

JAMES MILNE.

Improvement in Machines for Making Blinds.

No. 128,057.

Patented June 18, 1872.

Fig. 1

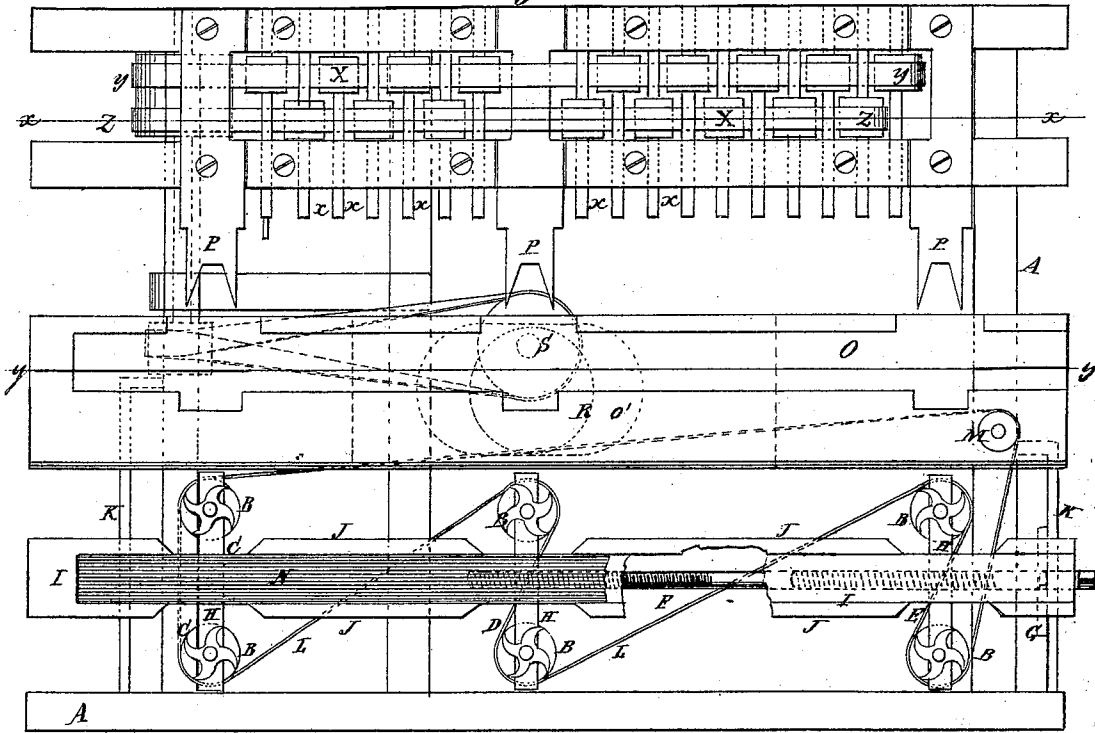


Fig. 2

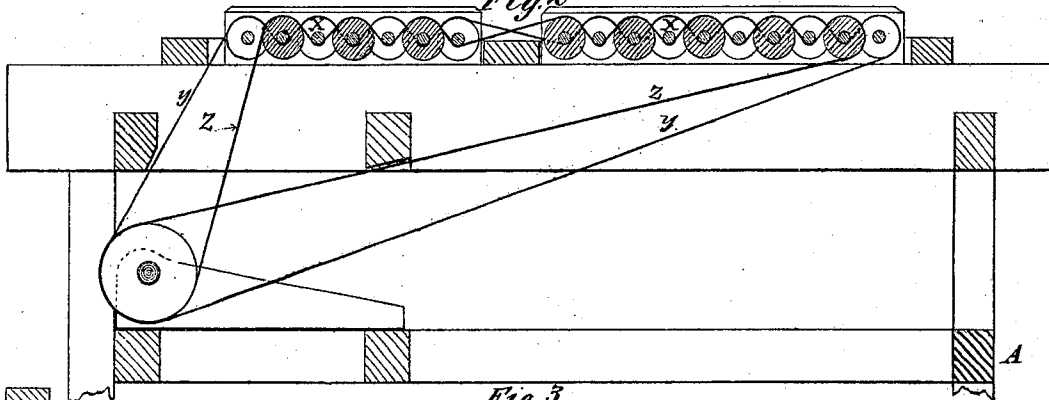
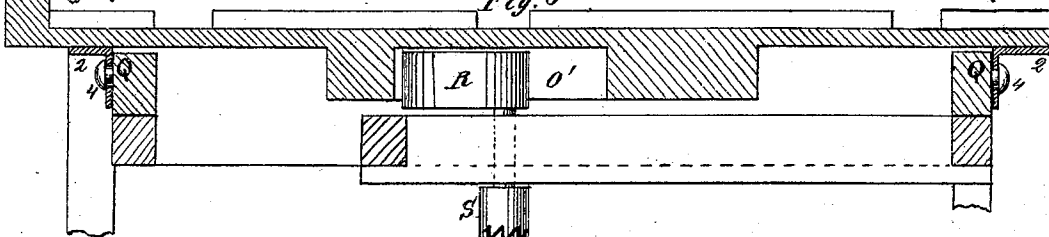


Fig. 3



UNITED STATES PATENT OFFICE.

