J. McARTHUR.

SAW TABLE.

APPLICATION FILED JULY 6, 1915.

1,187,755.

Patented June 20, 1916.

3 SHEETS—SHEET 1.

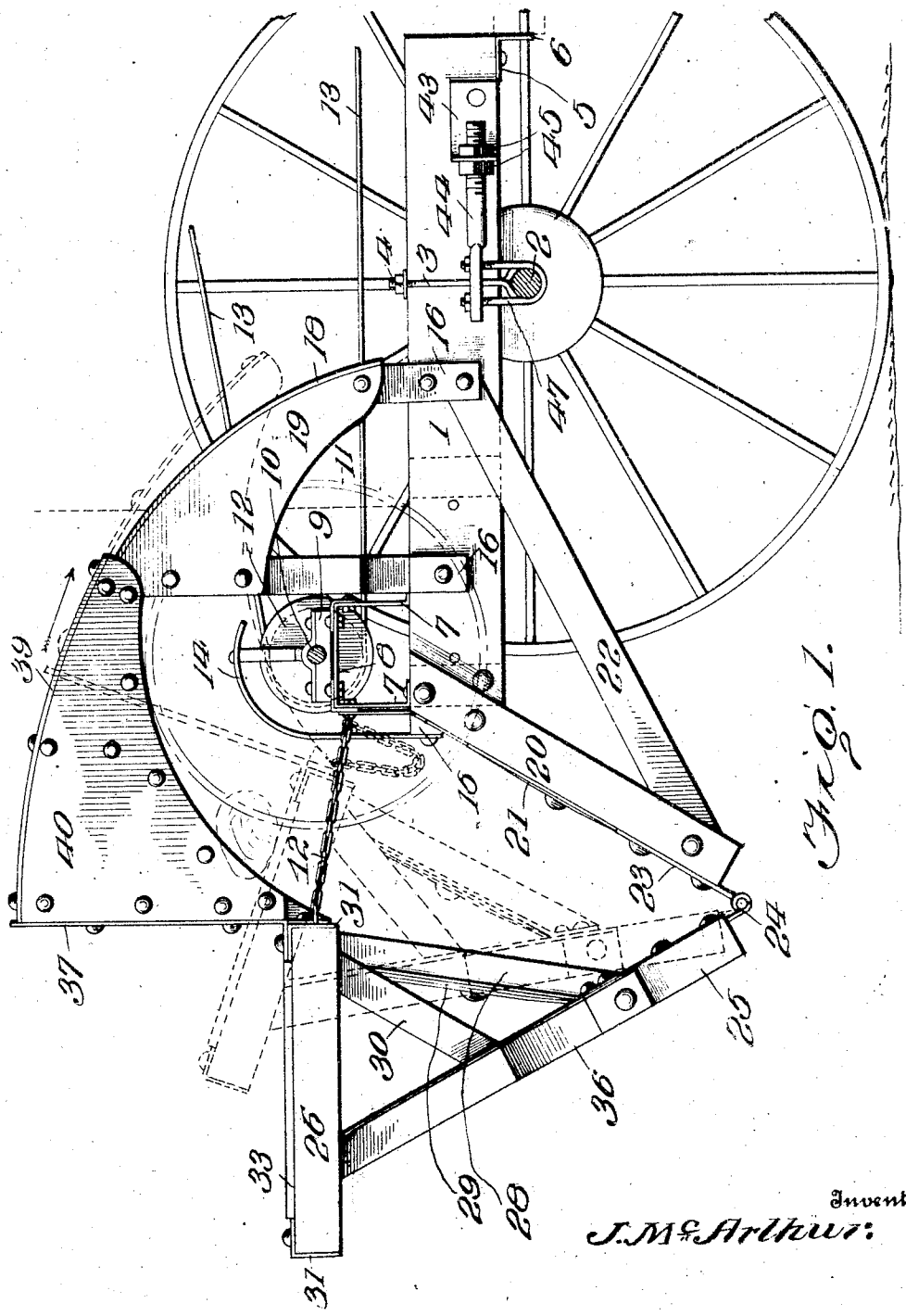


Fig. 1.

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3 SHEETS—SHEET 2.

