J. W. WHITE.

Machine for Cutting Fan-Sticks.

No. 166,571. Patented Aug. 10, 1875.

Fig. 1.

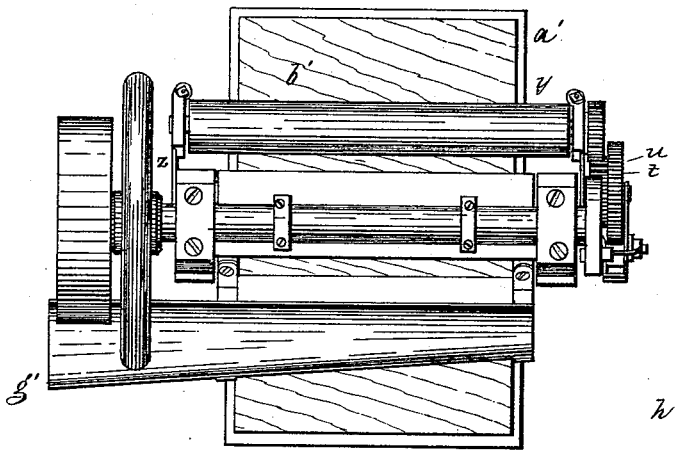


Fig. 2.

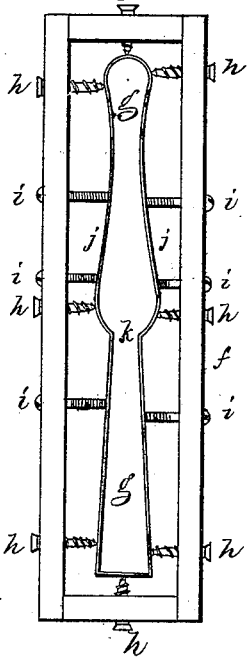


Fig. 3.

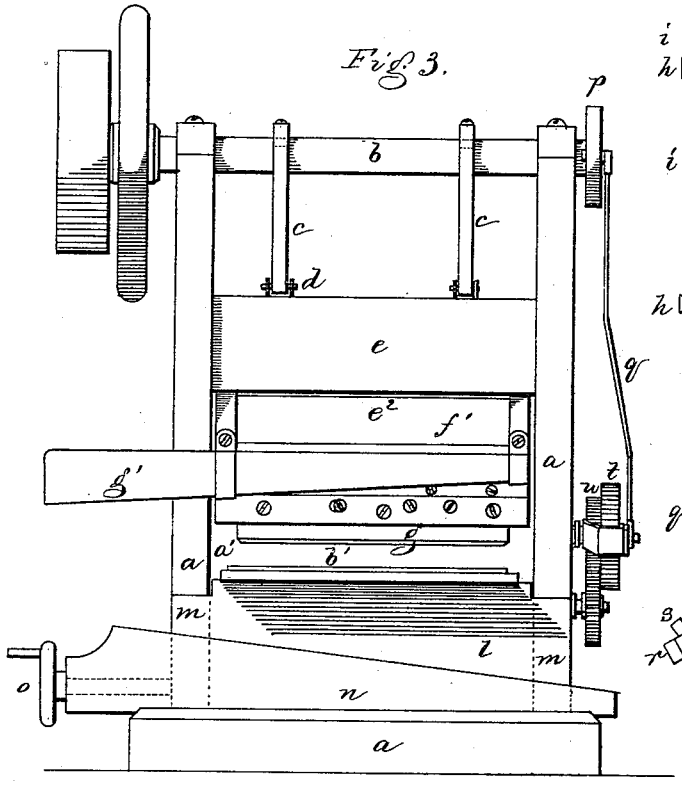
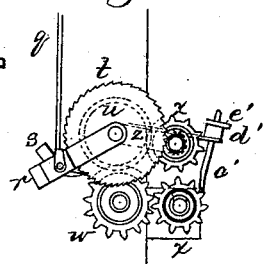


Fig. 4.



Witnesses.
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W. J. Pratt.

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UNITED STATES PATENT OFFICE.

JOSEPH W. WHITE, OF WEYMOUTH, MASSACHUSETTS.

IMPROVEMENT IN MACHINES FOR CUTTING FAN-STICKS.

Specification forming part of Letters Patent No. **166,571**, dated August 10, 1875; application filed June 24, 1875.

