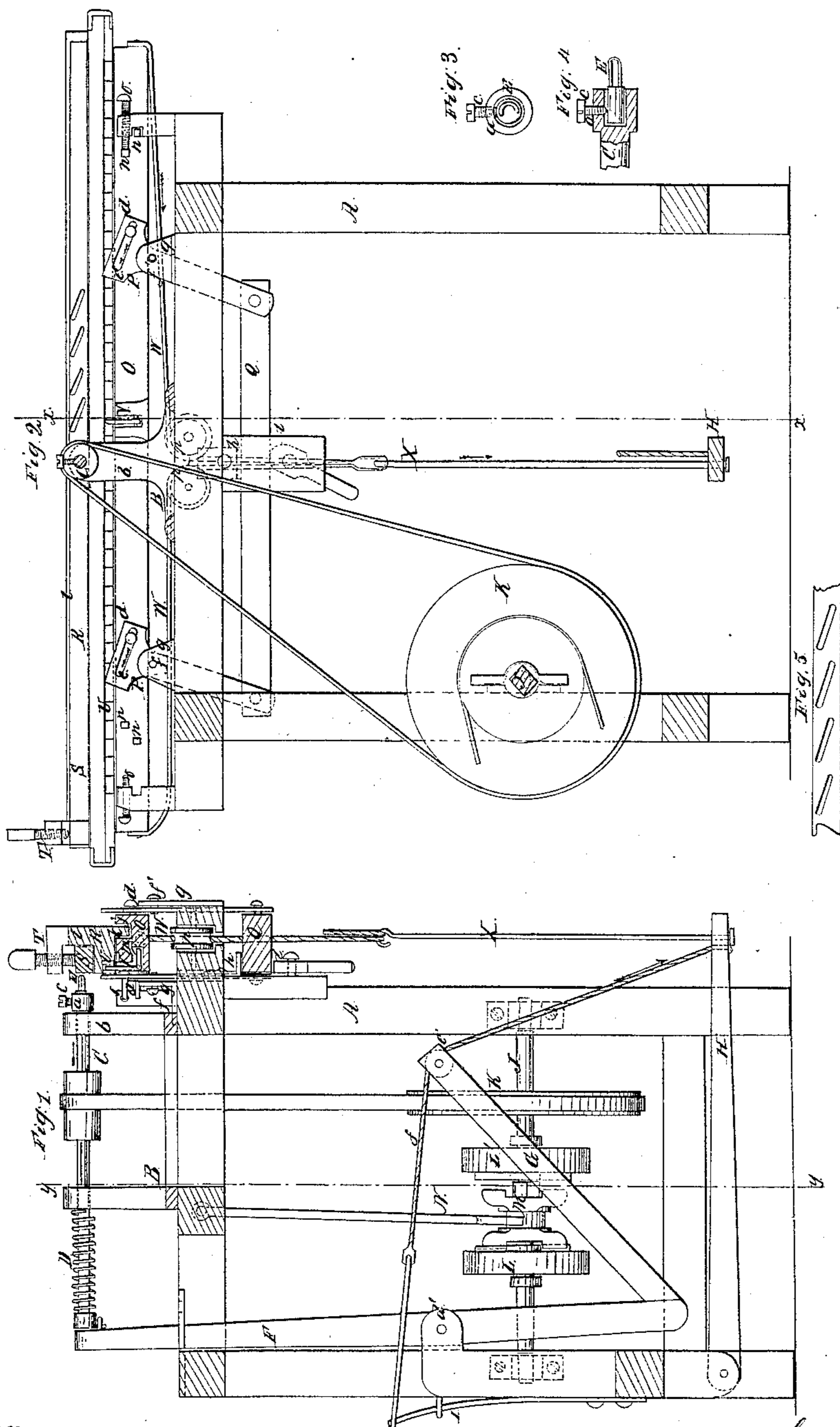


C. M. Strout,

Mortising Machine.

N^o 32,727.

Patented July 2, 1861.



Witnesses:
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UNITED STATES PATENT OFFICE.

CYRUS W. STROUT, OF CALAIS, MAINE.

MACHINE FOR MORTISING BLIND-SLATS.

Specification of Letters Patent No. 32,727, dated July 2, 1861.

To all whom it may concern:

Be it known that I, CYRUS W. STROUT, of Calais, in the county of Washington and State of Maine, have invented a new and Improved Mortising-Machine, designed for mortising the stiles of window-blinds to receive the slats; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the annexed drawings, making a part of this specification, in which—

Figure 1 is a transverse vertical section of my invention taken in the line x, x , Fig. 2. Fig. 2, a longitudinal vertical section of the same taken in the line y, y , Fig. 1. Fig. 3, a detached end view of the mandrel and cutter pertaining to the same. Fig. 4, a detached longitudinal section of the mandrel with the cutter inserted in it. Fig. 5, a detached view of a portion of the work performed by the invention.

