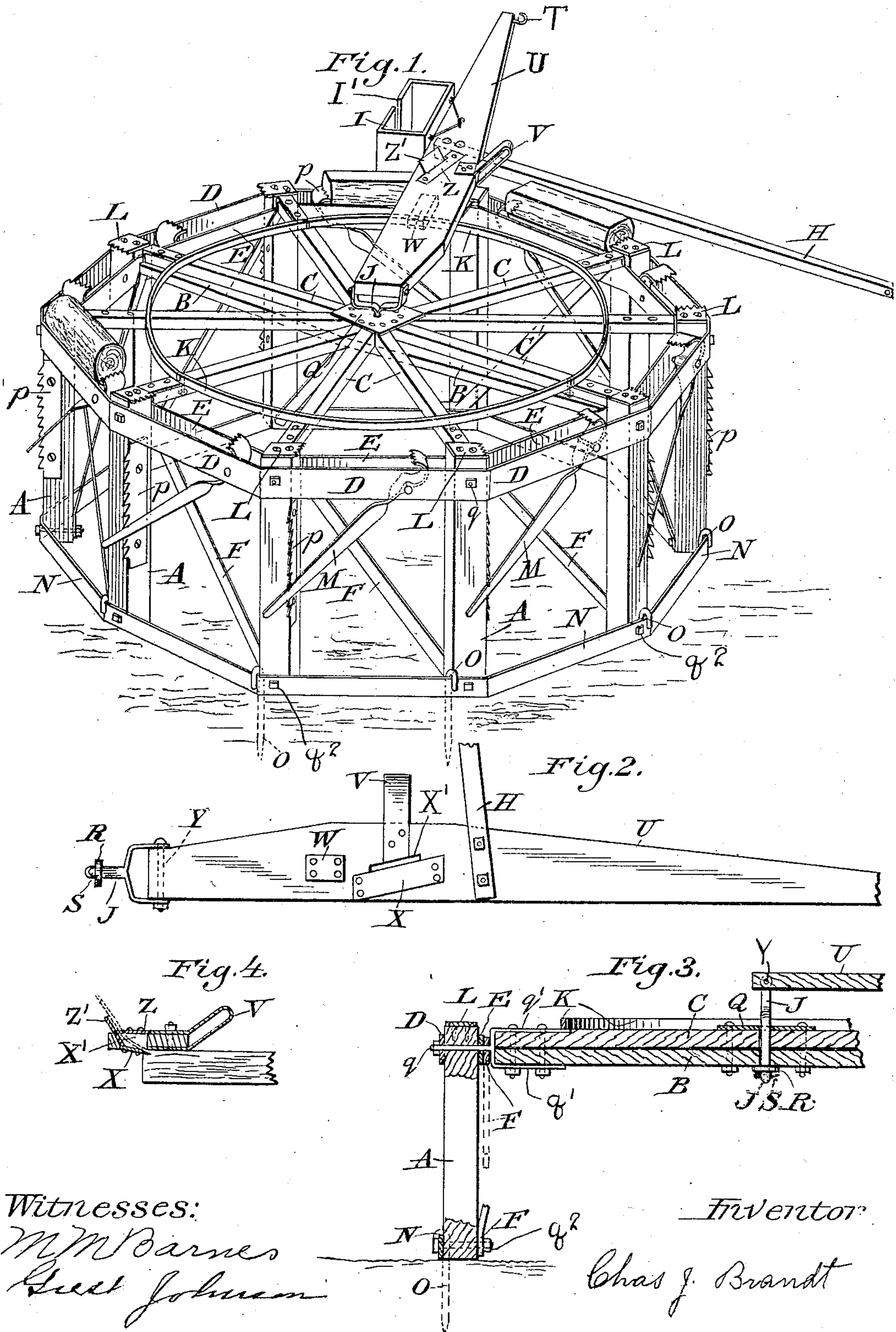


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SHINGLE MACHINE.

APPLICATION FILED AUG. 31, 1907.

944,659.

Patented Dec. 28, 1909.



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CHARLES JOHN BRANDT, OF WINDEMERE, MINNESOTA.

SHINGLE-MACHINE.

944,659.

Specification of Letters Patent.

Patented Dec. 28, 1909.

Application filed August 31, 1907. Serial No. 390,923.

To all whom it may concern:

Be it known that I, CHARLES JOHN BRANDT, a citizen of the United States, residing in the town of Windemere, in the county of Pine and State of Minnesota, have invented a new and useful Shingle-Machine, of which the following is a specification.

The present invention has reference to improvements in shingle machines, and it aims, primarily, to provide an exceedingly simple and efficient machine of that nature designed especially for the use of lumber dealers in the timber sections of the country.

