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PATENTED FEB. 20, 1906

C. PROVOST.
SHINGLE EDGING MACHINE.
APPLICATION FILED MAR. 18, 1905.

3 SHEETS—SHEET 1.

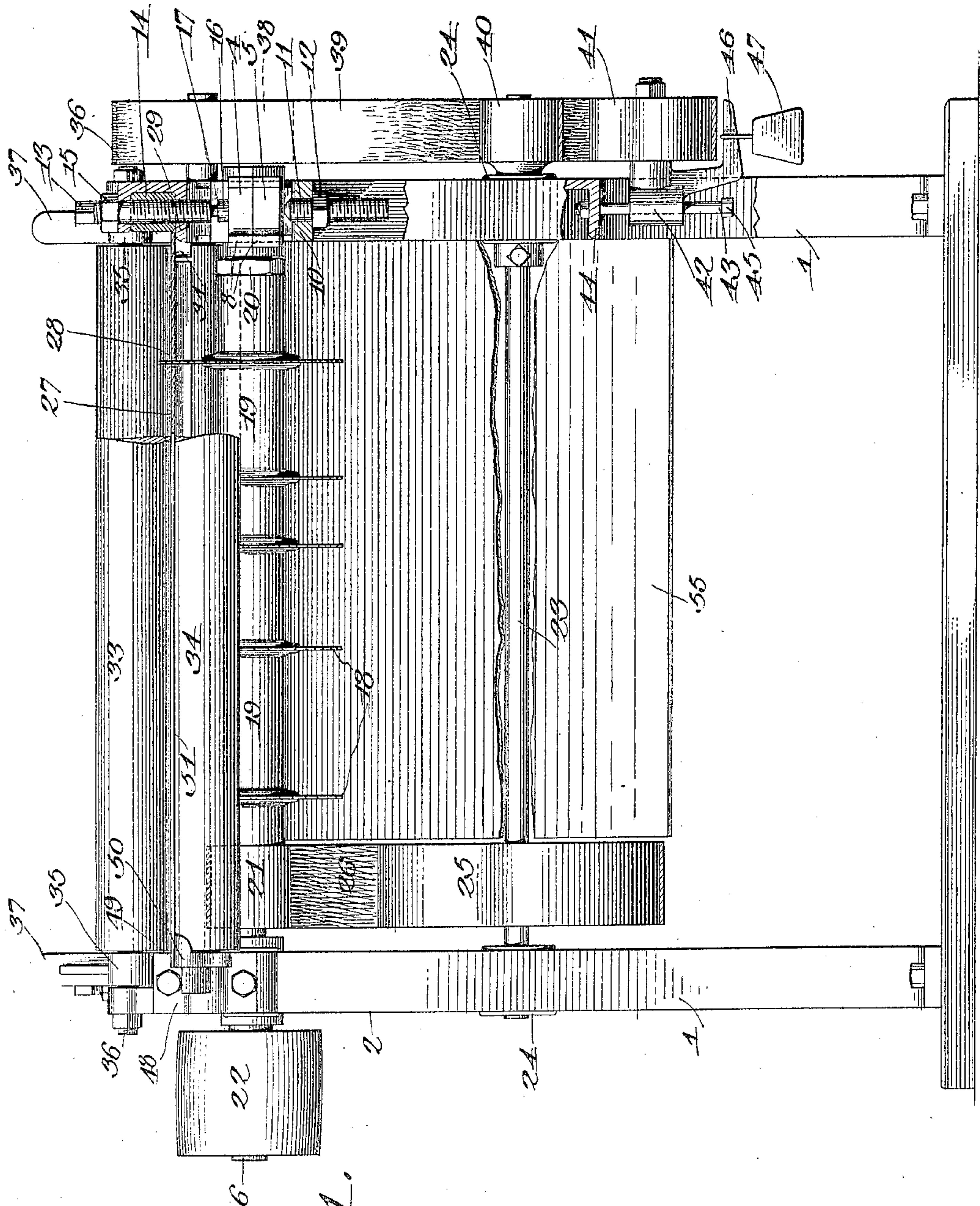


Fig. 1.