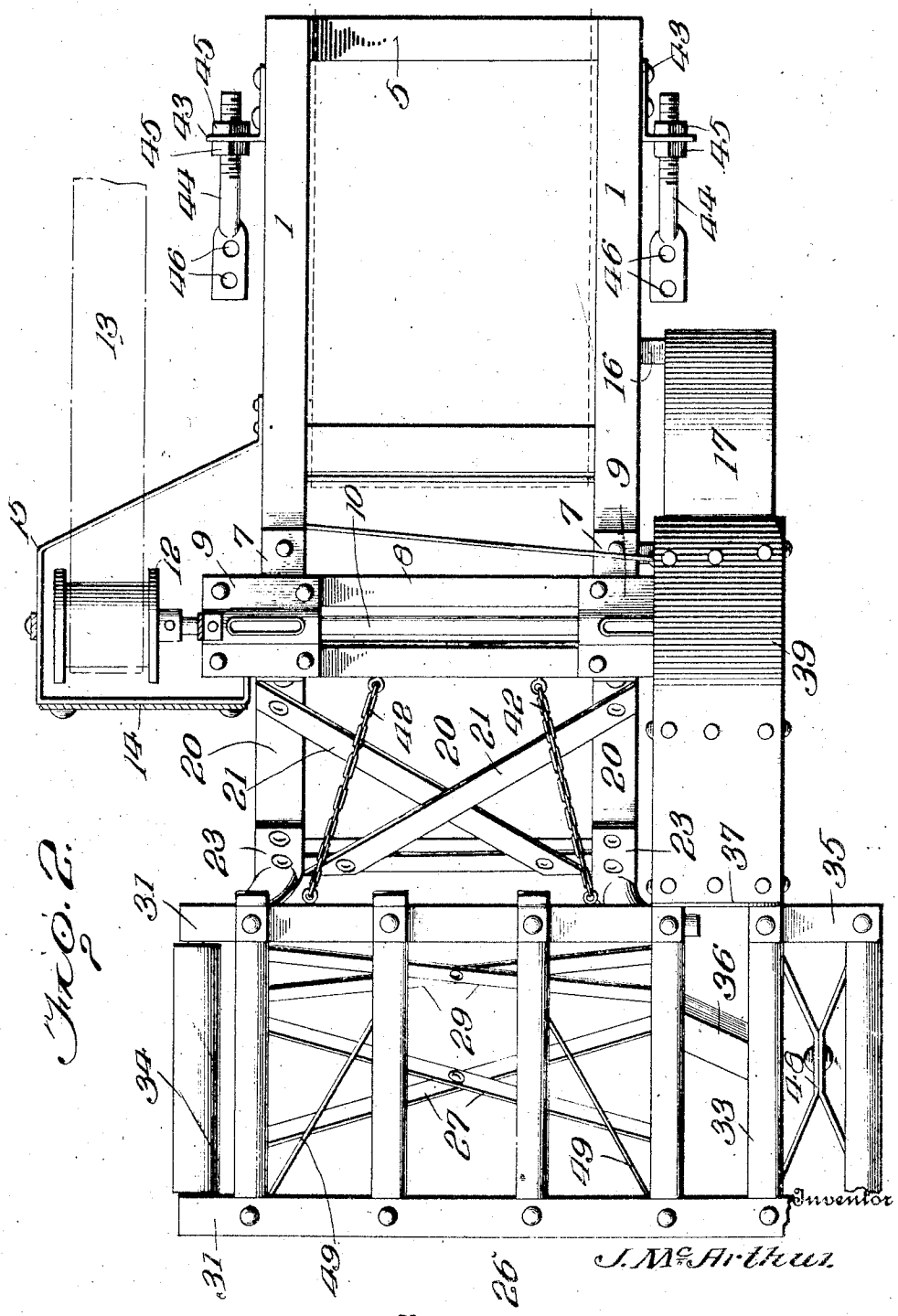


Fig. 2.

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3 SHEETS—SHEET 3.

Fig. 4.