More specifically, it is the object of the invention to provide a portable shingle machine which may be readily moved from place to place over ordinary roads without necessitating its being previously taken apart, and which will cut rough blocks, round or square, of different dimensions, with but little waste of material, and will require but a single man to operate it and a single horse for power.

The preferred embodiment of the invention is illustrated in the accompanying drawings, in which corresponding parts are designated by the same reference characters throughout the several views.

Of the said drawings, Figure 1 is a perspective view of the complete machine. Fig. 2 is a fragmental bottom plan view of the sweep. Fig. 3 is a fragmental section taken vertically through Fig. 1. Fig. 4 is a transverse section taken through the sweep, and illustrating the arrangement of the knife and shoe, a partially-shaped block being likewise shown in said figure.

The frame work of the machine illustrated in the drawings, consists, primarily, of a series of upright posts A, (ten being shown in the present instance), arranged at equidistant intervals apart from each other and from the center of the machine, the posts being connected together adjacent their lower ends by a metal band N, and adjacent their upper ends by a pair of similar bands D and E arranged in spaced relation to each other.

The band N is secured by means of bolts q^2 to the posts, against whose outer faces it is disposed, while the band D, which is likewise disposed against the outer faces of the posts is secured to the latter and to the posts and connected with the inner band E by means of yoke-shaped bolts q , whose stems pass through registering openings formed in said bands and in the posts, the arms q'

of said bolts receiving the outer ends of the radial braces C. The inner ends of these braces rest upon the enlarged central portion of a diametrically arranged brace B, two of the bolts q having their arms spaced sufficiently far apart to receive the ends of the brace in addition to those of the two alining radial braces C which rest upon said brace throughout their entire lengths. The several posts are still further braced by a series of inclined metal straps F, perforated at opposite ends and arranged adjacent the inner faces of the posts, the bolts q^2 passing through the perforations in the lower ends of the straps, and the shanks of the bolts q through the perforations in the upper ends thereof, as shown in Figs. 1 and 3.

The inner ends of the braces C, as above stated, rest upon the central portion of the braces B, to which portion they are bolted, the bolts passing through perforations formed therein and in a metal plate Q, which rests upon said ends. This plate is further provided with a central perforation through which loosely passes the stem of a vertical yoke-shaped bolt J, the lower end of said stem having a perforation arranged to receive a split pin S, there being interposed between the pin and the under face of the brace B, an annular washer R which is likewise carried by the bolt stem. The bolt J forms a pivot for the sweep U, whose inner end fits between the arms of the yoke portion of the bolt and is supported by a horizontal bolt Y, which passes loosely through an opening formed transversely of the sweep end, the ends of this bolt extending through openings formed in the yoke arms. By reason of this construction, it will be apparent that the sweep is capable of being swung in a horizontal plane through a complete circle, and also that during such revolution it is capable of swinging upwardly upon the bolt Y as a pivot, this upward movement being effected automatically by means of a forwardly and upwardly inclined shoe V formed by a metal strap bent upon itself and having its ends disposed against and secured to the upper and lower faces of the sweep. The direction of revolution of the sweep is clockwise.

The posts A project slightly above the upper edges of the bands D and E, and the portions of said edges between the pairs of posts are arranged to support the blocks from which the shingles are subsequently

cut. These blocks are held against displacement in such position by means of plates L and levers M, there being a plate secured to the top of each post and a lever pivoted adjacent its upper end in each of the equal divisions of the annular space between said bands, the divisions being caused by the projection of the post ends through said annular space.

Each plate has its right hand side edge (with reference to Fig. 1) serrated, the teeth being designed to bite into the adjacent end of the block which rests upon the bands to the right thereof, the other end of the block being engaged by the teeth formed upon the upper end of the adjacent lever M, the toothed end of which is curved toward the plate. It will be plain, therefore, that the pivotal mounting of the levers permits them to force the blocks into engagement with the toothed edges of the plates, the levers being retained in adjusted position by means of racks *p* secured to the right hand side faces of the posts, the lower portions of the levers being arranged for engagement with the racks, as shown in Fig. 1.

The cutting of the shingles is effected by a knife X, secured to the under face of the sweep and set at an angle to the axis thereof, the shoe V being located directly opposite the knife. Directly above the knife, which is inclined slightly downward so as to dispose its cutting edge below the lower edge of the sweep, there is formed in the sweep a slot X', the upper face of the sweep having secured thereto a plate Z provided with a tongue Z' which extends into said slot, the tongue forming a guide along which the cut shingles are arranged to travel. As they issue from the slot, the shingles are deposited by the operator of the machine in a box I attached to the rear edge of the sweep intermediate the ends thereof, the rear wall of the box being formed with a vertical slot I', the provision of the slot permitting the operator to remove all of the shingles at once from the box by inserting his hand through the slot and raising up the mass of shingles bodily. The knife is prevented from coming into contact with the upper edges of the bands D and E, after the blocks have been almost entirely consumed, by means of a metal plate W secured to the under face of the sweep and arranged to contact with the upper edge of a metal ring K bolted to the braces C and arranged concentrically of said bands, such contact taking place when the consumption of the blocks reaches a certain point.