JAMES MILNE, OF PHILADELPHIA, PENNSYLVANIA.

IMPROVEMENT IN MACHINES FOR MAKING BLINDS.

Specification forming part of Letters Patent No. 128,057, dated June 18, 1872.

Specification describing a new and Improved Blind-Stile Machine, invented by JAMES MILNE, of Philadelphia, in the county of Philadelphia and State of Pennsylvania.

This invention relates to machines for manufacturing window-blinds; and consists in the mode of mortising and boring the "stiles" or side pieces of the blinds hereinafter described.

In the accompanying drawing, Figure 1 represents a top or plan view of the machine. Fig. 2 is a vertical longitudinal section of Fig. 1 taken on the line *x x*. Fig. 3 is a vertical longitudinal section taken on the line *y y* of Fig. 1.

Similar letters of reference indicate corresponding parts.

The operating parts of this machine are supported by a square or rectangular-shaped frame of suitable height, marked A. B represents rotary cutters. There are three pairs of these cutters, one pair, C, of which is stationary or devoid of lateral motion. The other two pairs are adjustable laterally, so that they can be adjusted to stiles of different lengths. The two movable pairs D and E are adjustable laterally by means of horizontal screws F working through a plate, G, attached to the side of the machine, as seen in the drawing. The shafts of these cutters work in vertical frames H supported by a horizontal rod connected with the bottom timbers of the frame. The stationary pair C rotate in the fixed bearings. I is a bed-piece, upon which the stile of the blind is laid. It is confined by flanges J on the side of the bed, and is movable forward and back, but has no longitudinal motion. It is confined by hooks or staples on its under side to a guide-rod, K, at each end. These guide-rods are stationary and hold the bed-piece down to the cutter-frames H. The cutters B are revolved at a high rate of speed by means of the belt L, arranged as seen in Fig. 1, encircling pulleys near the bottom ends of the cutter-shafts. One shaft of the stationary pair C extends down through the box and has a driving-pulley upon it. M is a traverse pulley which may be adjustable for tightening the belt. Other tightening-pulleys may be used, as may be necessary. N represents the

stile to be mortised. It is placed on the bed-piece I, and the bed is pushed in one direction, so as to bring the stile in contact with the cutters, which cut the mortise partly through. The stile is then forced against the opposite set of cutters, which cuts the mortise on the other side, each set of cutters cutting semicircles on opposite sides of the stile. The outer set of cutters may be the largest, so that "wedge-way" may be left on the outside of the stile, and also so that the chisels will not tear the wood in cutting through. The stile is now placed in another movable bed, O, and is forced up to the stationary double chisels P. This bed O is moved back and forth by means of an eccentric, R, which revolves in a cavity, O', in its under side. (See Fig. 3.) Q Q are slotted guide-plates on the under side of the bed O, which slide on the screw-pins. (See Fig. 3.) The eccentric R is on the top of the vertical shaft S, which receives motion from the pulley T by the belt U on the pulley of the sleeve V. This sleeve is actuated by the foot-lever W, and couples so as to revolve the eccentric as may be desired. As the eccentric revolves the bed and the stile are forced up to the chisels P and the mortises are completed. X represents a series of arbors which carry boring-bits to bore the holes for the pivots of the revolving slats of the blinds. In forcing the stile up to the double chisels for completing the mortises it is brought in contact with the bits and the holes are bored, both operations being performed by one and the same movement. The arbors X are revolved by two separate belts, Y Z, which pass over and under alternate arbors, as seen in the drawing, one-half of the bits being left-hand bits and the other half right-hand. By this arrangement the motions produced by the belts on the arbors are in unison with each other, and no undue friction is caused.

I do not confine myself to the precise form or arrangement of any of the parts described, as they may be varied in many ways without departing from my invention.

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

1. The combination, in a blind-stile machine, of two pairs, D E, of rotary cutters, arranged in movable bearings, and one pair of cutters, C, in stationary bearings with a transversely-movable bed, I, as and for the purpose described.

2. The stationary double chisels P and arbors X, provided with boring-bits, combined

with the movable carriage O, as described, so that the boring and chiseling will be simultaneously performed.

JAMES MILNE.

Witnesses:

FR. SPEEL,
THOS. RANDALL.