R. ALDRICH.

MACHINES FOR MAKING PICKER-TEETH.

No. 192,669. Patented July 3, 1877.

Fig. 1

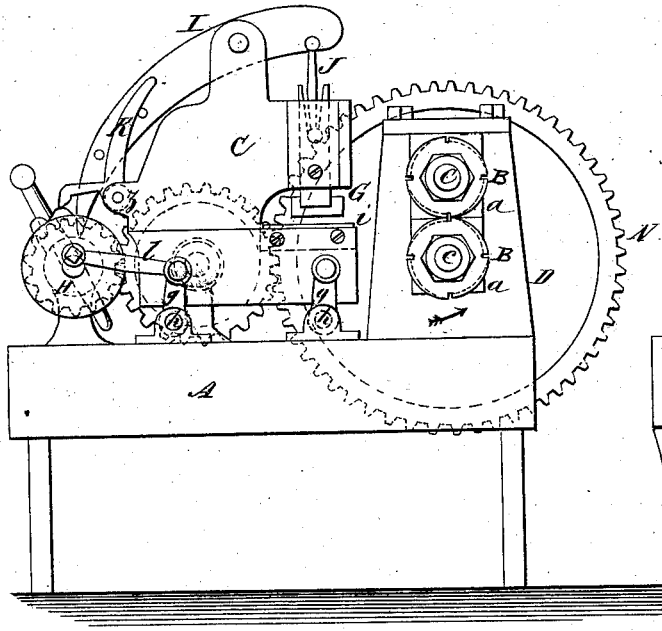


Fig. 2

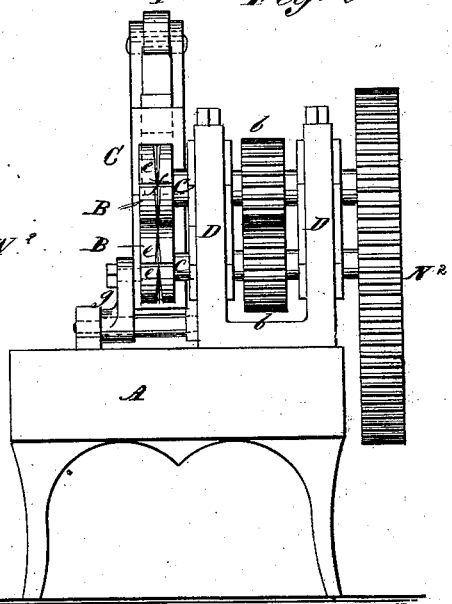


Fig. 3

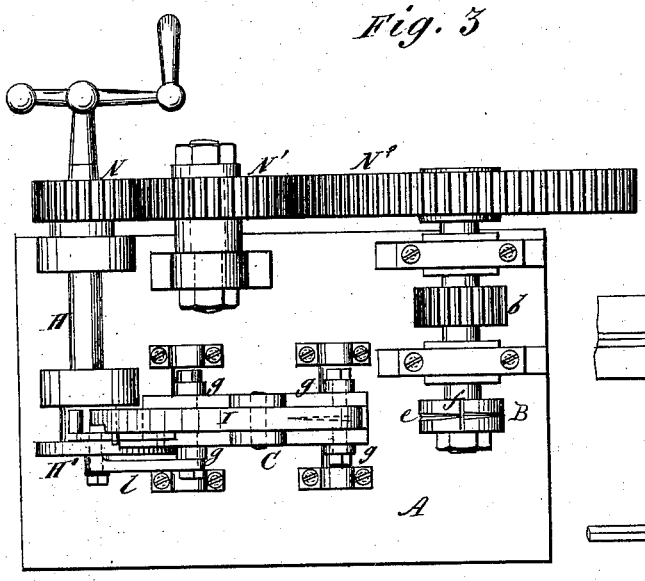


Fig. 4

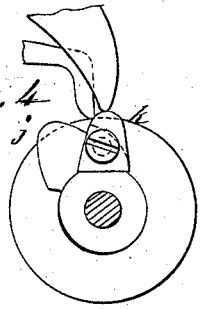


Fig. 5

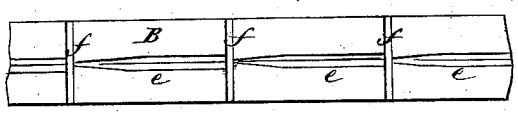


Fig. 6

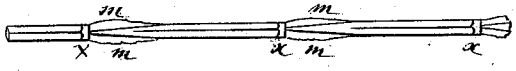
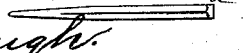


Fig. 7



WITNESSES:

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ROBERT ALDRICH, OF MILLVILLE, MASSACHUSETTS.

IMPROVEMENT IN MACHINES FOR MAKING PICKER-TEETH.

Specification forming part of Letters Patent No. **192,669**, dated July 3, 1877; application filed May 5, 1877.

To all whom it may concern:

Be it known that I, ROBERT ALDRICH, of Millville, in the county of Worcester and State of Massachusetts, have invented a new and Improved Machine for Making Picker-Teeth, of which the following is a specification:

Figure 1 is an elevation of one side of the machine. Fig. 2 is an elevation of one end of the machine. Fig. 3 is a plan view. Figs. 4 and 5 are details, and Figs. 6 and 7 show the teeth in blank and when finished.

Similar letters of reference indicate corresponding parts.

The object of my invention is to produce from metal rods shoddy-picker teeth by a process of swaging; and the nature of my invention consists in rotating swaging-dies adapted to give the desired shape to the picker-teeth in combination with a punch which is applied to a horizontal reciprocating stock, as will be hereinafter explained.

In the annexed drawings, A designates the table or bed of my improved machine, and D D are two pillow-blocks, in which are applied journal-boxes *a a*. These boxes *a* afford bearings for the shafts *c c* of twin spur-wheels *b b*. Shafts *c c* carry circular dies B B, the peripheries of which have indentations *e* made in them adapted to give the required shape to the picker-teeth. (Shown by Fig. 7.)

