Andrews & Tucker,

Making Matches,

No. 84,464, Patented Dec. 1, 1868

Fig: 1.

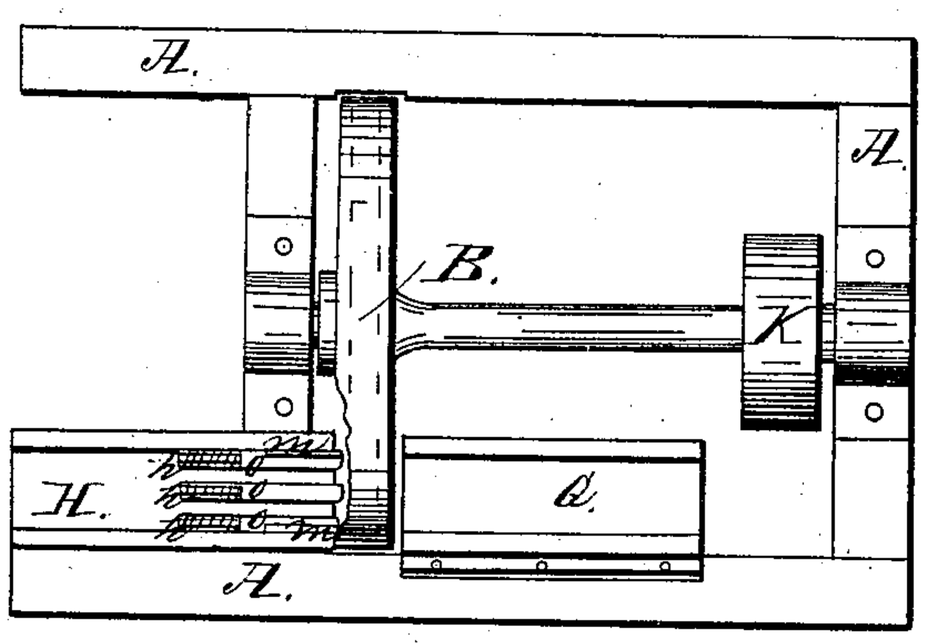


Fig: 3.

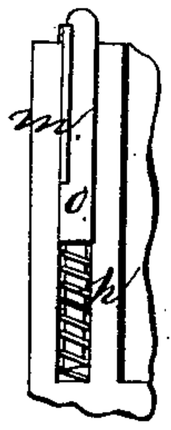


Fig: 2.

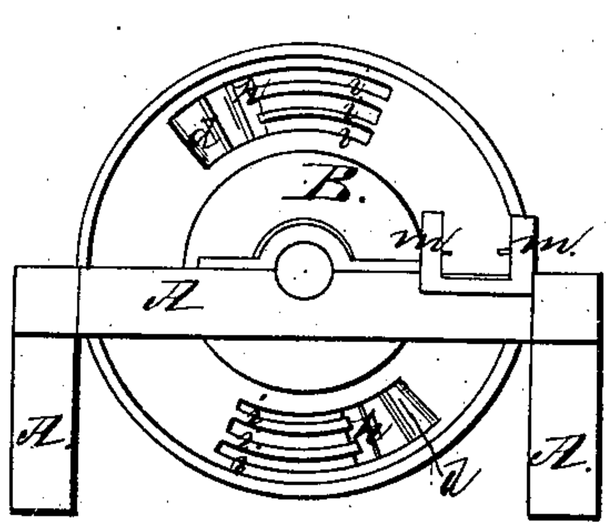
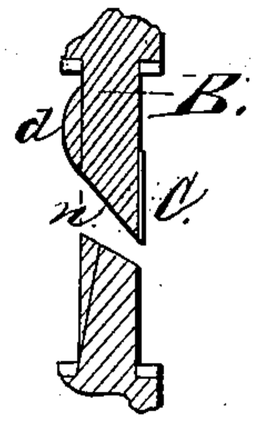


Fig: 4.



Witnesses:

Wm. H. Chipfon

Henry C. Houston

Inventor:

Emery Andrews

William Tucker

UNITED STATES PATENT OFFICE.

EMERY ANDREWS AND WILLIAM TUCKER, OF PORTLAND, MAINE, ASSIGNORS TO STAR MATCH CORPORATION, OF SAME PLACE.

IMPROVEMENT IN MATCH-MACHINES.

Specification forming part of Letters Patent No. **84,464**, dated December 1, 1868.

To all whom it may concern:

Be it known that we, EMERY ANDREWS and WILLIAM TUCKER, both of Portland, in the county of Cumberland and State of Maine, have invented a new and useful Improvement in Machines for Cutting Veneers or Match-Cards; and we hereby declare the following to be a full, clear, and exact description thereof, which will enable others to make and use our invention, reference being had to the accompanying drawings, forming part of this specification, in which—

Figure 1 is a plan of an improved slasher. Fig. 2 is a front elevation of the same; Fig. 3, a detached plan of one of the slides, and one of the receivers and conductors; Fig. 4, a side elevation of a detached section of the wheel.

