(No Model.) 2 Sheets—Sheet 1.

C. SCHOEN.

DEVICE FOR SETTING UP MATCHERS FOR PLANING MILL MACHINERY.

No. 544,129. Patented Aug. 6, 1895.

Fig. 1.

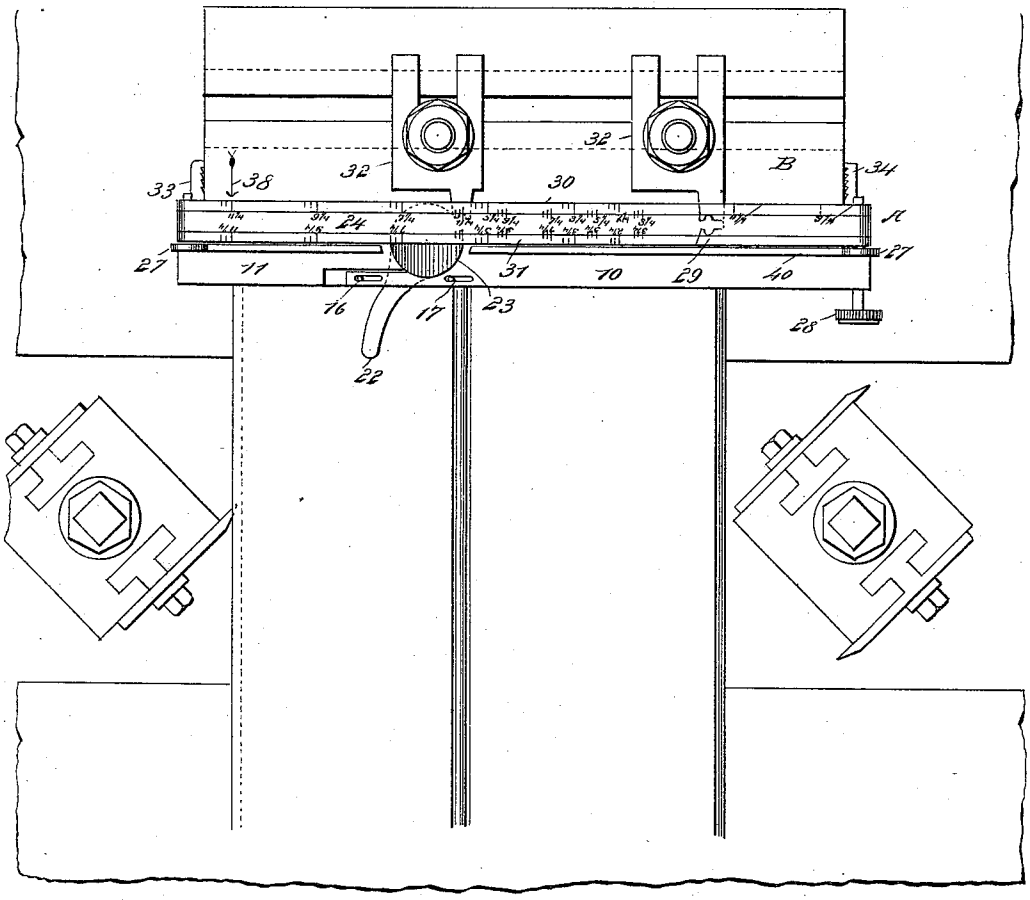


Fig. 2.

