No. 759,861.

PATENTED MAY 17, 1904.

W. S. CAMPBELL & L. HOLABIRD.

MATCH MAKING MACHINE.

APPLICATION FILED JUNE 13, 1902.

NO MODEL.

2 SHEETS—SHEET 1.

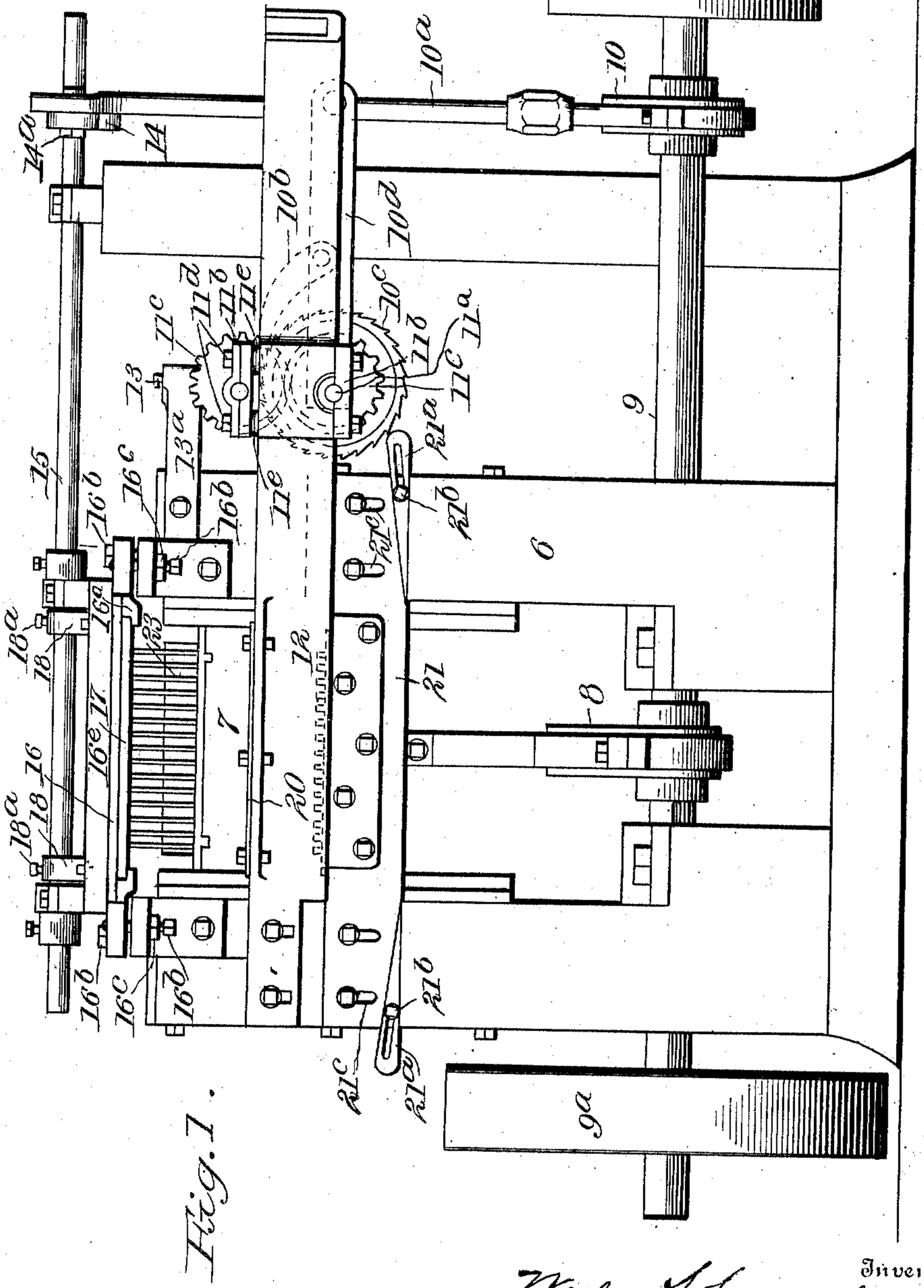

Fig. 1.

