

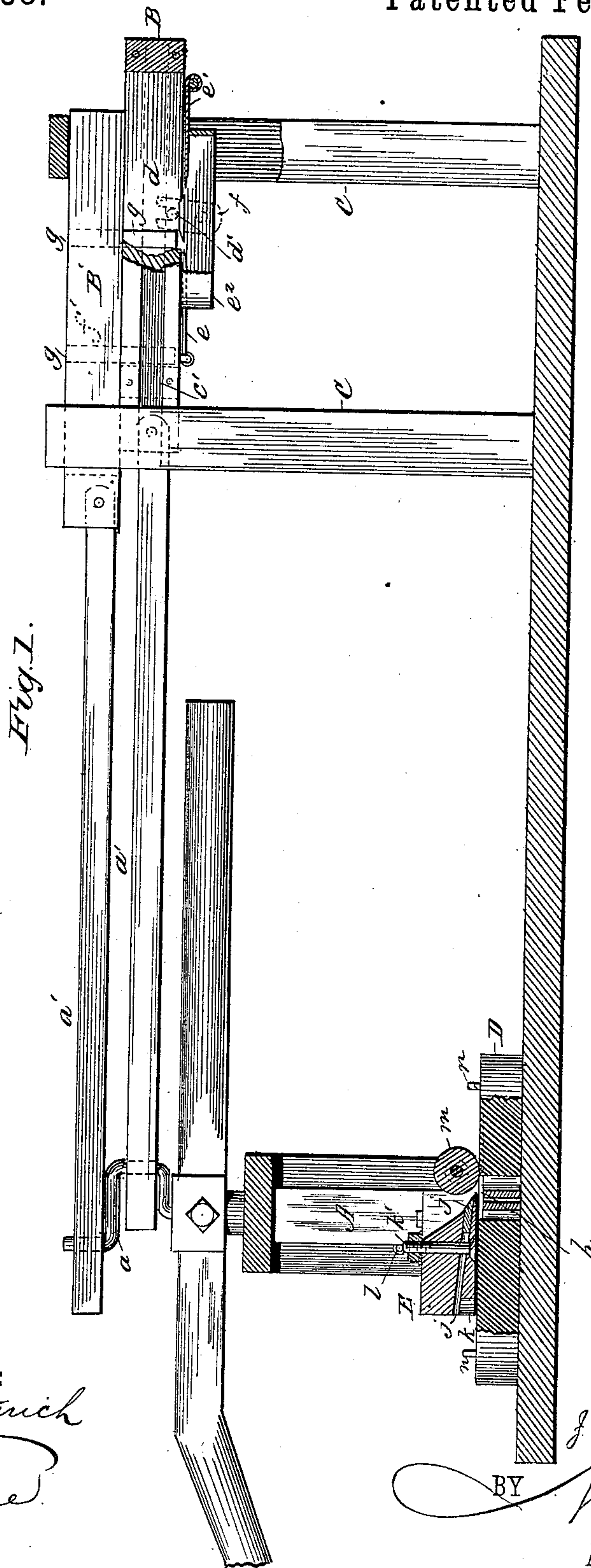
(No Model.)

2 Sheets—Sheet 1.

J. P. BOWLING.  
SHINGLE MACHINE.

No. 272,638.

Patented Feb. 20, 1883.



WITNESSES:  
*Fred. G. Dietrich*  
*A. G. Lyne*

INVENTOR:  
*J. P. Bowling*  
BY *Rum*  
ATTORNEYS.

(No Model.)

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Fig. 2.

