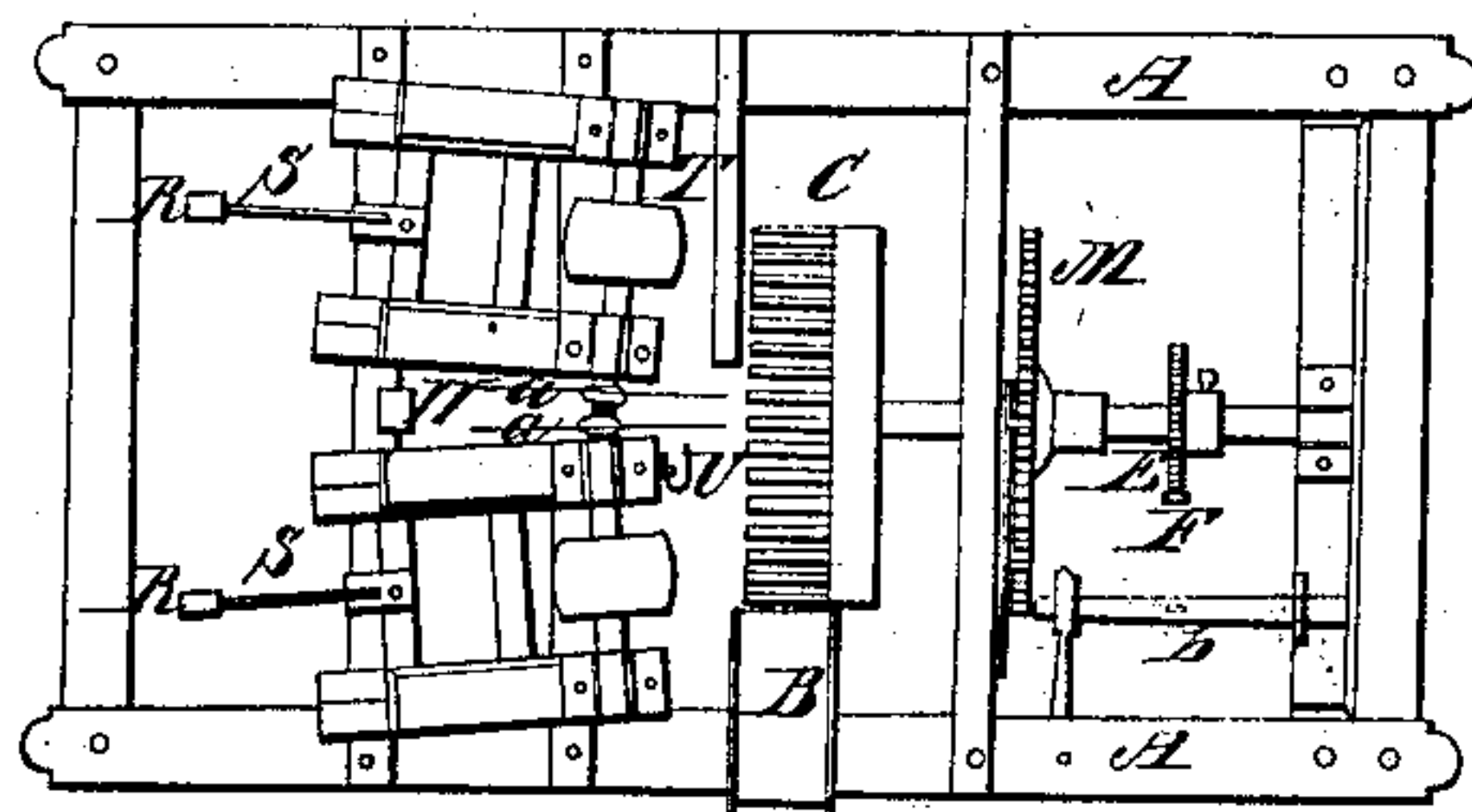


*J. B. Smith,*  
*Clothes Pin Machine.*

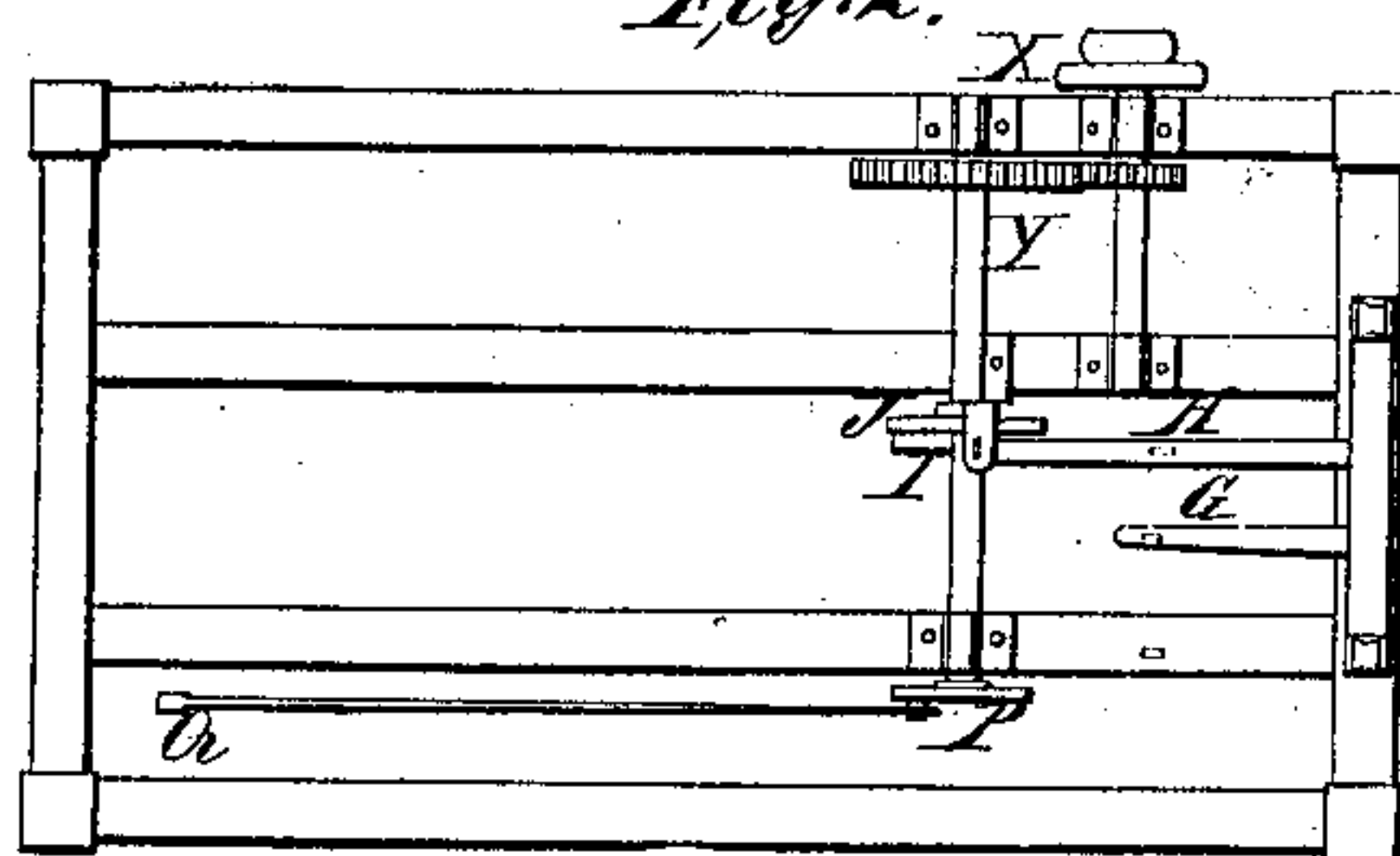
*N<sup>o</sup> 10,553.*

*Patented Feb 21, 1854.*

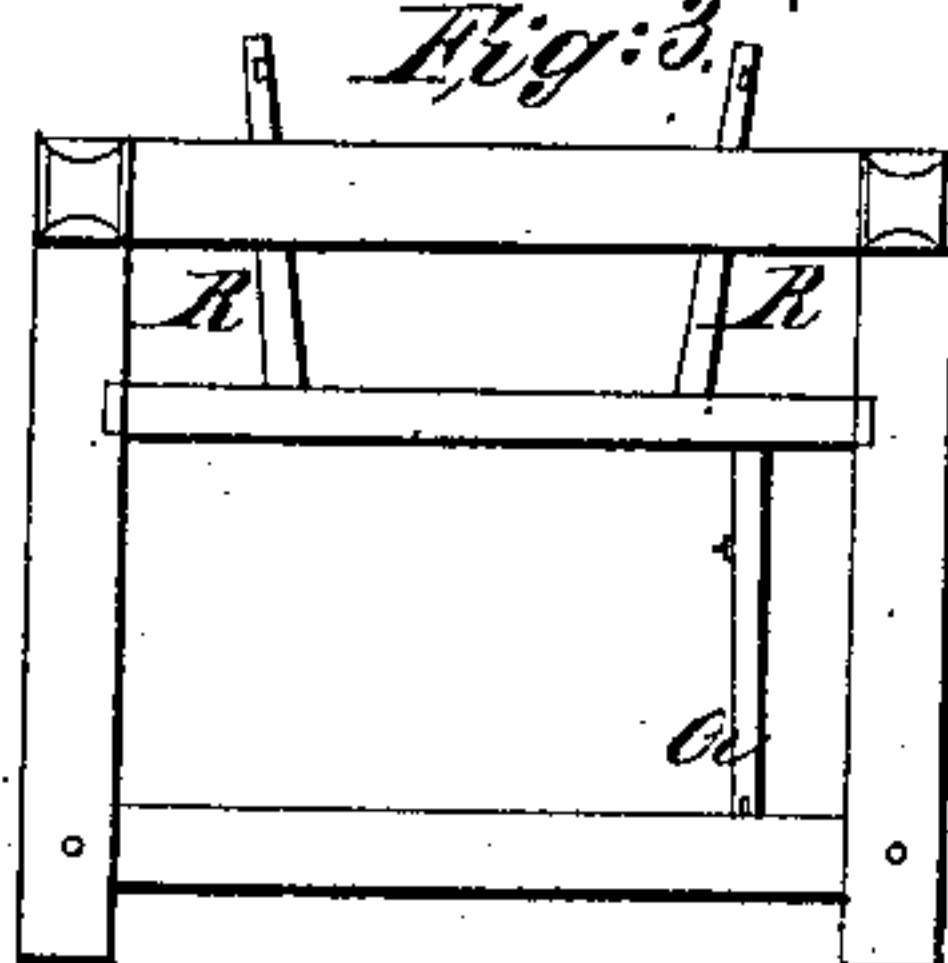
*Fig. 1*



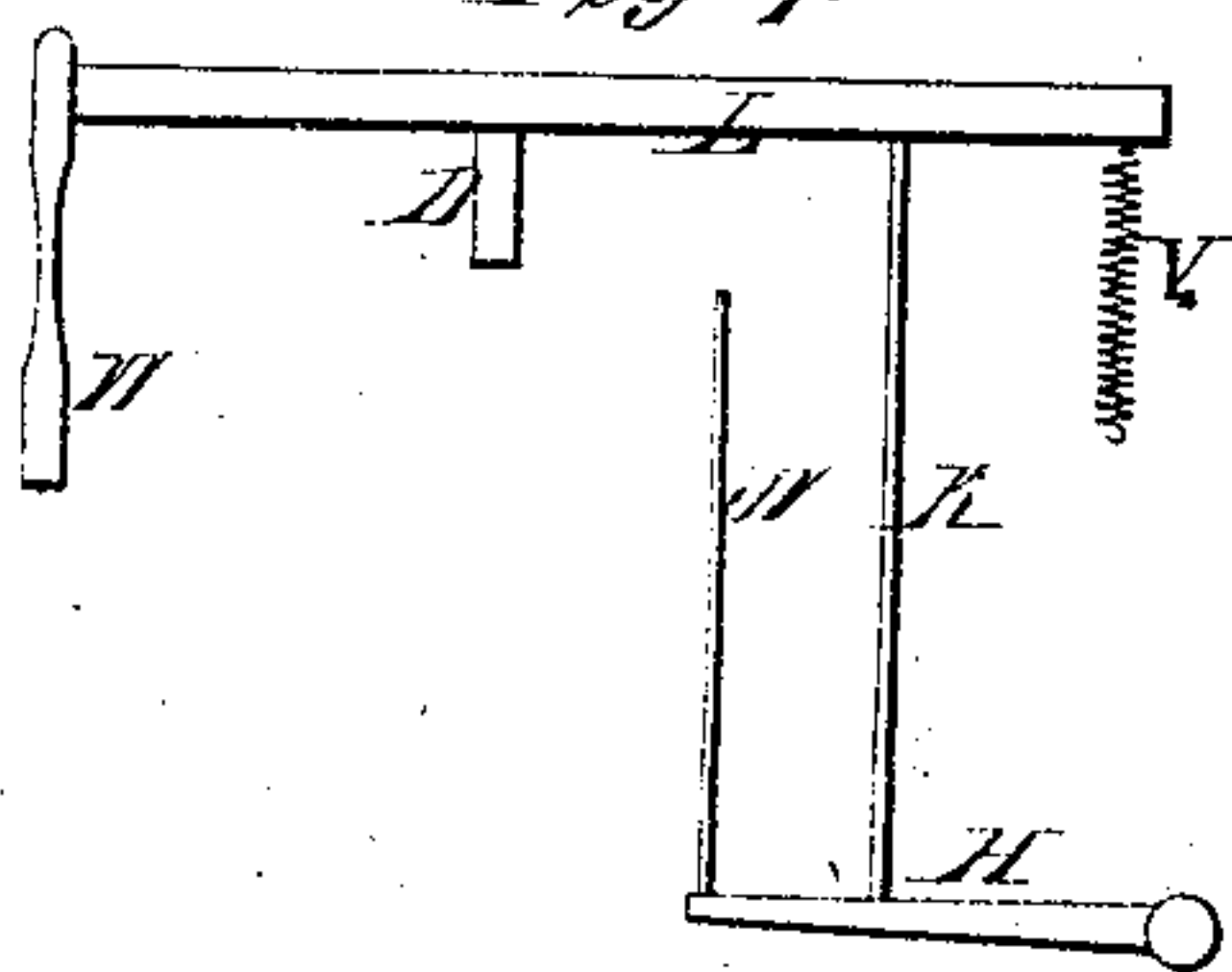
*Fig. 2.*



*Fig. 3.*



*Fig. 4.*



*Witnesses:*  
*John C. E. E. E.*  
*John C. E. E.*

*Inventor:*  
*John B. Smith*

# UNITED STATES PATENT OFFICE.

JOHN B. SMITH, OF SUNAPEE, NEW HAMPSHIRE.

## MACHINE FOR SLITTING CLOTHES-PINS.

Specification of Letters Patent No. 10,553, dated February 21, 1854.

*To all whom it may concern:*

