

No. 752,706.

PATENTED FEB. 23, 1904.

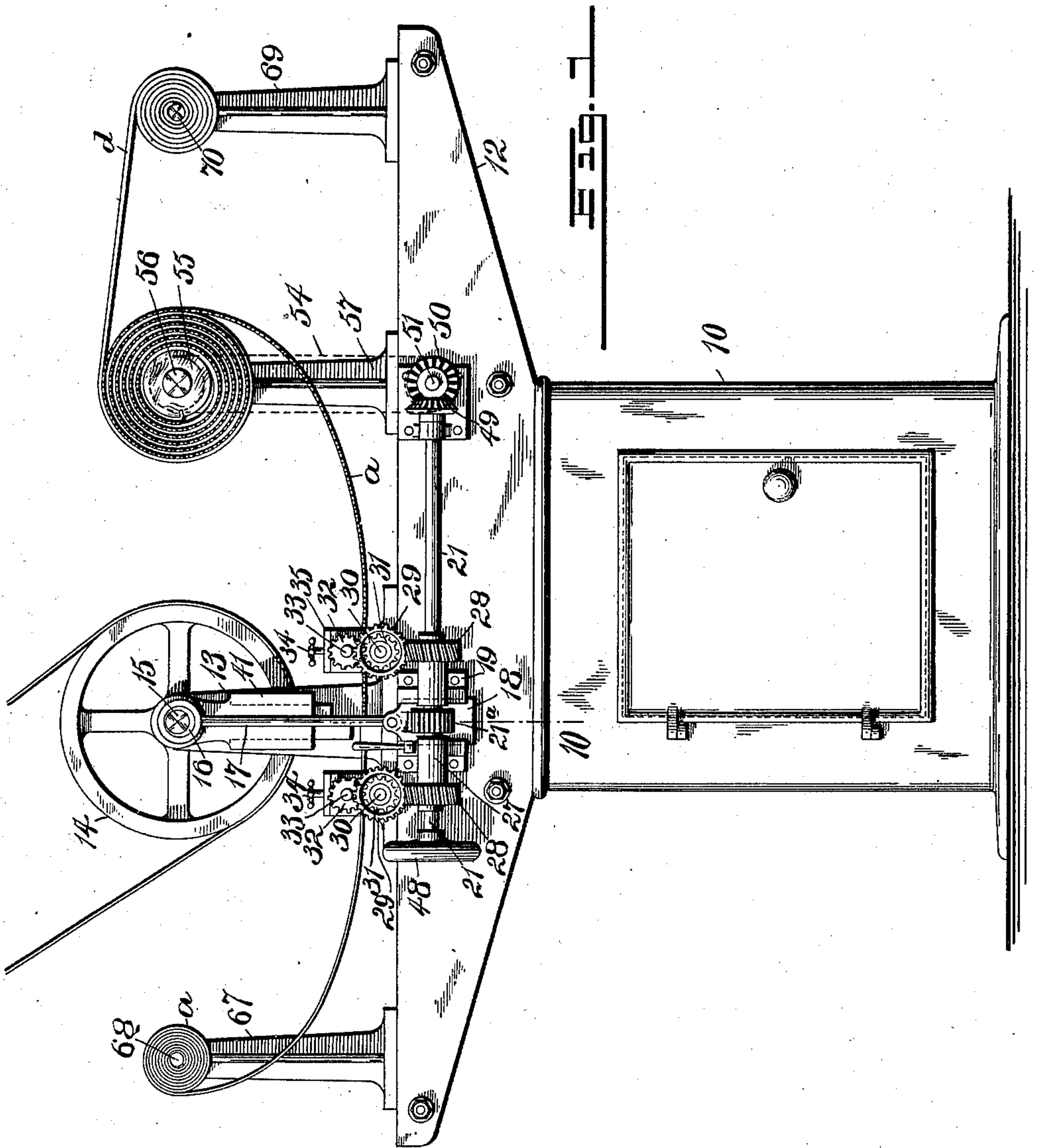
W. H. PARKER.

MACHINE FOR PREPARING MATCH STOCK.

APPLICATION FILED OCT. 24, 1902. RENEWED JULY 23, 1903.

NO MODEL.