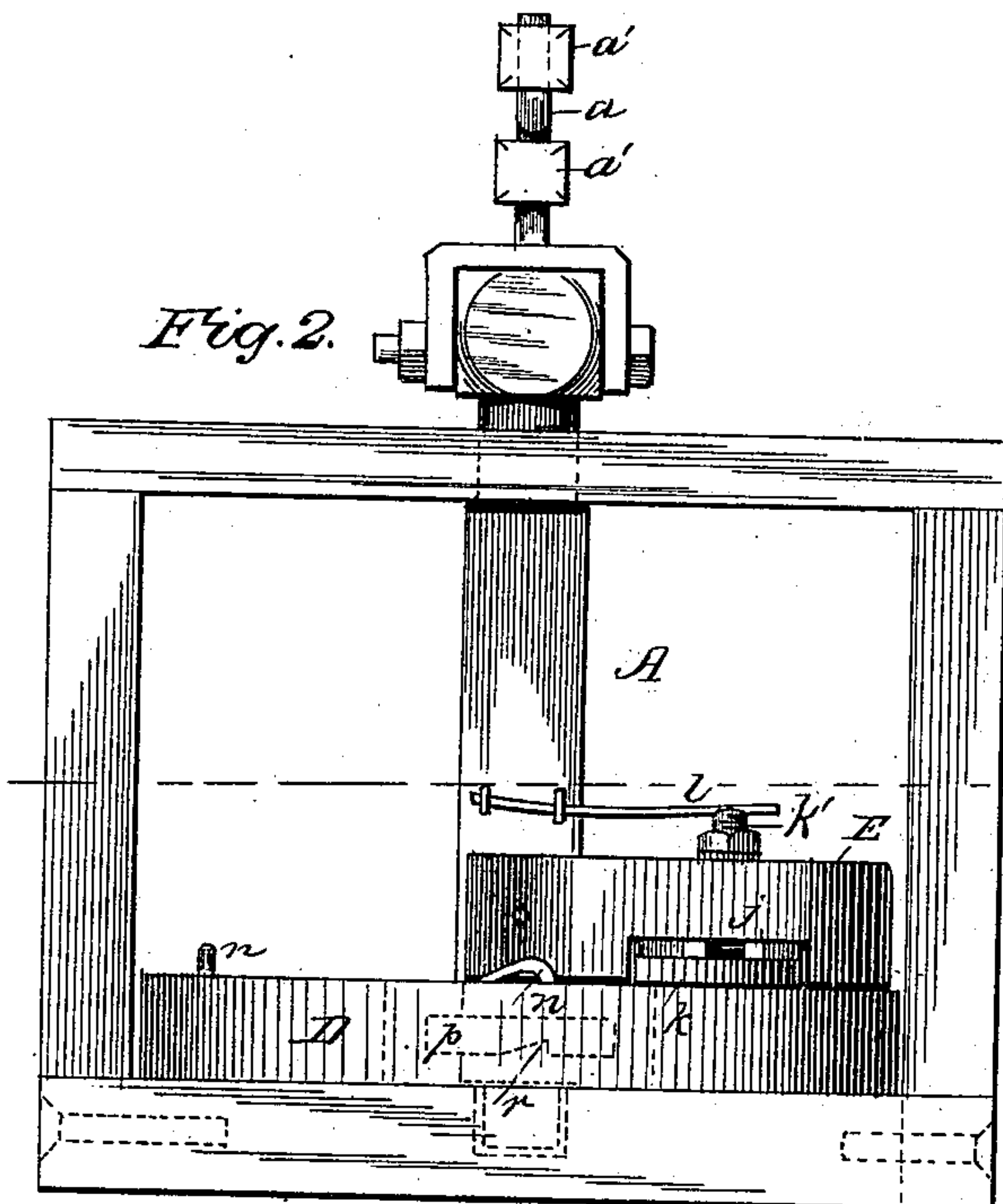


Fig. 3.

