(No Model.)

J. H. & H. L. BERST.

SKEWER POINTING MACHINE.

No. 483,205. Patented Sept. 27, 1892.

Fig. I.

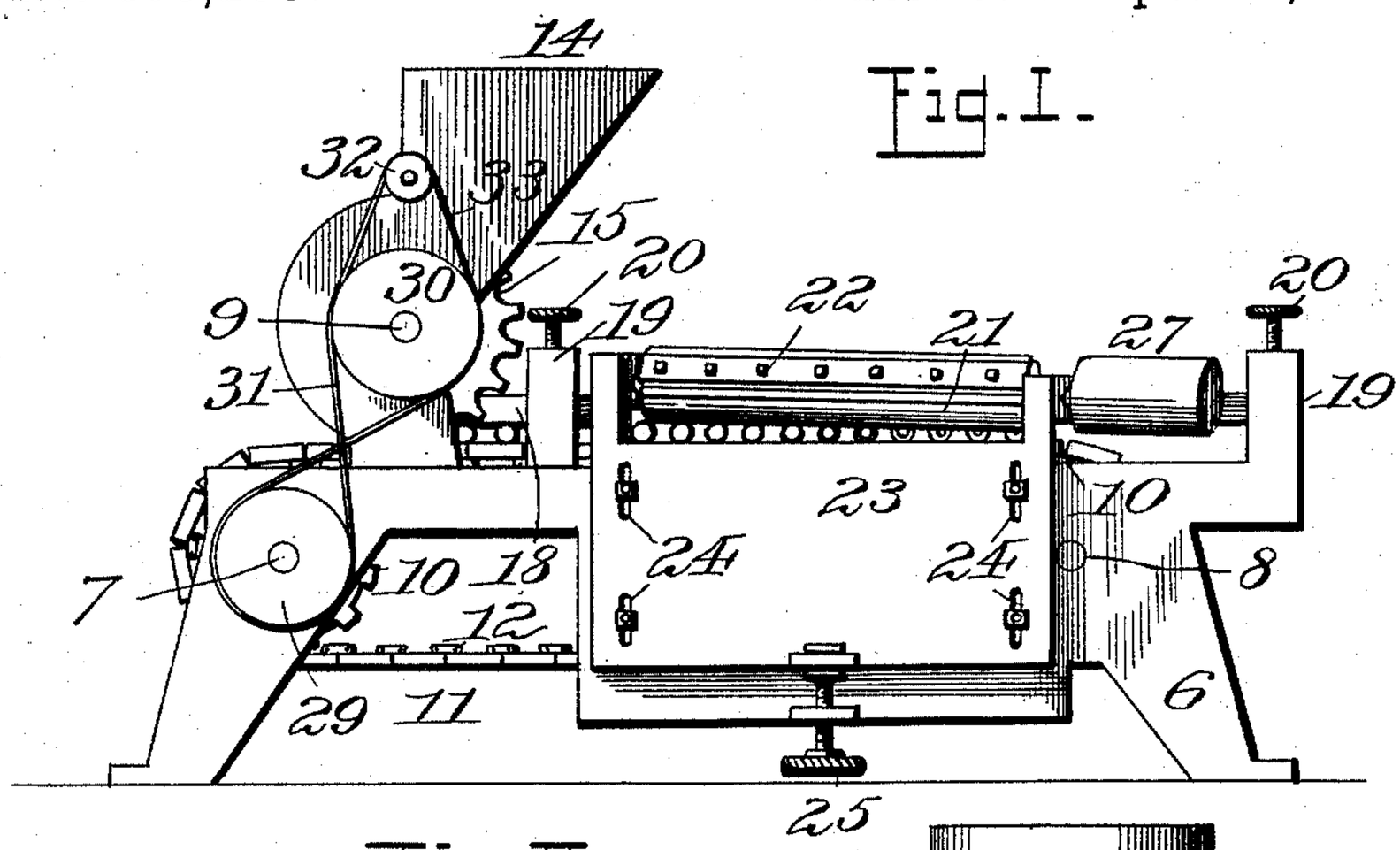


Fig. II.