The object of our invention is to cut veneers, or match-cards, in the usual way, and then stack them in form for handling, instead of scattering them on the floor, as is usually done.

Our improvements consist in providing a rotary slasher with a receiving-box, set opposite the trough in which the blocks are placed to be cut into cards, for receiving the cards after they are cut from the block; also, in providing slides, set in the bottom of the receiving-box, which are driven forward into grooves in the wheel by springs or other devices, for the purpose of preventing the cards from falling when cut from the block, which slides are driven back by the bevels of the knives, throats of the wheel, and cam which is attached to the wheel; also, in providing the wheel with grooves to receive the slides already mentioned; also, in providing the wheel with cams, placed opposite the knives, which force the card, as it is being cut from the block, on to the receivers and conductors, which are placed in the receiving-box.

A represents a frame, made of any suitable material; B, the wheel, mounted on the frame, to which are attached the knives *c* and the cams *d*. H is the receiving-box, in the bottom of which the slides *o* are set, which slides are driven into the grooves *i* by means of spiral springs *h*, or other devices. *m m* are the receivers and conductors, set in the sides of the receiving-box H. G is the trough in which the blocks are placed to be cut into veneers or cards.

Having indicated all the parts which are necessary to attach our improvement to the common "card-slasher," we will proceed to explain the operation of the machine, which, so far as merely cutting the cards from the block is concered, is the same as usual in similar machines.

Revolution of a proper speed is imparted to the wheel B by means of a belt passing over the driving-pulley K. The block to be cut is placed in the trough G, and borne up against the wheel by the hands of the operative, or by feeding-rolls, or in any other desired way. The knives *c* being attached to the wheel in such a way that the edges of them stand out from the wheel a distance equal to the desired thickness of the cards to be cut, one knife, in coming round the block, being pressed against the wheel, cuts off a card, and as soon as the knife has passed the block, the force which is constantly applied to the block carries it again up to the wheel before the next knife reaches it, when another card is cut, as many cards being cut at each revolution of the wheel as there are knives on the same.

Thus far the operation of the machine is the same as that of the ordinary slasher; but by that the cards would, when cut from the block, pass through the throats *n*, and drop promiscuously on the floor.

By our improved method we obviate the trouble and expense of gathering them up and arranging them in regular order again, for in the operation of cutting, when the card is nearly severed from the block, the cam *d* on the opposite side of the wheel has pressed the card forward on the metallic receivers and conductors *m m*, on which it is held and moved forward by the accumulation of successive cards, until it is well secured in the receiving-box H.

The cards are thus kept in regular order by means of the cams *d d* and the receivers and conductors *m m* alone; but in order to insure all the cards being caught with certainty, just before the knives reach the block to cut a card from it, the grooves *i* are in position opposite the slides *o*, and the slides are instantly forced into the grooves by the action of the springs *h*, and as far through the wheel as may be and not be struck by the edges of passing knives. Being thus under the card before it is quite

severed from the block, they prevent its falling, and sustain it in the same position, as it passes through the throat *n*, as the block from which it was cut, and it is moved forward into the receiving-box by succeeding cards, as before stated. The slides are forced back by the cam action produced by the action of the bevels on the knives and throat of the wheel, and then by the cam *d* sufficiently for the cam to pass. After the cam has passed, the slides are held against the wheel by the springs *h* until the next set of grooves reaches them, when they operate as before.

By the use of our improvement the cards are thus stacked in the receiving-box in the desired form for handling, and the laborious and expensive manner of gathering them from the floor and thus stacking them is obviated.

The slides may be used independently of the cams and receivers, or the cams and receivers may be used independently of the slides, and in either way the desired result will be accomplished.

The several operations of the different parts, which operate conjointly to do the work in our machine, are as follows: The combination of the cams *d d* with the receivers and conductors *m m* in the receiving-box H imparts such inclination to the match-cards as insures their so landing on the receivers or conductors *m m* as to be then carried forward by the successive accumulations of the cards thereon.

The joint operation of the slides *o*, grooves *i* on the wheel B, and the springs *h* prevents the card from falling as it is cut from the block, and secures the placing of the slides under the card before it is cut entirely clear from the block.

Furthermore, by their means the card, as it passes through the throat *n*, is held in the same position as the block from which it was cut. The cams and throat then direct the card, as it passes onto the conductors, in the receiving-box.

The cams *d d* and throats *n* are both concerned in giving the proper inclination to the cards, and in securing the passage of the cards through the throat onto the receiver.

What we claim as our invention, and desire to secure by Letters Patent, is—

1. The combination of the cams *d d* with the receivers and conductors *m m* in the receiving-box H, as and for the purposes specified.

2. The combination and arrangement of the slides *o* and grooves *i* on the wheel B, and the spring *h*, in connection with the receivers and conductors *m m* in the receiving-box H, substantially as and for the described purposes.

EMERY ANDREWS.
WILLIAM TUCKER.

Witnesses:
WM. H. CLIFFORD,
HENRY C. HOUSTON.