The machine, as a whole, is held in stationary position upon the ground by means of a series of hooks O, whose bent upper ends are arranged for engagement with the lower band N, the pointed lower ends of the hooks being inserted in the ground.

When the machine is to be moved from one point to another, it is only necessary to press upwardly upon the lower edges of the bands D and E, whereupon the hooks will be withdrawn from the ground. The sweep carries at its extreme outer end a hook T arranged for engagement with the harness of the horse employed for operating the machine, the harness being further connected with a pole H set at an angle to the sweep and fastened to the same at its rear end.

The operation of the machine is thought to be apparent from the foregoing, and an extended description thereof is accordingly omitted, it being obvious that during the revolution of the sweep, the knife will slice a complete shingle from each block as it is brought into contact therewith, the capacity of the machine being dependent upon the diameter of the bands, and upon the number of divisions into which the space between the bands D and E is separated. It will also be understood that these spaced bands unite in forming an annular bed and that the divisions of the space between said bands serve as seats arranged to receive the blocks, these terms being employed in the appended claims.

What is claimed is:—

1. The combination with a bed provided with an endless series of seats, of a horizontally revoluble sweep and a knife carried thereby, the sweep being so mounted as to be capable of a free vertical movement and means carried by the sweep arranged to engage the ends of the pieces of work mounted in the seats to bring the knife into the desired relation to the surface of said work, so that similar portions may be cut from each piece of work irrespective of variations in the thickness of several of said pieces.

2. In a shingle machine, the combination with a bed comprising a pair of concentric annular members arranged in spaced relation to each other and the space between being divided into a series of separate portions, the upper edges of the annular members in each portion forming a seat for the work; a revoluble sweep; a knife carried by the sweep for engagement during its rotation; and a holding device mounted in the spaces between the annular members for each seat including a lever provided with a serrated work-engaging end.

3. In a shingle machine, the combination with a pair of concentrically - arranged spaced annular bands, of a series of vertical posts to which the bands are secured, the posts having their upper ends projecting through the space between said bands, to divide such space into separate portions, the upper edges of the annular bands in each portion forming a seat for a block; a gripping device secured to the projecting

end of each post; and gripping means movable within each seat, arranged for coöperation with the adjacent gripping devices, to retain the blocks in the seats.

5 4. In a shingle machine, the combination, with a pair of concentrically arranged spaced annular bands, of a series of vertical posts to which the bands are secured, the posts having their upper ends projecting
10 through the space between said bands, to divide such space into separate portions, the upper edges of the annular bands in each portion forming a seat for a block; a gripping plate secured to the projecting end of
15 each post; and a gripping member movable within each seat, said members being arranged for coöperation with the adjacent plates, to retain the blocks in the seats.

5 5. In a shingle machine, the combination, with a pair of concentrically arranged spaced annular bands, of a series of vertical posts to which the bands are secured, the posts having their upper ends projecting
20 through the space between said bands, to divide such space into separate portions, the upper edges of the annular bands in each portion forming a seat for a block; a toothed gripping plate secured to the projecting end
25 of each post; and a toothed gripping member movable within each seat, said members being arranged for coöperation with the adjacent plates, to retain the blocks in the
30 seats.

35 6. In a shingle machine, the combination, with a pair of concentrically arranged spaced annular bands, of a series of vertical posts to which the bands are secured, the posts having their upper ends projecting
40 through the space between said bands, to divide such space into separate portions, the

upper edges of the annular bands in each portion forming a seat for a block; a gripping device secured to the projecting end of each post; and a gripping lever pivoted
45 within each seat, said levers being arranged for coöperation with the adjacent gripping devices, to retain the blocks in the seats.

7. In a shingle machine, the combination with a pair of concentrically - arranged spaced annular bands, of a series of vertical
50 posts to which the bands are secured, the posts having their upper ends projecting through the space between said bands, to divide such space into separate portions, the upper edges of the annular bands in each
55 portion forming a seat for a block; a gripping device secured to the projecting end of each post; a gripping lever pivoted within each seat, said levers being arranged for coöperation with the adjacent gripping de-
60 vices, to retain the blocks in the seats; and means for holding the levers in adjusted position.

8. In a shingle machine, the combination with a bed provided with a circular series of
65 seats each arranged to receive a block, of a revoluble sweep pivoted at its inner end centrally of the series; a shoe carried by the sweep for effecting an upward swinging movement of the sweep during its revolu-
70 tion; a knife carried by the sweep and arranged for movement into contact with the blocks successively during the revolution of the sweep, to slice strips therefrom; and means located within each seat for holding a
75 block in place therein.

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Witnesses:

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