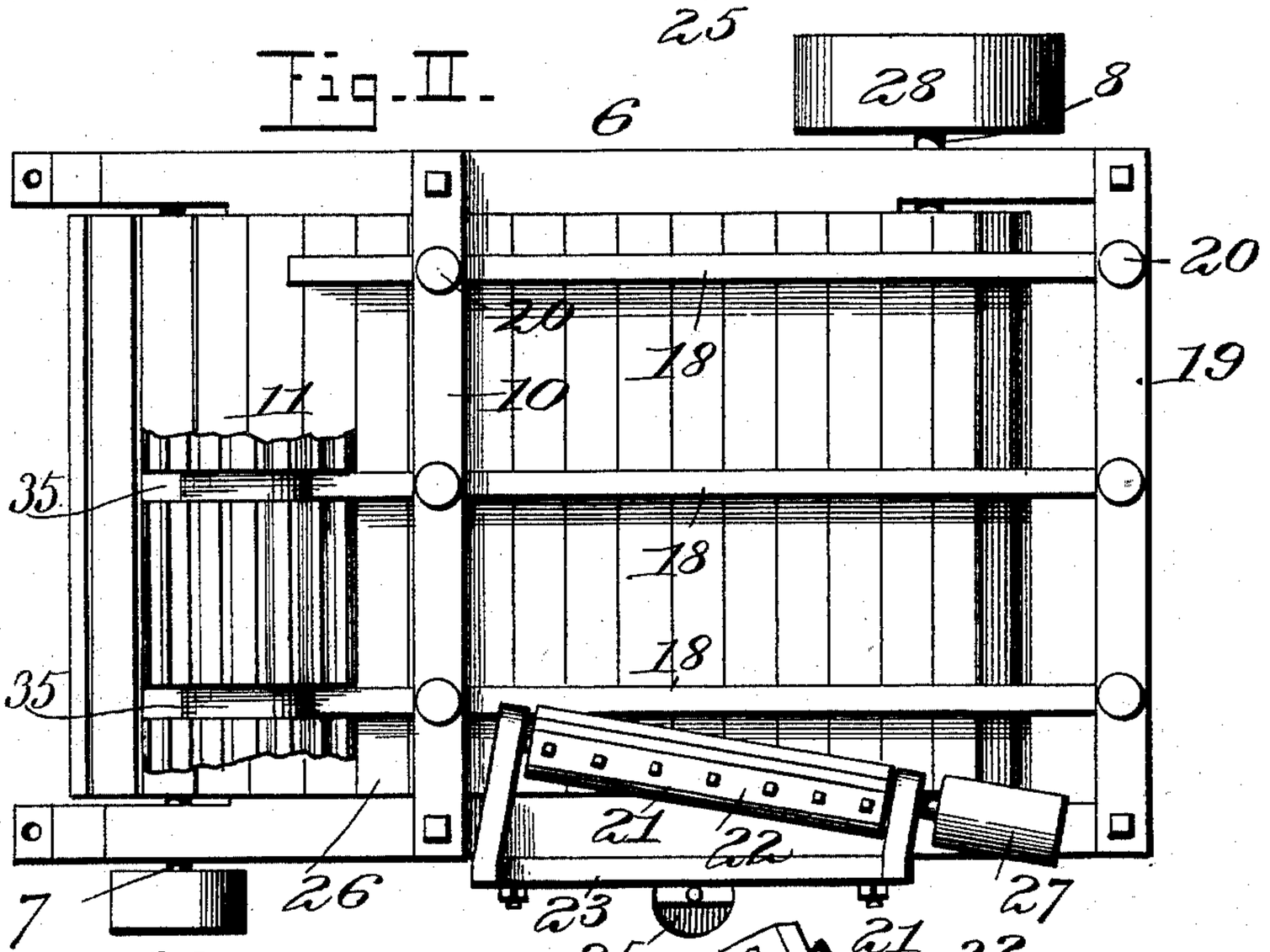


Fig. III.