3 SHEETS—SHEET 1.



WITNESSES:

Wm H. Canfield
John Carolan

INVENTOR

William H. Parker,

BY

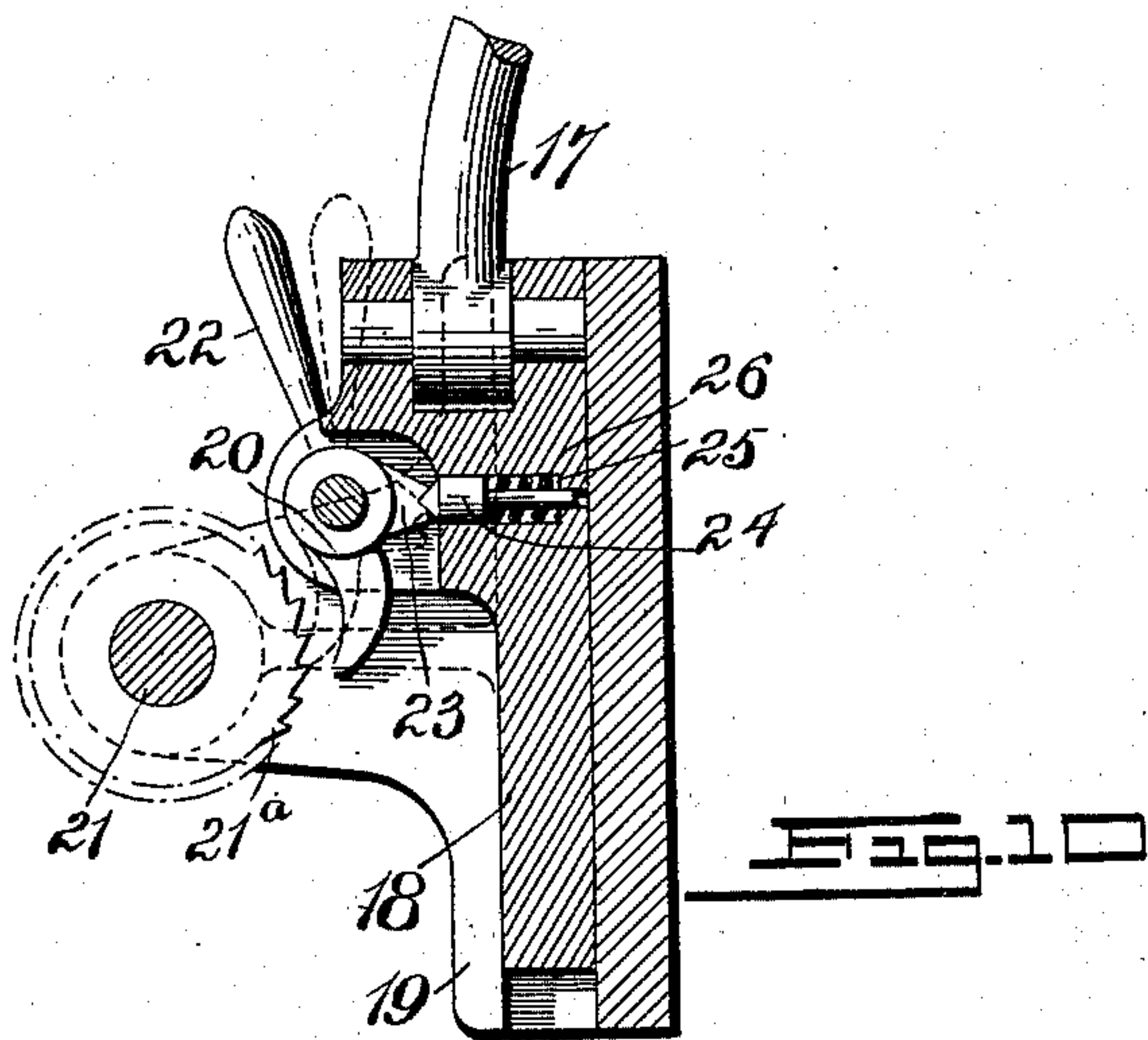
