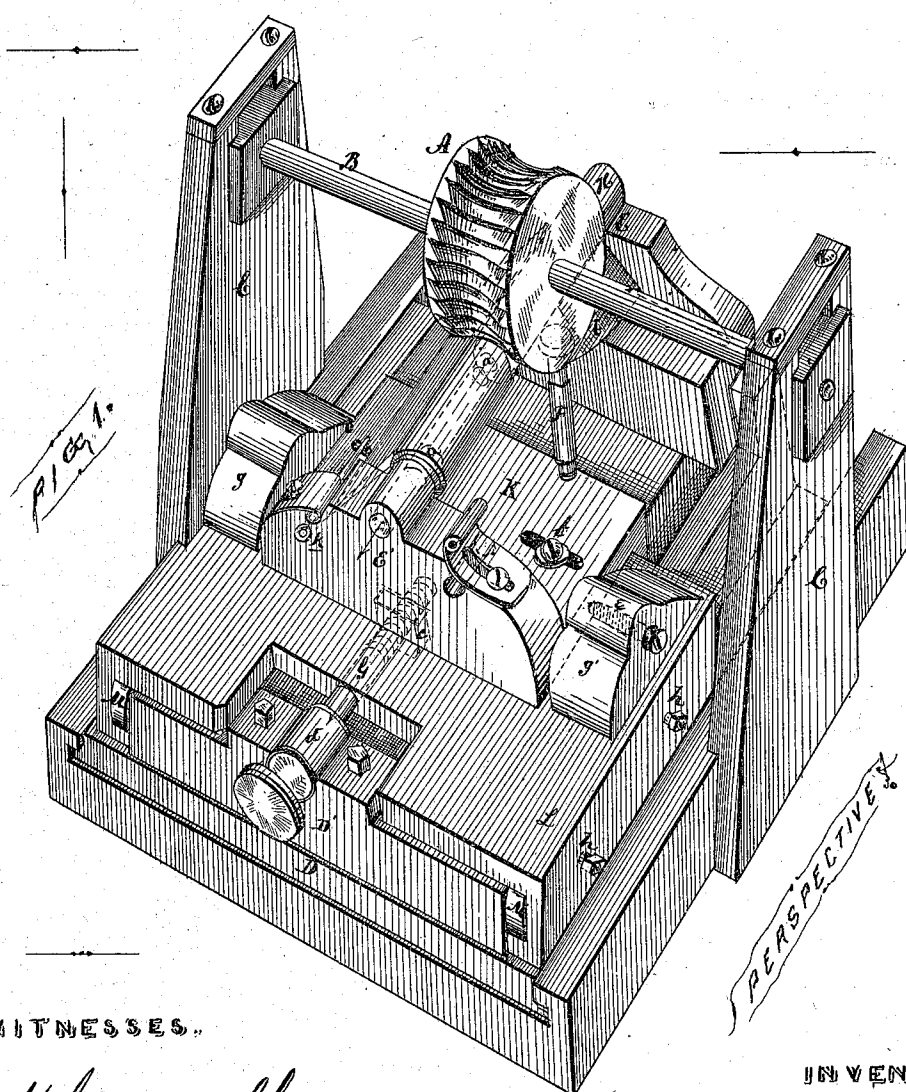


E. PARKER.
MACHINE FOR MILLING KNUCKLES OF BUTT HINGES.
No. 105,487. Patented July 19, 1870.



WITNESSES.

M. J. Wooduff
Henry C. Russell

INVENTOR

Emery Parker

E. PARKER.

MACHINE FOR MILLING KNUCKLES OF BUTT HINGES.

No. 105,487.

Patented July 19, 1870

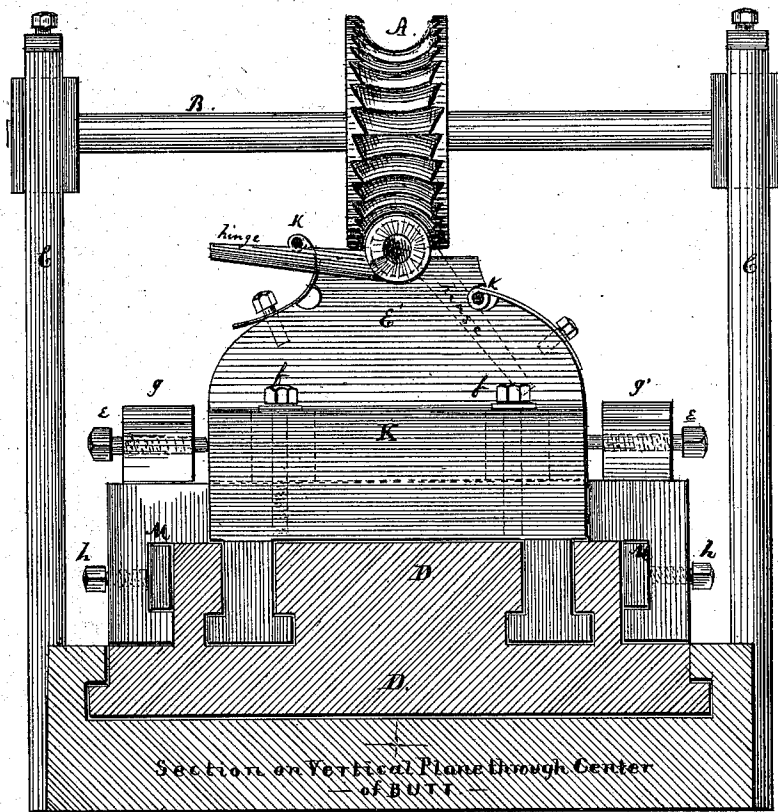


FIG 2.