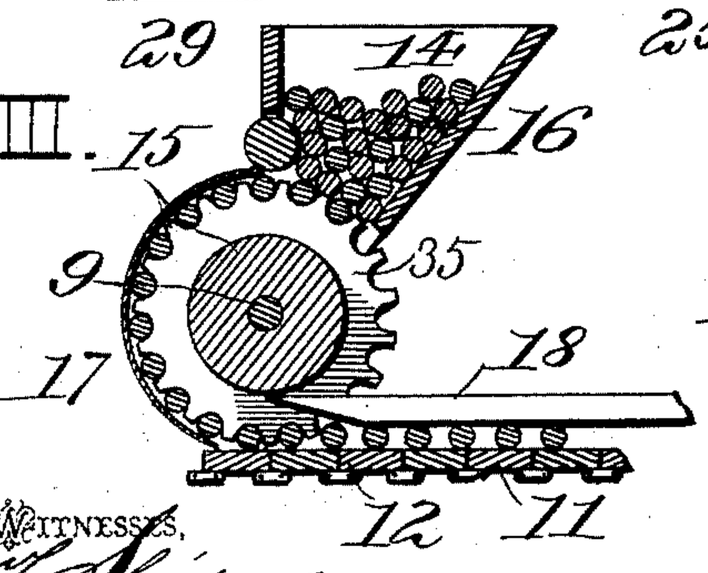
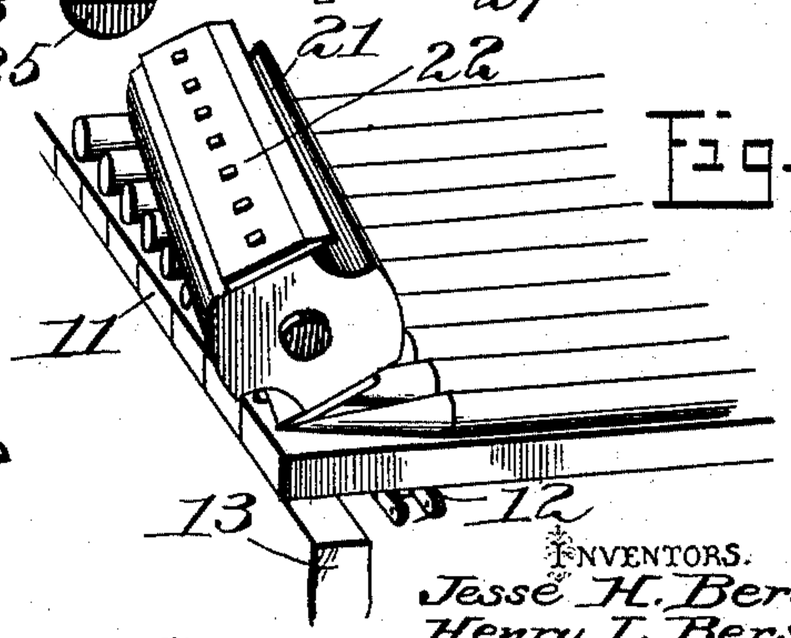


Fig. IV.



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JESSE H. BERST, OF KOKOMO, AND HENRY L. BERST, OF LEESBURG, INDIANA.

SKEWER-POINTING MACHINE.

SPECIFICATION forming part of Letters Patent No. 483,205, dated September 27, 1892.

Application filed August 27, 1891. Serial No. 403,915. (No model.)

To all whom it may concern:

Be it known that we, JESSE H. BERST, residing at Kokomo, in the county of Howard, and HENRY L. BERST, residing at Leesburg, in the county of Kosciusko, State of Indiana, citizens of the United States, have invented certain new and useful Improvements in Skewer-Pointing Machines; and we do hereby 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.

This invention relates to machines for sharpening wooden pins in general, and particularly to that class of round-bodied pins called "skewers," and which are used by butchers for fastening meat together.

The object of the invention is to adapt a machine to automatically feed the skewers to the cutters and to so arrange the cutters that each will act upon a number of skewers at one time and gradually sharpen the point of each skewer as it passes the cutter, thus forming a perfect and sharp point without danger of breaking off.

To this end our invention consists in a skewer-pointing machine having means for feeding the skewers to the cutters by rolling the skewers along a plane surface, and means for causing the cutters to act in a direction to peal shavings from the butt of the taper toward the point and obliquely to the line of the skewer, as hereinafter described and claimed, reference being had to the accompanying drawings, in which—

Figure I represents in side elevation a skewer-pointing machine according to our invention. Fig. II is a top view of the same without the feed-hopper and showing part of the separator. Fig. III shows a longitudinal vertical section in the region of the hopper and separator. Fig. IV is a detail view showing in perspective a cutter at work and a series of skewers being pointed thereby.

6 represents the frame of the machine in which the shafts 7, 8, and 9 are journaled. The shafts 7 and 8 are each provided with a pair of sprocket-wheels 10, which carry a belt 11, made up of a series of plane sections secured together at their adjacent edges by hinges 12, that portion of the belt which goes over the sprocket-wheel being fitted to slide upon side rails 13, which are rigidly secured to the frame to maintain the sections of the belt in an exact plane while moving.

14 represents a hopper into which the skewers are fed lying in a direction across the machine.

15 represents a separator consisting of a fluted cylinder mounted upon the shaft 9 to revolve therewith and of a length equal to the length of the skewer, the slots or flutes being each deep enough to receive a skewer and to separate it from the mass of skewers 16, as shown in Fig. III.