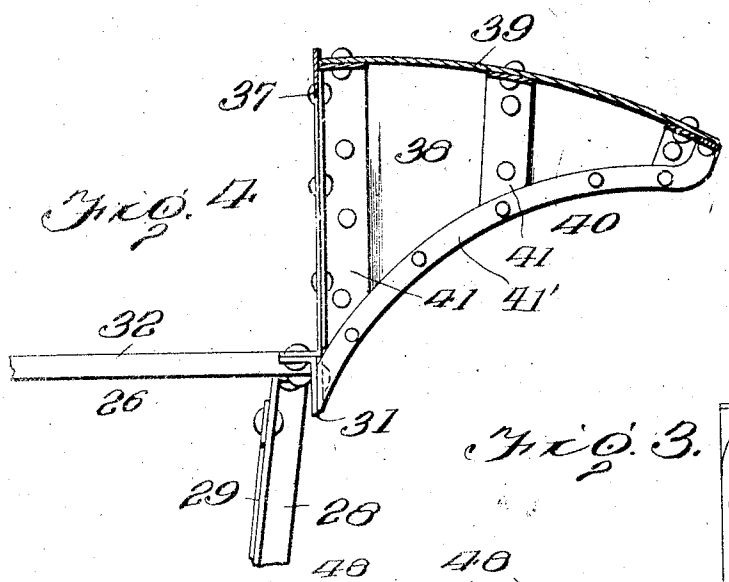
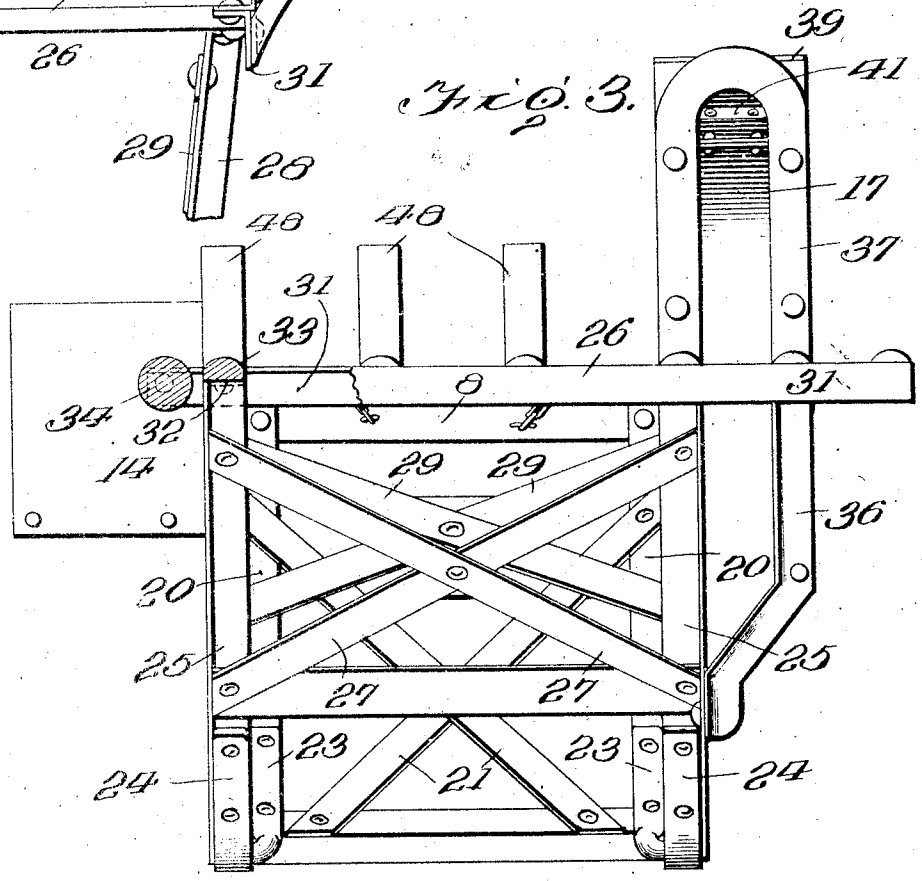


Fig. 3.



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UNITED STATES PATENT OFFICE.

JAMES McARTHUR, OF GREENWICH, NEW YORK.

SAW-TABLE.

1,187,755. Specification of Letters Patent. Patented June 20, 1916.

Application filed July 6, 1915. Serial No. 38,131.

To all whom it may concern:

Be it known that I, JAMES McARTHUR, a citizen of the United States, residing at Greenwich, in the county of Washington and State of New York, have invented certain new and useful Improvements in Saw-Tables, of which the following is a specification.