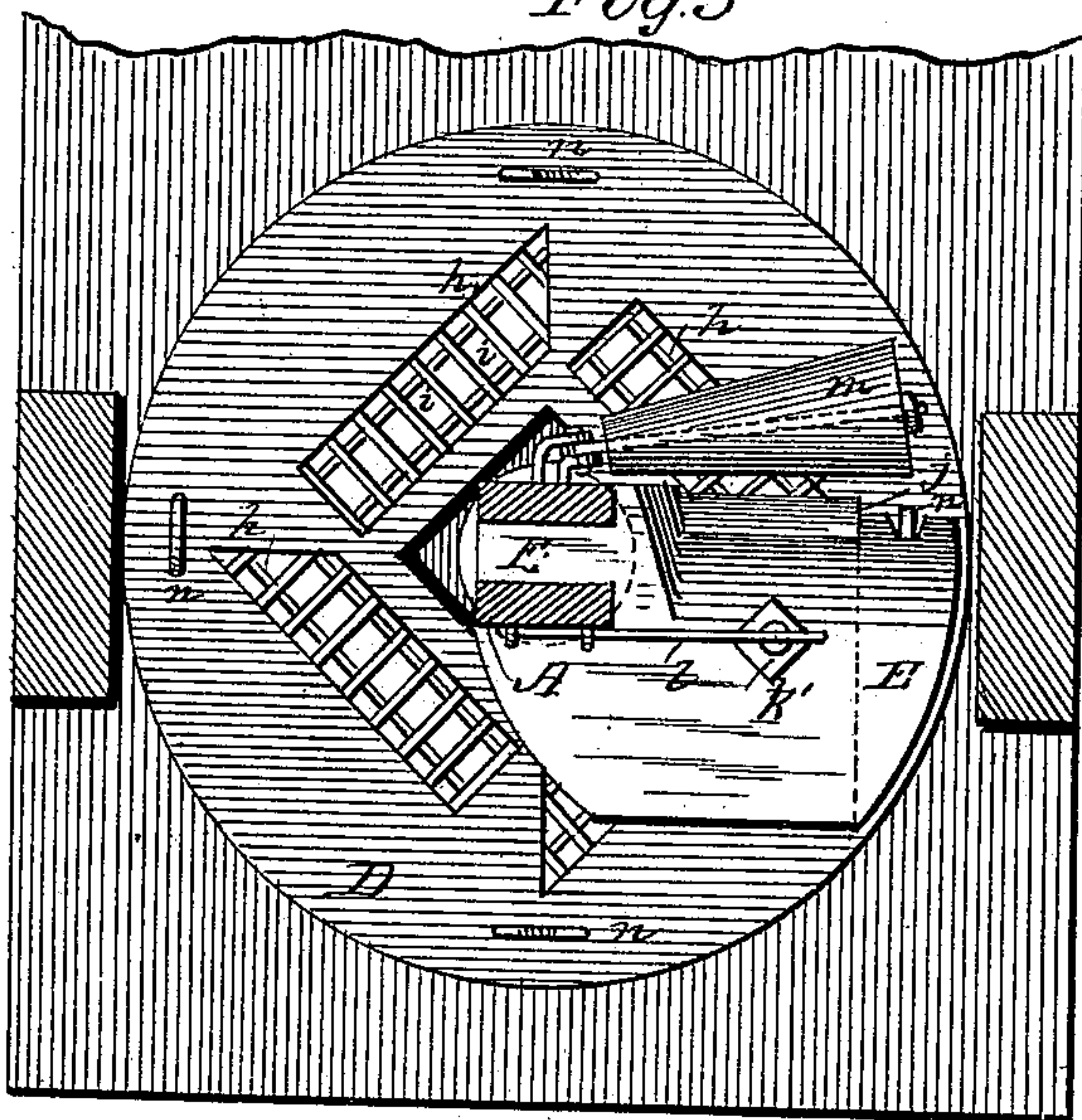
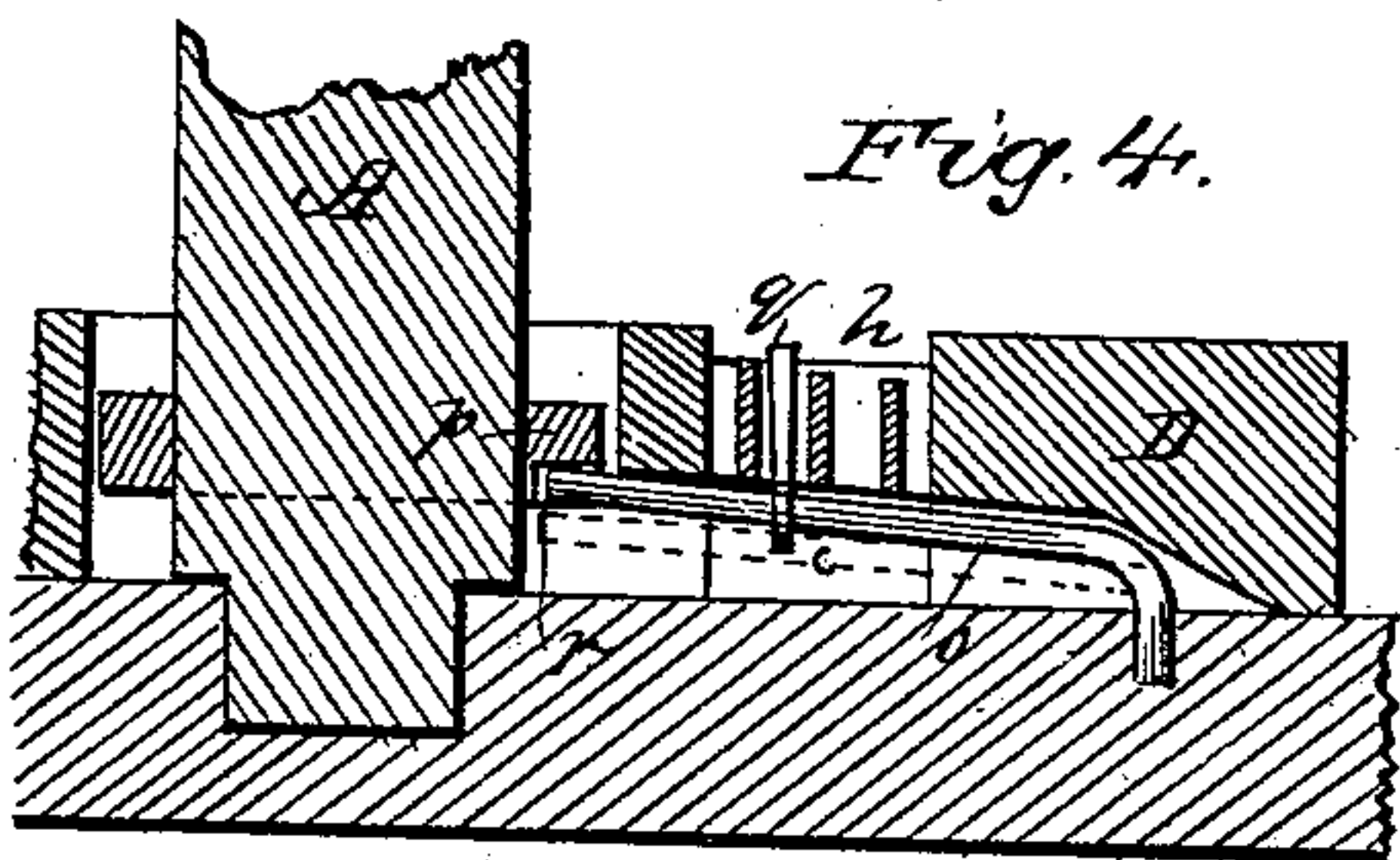