To all whom it may concern:

Be it known that I, JOSEPH W. WHITE, of Weymouth, in the county of Norfolk and State of Massachusetts, have invented an Improvement in Machines for Cutting Fan-Sticks, of which the following is a specification:

This invention relates to improvements in mechanism for cutting fan-sticks; and consists in the combination, with the rising and falling die, of a loose movable support for the material, from which the sticks are cut, and with feeding mechanism for moving the support and material under the action of the cutters; also, in the combination, with the reciprocating carrier for the die, of a fan-stick receiver attached to the die-carrier; also, in the support combined with a bed plate and an adjusting mechanism, whereby the height of the bed-plate may be adjusted or regulated with reference to the die, substantially as set forth; also in the particular construction of the die.

Figure 1 is a top view of my invention; Fig. 2, a plan of the cutting-die; Fig. 3 a side elevation, and Fig. 4 a detail of construction.

The frame *a* of the machine is of a shape to properly sustain the working parts, and mounted therein is a crank-shaft, *b*, provided with a balance-wheel and driven by power. This shaft *b* is provided with cranks or eccentrics, to which are fitted links *c* jointed at *d* to the reciprocating carrier *e*, guided through the uprights of the frame, and having connected with its lower side the holder *f* of the fan-stick cutting-die *g*, which is an endless spring-knife in the shape of the fan-stick, and which is attached to the holder *f* by screws *h i*, those *h* bearing only against the outer sides of the cutter to confine it in position, and those *i* entering screw-threaded openings in the cutter to move its sides *j* in or out to contract or widen their distance apart, as it is desired to make the neck of the fan-stick, as at *k*, narrow or wide, and this feature of adjustment of the cutter is of great importance. The bed *l* of the machine is provided with projections *m* that grasp the upright of the frame, and the bed being guided, is adapted to be raised or lowered, as required, by the adjusting device (shown as a wedge, *n*) fitted to the frame and the lower side of the bed *l*, and moved by a hand-screw, *o*, by which the adjusting device may be moved longitudinally. The bed rests on the adjusting device *n*, and the latter on the frame *a*. At the end of the crank-shaft is a crank, *p*, having a slot in which is adjustably placed the end of a connecting-link, *q*, which operates a pawl-carrier, *r*, having a pawl, *s*, which engages a ratchet, *t*, on a journal projecting from the frame, *a*, this journal also carrying a toothed gear, *u*, moving with the ratchet. This gear *u* engages a gear, *w*, supported below it, and each gear *u w* engages gears *x x* on the ends of the feed-rollers *y*, the upper of the feed-rollers being connected with the journal, supporting ratchet *t* by links *z*, which permit the upper roller to rise or fall with relation to the lower roll fixed in its bearings, so as to permit the introduction of the loose movable support *a'*, which is preferably a plate of wood of proper size to support the veneers or thin pieces *b'* of wood, from which the fan-sticks are cut, the cutter usually cutting through several thicknesses at one operation. The upper feed-roller is held pressed against the material between it and the lower roll by links *c'*, having springs *d'* and adjusting nuts e^1. The feed-rollers, after the supporting-board *a'* and pieces are grasped between them, present the material automatically to the action of the cutter *g*, the movement of the pawl-carrier *r* controlling the extent of the feed movement according to the width of the fan-stick being cut. This board *a'* is found of great value in presenting the material to the action of the cutters, as it is light, easily moved, is readily and firmly grasped by the feed-roller on which it rests, and will not dull the cutter-edge, and as the board becomes worn, and consequently reduced in thickness, the bed *l* is adjusted by the adjuster *n*. An opening or channel, *f'*, is made through the piece *e* in line with the cutter *g* for the discharge of the fan-sticks through the top of *g*, and the inclined portion e^2 of *e* deflects the sticks into a stick-guide, *g'*, from which they drop into a box or receptacle placed to receive them.

I claim—

1. In a fan-stick-cutting machine, the combination of the reciprocating cutter-carrier, cutter *g*, and bed with feed-rollers and loose

support, moved by the feed, and adapted to support and present the fan-stick material to the action of the cutters, substantially as described.

2. The reciprocating carrier for the cutter, provided with an opening, *f'*, for the discharge of the fan-sticks from the top of the cutter *g*, substantially as described.

3. The cutter-carrier *e*, provided with opening *f'*, in combination with the fan-stick guide *g'* to receive the fan-sticks as discharged from the holder, substantially as described.

4. The endless and flexible cutter *g*, and its holder *f*, in combination with the adjusting-screws *h* and *i* for controlling the opening in the cutter and its position in the holder, substantially as described.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

JOSEPH W. WHITE.

Witnesses:

G. W. GREGORY,

W. J. PRATT.