Witnesses
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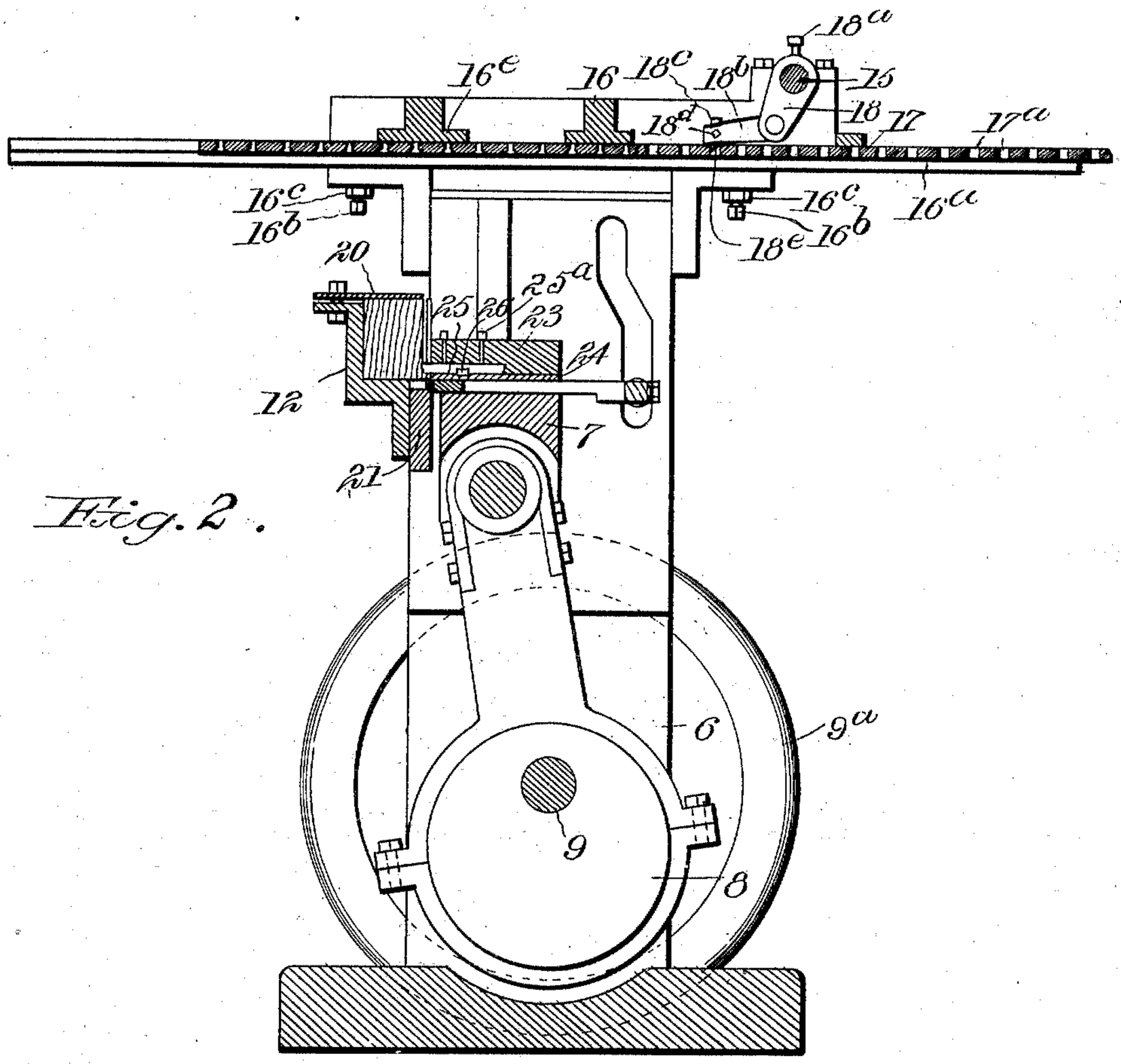

Fig. 2.

