

(No Model.)

S. J. McCONNELL.

POST AND SIDE SPRING FOR MOLDING MACHINES.

No. 534,447.

Patented Feb. 19, 1895.

Fig. 1.

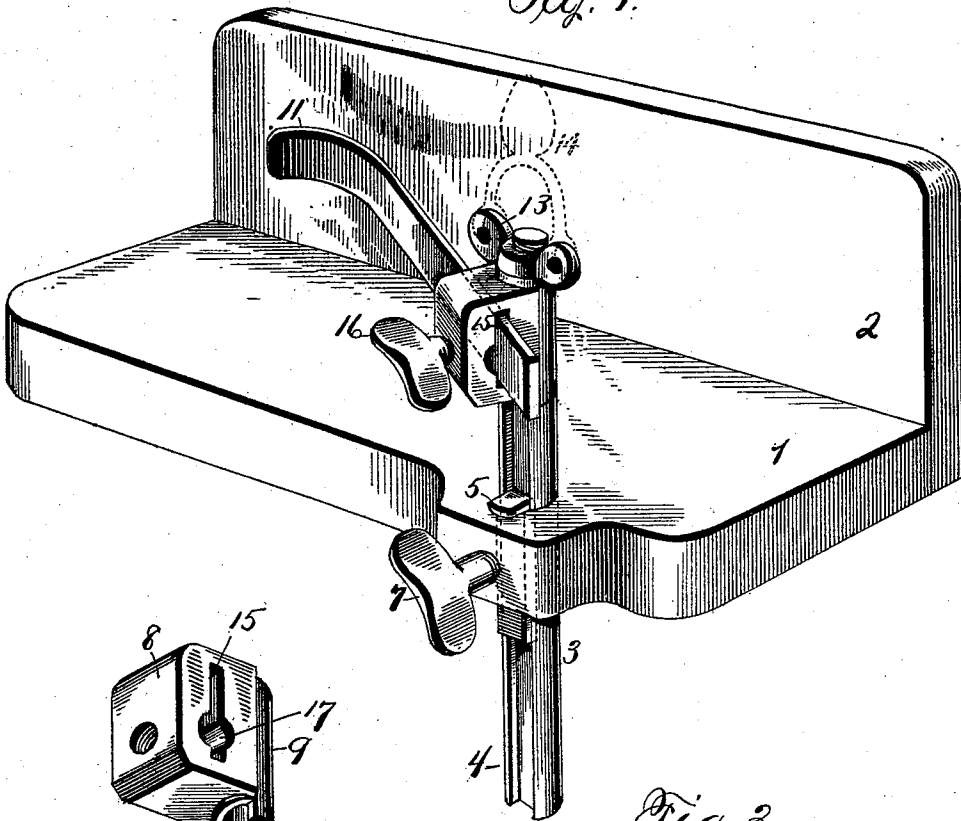


Fig. 2.

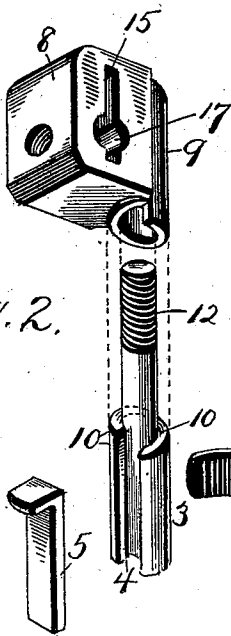


Fig. 4.

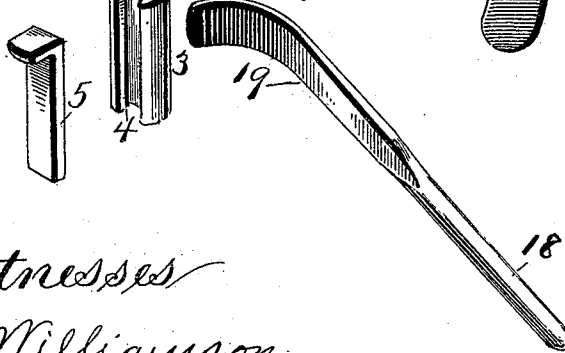
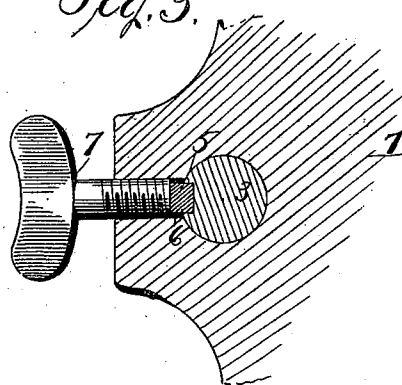


Fig. 3.