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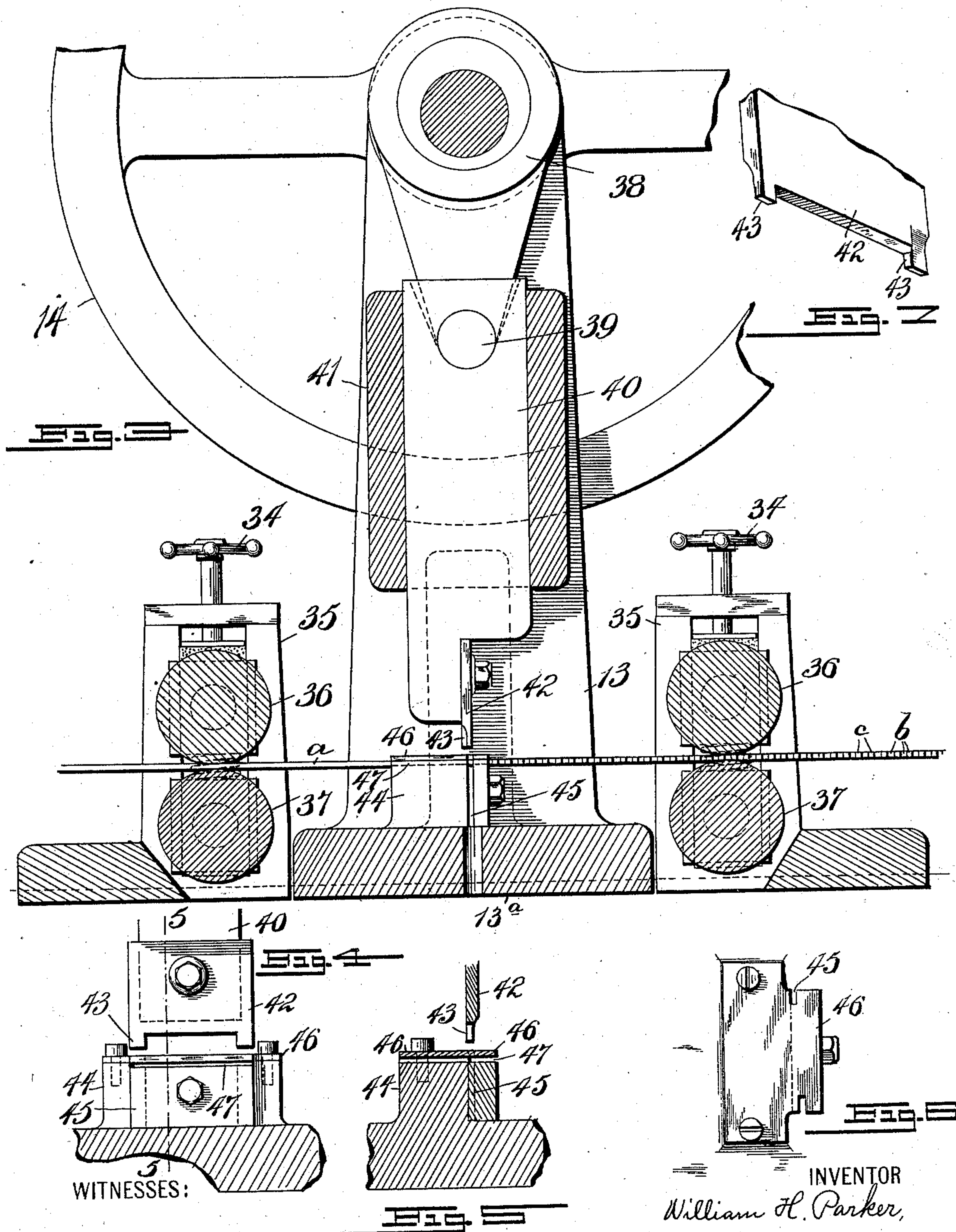
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UNITED STATES PATENT OFFICE.