Be it known that I, JOHN B. SMITH, of Sunapee, in the county of Sullivan and State of New Hampshire, have invented a new and useful Machine for Slitting Clothes-Pins; and I do hereby declare that the following is a full, clear, and exact description of the construction and operation of the same, reference being had to the annexed drawings as part of this specification.

Figure 1 is a top view, Fig. 2, a base section, Fig. 3, an end view, and Fig. 4 the paw-levers and appurtenances detached from the machine.

The nature of my invention consists in cutting out the wedge from clothes-pins, after they have been turned and cut to the proper length, by means of a self-acting saw or saws, so combined with a movable groove-bed, as to approach when the groove-bed is stationary, and retire to permit of the successive hitchings of said groove-bed; and to enable others skilled in the mechanic arts to make and use my invention, I will proceed to describe its construction and operation.

The different representations of the same parts, are marked in the various figures by identical letters.

'A A' Fig. 1. is the top of the outside frame which is of wood, bolted, or mortised and tenoned together. 'B' same figure is the inclined spout where the pins are fed in; this spout may be of wood or any other convenient material. When the pins are placed in this spout they roll against the fluted drum or groove-bed 'C' Fig. 1, and are carried up toward the saws.

'D' Fig. 4 is one of two paws which drop upon the pins which are highest in the bed, and hold them until the saws enter and retire. The grooves in the groove-bed are of peculiar construction, being so shaped as to hold the pin fast between its sides, when the 'paw' has stamped it in, until ejected by spur 'T' Fig. 1, when they fall into a receptacle at the back of the machine. The groove-bed (which may be made of cast-iron entirely, or built of wood with iron grooves bedded into its periphery) is turned by a dog-headed spear operating on the side of ratchet wheel 'E' Fig. 1. The head of this spear is seen inclosing the teeth of said ratchet at 'F' Fig. 1, and its lower end rests on the point of arm 'G' Fig. 2. It is made to adhere to the ratchet by a spiral spring.