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POST OR SIDE SPRING FOR MOLDING-MACHINES.

SPECIFICATION forming part of Letters Patent No. 534,447, dated February 19, 1895.

Application filed September 17, 1894. Serial No. 523,196. (No model.)

To all whom it may concern:

Be it known that I, SAMUEL JACKSON McCONNELL, a citizen of the United States, residing at Stewartstown, in the county of York and State of Pennsylvania, have invented certain new and useful Improvements in Posts or Side Springs for Molding-Machines; and I do 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.

My invention relates to spring posts or side springs commonly used on molding machines for holding the piece of lumber or material against the guide as the material is moved over the bed plate.

The invention has for its object to provide improved simple and efficient means for firmly and immovably holding the spring or elastic guide finger, which presses against the material, in position so that it cannot slip after it has been adjusted to the desired position.

The invention has further for its object to provide improved means for binding the vertically adjustable post which carries the spring finger with the view of avoiding the usual wear upon said post and its consequent impairment for efficient work.

To the accomplishment of the foregoing and such other objects as may hereinafter appear the invention consists in the construction and the combination of parts hereinafter described and then sought to be specifically defined by the claims, reference being had to the accompanying drawings forming a part hereof, in which—

Figure 1 represents a perspective of a portion of a bed plate and its guide of a molding machine with the spring post or side spring applied thereto. Fig. 2 is a detail in perspective of the vertically adjustable post, the socket which holds the spring finger, and the key which serves to prevent the post from turning, the parts being separated. Fig. 3 is a sectional view through a portion of the bed plate and post showing the set screw for clamping the key and adjustable post to-

gether; and Fig. 4 is a perspective of one form of spring finger having a rounded shank.

In the drawings the numeral 1 designates a portion of an ordinary bed plate and 2 a portion of the ordinary guide employed in molding machines.

The numeral 3 designates a post passing through a hole or opening in the bed plate and formed with a groove 4 to receive a key 5 which also fits in a groove 6 formed in the bed plate so that by fitting partly in the groove of the post and partly in the groove in the bed plate it will lock the post against rotation.

For the purpose of holding the post to any position in its vertical adjustment to which it may be moved I provide a thumb or set screw 7 which will pass through the bed plate and bear against the key so as to securely clamp the key and adjustable post to position in the bed plate. This manner of securing the post in its vertical adjustment and of preventing rotation of the post most efficiently serves the purposes stated and greatly prolongs the life and efficiency of the post and effectually insures the post being held in its proper position. If the set screw were allowed to bear directly against the post it would in a short time, owing to the great strain on the post while the material is passing between the spring finger and the guide, so cut or wear the post at the point of contact of the screw therewith that it would be rendered exceedingly difficult, and oftentimes impossible, to get the post secured in the proper position to cause the end of the spring finger to bear with efficiency against the material being worked. This difficulty has been experienced for a long time in spring posts or side springs and it is with the view of preventing that difficulty that I have devised the simple and yet efficient means described.

The post can be readily adjusted by loosening the set screw and then raising or lowering the post and afterward tightening the screw. The key is easily removed when necessary as it fits loosely or slidably in the groove of the post and also in the groove of the bed plate and is tightened by the action of the set screw.

The post carries at its upper end a head 8 which is formed with a socket 9 that fits down

over the upper portion of the post and rests upon a shoulder 10 formed upon the post either by reducing the upper portion of the post so as to form said shoulder or otherwise.