WILLIAM H. PARKER, OF PASSAIC, NEW JERSEY, ASSIGNOR TO PARKER MATCH COMPANY, OF JERSEY CITY, NEW JERSEY, A CORPORATION OF NEW JERSEY.

MACHINE FOR PREPARING MATCH-STOCK.

SPECIFICATION forming part of Letters Patent No. 752,706, dated February 23, 1904.

Application filed October 24, 1902. Renewed July 23, 1903. Serial No. 166,771. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM H. PARKER, of Passaic, Passaic county, New Jersey, have invented certain new and useful Improvements in Machines for Preparing Match-Stock, of which the following is a full, clear, and exact description.

This invention is designed to provide a machine for punching notches in the opposed edges of veneer to cause a series of projections to be formed on said edges preparatory to heading the said projections. The strip that it is intended to notch is afterward cut transversely into matches and is used more particularly in the process for making matches described in my Patent No. 704,091, of July 8, 1902.

A still further object is to provide a machine that will wind the veneer so cut into a roll, inserting a strip of flexible material in the roll, thereby spacing the edges to prevent any double heading when the roll is dipped.

The invention is illustrated in the accompanying drawings, in which—

Figure 1 is a side view of the machine, and Fig. 2 an end view of the same. Fig. 3 is a vertical section of the punching mechanism; Fig. 4, a face view of a part thereof, and Fig. 5 is a section on line 5 5 in Fig. 4. Fig. 6 is a plan view of the block. Fig. 7 is a perspective view of the punch. Figs. 8 and 9 are sectional views of the roll-rotating device. Fig. 10 is a section of the mechanism to throw the feed in and out of gear, said section being taken on line 10 in Fig. 1; and Fig. 11 is a perspective view of a strip of veneer with a portion of its edges punched with the notches that this machine is designed to make.

In the drawings the base 11 supports two beams 12, which are secured thereto and serve to support between them on a shelf 13^a an upright 13, which in turn provides the bearings for the shaft 15, on which is placed the driving-pulley 14. This pulley is preferably placed in the center of the machine, and the punching mechanism and the winding apparatus are arranged in pairs on either side

and driven from the same shaft. In this specification I will describe one of these sets of mechanism as a unit. Each of these punching mechanisms consists of an eccentric 16, placed on the end of the shaft 15 and actuating, through the rod 17, a block 18, reciprocating in guides 19. In bearings on the block 18 is placed a latch 20, which can be made to engage with or be disengaged from a ratchet 21^a on the shaft 21, said shaft being journaled in the bearings 27. This latch can be thrown into and out of engagement by the handle 22, and a notched nose 23 holds the latch in either position by reason of the pressure of a pin 24, that fits the perforation 25 in the block 18 and is pressed forward by a spring 26. The notch and the inclined upper surface of the nose hold the latch respectively out of and into engagement. The shaft 21 extends along the side of the machine and has a worm-gear 28 at the front and rear of the guides 19, and each of these is in mesh with a similar gear 29 on shaft 30, which runs with the shaft 33 in boxes in the standards 35. Gears 31 and 32 provide the power to the upper shaft 33, and these shafts 31 and 33 carry the feeding-rolls 37 and 36, respectively, and a screw 34 regulates the distance between the rolls in any usual well-known manner. A hand-wheel 48 may be placed on the shaft 41 for starting veneer through the rolls. On the shaft 15 is placed another eccentric 38, (see Fig. 3,) which acts to reciprocate by means of the pin 39 a bar 40, sliding in ways 41 on the upright 13, and the bar has secured thereto a punch-plate 42. This punch-plate 42 has two punches 43, arranged on opposite ends and on the opposed sides of said ends. A block 44 on the shelf 13^a has a pair of slots 45, arranged to register with the punches 43 and receive them on their downward stroke. A plate 46, similarly slotted and adapted to fit the block 44 and bridge the slot 47 in said block, allows a strip of veneer to be fed through the last-named slot and prevents its tilting when the punches are forced down.

On the rear end of the shaft 21 is placed a

miter-gear 49, in mesh with the miter-gear 50 on a shaft 51, that is journaled on its inner end in a bearing 52 and also receives the shaft on the parallel machine, these shafts of course
5 not being connected.

A sprocket-wheel 53 communicates its power by means of a chain 54 to the sprocket 55. This sprocket 55 turns with a collar 55^a on the shaft 56, which is eccentrically arranged
10 on a shaft 57 of larger diameter, and this latter shaft is adapted to be fastened in the bearing 58 and secured by the set-screw 59. In this way by a turning of the shaft 57 the chain can be tightened or loosened, as the circum-
15 stances may require, and the set-screw is adapted to hold the adjustment secure.

A sleeve 60 with the flange 60^a is slipped over the shafts 56 against a washer 61 between itself and the collar 55^a, and on the
20 other end a collar 62 bears against it and is jammed up by means of the nut 63, provided with the spanner-holes 64. In this way a variable tension can be secured, the purpose of which will be apparent hereinafter.

