T. E. & H. YATES, W. H. & S. KELLETT.

MACHINE FOR MANUFACTURING CARDS FOR CARDING FIBERS.

No. 186,396. Patented Jan. 16, 1877.

Fig. 2.

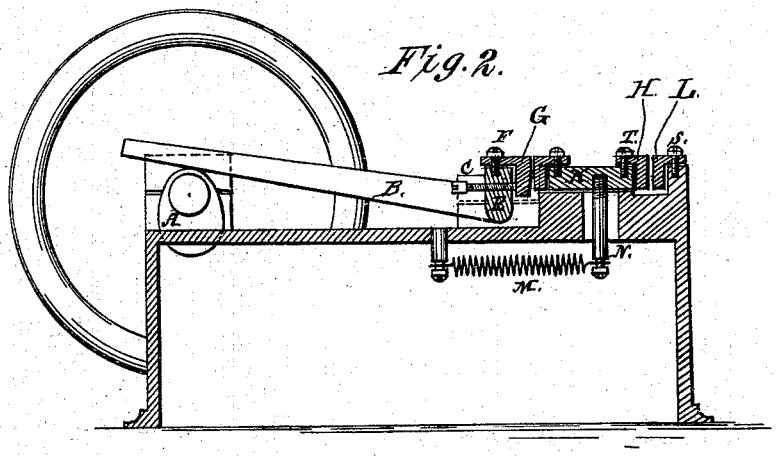


Fig. 1.

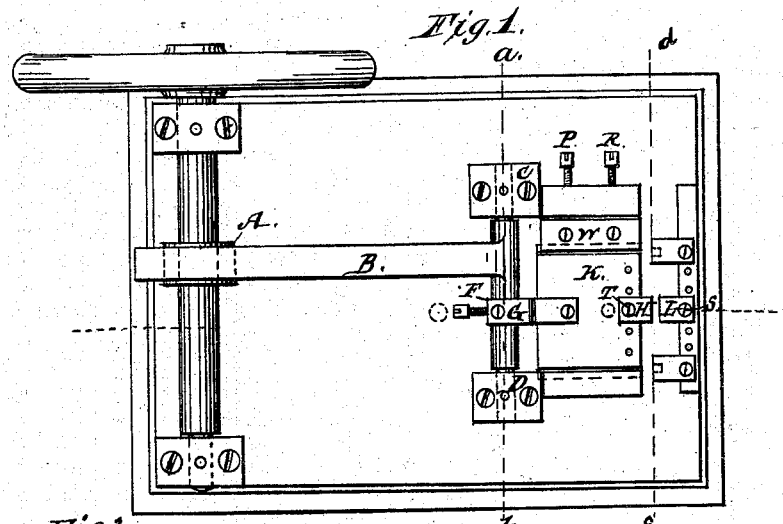


Fig. 3.

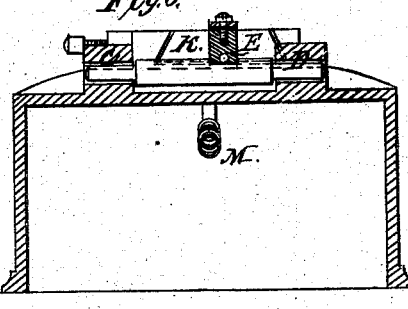
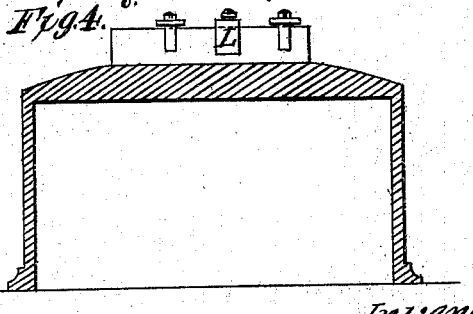


Fig. 4.



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UNITED STATES PATENT OFFICE.

THOMAS E. YATES, HENRY YATES, WILLIAM H. KELLETT, AND SIMON KELLETT, OF CLECKHEATON, ENGLAND.

IMPROVEMENT IN MACHINES FOR MANUFACTURING CARDS FOR CARDING FIBERS.

Specification forming part of Letters Patent No. **186,396**, dated January 16, 1877; application filed November 11, 1876.

To all whom it may concern:

Be it known that we, THOMAS EDWARD YATES, HENRY YATES, WILLIAM HEATON KELLETT, and SIMON KELLETT, all of Cleckheaton, in the county of York, England, have invented certain Improvements in Machines for Manufacturing Cards for Carding Fibers, of which the following is a specification:

This invention has for its object improvements in machines employed in the manufacture of cards, or card-teeth employed for carding fibers, and relates specially to that class of card-tooth the working portion of which—that is to say, from the points to the bend—is flattened, while the other portion of the tooth is round, or of the original form of the wire from which the tooth is made. For the purpose of manufacture of card-teeth of the form above described, we apply to card-setting machines a pair of dies. One is a fixed die; the other advances at intervals upon the fixed die, and flattens the wire as fed into the machine.

The drawing shows only such parts as are comprised by or immediately connected with our invention, as it will be understood that the mechanism for "setting" the cards is of the ordinary description.

Figure 1 is a plan view of part of a card-setting machine, having our improvements applied. Fig. 2 is a vertical section of Fig. 1. Fig. 3 is a cross-section on line *a b;* Fig. 4, a section on the line *c d.*

A is an eccentric on the main driving-shaft of the machine. B is a T-shaped lever, rocking on its ends in the pedestals C D. At E is an upright projection, being part of the lever B, and to which, by screw F, the adjusting-piece G is attached. H is a die, secured by screw T to the slide-block K. L is another and stationary die. It will be seen that on each revolution of the main shaft the eccentric A will, by means of the T-lever, adjusting-piece G, and slide-block K, cause the die H to advance upon the die L, and so nip and flatten the portion of the wire between them, and this flat part will, on the wire being cut and set by a setting-machine, form the working part of the card—that is to say, from the point to the bend of the tooth will be of flattened wire. When the eccentric has passed its greatest "throw," the pressure will be taken off the die H, whereon the spiral spring M will, by means of the pin N, draw back the slide K and the die H away from the fixed die L, so that the ordinary feed of the machine may act, and another portion of wire will be brought between the dies to be flattened, and so on at each revolution of the shaft and eccentric. The adjusting-screw F and piece G admit of the degree of flattening imparted to the wire, being regulated with nicety. The dies may also be regulated laterally by means of the screws S and T, and at P and R are screws for adjusting the block W relatively to the slide-piece K.

We claim—

The combination of the stationary die L, and guides at each side of the same, with the die H, slide K, adjustable shoe G on the actuating-lever B, and means substantially such as described for imparting to the said lever a vibratory movement, and substantially as specified.

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