Witnesses

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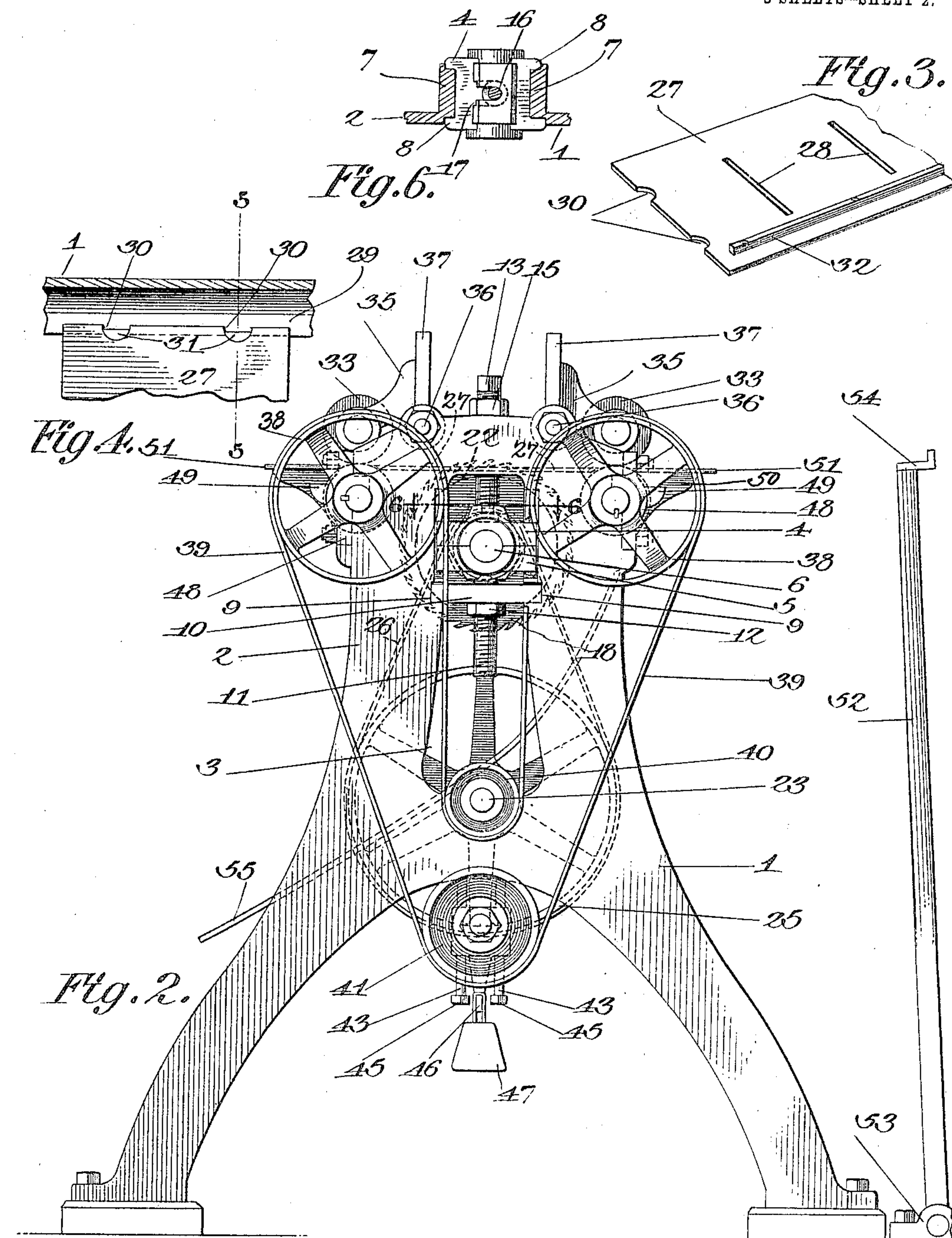
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