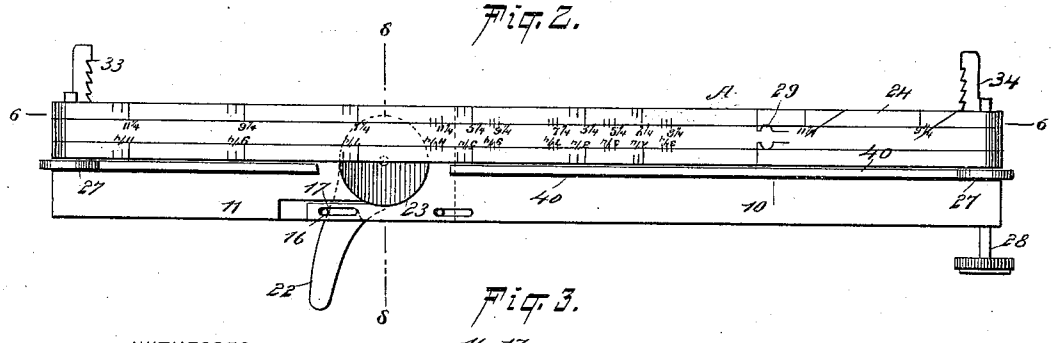
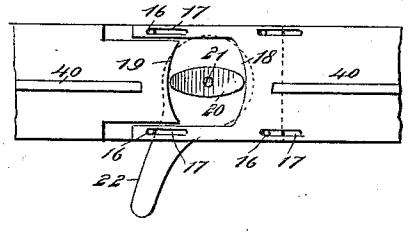


Fig. 3.



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ATTORNEYS.

(No Model.) 2 Sheets—Sheet 2.

C. SCHOEN.

DEVICE FOR SETTING UP MATCHERS FOR PLANING MILL MACHINERY.

No. 544,129. Patented Aug. 6, 1895.

Fig. 4.

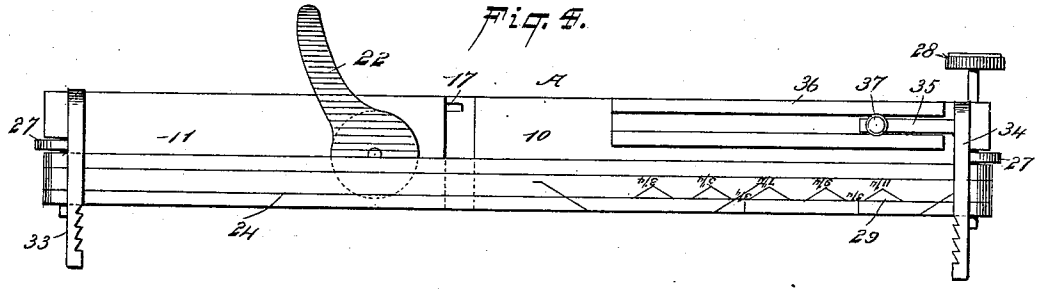


Fig. 5.

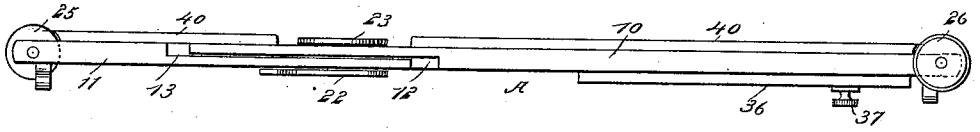


Fig. 6.

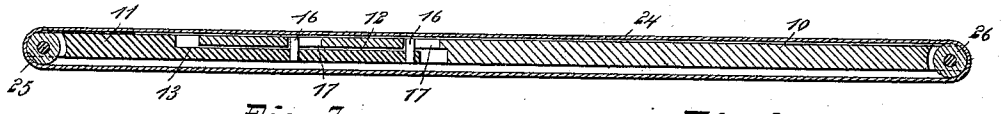


Fig. 7.

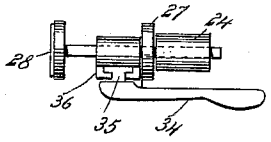


Fig. 8.

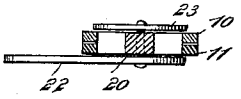


Fig. 10

Fig. 11.

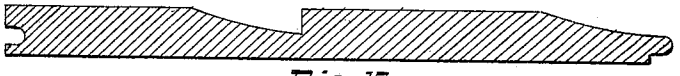


Fig. 12.

Fig. 13.