The rocker into which arm 'G' is tenoned contains another arm marked 'H' Fig. 2, which latter, by means of a pole 'K' Fig. 4, resting on its middle, raises the lever 'L' Fig. 4, the upper end of pole being secured to said levers. These levers are held down while the pins are being slitted, by a spiral spring 'V' Fig. 4, and are hinged in a post 'W' shown in Figs. 1 and 4. The arm 'H' is raised by a cam 'I' Fig. 2, on a disk 'J' same figure. Another spear 'N' Fig. 4 resting on the point of arm 'H' and passing up between the cross-beam of the machine and the notched index 'M' Fig. 1, raises the horizontal dog 'O' Fig. 1, and allows the groove bed to turn one groove. Spear 'N,' which may be made of iron or steel is formed with a bow near its upper end, the convexity of which touches the arbor of groove-bed, and thus as spear 'N' rises, it is thrown back, and from under dog 'O' so that said dog may drop instantly into the succeeding notch of the index; when the spear drops, it again takes its position immediately under the end of dog 'O' ready to lift the dog again from the index and fly out as before. This dog is held down by a spiral spring. The index may be placed upon the groove bed or on the same shaft separate and has the same number of nubbles on its periphery as there are grooves in the groove bed.

The saws are moved with the frames on which they are set by a rod or sweep attached to disk 'P' Fig. 2, and running into arm 'Q' Figs. 2 and 3. The rocker into which this arm is inserted has also two other arms 'R' 'R' Figs. 1 and 3, projecting upward, which latter arms are attached to the saw-frames by links 'S,' 'S,' Fig. 1. The pins when slitted—as the bed rolls around—hit spur 'T' and fall out.

A light spring 'U' is fixed to the end of the front sawframe, for the purpose of pressing each pin back in the groove an equal distance; in other words, gaging the pins from the point. This spring operates, of course, at every advance of the saws.

Motion may be communicated to the whole machine from a driving shaft above by a belt passing from a small cone on said shaft to cone 'X' Fig. 2. On the same shaft on which cone 'X' is placed is also a small gear, which meshes into a larger gear on shaft 'Y' and thereby reduces the revolutions of the disks, and as a consequence the



strokes of the saws, to about 65 per minute. The saws may be driven from large pulleys on the before mentioned extraneous shaft or in any other way deemed convenient.

- 5 From near the upper end of arm 'Q' Fig. 3, a sweep is run to a spear, the lower end of which is set in a longitudinal rail of the machine, and the upper end of which passes into "safety-slide" 'b' Fig. 1. This slide is to  
10 prevent accidents by the saws running into, or against, the wrong place of the "groove-bed": For being at each advance of the saws correctly run into a notch of the index; should the groove-bed become triggered, so  
15 as to prevent a correct turning of one groove at a time, the end of said slide would strike the nubble instead of the notch of the index and the saws would stand still.

I claim—

- 20 1. The sliding saw-frame or frames, operated on adjustable ways in combination with the movable "groove bed" as herein described.  
25 2. The grooved or fluted bed whether said grooves are parallel with the shaft on which said bed is placed or radiate from its center.

3. The manner of setting off the "groove-bed" by means of a ratchet as shown, or its equivalent, a worm-wheel operating on the nubbles of the index; these nubbles being the  
30 same in number as the grooves in the groove-bed.

4. The lever-paws, operated by springs, or their mechanical equivalents, pressure rolls, to hold the pin while being slitted. 35

5. The application of the gaging spring 'U' for driving the approaching pin toward the end of the groove into which it has fallen.

6. The 'safety-slide' for the purpose of  
40 preventing the wrong passage of the saws.

7. The construction of a self-acting machine for 'slitting' clothes-pins, by means of one or more saws, making one or more  
45 carths, into the same, or separate pins, at one advance of the saws; having the same appurtenances, and operated substantially in the manner herein set forth.

JOHN B. SMITH.

Witnesses:

JOHN FELCH,  
JOSIAH TURNER.