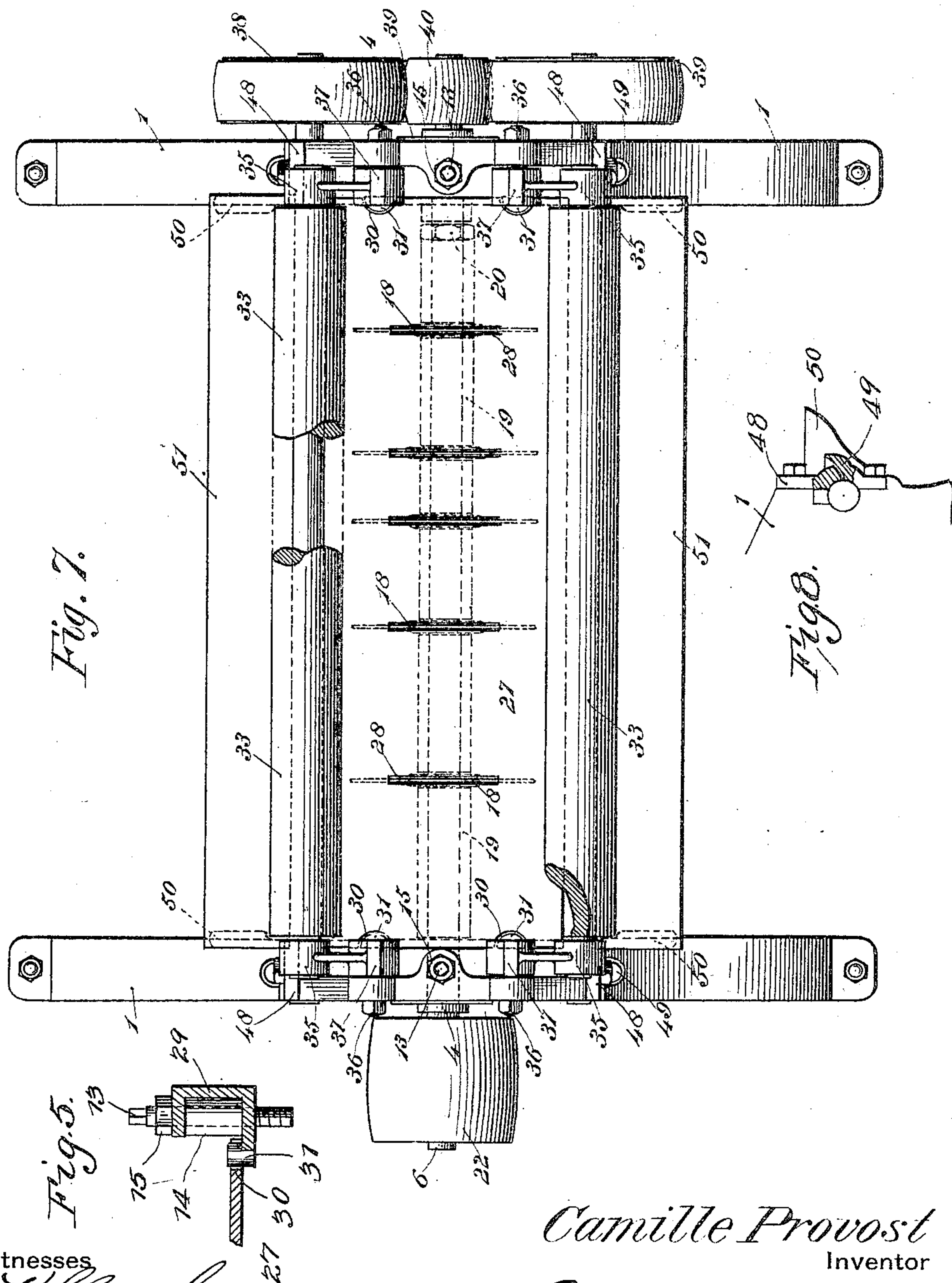
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3 SHEETS—SHEET 3.