5 The face of the shoulder 10 is made spirally inclined and the lower face of the socket 9 is likewise spirally inclined, the two inclined faces corresponding to each other and inclining in such direction that in order to turn the

10 spring finger 11 away from the material being operated on the upper incline, or incline to the socket 9, must rise or ascend the incline of the shoulder 10. This is made so that when the head is clamped to the post a stronger resistance will be made to the pressure against

15 the finger while the material passes between the finger and guide than can otherwise be obtained and thus the possibility of the finger accidentally turning or slipping is effectually overcome. It will also be observed that this

20 construction will allow the head to be turned, more or less, so as to bring the finger farther from the guide when desired, and yet permit the head to be securely clamped against accidental turning by tightening the clamping

25 nut.

The upper end of the post is formed with left handed threads 12 so that by the application of a left handed nut 13 which will bear

30 against the top of the head 8 the latter will be firmly clamped to the post. By the use of this left handed nut in connection with the inclined faces to the shoulder on the post and the socket of the head 8, the greater the pressure on the forward end of the spring finger 11

35 the tighter will the head be clamped to the post as is obvious to the skilled. I may employ a bail or handle 14 linked to ears on the thumb nut 13 so as to facilitate the turning

40 of the nut.

The spring finger 11 fits at its rear end in a socket 15 formed in the head 8 and is secured therein by means of a set screw 16. This

45 socket 15 is made circular at one portion of its length as indicated by 17 so as to adapt it to receive the rounded end 18 of the form of finger 19 shown in Fig. 4. The advantage of this form of finger is that it may be turned to any angle desired to suit the work being

50 operated on as well as being capable of lengthwise adjustment. By forming the socket as described it is adapted to receive either the form of spring finger shown in Fig. 1 or the form shown in Fig. 4 as it may be desired to

55 use either one.

It is of course to be understood that there will be employed as many of the spring posts or side springs as is necessary in the machine. It may also be stated that while the form of

60 post illustrated is what may be termed a right handed spring post, that is, one employed where the material passes from the right to the left still the same invention may be and will be employed if the inclines to the post

65 and the head and the threads and nuts be reversed in their formation so as to adapt them to a left handed spring post or spring finger.

Such a change being within the scope of the skill of an ordinary mechanic will require no invention to make the same.

I have shown and described the spring post or side spring as applied to a molding machine but it is obvious that it may be applied to other forms of machines where it is necessary or desirable to employ a spring finger

70 for holding the work to place.

It is to be observed further that the spring fingers are capable of lengthwise adjustment to any extent desired so as to accommodate the same to the thickness of the material being worked in the machine. It is also to be

80 observed that the adjustment of the several parts by the employment of the thumb screws and nuts dispenses with the necessity of using wrenches for the purpose of tightening and

85 loosening the parts.

Having described my invention and set forth its merits, what I claim is—

1. The combination of the vertically adjustable post formed with a longitudinally

90 extending groove and spirally inclined shoulder, the bed plate having a corresponding groove and an opening for the post to pass through, the key fitting slidably in the groove of the post and the groove of the bed plate,

95 the set screw passing into the bed plate and bearing against the said key, and the sleeve formed with a head to carry the spring finger and having at its lower end a spirally inclined face fitting to the corresponding incline on

100 the post, and means for securing together the post and sleeve, substantially as and for the purposes described.

2. The combination of the post having a spirally inclined face at a point in its length,

105 the head to carry the spring finger having a sleeve fitting over the post and formed at its lower end with a spirally inclined face fitting to the inclined face of the post, said head being rotatable on the post, and means for locking the head to the post, substantially as and

110 for the purposes described.

3. The combination of the post formed with an inclined face at a point in its length, the head to receive the spring finger formed with

115 a socket to receive a portion of the post and having an inclined face corresponding to that of the post, screw threads to the upper end of the post, a nut fitted to the threaded end of the post above the said head to lock the

120 head to the post, the inclines to the post and head bearing such relation to the screw threads and nut that an outward pressure on the spring finger carried by the head will cause the head to be more tightly clamped by

125 the nut substantially as and for the purposes described.

In testimony whereof I affix my signature in presence of two witnesses.

SAMUEL JACKSON McCONNELL.

Witnesses:

GEO. F. TROUT,
THOS. C. FULTON.