25 The block 65, to receive the veneer and roll it up, is preferably fastened to the collar 60 by having a pin 66 on the flange 60^a enter a perforation therein, and at the same time it allows a quick removal or attachment.

30 The shaft 68, on a standard 67, holds the veneer *a* before it is punched, and on the other end of the machine a standard 69 has a shaft 70, that holds the spacing material that is to be inserted in the spaces between the ve-
35 neer when it is rolled up after being punched.

When it is desired to start the machine, the veneer is placed on the shaft 68 and fed through the first pair of feed-rolls 36 and 37 by turning the hand-wheel 48 and then in-
40 serted in the slot 47 in the block 44, up to the line of the openings or slots 45. Then by turning the handle 22 of the latch 20, the latch and its pawl, which, with the punch, operate continuously, is thrown into engage-
45 ment with the ratchet 21^a and the feeding mechanism is set in motion. The throw of the feed-rolls is such as to feed the veneer the distance taken up by two notches, one on either edge, as it will be observed that these
50 notches are not in line, but are placed so as to alternate, the punch cutting two at one stroke, as will be understood more fully from an inspection of Figs. 6 and 7; but the notches can be cut singly and on alternate strokes, if
55 desired. The veneer *a* is thus provided with a series of notches *b*, that consequently form between them the projections *c* to receive the firing composition. When the veneer has been notched, it passes through the other set
60 of rolls 36 and 37 and is rolled up by means of the mechanism described above, the friction mechanism (shown in Fig. 8) acting to relieve the strain on the veneer, a spacing material, as *d*, which may be rubber or cot-

ton belting, or any similar flexible material, 65 being started with the roll and running in with the same. This spacing is desirable, as when the roll is dipped in the firing composition the projections or heads should be separated to prevent the capillary attraction bridg- 70 ing the spaces and forming double-headed matches when the veneer is cut.

I have thus devised a machine that both cuts the veneer on the edges in the proper manner and rolls it up with the intervening 75 material ready for dipping.

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

1. A machine for preparing match-stock, 80 comprising a feeding mechanism, a punching mechanism for punching alternate notches in the opposed edges of the stock, and a winding apparatus to roll up the stock after it has been punched. 85

2. A machine for preparing match-stock, comprising an intermittent feeding mechanism, a punching mechanism operating to punch notches in the edges of the stock while the feed is at rest, a continuous winding appara- 90 tus to roll up the stock after it has been punched, and a tension on said winding apparatus to prevent undue strain on the stock.

3. A machine for preparing match-stock, comprising an intermittent feeding mechan- 95 ism, a punching mechanism operating to punch alternate notches in the opposed edges of the stock, a winding apparatus to roll up the stock after it has been punched, and a tension on said winding apparatus to prevent strain on 100 the stock.

4. A machine for preparing match-stock, comprising an intermittent feeding mechanism, a punching mechanism operating to punch alternate notches in the opposed edges of the 105 stock, a winding apparatus to roll up the stock after it has been notched, and a tension adapted to slip when a certain tension is reached, a device to feed a separating medium into the roll to separate the edges of the stock. 110

5. In a machine for preparing match-stock, a punch adapted to punch alternate notches in the opposed edges of the stock, said punch having cutting-fingers on the edges thereof and arranged to have the faces toward one an- 115 other in the same vertical plane.

6. In a machine for preparing match-stock, a feeding mechanism, a punching mechanism, a continuous-winding apparatus to roll up the prepared stock with a separating medium, a 120 means for fastening said roll to the winding mechanism, and a friction device to cease the winding when a certain tension on the stock has been reached.

7. A machine for preparing match-stock, 125 comprising a continuous-punching mechanism adapted to punch notches in the edges of the stock, a pair of intermittent feed-rolls

feeding the stock to said punching mechanism,
a second pair of rolls behind said punching
mechanism, a winding apparatus to roll up
the match-stock with a separating medium,
5 and an adjustable friction device to prevent the
winding when a certain tension on the stock
has been reached.

In testimony whereof I have hereunto set
my hand to this specification in the presence
of two subscribing witnesses.

WILLIAM H. PARKER.

Witnesses:

WM. H. CAMFIELD,
J. G. DUNBAR.