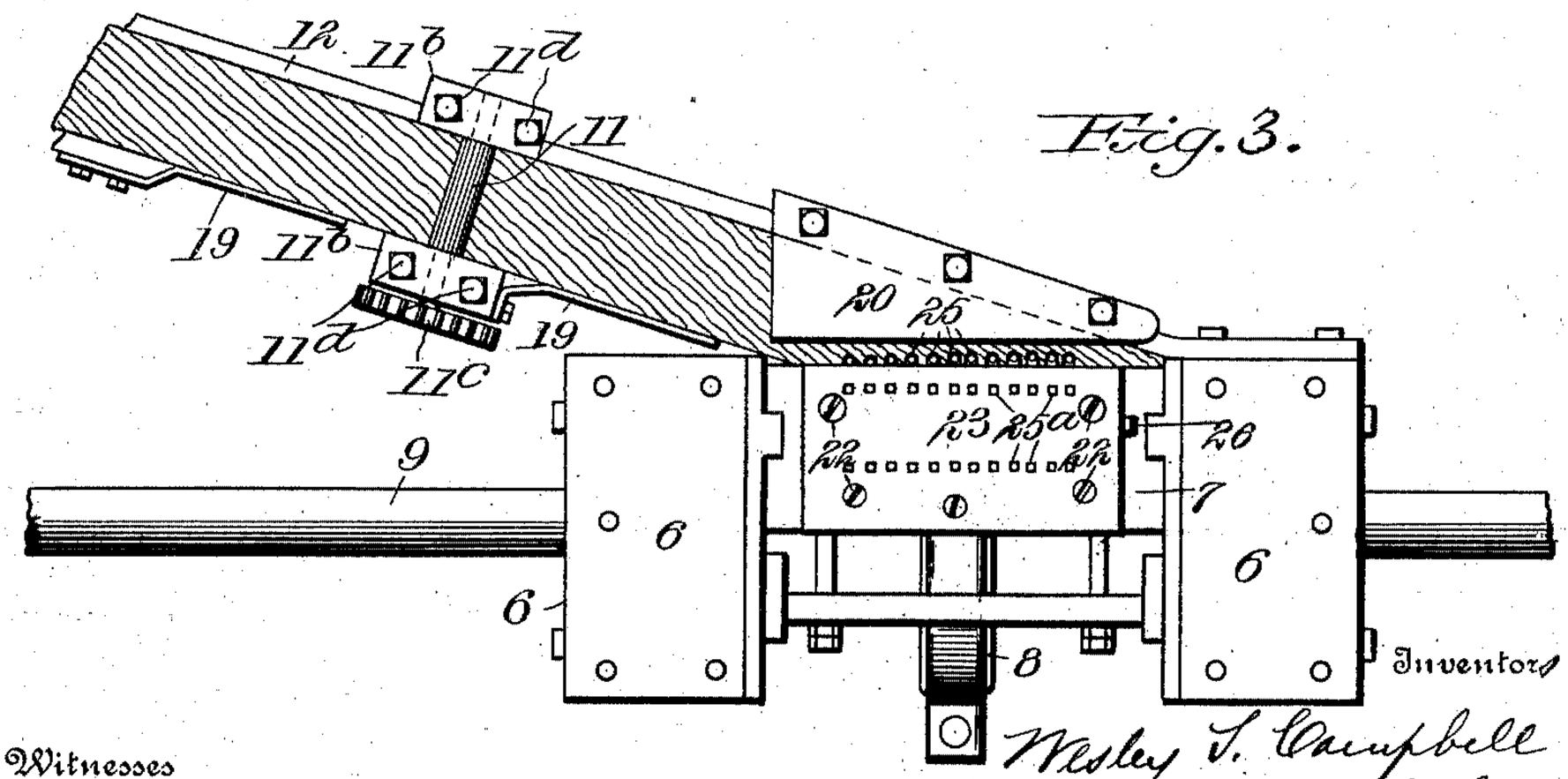

Fig. 3.

Witnesses

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UNITED STATES PATENT OFFICE.

WESLEY S. CAMPBELL, OF GARRETT, INDIANA, AND LOUIS HOLABIRD, OF CHICAGO, ILLINOIS.

MATCH-MAKING MACHINE.

SPECIFICATION forming part of Letters Patent No. 759,861, dated May 17, 1904.

Application filed June 13, 1902. Serial No. 111,482. (No model.)

To all whom it may concern:

Be it known that we, WESLEY S. CAMPBELL, residing at Garrett, county of Dekalb, Indiana, and LOUIS HOLABIRD, residing at Chicago, in the county of Cook and State of Illinois, citizens of the United States, have invented certain new and useful Improvements in Match-Making Machines; and we do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the figures of reference marked thereon, which form a part of this specification.

This invention relates to that class of match-making machines in which the splints are cut by a vertically-reciprocating cutter-head and stuck into splint-frames formed of metal plates having holes therein to receive the splints.

The invention relates particularly to the pin-bar. An adjustable pin-bar is provided which can be raised or lowered without disturbing the cutter-head or other parts. In some existing machines if the pin-bar wears or sinks slightly from the constant pounding or the cutter-head gets slightly out of position or has any lost motion it is required that the machine be stopped for several hours at least to correct the adjustment. This invention remedies this defect by providing a wedge-supported pin-bar which can be adjusted in a few minutes.