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UNITED STATES PATENT OFFICE.

CAMILLE PROVOST, OF JEANERETTE, LOUISIANA, ASSIGNOR OF ONE-HALF
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SHINGLE-EDGING MACHINE.

No. 812,951.

Specification of Letters Patent.

Patented Feb. 20, 1906.

Application filed March 18, 1905. Serial No. 250,851.

To all whom it may concern:

Be it known that I, CAMILLE PROVOST, a citizen of the United States, residing at Jeanerette, in the parish of Iberia and State of Louisiana, have invented a new and useful Shingle-Edging Machine, of which the following is a specification.

This invention relates to woodworking-machines, and has for its object to provide an improved machine of this character especially designed for cutting up a sheet of wood into a plurality of shingles of standard widths after the latter has been cut from a slab or block of wood by a shingle-cutting machine. It is also designed to arrange the parts of the machine for convenient access thereto, to facilitate the feeding and removal of the work, and to maintain the work in positive engagement with the saw or saws during its passage through the machine, thereby to insure a straight even cut and to maintain a uniformity in the work.

With these and other objects in view the present invention consists in the combination and arrangement of parts, as will be hereinafter more fully described, shown in the accompanying drawings, and particularly pointed out in the appended claims, it being understood that changes in the form, proportion, size, and minor details may be made within the scope of the claims without departing from the spirit or sacrificing any of the advantages of the invention.

In the accompanying drawings, Figure 1 is a side elevation of a woodworking-machine of the present invention with parts broken away to show the mounting of the saw-arbor and the saw-table. Fig. 2 is an end elevation of the machine. Fig. 3 is a detail perspective view of one end portion of the saw-table. Fig. 4 is a detail fragmentary plan view illustrating the manner of connecting one end of the saw-table to the adjacent portion of the frame of the machine. Fig. 5 is a detail sectional view on the line 5 5 of Fig. 4. Fig. 6 is a detail plan section on the line 6 6 of Fig. 2. Fig. 7 is a plan view of the machine with portions of the upper feed-rolls broken away. Fig. 8 is a detail view of one of the bearing members for one of the lower feed-rolls.

Like characters of reference designate corresponding parts in each and every figure of the drawings.

The frame of the present machine includes

duplicate arched frame members 1, constituting the ends of the machine, and these frame members are connected by the shafts and rollers embodied in the construction of the machine. Each frame member has a body portion 2, rising for a suitable distance above the lower arched portion and provided with a longitudinal opening 3, in which the saw-arbor is designed to be mounted.

In each of the openings 3 there is a bearing-box made up of upper and lower members 4 and 5 for the reception of the adjacent end of the saw shaft or arbor 6. As best shown in Fig. 6 of the drawings, it will be noted that the upper portion of each side wall of the opening 3 is laterally reduced to form an upright guide-rib 7, and each end of the bearing-box is provided with spaced ears or projections 8 to slidably embrace the guideways 7 in order that the bearing-box may be moved vertically and at the same time be held against lateral displacement from the opening 3. At the bottom of each guide member 7 the wall of the opening 3 is provided with a notch or seat 9 for the reception of a cross-head 10, which is centrally pierced by an upright set-screw 11, having its upper end engaging the bottom of the bearing-box for the purpose of adjustably elevating the same, there being a suitable jam-nut 12, carried by the screw and engaging the bottom of the cross-head 10. Another set-screw 13 pierces the top of the frame, in which is set a nut 14 for the reception of the screw, the lower end of the latter having a swiveled connection with the top member of the bearing-box, whereby the upper and lower members of the box may be individually adjusted. A jam-nut 15 is carried by the upper portion of the screw 13 and bears upon the top of the frame to lock the set-screw. The swiveled connection between the set-screw 13 and the top of the bearing-box consists of a reduced cylindrically-headed stem 16 upon the bottom of the screw engaging an open-ended flanged groove or socket 17 upon the top of the bearing-box, whereby the upper member of the box may be lifted by the screw.

Upon the saw-arbor 6 is a series of circular saws 18, which are spaced at different predetermined intervals by spacing-sleeves 19, there being a locking-nut 20 fitted upon one end portion of the saw-shaft at the inner side of the frame, so as to clamp the saws between

the sleeve-sections, there being a fixed pulley 21 upon the opposite end portion of the saw-shaft between the frame members and constituting an abutment between which and the nut 20 the several sleeves and saws are clamped. That end portion of the shaft 6 which carries the pulley 21 is projected beyond the frame and provided with a suitable drive-pulley 22, to which power is applied by a belt for running the machine. Below the saw-shaft 6 and in parallelism therewith there is a counter-shaft 23, mounted in suitable bearings 24 within the bottom portions of the openings 3 in the frame members of the machine. Upon this counter-shaft is a large pulley 25 in alinement with the smaller pulley 21, and an endless belt 26 travels around these two pulleys so as to transfer motion from the saw-shaft to the counter-shaft and to rotate the latter at a comparatively low rate of speed.

For the support of the work in passing through the machine there is a saw-table 27, in the nature of a flat oblong metal sheet which is provided at predetermined intervals with transverse slits or slots 28, through which the upper edge portions of the circular saws project. As indicated by dotted lines in Fig. 2 of the drawings, it will be noted that the saw-table terminates short of the opposite edges of the frame of the machine, and, as shown in Fig. 1 of the drawings, it will be seen that each end of the saw-table rests upon an internal flange 29, carried by the adjacent frame member at the top of the opening 3, whereby the table is supported in its horizontal position. Each end of the table is provided with a pair of notches 30, constituting seats for the snug reception of lugs or projections 31, carried by the outer edge of the flange 29, whereby endwise displacement of the table is prevented. A suitable stiffening-rib or cross-bar 32 is provided upon the under side of the table beyond the ends of the slots 28.