The transverse slots or indentations *f* in the peripheries of the dies B B leave heads on the teeth, which are lettered *x* in Figs. 6 and 7.

C designates a stock or head which is borne by vibrating arms *g g* rising from and keyed to oscillating shafts *h*. This stock is constructed to receive removable bed-plates *i*, and also a punch, G, which latter receives vertical motion from cam-toes *j k* on a driving-shaft, H, by means of a curved lever, I, pitman-rod J, and an angular lever, K.

A wrist-pin, which is eccentrically applied on the face of a plate, H′, on driving-shaft H, operates on a pitman-rod, *l*, and gives reciprocating motion to the punch-head C.

The angular lever K has its fulcrum at *z* on the head C, and its longest curved arm plays between two studs on one side of the lever I.

The teeth are formed continuous from a round or angular rod of metal by the operation of the swaging-dies B B, which leave fins *m m*, (shown in Fig. 6,) and these fins are cut off by the punch G.

The operation of my machine is as follows:

The shaft H being rotated, motion, in the direction indicated by the arrows in Fig. 1, is communicated to the circular dies B B through the medium of spur-wheels N N^1 N^2 and *b b*. The dies B B operate as feeders and move the rod forward continuously at the same time that they give the swaging impressions. The punch G operates in harmony with the motion of the dies, and alternately moves toward them and severs the fins from the teeth, at the same time cuts the teeth from the rod. The cam-toe *j*, acting on the longest arm of lever I, gives the descending motions to the punch G, and the cam-toe *k*, acting on the angular lever K, raises the punch. These movements are synchronous with the movement of the dies.

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

The punch G applied to a reciprocating stock, C, and actuated by means described, in combination with the circular swaging-dies B B, as set forth.

ROBERT ALDRICH.

Witnesses:

THOMAS T. SMITH,

LINDLEY M. GASKILL.