Similar letters of reference indicate corresponding parts in the several figures.

This invention relates to a machine for cutting oblique mortises in the stiles of window blinds for the purpose of receiving the slats.

The object of the invention is to obtain a machine which will perform the desired work very expeditiously and perfectly, and by an extremely simple manipulation of parts, the mortises being spaced at proper and equal distances apart and with a greater or less degree of obliquity as may be required.

To enable those skilled in the art to fully understand and construct my invention I will proceed to describe it.

A, represents a rectangular frame on the upper part of which a metal head B, is placed, said head containing a horizontal mandrel C, which is allowed to slide in the head and has a spiral spring D, on it, said spring having a tendency to keep a hub a , on the front end of the mandrel against the front standard b , of the head B, see Fig. 1. The mandrel C, is allowed to rotate freely in the head B, and in the hub a , a cutter E, is secured by a set screw c . The cutter E, may be of the half-round or pod-form, as shown clearly in Figs. 3 and 4. The back end of the mandrel C, bears against the upper end of a lever F, which has its fulcrum at d' . The lower end of lever F, has an inclined bar G, attached to it in the upper end of which a pulley e' , is placed, said pulley having a strap f passing over it one end of which is attached to a treadle H, and the opposite end

attached to a spring I, which has a tendency to keep the treadle elevated.

In the lower part of the frame A, there is a horizontal shaft J, on which a fast pulley K, is placed, and two loose pulleys L, L, either of which may be connected to the shaft by a clutch M, operated by a lever N, in the usual way, see Fig. 1.

On the front part of the frame A, there is placed longitudinally, a bar O, which has pins d , projecting from its sides. These pins d , fit in slots e , made in plates P, which are placed at each side of bar O, and are pivoted at f' , to standards g , secured to the frame A. The lower ends of the plates P, are attached to the ends of a bar Q, which, when the machine is in operation, is firmly clamped between an adjustable stop h , and an eccentric i . The pins d , of bar O, are allowed to slide freely in the plates P, and by adjusting the bar Q, the plates P, may be inclined either to the right or left, so as to give the bar O, an oblique movement in either of two different or opposite directions as may be required.

In the upper surface of the bar O, there is made longitudinally a slot j , which extends the whole length of bar O, and in which the guide k , of a bar R, is fitted and allowed to slide freely. The bar R, has a fence l , attached to its upper surface against which the stile S, shown in red, to be mortised is placed, the stile being secured in proper position by a clamp T. To the under side of bar R, there is attached a rack bar U, and to the bar O, at about its center there is attached a spring catch V, which is simply a bent lever having a spring m , bearing on its lower end to keep the upper end engaged with the rack bar U. At the inner side of bar O, near each end there are pins n , which come in contact with screws o , at the end of each stroke or movement of bar O; and the length of the stroke of bar O, may therefore be regulated as desired by adjusting the screws o .

To each end of bar O, there is attached a strap W. These straps extend down through a hole at the center of the front part of the frame A, and over pulleys p, p , and are connected by a rod X, to the treadle H.

The operation is as follows; The stile S, is secured on the bar R, and the mandrel C, is rotated from the shaft J, by a belt from the pulley K. The operator by depressing the

treadle H, moves the bar O, longitudinally and obliquely upward, one of the straps W, giving the longitudinal movement while the slots *e*, of the inclined plates P, give the oblique movement. The cutter E, by the same movement of the treadle and through the medium of strap *f*, and the bar G, is shoved toward the stile and the cutter enters the stile, the movement of the latter as specified causing the cutter to cut the oblong oblique mortises, as shown in Fig. 5. The stile is spaced by means of the rack bar U, the operator shoving the bar R, along the distance of one tooth after each operation of the cutter. The position of the mortises are reversed in the stiles by changing or reversing the position of the plates P. This is necessary as the stiles for each blind must be mortised in a reverse manner in order to coincide with each other and receive the ends of the slats. Only one strap W, acts at a time; the two being used to admit of the bar O, being operated in both positions. When the position of the plates P, are reversed the motion of the cutter E, is also reversed. This is necessary to enable the cutter to cut with the grain of the wood. This

reverse movement of the cutter is produced by having a cross belt on one pulley L, and a straight belt on the other pulley L'. The degree of obliquity of the mortises may be regulated by adjusting the stop *h*.

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

1. The arrangement of the bar O, slotted plates P, P, bar Q, and adjustable stop *h*, with the eccentric *i*, or its equivalent for the purpose specified.

2. The bar R, with rack bar U, attached and fitted on bar O, in connection with the spring catch V, in bar O, when the bar R, and rack bar U, are used in connection with the bar O, and arranged to operate conjointly therewith for the purpose specified.

3. The combination of the treadle H, straps W, W, bar G, lever F, and strap *f*, substantially as shown for the purpose of operating simultaneously the bar O, and mandrel C, as herein described.

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Witnesses:

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