Fig. 4.



WITNESSES:  
*Thos. G. Dieterich*  
*A. G. Lyne*

INVENTOR:  
*J. P. Bowling*  
BY *Thos. G. Dieterich*  
ATTORNEYS.



# UNITED STATES PATENT OFFICE.

JOHN P. BOWLING, OF GUTHRIE, KENTUCKY, ASSIGNOR OF ONE-HALF TO  
EDWARD BRYAN, OF SAME PLACE.

## SHINGLE-MACHINE.

SPECIFICATION forming part of Letters Patent No. 272,638, dated February 20, 1883.

Application filed May 20, 1882. (No model.)

*To all whom it may concern:*

Be it known that I, JOHN P. BOWLING, of Guthrie, in the county of Todd and State of Kentucky, have invented a new and useful  
5 Improvement in Shingle-Machines, of which the following is a full, clear, and exact description, reference being had to the annexed drawings, forming part of this specification.

The object of this invention is to provide a  
10 planing device for a shingle-machine, which may be conveniently geared with a riving device, to the end that the shingles may be planed to a uniform bevel by transferring them from the riving device to the planing device while  
15 both devices are in operation.

The present invention consists of the planing device, as hereinafter described.

In the drawings, Figure 1 is a side elevation, partly in section, of my improved shingle-machine. Fig. 2 is an end view of the machine,  
20 partly in section. Fig. 3 is a plan view of the planing device, and Fig. 4 is a detail.

A represents an upright wrought-iron or steel shaft, about two inches in diameter, supported  
25 in suitable bearings, and having a double-acting crank, *a*, secured to its upper end. The throw of each wrist of the double crank is to be about five and one-half inches from the center of said shaft, and to the wrists are connected the  
30 pitman-bars *a' a'*, which are pivoted respectively to the wrought-iron hopper-boxes B B'. The box B is supported in the frame C by means of projections fitting in grooves *c'* at the sides of the box in such manner that the  
35 latter may be given a reciprocating movement within the frame, while the box B' is supported upon the upper surface of box B. The box B is constructed with a chamber, *d*, extending nearly from one end thereof to the other, with  
40 a two-edged knife, *d'*, secured to the under side of the box crosswise at the center, and two gages or adjustable bottoms, *e e'*, are hinged to the box B, on opposite sides of the knife, with their free ends toward each other.  
45 The gages are to be about sixteen inches in length and their inner ends are to be about three inches from the adjacent edges of the knife to leave room for the shingle to drop out at either side of the knife. The gages are sup-  
50 ported in position to close the chamber *d* at

the bottom by means of a frame, *e<sup>2</sup>*, which extends from the center of one gage to that of the other, and which is pivoted at the center, on opposite sides, in the vertically-adjustable supports *f*. The box B' is constructed with  
55 a chamber, *f'*, in the ends of which are secured pieces *g*, which project downward into the chamber *d* of box B and serve to form the hopper in which the bolt is to be placed. With this construction the bolt is made to move, with  
60 the box B', against the knife, which moves with the box B in the opposite direction, whereby only one-half the stroke is required that would be necessary if either the bolt or the knife were stationary. The weight of the  
65 bolt upon either of the gages *e e'* will cause the balanced frame *e<sup>2</sup>* to dip at that end, whereby one part of the bottom of chamber *d* will be slightly inclined toward the knife at said end, and thus the shingle will be made  
70 thicker at one end than at the other. By means of the slotted supports *f* the balanced frame *e<sup>2</sup>* may be adjusted vertically, so that the gages may have greater or less play to vary the thickness of the shingles.  
75