A machine embodying the invention is hereinafter described and is illustrated in the accompanying drawings, in which—

Figure 1 is a side elevation of the machine. Fig. 2 is a vertical section, and Fig. 3 is a partial plan view with the top plate removed.

The general plan of our machine is similar to that of well-known machines—such, for instance, as the one described in the United States Patent to Williams, No. 555,987, and hence no specific description of the general construction and method of operation is believed to be necessary except such as shall hereinafter appear.

Referring specifically to the drawings, the frame of the machine is indicated at 6, the cutter-bearing cross-head at 7, reciprocating vertically in suitable guides in the frame. Preferably the cross-head is driven by an eccentric 8 on the main shaft 9, which renders the use of a counterbalance unnecessary. A fly-wheel on the shaft is indicated at 9^a.

The wood-feed is effected by upper and lower corrugated rollers (indicated at 11 and 11^a) engaging the wood blocks in the trough 12, which leads to the cutter-head. The rollers are journaled in boxes 11^b, supported on the trough, and are connected by spur-wheels 11^c, which have deep cogs, so that the upper roller 11 may be adjusted to vary the distance between the rollers to accommodate stock of different thicknesses without disengagement of the wheels. This adjustment is effected by raising or lowering the bearing-boxes of the upper roller by screws 11^d and spacing-washers 11^e under the boxes. The rollers are driven from the main shaft by eccentric 10 and its rod 10^a through a lever 10^d, carrying a gravity-pawl 10^b, engaging ratchet-wheel 10^c on the shaft of the lower roller 11^a. A spring-click 13, supported on an arm 13^a, projecting from the frame of the machine, prevents reverse motion. The feed is at an acute angle to the cutters, as usual. The splint-frame feed is also operated by the eccentric 10. Its rod is extended upwardly to rock the shaft 15 by a crank-arm 14. The connection between the rod and the arm is adjustable by slot and bolt 14^a. The rock-shaft is journaled in proper bearings on the top plate 16, to the under side of which is secured bars 16^a, having ways in which the splint-frames 17 travel. The plate 16 is vertically adjustable on the main frame by means of upper and lower set-screws 16^b and jam-nuts 16^c. This vertical adjustment permits match-splints of different lengths to be made in the same machine without variation of the cutter-head. The cross-bar 16^e of the plate is directly over the thrust-point of the splints.

Pawl-blocks 18 are sleeved on the rock-shaft 15 and are adjustably fixed thereto by set-screws 18^a. Pawls 18^b are pivoted to the blocks and have pins 18^c, which engage in holes 17^a at the side edges of the splint-frames.

The pins 18[c] are secured by binding-screws 18[d] and may be quickly adjusted in the pawls or removed when worn and others substituted.

The pin-bar, meaning thereby the bar which holds the pins which enter the knives at the end of the cutting stroke, is indicated at 21, the pins being shown in dotted lines in Fig. 1. This bar is let into suitable recesses in the standards of the frame of the machine and is vertically adjustable by means of wedges 21[a] thereunder. The wedges are slotted to receive bolts 21[b] to bind them at adjustment. The bar also has vertical slots receiving bolts 21[c] for a similar purpose. The thrust on the bar is sustained by the wedges, and the construction permits quick correction of any sinking of the bar or variation of the cutter-head.

The cutter-frame is secured to the cross-head by screws 22 and comprises a top plate or block 23 and a bottom plate 24. The block is grooved to receive the cutters or knives 25 and also has at a right angle to the said grooves a groove which registers with a corresponding cross-groove in the bottom plate, forming a way to receive lock-bar 26. The top block is tapped to receive two binding-screws 25[a] for each knife or cutter.

In operation the blocks of wood are fed along the trough by the means described, and the vertically-reciprocating cutters cut the match-splints and stick them in the holes of the splint-frames in a manner common to this class of machines. The relation of the pin-bar to the cutter-head and the cutters carried thereby can be varied by loosening the bolts 21[b] and adjusting the wedges 21[a] accordingly, which raises or lowers the pin-bar 21 to the desired position.

Having thus described the invention, what we claim, and desire to secure by Letters Patent, is—

In a match-making machine, the combination with a frame and a vertically-reciprocating cutter-head therein, of a pin-bar movable on the frame, parallel to the stroke of the cutter-head, and slotted adjusting-wedges under the pin-bar having bolts extending through the slots into the frame.

In testimony whereof we affix our signatures in presence of two witnesses.

WESLEY S. CAMPBELL.
LOUIS HOLABIRD.

Witnesses:
NELLIE FELTSKOG,
H. G. BATCHELOR.