WITNESSES.

M. J. Woodruff
Henry C. Russell

INVENTOR.

Emery Parker

United States Patent Office.

EMERY PARKER, OF NEW BRITAIN, CONNECTICUT, ASSIGNOR TO RUSSELL & ERWIN MANUFACTURING COMPANY, OF SAME PLACE.

Letters Patent No. 105,487, dated July 19, 1870.

IMPROVED MACHINE FOR MILLING THE KNUCKLES OF BUTT-HINGES.

The Schedule referred to in these Letters Patent and making part of the same

To all whom it may concern:

Be it known that I, EMERY PARKER, of New Britain, in the county of Hartford and State of Connecticut, have invented a new and useful Improved Machine for Milling the Knuckles of Butt-Hinges; and I do hereby declare that the following specification, taken in connection with the drawing making a part of the same, is a full, clear, and exact description thereof.

Figure 1 is a view of the machine in perspective. Figure 2 is a vertical section.

The machine hereinafter described is intended to be employed in milling the knuckles of that class of bronze-metal butt-hinges which are usually of ornamental character, and of costly finish. Heretofore the knuckles of such hinges have, so far as I am aware, been finished by the file, which has added much to their cost, and is, besides, a method deficient in the degree of accuracy desirable.

Some of the parts constituting the machine are common to many machines for milling metal. Other parts, to be particularly designated, are adapted to the peculiar necessities of a machine for this special purpose.

A is a milling-tool, mounted on the shaft B, which is set in proper bearings in the standards C C, and is to be revolved by power.

The face of the milling-tool is adapted to the cylindrical form of the knuckle. The leaf of the butt-hinge to be milled is, irrespective of the particular apparatus contrived for holding it and adjusting it to the action of the cutter A, arranged upon a sliding bed, D, which is capable of being moved in a right line, tangential to the face of the cutter, after the mode of operation of most milling-machines.

The features of construction peculiar to this machine are found in the devices for accommodating the leaf of the hinge which is to be milled, and in the combination of such devices with the sliding bed.

E is a stationary back rest; and

E', a movable front rest.

Each rest is furnished with a pintle, *a*, to enter the hole which has already been drilled through the knuckle of the leaf of the hinge to be milled. The back rest E, being necessarily somewhat longer than the knuckle of a hinge, should be stiffened by a rib, *b*, and be further rendered rigid by a martingale-brace, F.

The front rest is capable of a backward and forward movement upon the bed D, to enable the leaf of the hinge to be introduced, and to be removed when milled.

This movement is effected by the screw G working in the fixed nut *c*, set in the bed-piece L of the front rest, the shank of the screw being held by a collar, *d*, attached to the underlying block D', attached to the sliding bed D.

It is necessary that the knuckle should be milled, so that, when the two leaves of a hinge are put together, they will be in complete alignment. Accordingly, some provision for an adjustment of the front rest laterally is indispensable.

That portion of the back rest E which is indicated by H is a stationary or dummy knuckle, with reference to which the knuckle of each leaf of the hinge is to be aligned in the machine; and, in order that it may be used for the purpose, it is made in form like a finished knuckle, and set permanently upon its supporting piece E, so that its axis will, if the hinge knuckle to be milled be correctly aligned therewith, coincide with the axis of the latter.

The diameter of the dummy knuckle should be somewhat less than that of the knuckle to be dressed, so that the milling-tool will not touch its surface, but the difference should not be so great as to fail to afford a fair sight across its surface, so as to effect a proper alignment with it of the hinge knuckle.

I I' are check-pieces, furnished with check-screws, *e*, the ends of which bear against the base-piece K of the front rest, and clamp-bolts *f* pass through transverse slots in such base-piece, and enter threaded holes in the sliding bed. By these means for adjustment the knuckle can be aligned with dummy H, and, when the two leaves of a hinge are brought together, the knuckles will be in line.

To compensate for the effects of wear in the sliding bed, gib-pieces, M, which are strips of steel with parallel faces, are introduced between the lips of the bed-piece L, which supports the front rest, and the underlying block D' attached to the sliding bed-piece D. Check screws, *h*, are inserted in the side of the lips of the bed piece, by means of which any slight derangement of the proper relation of the front to the back rest can be corrected.

In operation, one half of the hinge is set on the supporting pintles, as explained, and held at the proper angle for the milling operation by means of a bolt-pin, *k*. The leaf is then turned to the opposite side, as shown in dotted lines, fig. 2, and the remaining portion of its cylindrical barrel milled. The two cuts of the milling-tool dress the knuckle up to its junction with the leaf.

What I claim as my invention, and desire to secure by Letters Patent, is—

1. Constructing the back rest E with a dummy knuckle H, and suitable support *e*, substantially as described, for the purposes specified.

2. The adjustable front rest E', the adjustable bed-piece L, and the stationary back rest E, all in combination, substantially as described.

EMERY PARKER.

Witnesses:

M. J. WOODRUFF,
HENRY E. RUSSELL, 2d.