At the lower end of the vertical shaft A is provided a stationary bed-piece, D, surrounding said shaft and having seats *h* for receiving the shingles to be planed. The bottoms of the  
80 seats are to be made removable to adapt the seats for shingles of any thickness that may be desired. As shown in the drawings, the bottoms of the seats may be made of cross-pieces *i*, connected together in such manner as  
85 to leave open spaces, through which any shavings that may happen to get into the seats may fall. These bottoms are made removable, in order that they may be taken out and others of greater or less height substituted, according to the depth of seat required. The seats are  
90 to be made deeper at one end than at the other, and the upper surface of the bed-piece D is made plane, to serve as a guide for the knife *j*, which is secured in a recess in the under surface of the stock E. A gage-plate, *k*, made  
95 plane on the under side and inclined toward one end on the other, is secured to the under side of the knife by means of a bolt, *k'*, which passes through the gage-plate, the knife, and the stock, and has its head countersunk in the  
100



plate. The knife is slotted to receive the bolt, in order that it may be adjusted inward or outward, according to the depth to be cut. This stock has one end pivoted in a mortise in the shaft A in such manner that it may have a slight vertical movement above the bed-piece D, and a spring, *l*, connected to the shaft, is placed in engagement with the stock to hold the knife yieldingly in position. As the shaft is rotated the knife passes over the surface of the bed-piece and removes any portion of the shingle which projects above its seat. The knife is set therefore with reference to the surface of the bed-piece, and not with reference to the actual surface of the shingle being planed, and thus the shingles are all made uniform in thickness, whether much or little is to be removed by the planing operation. When a shingle has been planed on one side it is to be turned over and planed in the same manner on the opposite side, whereby it is beveled at one end on each side. As a means of holding the shingle firmly in its seat during the operation of planing, a roller, *m*, is supported in front of the knife *j* by means of a shaft flexibly connected to the shaft A in such manner that the roller may rise over projections *n*, secured to the upper surface of the bed-piece near the forward ends of the seats, and then drop by its own weight or by the action of a spring upon the shingle.

Underneath two of the seats, on opposite sides of the bed-piece, is located a spring, *o*, having one end secured to the bed-piece, and the other or inner end arranged under a band, *p*, which is secured to the shaft A. A short piece, *q*, is loosely secured to the straight spring by means of an eye, in such manner that it shall project upward through an opening in the bottom of the seat, and the band *p* is provided with a recess, *r*, in its periphery at a single point, whereby the inner end of the springs shall be allowed to spring up suddenly to cause the piece *q* to project upward and knock the shingle out of the seat. A segmental groove is to be formed in the under surface of the stock to receive the projections *n* as the stock passes over them.

By means of a sweep, as shown, or a pulley

secured to the shaft A, power is to be applied to operate the machine.

The above-described riving device will be made the subject-matter of a subsequent application.

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

1. In a shingle-machine, the combination of the bed-piece, having seats therein for the shingles, provided with removable bottoms, the vertical shaft, the stock forming a flexible joint with the shaft, and having a depressing-spring, and the drawing-knife set in the under surface of the stock to move over the face of the bed-piece, substantially as shown and described.

2. In a shingle-machine, the combination, with the bed-piece having seats for the shingles and the vertical shaft, of the stock having a wedge-shaped recess in its under surface, the slotted drawing-knife, and the gage-plate having its under surface made flush with the under surface of the stock, and its upper surface inclined toward the edge of the knife, and the bolt passing through said parts, substantially as shown and described.

3. In a shingle-machine, the combination, with the bed piece having seats for the shingles and projections near the forward ends of the seats, of the vertical shaft and roller flexibly connected thereto, whereby it shall be adapted to rise over the projections and fall directly upon the shingles to hold them in position, substantially as shown and described.

4. In a shingle-machine, the combination, with the bed-piece having the seats, of a spring arranged underneath a seat, and having a projection thereon which is adapted to be pressed upward through an opening in the bottom of the seat, and the vertical shaft having a band around its lower end, provided with a recess in its periphery to allow the end of the spring to fly upward at a given point, substantially as shown and described.

JOHN P. BOWLING.

Witnesses:

A. G. LYNE,  
 SOLON C. KEMON.