17 represents a casing extending from the lower edge of the hopper 14 around the cylinder 15 to the upper base of the belt 11 to keep the skewers in the slots while passing from the hopper to the belt.

18 represents a series of guide-rails secured to cross portions 19 of the frame by means of screws 20, whereby the rails may be raised or lowered to adjust them relatively to the upper plane portion of the belt 11, so that the guide-rails will press the skewers upon the belt. The rear end of each guide-rail 18 is slanted upward on its under side to form an open mouth in connection with the belt to readily receive the skewers, and the fluted cylinder 15 is grooved around its circumference, as shown at 35, to admit the ends of the rails 18 under the skewer.

21 represents a cutter-head provided with blades 22 and journaled in two arms of a bracket 23, which is slotted at 24 and secured to the main frame by means of bolts passing through the said slots.

25 is an adjusting-screw operating between the said bracket and frame, whereby the bracket may be raised or lowered to vertically adjust the cutter-head 21. The cutter-head 21 is journaled both horizontally and vertically oblique to the line of travel of the edge 26 of the belt 11. As seen in the drawings, the left-hand end of the cutter-head 21 is higher than the right-hand end in Fig. I to the amount equal to one-half the diameter of a skewer, and in Fig. II the left-hand end is shown as extending over the belt a distance equal to the length of the taper of a skewer, while the right-hand end is beyond the edge of the belt. The cutter-head should be revolved rapidly by some suitable means, such

as a belt on a pulley 27, and the carrier-belt 11 should be revolved at a moderate speed by means of a pulley 28, and the separator-cylinder 15 is caused to revolve at a suitable speed relative to the belt by means of a pulley 29 on the belt-shaft 7, a pulley 30 on the separator-shaft 9, and a crossed belt 31.

32 is a roller connected with the separator-cylinder by means of a belt 33, and it acts upon the skewers in bulk in the hopper to roll them over among themselves, thereby tending to straighten them into a parallel body, so that each skewer will be ready to fall into the first open groove in the separator which arrives beneath it. The belt 11 in its forward movement bears the skewers against the rails 18 and rolls them over and over as they advance beneath the cutter, and the cutter begins its action upon the circumference of each skewer at a distance from the end thereof to cut a ring forming the shoulder, and as the skewer continues to roll forward the obliquity of the cutter relative to the vertical plane of the line of travel of the skewer causes the cutter to gradually approach the end of the skewer, and the obliquity of the cutter relative to the plane in which the skewers travel causes the cutting to gradually approach the central line of the skewer, whereby each skewer is gradually reduced at one end to a smooth conical point. The cutters revolve in the direction to make a pealing cut toward the point and almost in the direction of the grain of the wood of the skewer, turning barely enough to one side to peal the shavings off easily and leave the skewer with a smooth and unbroken conical point. When the binding-screws in the slots 24 are loosened, the bracket 23 may be canted to the right or left to give the point of the skewer more or less taper, and by raising or lowering the set-screw 25 a larger or smaller bodied skewer may be admitted within the small range of variation permitted by the grooves in the separator 15, and the screws 20 permit the rails 18 to be set for different-sized skewers or to be adjusted to bear on the skewers at all points properly. After the first skewer passes the end of the cutter it is perfectly pointed, and the cutters are acting throughout their length on a series of skewers all at once in the gradual process of pointing them, so that the work is rapidly and automatically done.

Other styles of belts than the hinged sectional one here shown may be used, and any means for separating the skewers and delivering them to the belt, as described, may be substituted for the fluted cylinder without affecting our invention.

Having thus fully described our invention, what we believe to be new, and desire to secure by Letters Patent, is the following:

The combination, in a skewer-pointing machine, of a plain feeding-belt, guide-rails located in a plane opposite to the belt, a cylinder fluted to receive skewers and journaled above and parallel with the belt, and a rotary cutter journaled obliquely to the plane of the belt and to the edge thereof, the fluted cylinder being adapted to deliver the skewers parallel with each other across the belt, the feed of the belt and the fixed guide-rails being adapted to revolve the skewers in advancing and the oblique cutters being adapted to cut the skewers from the shoulders thereof toward the point spirally, substantially as described.

In testimony whereof we affix our signatures in presence of two witnesses.

JESSE H. BERST.
HENRY L. BERST.

Witnesses to the signature of Jesse H. Berst:
CHARLES A. DOLMAN,
C. H. TAYLOR.

Witnesses to the signature of Henry L. Berst:
WM. BAER,
WM. H. WOOD.