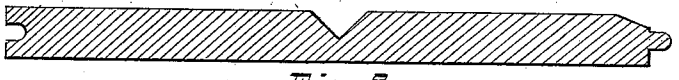
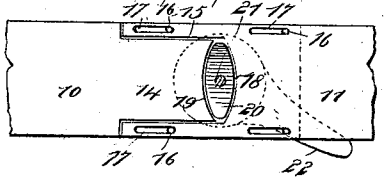


Fig. 9.



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UNITED STATES PATENT OFFICE.

CHARLES SCHOEN, OF RHINELANDER, WISCONSIN.

DEVICE FOR SETTING UP MATCHERS FOR PLANING-MILL MACHINERY.

SPECIFICATION forming part of Letters Patent No. 544,129, dated August 6, 1895.

Application filed May 25, 1895. Serial No. 550,621. (No model.)

To all whom it may concern:

Be it known that I, CHARLES SCHOEN, of Rhinelander, in the county of Oneida and State of Wisconsin, have invented a new and Improved Device for Setting up Matchers for Planing-Mill Machinery, of which the following is a full, clear, and exact description.

My invention relates to a device for setting up matchers for planing-mill machinery, and especially for molding-machines; and it has for its object to provide a device whereby the beader-knives may be adjusted expeditiously and conveniently and also systematically to perform their work and whereby, further, any ordinary mill-hand, by the aid of the said device, may set up a matcher for any predetermined style of molding in an exceedingly short space of time.

A further object of the invention is to provide a matcher with a device which may be fitted to any four-sided slotted matcher-cylinder top or bottom.

The invention consists in the novel construction and combination of the several parts, as will be hereinafter fully set forth, and pointed out in the claims.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar characters of reference indicate corresponding parts in all the figures.

Figure 1 is a plan view of the device applied to the top cylinder of the machine, illustrating a board having molding cut thereon. Fig. 2 is a plan view of the device detached from the cylinder. Fig. 3 is a plan view of that portion of the device where the two sections are brought together, illustrating the cam in position to force the sections apart. Fig. 4 is a bottom plan view of the device. Fig. 5 is a side elevation thereof. Fig. 6 is a longitudinal section taken substantially on the line 6 6 of Fig. 2. Fig. 7 is an end view of the device. Fig. 8 is a section through that portion of the device at which the cam is located, the said section being taken practically on the line 8 8 of Fig. 2. Fig. 9 is a view similar to Fig. 3, the cam being shown in position to admit of the sections of the device being brought together; and Figs. 10, 11, 12, and 13 are a few sectional views of boards having different styles of moldings formed thereon, which styles may be indicated on the apron or tape of the device.

In carrying out the invention the device consists of a body portion A, which body portion may be made of metal or of any desired material, and is in two sections 10 and 11, the section 10 being recessed in its bottom to reduce its thickness, while the shorter section 11 is recessed on the top to produce a corresponding result, so that when the two sections at their reduced portions are placed one upon the other the combined thickness will correspond to the thickness of each section outside of its recessed portions, as shown in Fig. 6, in which view the recesses are indicated by the reference-numerals 12 and 13. The movement of the two sections is guided by forming a tongue 14 on the upper section at its reduced part to enter a slot 15 in the under section at the corresponding part, as shown in Fig. 9; and as a further guide the under section is provided with pins 16, which enter openings 17 in the upper section, the said openings 17 being elongated and the length of the said openings limiting the extent of the movement of the two sections, as shown in Figs. 3 and 9. The inner end wall of the slot 15 in the longer section 10 is made concaved, as shown at 18 in Figs. 3 and 9, and the opposing end of the shorter section 11 is correspondingly formed, as shown at 19 in the same figures, the concavities being such that the space between these two sections at these points will be more or less elliptical, and in this space the elliptical cam 20 is held to turn, being mounted upon a stem 21, and the said stem extends through a suitable opening in the shorter section 11 and is secured to a lever 22, which is at the bottom of the body, while at the top of the said body a cap or washer 23 is secured to the said stem or post 21, holding the cam in position. It is therefore evident that by moving the lever 22 in one direction the cam 20 will be carried transversely of the body, as shown in Fig. 9, and the said body may be shortened in length, while by carrying the cam longitudinally of the body, as shown in Fig. 3, the sections thereof will be forced apart. This adjustment is necessary in order to slacken or to tighten the endless tape or apron 24, which is made

