

W. P. Lathrop.

Making Cutlery.

N^o 42,005.

Patented Mar. 22, 1864.

Fig. 3.

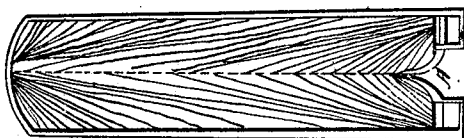


Fig. 2.

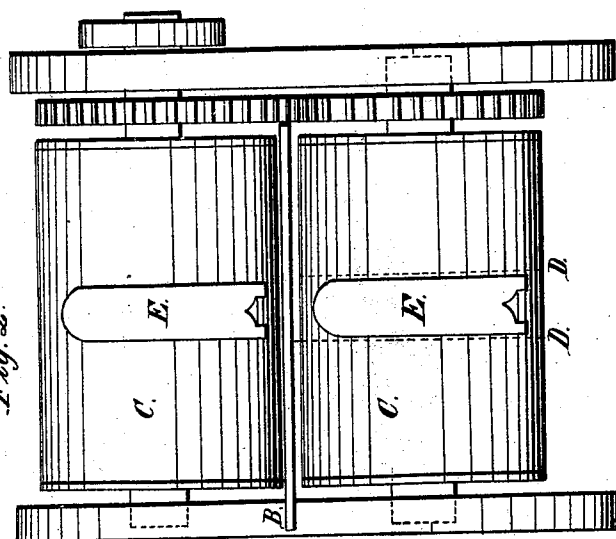
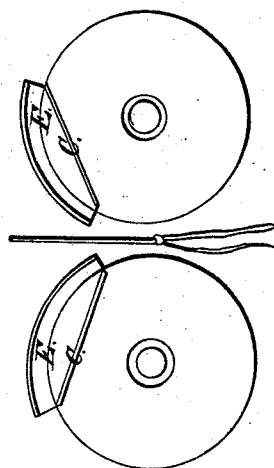


Fig. 1.



UNITED STATES PATENT OFFICE.

WILLIAM P. LATHROP, OF WINCHESTER, CONNECTICUT.

IMPROVEMENT IN MACHINES FOR ROLLING KNIFE-BLADES.

Specification forming part of Letters Patent No. 42,005, dated March 22, 1864.

To all whom it may concern:

Be it known that I, WILLIAM P. LATHROP, of Winchester, Litchfield, county and State of Connecticut, have invented a new and improved combination of dies and guides for making knife-blades, particularly adapted to the manufacture of table-cutlery, the object of which is to form two blades expeditiously, with little waste of metal, at one and the same time, and with one heat, connected at the edges (in this machine the dies are so constructed that the blades, when passed from under the rollers, are connected at the edge) to be cut apart by a press, die, shears, or other mechanical contrivance.

The peculiarity of the revolving dies which form the blades is, they give a taper, a bevel, and a curvilinear form to the blade, as seen in section No. 3, herewith connected. I use the sheet-steel of a gage thickness equal to the thickness desired for the back of the knife at the bolster, the sheet of metal to be of a width sufficient for the length of the blank for a knife cut transversely with a press, die, or otherwise. The plate may be reversed at every cut to compensate for the angular cut which will give each blank a true taper from heel to point, or from bolster to point, so as to admit it easily between the lateral transverse guides of the dies between the cylinders. These blanks must be of a width and length to contain a sufficient quantity of metal to make a blade perfect in all its proportions when rolled to any desired size. A slot is cut in the broad end of the blanks, as seen in section No. 3, letter A, either with the die when the blank is cut from the sheet, or by a subsequent operation, as most economical. When the double blank has been passed through the rollers, it is to be cut apart longitudinally along the dotted line, as seen in section 3. The heel of the blank or tenon is now fitted to enter the slot of a malleable cast-iron (or other metal) bolster. The blanks are sufficiently heated and taken by the operator with a pair of tongs, the lips of which will take hold of

the blank at letter A, just as far as the square portion of the slot extends into the blank. The blank is pushed between the rollers C within the lateral transverse guides D, until a stop on the under lip of the tongs meets the longitudinal guide-bar B, and as the rollers revolve outwardly from the center the forming-dies E, as seen in section No. 1, meet the blank on each side close to the lip of the tongs, rolling it from the dies still held in the tongs of the operator, forming a couplet of perfect blades. The dies are strongly fastened into rollers C, one die in each. These are so shaped as to form the obverse and reverse of two perfect blades when cut through the center, as seen in section No. 3.

The great object of rolling blades in couplets is not only a saving of much expense and time, but it counteracts the great difficulty met with in rolling a single blade with a thin edge—viz., the tendency to crook from the thin edge. By this method that tendency is entirely obviated, each blade counteracting the effect of its fellow blade.

The transverse lateral guides are for the purpose of keeping the blank in exact position between the dies; also, to form a full square back on each side of the blank, and to prevent the side lash of the rollers. These guides are sufficiently strong to control the dies in the rollers, which exactly fill the space between them. The red semi-longitudinal lines in section 3 show the curvilinear or winding form given to the blades by passing through between the roller-dies.

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

The combination of mechanism for making knife-blades economically, expeditiously, and in a way not now in use, as herein described, or by any other mode substantially the same.

W. P. LATHROP. [L. S.]

Witnesses:

E. S. WOODFORD,
ANNIE C. WOODFORD.