At each longitudinal edge of the saw-table there is a set of upper and lower feed-rolls, (designated 33 and 34,) which are located, respectively, above and below the table, with the top surface of the lower roll in substantial alinement with the top of the table in order that the work may be readily passed from the front feed-roll to the table and from the latter to the rear feed-roll, each upper feed-roll capable of gravitating into engagement with the work and supported at each end in an angle-bracket 35, which is pivotally supported upon the adjacent frame member, as at 36, and has an upstanding portion 37, constituting a handle for swinging the bracket inwardly to elevate the roller whenever such elevation becomes necessary. It will here be explained that each of the lower feed-rollers 34 is driven from the counter-shaft 23 and for this purpose is provided at one end with a

pulley 38, around which passes an endless belt 39, one ply of which passes downwardly around the under side of a pulley 40 upon the adjacent end of the counter-shaft 23, while the other ply passes downwardly around the idle pulley 41, alined below the pulley 40 and mounted upon a vertically-movable bracket 42, which is pierced by and mounted to slide upon a pair of spaced upright guide-bars 43, hung from the internal flange 44 at the top of the arched portion of the adjacent frame member. The downward play of this bracket is limited by heads or stops 45 upon the lower ends of the rods, and the bracket 42 is provided with a pendent hooked arm 46, underlying the pulley 41 and upon which a weight 47 is hung, whereby the pulley 41 and the bracket 42 constitute a gravity belt-tightener to automatically maintain the belt 39 in proper engagement with the several pulleys.

The journals of each of the rollers 34 are received within a bearing-notch in the adjacent edge of one of the frame members and is held therein by means of a bearing-plate 48, and this bearing-plate has an oil-cup 49 in communication with the bearing for the roller. There is also a bracket 50 extending outwardly from the bearing-plate, and the opposite brackets at each side of the machine support a work-table 51, the inner edge of which terminates short of the adjacent feed-rollers in order that the latter may engage the work between the saw-table 27 and each of the work-tables, it of course being understood that there is a work-table at the front and also at the rear of the machine.

There is a work-support in front of the machine, consisting of an upright bar or standard 52, one at each end of the machine, with its lower end pivotally supported by a bearing-bracket 53, the upper ends of the two bars or standards being connected by an angle-bar 54, which has substantially the same elevation as the adjacent work-table 51.

Beneath the saw-arbor there is a downwardly and rearwardly inclined apron or chute 55, carried by the frame. This apron extends upwardly in front of the saws and inclines downwardly and rearwardly beyond the counter-shaft 23, so as to collect the sawdust and shoot the same to the rear of the machine.

In using the machine the butt-end of a shingle is placed upon the work-support 54 with its other end resting against the adjacent work-table 51, whereupon the work-support is pushed toward the machine, so as to enter the front edge of the work between the adjacent set of feed-rollers, which thereupon grip the work and feed the same rearwardly across the saw-table 27 into contact with the saws, which split the work into a plurality of shingles of different standard widths, the rear set of feed-rollers then gripping the shin-

gles and forcing the same rearwardly out of the machine.

When the saws become worn and fail to project to the desired extent above the saw-table, the saw-shaft may be elevated by manipulation of the adjusting-screws 11 and 13 without interfering with any of the other parts of the machine.

Having thus described the invention, what is claimed is—

1. In a woodworking-machine, the combination with opposite frame members having corresponding inner flanges, of a saw-table supported upon the flanges and provided with socket and projection detachable connections with the flanges.

2. In a woodworking-machine, the combination with opposite frame members having corresponding inner horizontal flanges provided upon their edges with outwardly-

directed upstanding projections, of a saw-table removably supported upon the flanges and having edge notches receiving the projections.

3. In a woodworking-machine, the combination with opposite frame members having corresponding inner horizontal flanges provided at their edges with upstanding projections, of a saw-table supported upon the flanges and removable vertically therefrom, the opposite ends of the table having notches receiving the projections, and said saw-table being provided with a saw-receiving slot.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in the presence of two witnesses.

CAMILLE PROVOST.

Witnesses:

E. P. MERESI,
A. P. MERESI.