to pass around rollers 25 and 26, journaled in suitable bearings 27, located at the ends of the body, and one of the said rollers is provided with a thumb-piece 28 at an extremity of its trunnion, in order that this particular roller may be revolved and the endless tape or apron made to travel over the body. This tape has patterns 29 produced thereon at proper intervals, said patterns indicating the various cuts to be made by the knives of the machine, and the tape is likewise provided with two scales 30 and 31, one scale being adapted to be used in connection with the upper cylinder B of the machine and the other in connection with the lower cylinder thereof. All four-sided cylinders are provided with the usual form of beader-knives 32, which are adjustably placed upon the said cylinder.

The device is secured to the cylinder by means of arms 33 and 34, which are located at the ends of the said device upon its under face. The arm 33 is firmly secured to the cylinder, while the arm 34 at the opposite end is adjustable, being provided with an extension 35, held to travel in a slideway 36, formed upon the under face of the longer section 10 of the device, as shown in Figs. 4 and 7, and the said extension is provided with a set-screw 37, whereby the adjustable arm may be held in position. Through the medium of the said arms 33 and 34 the device is secured upon either the upper or the lower cylinder, and to that end the clamping-surfaces of the arms are more or less roughened, as shown in the drawings, and an arrow 38 is produced on the cylinder with which the figure on the scale representing the width of the board to be cut is made to register, while the beader-knives or those forming the cuts are adjusted to the various figures which shall determine their distance apart, as shown in Fig. 1.

A rib 40 is preferably formed upon the upper face of the body of the device in order to hold the endless tape in proper position thereon.

It will be understood that the device is detached from the machine when the machine is in motion, and that it takes but an instant of time to place the device in position on the machine, make the proper adjustment of the knives, or remove it from the machine.

In the operation of the device, to set up the beader-knives or any knife that the operator wishes to adjust, take the device, as shown in Fig. 2, place it on the cylinder, as shown in Fig. 1, and clamp it tight. The operator will now have both hands free to work. Fig. 1 shows the machine set up for a twelve-inch beaded ceiling, one bead in the center and one on the edge. It will be noticed that the apron has three marks, running from eleven and a quarter to two and a quarter, and also three marks for the center knives, which are easy to determine from the others since they are on the parallel lines of the apron, and the marks which regulate the outside beads are on the edge of the apron or tape.

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

1. In a device for molders and matchers, an extensible body, means for adjusting the body endwise, and an endless tape carried by the body and having scales produced thereon, as and for the purpose specified.

2. A device for molders and matchers, the same consisting of a body constructed in sections having sliding connection with each other, a device for extending the sections, an endless tape carried by the body, rollers over which the said tape passes, one of which is provided with means for rotating it, the said tape having scales produced thereon for use in connection with either the upper or the lower cylinder of the machine, and patterns of the moldings to be produced, as and for the purpose set forth.

3. In a device for molders and matchers, a body comprising two sections having sliding and guided movement one on the other, a cam adapted to force the said sections apart, being in engagement with the inner ends thereof, a lever whereby the cam is operated, and an endless belt provided with guide rollers and bearing scales for adjusting the beader knives, representations of the patterns to be produced, and means, substantially as shown and described, for rotating the said endless tape, as and for the purpose specified.

4. In a device for molders and matchers, a body comprising two sections having sliding and guided movement one on the other, a cam adapted to force the said sections apart, being in engagement with the inner ends thereof, a lever whereby the cam is operated, an endless belt provided with guide rollers and bearing scales for adjusting the beader knives, representations of the patterns to be produced, clamps secured to the said body, one of the said clamps being adjustable, and means, substantially as shown and described, for rotating the roller over which the tape passes, as and for the purpose set forth.

CHARLES SCHOEN.

Witnesses:
J. C. WIXSON,
C. C. BUNSON.