This invention relates to saw tables or means for feeding stock to a circular saw, and the primary object of the invention is to provide a table which may be moved to and from the saw and will be so constructed as to withstand hard usage and positively support the stock.

A further object of the invention is to provide means upon the table whereby the saw will not be exposed when it is not acting upon stock, so that the danger of injury to the operator is overcome.

The invention further seeks to provide a novel support for a saw which may be readily connected to a portable engine and permit the saw to be operated through power supplied by said engine.

The several stated objects of the invention, and such other objects as will incidentally appear from the following description, are attained in mechanism of the character illustrated in the accompanying drawings, and the invention resides in certain novel features which will be particularly pointed out in the claims following the description.

In the annexed drawings, which fully illustrate my invention:—Figure 1 is a side view of the saw table and the parts for supporting the same, the figure illustrating the manner in which the device may be attached to the engine frame; Fig. 2 is a plan view of the improved apparatus; Fig. 3 is a rear end elevation with parts broken away and in section; and Fig. 4 is a detail section of the saw guard.

In carrying out my invention, I employ side bars 1 which are intended to rest upon or project over the axle 2 of the engine and be secured to the axle by clips 3 engaged around the axle in the usual manner and secured to the beams by nuts 4, as will be readily understood. To the front ends of the side bars 1, I secure a cross bar or plate 5 having a depending flange 6 which is adapted to engage a cross sill of the engine frame and thereby aid in supporting the side bars upon the said engine frame, the relative position of the engine and its bed being indicated by dotted lines in Figs. 1 and 2. Upon the upper sides of the side bars 1, at the rear ends thereof, I secure brackets 7 which are connected by transverse bars or beams 8 extending between the side bars 1 and spaced vertically above the same by the said brackets. Upon the said bars 8 I secure journal boxes 9 and in the said boxes I mount the saw shaft 10 having upon one end the saw blade, indicated at 11 in Fig. 1, and upon its other end a pulley 12 which receives power from the engine through a belt 13, as will be readily understood. A shield 14 is secured to a lateral frame or bracket 15 carried by the adjacent side bar 1, and this shield extends up and over the pulley so as to protect the same from falling objects and also prevent persons passing near the machine being caught in the belt.

Upon the side bar 1, adjacent to the saw, I secure brackets 16 which carry the inner guard or housing member 17 which projects upwardly over the saw so that persons standing or passing near the frame cannot come into contact with the saw while the same is working and be thereby injured. It will be understood, of course, that this guard 17 is so constructed as to inclose the saw and to that end it will be preferably constructed of a top plate 18 suitably curved and side plates 19 secured to the brackets 16 and extending to the edges of the top plate which is secured to and carried by the side plates. Rigidly secured to the side bars 1 and extending downwardly and rearwardly therefrom is a frame 20 which will preferably be constructed of angle or channel bars connected by diagonal braces 21 and further strengthened by struts 22 extending from the lower corners of the frame to the side bars, as shown in Fig. 1. Hinge members 23 are secured to the frame 20 at the lower end thereof, and to the said hinge members are pivotally connected the co-acting hinge members 24 secured to the lower ends of side bars 25 which are preferably angle iron and constitute the main support for the saw table proper, shown at 26. The side bars or standards 25 are connected by suitable braces 27 and are secured to the table 26 near the rear edge of the same, while supplemental posts 28 extend between the standards 25 and the front portion of the

table, said posts 28 being connected by braces 29.

The table proper or platform is composed of parallel angle bars 31 and spaced transverse bars 32 secured to and extending between the same. These transverse bars 32 have convex upper surfaces, as shown at 33, so that the lumber placed upon the table may be fed over the same, to be brought into position in front of the saw, with very little friction. Between those ends of the side bars 31 which are remote from the saw, I mount a roller 34 which, by its rotation, facilitates the placing of lumber upon the table, as will be readily understood. The outer side bar 31 is coextensive in length with the saw table, as shown most clearly in Fig. 2, but the inner side bar 31 terminates adjacent to the saw and a supplemental side bar 35 is provided in alinement with the said inner side bar but spaced therefrom so as to provide an opening or notch through which the saw may reach the stock.

To the standard 25 nearer the saw, I secure the supplemental support 36 which is carried laterally from the standard and then upward parallel thereto, as shown most clearly in Fig. 3, so as to support the end of the saw table, a brace 30 extending between said lateral support and the front edge of the table. To the standard 25 and the said lateral support 36 I secure an arch 37 which forms the end of the saw guard and carries a housing 38 which is suitably shaped to fit over the saw and of such dimensions that, when the table is swung to the saw, it will fit over the guard 17, as shown in dotted lines in Fig. 1. This housing 38 consists of a top plate 39 and side plates 40 which are secured to the top plate by arched supports 41, the central portions of said supports being secured to the top plate 39 and the end portions of the same being secured to the side plates 40. The side plates 40 are substantially triangular in shape and the bases of the triangles presented by said side plates are constructed with flanges through which suitable bolts are passed to secure the plates to the arch 37. A reinforcing and supporting frame 41′ is bolted to the ends of the bars 31 and 35 and extends therefrom to be secured to the lower edges of the side plates 40 and the top plates 39.

Chains or similar devices 42 are secured to the inner side bar 31 of the saw table and to the rear bar 8 so as to limit the movement of the table away from the saw and thereby prevent the table assuming such a position that stock placed thereon will tend to slide therefrom.

In order that the saw shaft may be kept in proper relation to the engine to be positively driven by the belt 13, I provide, on each of the side bars 1, brackets 43 in which are adjusting bolts or tension devices 44. These tension devices carry nuts 45 by which they are adjustably secured in the said brackets 43, and the ends of the said bolts are flattened and provided with openings 46 whereby clips 47 may be secured thereto, the said clips passing around the axle 2, as shown clearly in Fig. 1, so that, if the belt should stretch and fail to properly engage the pulley 12, the side bars 1 may be moved longitudinally over the axle and the pulley 12 thereby set in a position farther from the driving shaft of the engine. 49 designates braces which may be arranged as desired between the cross bars of the table 26.

It is thought that the use and advantages of my device may be readily understood from the foregoing description taken in connection with the accompanying drawings.

When the lumber to be sawed is being placed upon the table 26, the said table rests in a horizontal position, as shown in full lines in Fig. 1. In this position of the table, the housing 38 will be disposed above and at the sides of the saw so that no part of the saw will be exposed and persons passing near the same cannot be injured. After the lumber has been placed upon the table, the table is swung toward the saw so as to carry the lumber thereto, and this swinging of the table will cause the housing 38 to swing to the position shown in dotted lines in Fig. 1 in which it will extend over the guard 17 and the edge of the saw will project through the opening of the arch 37. It will also be readily noted that the table will assume an inclined position so that the stock will tend to gravitate toward the saw and, consequently, it will not be necessary for the operator to approach so closely to the saw as with other devices. The swinging of the table toward the saw may be accomplished by pushing upon the outer edge of the table, but in order to more easily accomplish the swinging of the table I provide fingers or stops 48 along the inner edge of the table against which the lumber may rest so that a push exerted through the lumber will carry the table toward the saw. These stops 48 also serve to prevent the lumber, beyond the saw, rolling from the table when it is in the position shown in dotted lines in Fig. 1.

My device is very simple in its construction and may be produced at a low cost. It may be applied to any portable engine and will effectually prevent injury to the operator or to any other persons who may be near the saw. Moreover, the stock will be fed to the saw easily and positively so that the labor incident to cutting up logs into lengths or dividing lumber will be minimized. The device will preferably be con-

structed of angle and channel irons throughout so that it will possess the maximum strength with a minimum weight and may be very rapidly and, therefore, cheaply manufactured. As the device is adapted to be mounted directly upon a portable engine, it may be easily moved from place to place so that it is especially adapted for use in lumber camps.

Having thus described the invention, what is claimed as new is:

1. An apparatus for the purpose set forth comprising side sills, a saw mounted upon the said sills, an axle over which the sills project, brackets on the outer sides of the sills, longitudinally adjustable bolts mounted in said brackets, and clips carried by said bolts and adapted to engage around the axle.

2. An apparatus for the purpose set forth comprising a pair of side bars, a saw mounted thereon, means for operating said saw, means for securing the side bars upon an axle, and means carried by the side bars for adjusting the same across the axle.

3. The combination of a support, a frame secured rigidly to the support and depending rearwardly therefrom, a rotary saw mounted on the support over said frame, a hood secured rigidly to the support and rising therefrom and receiving and housing the upper forward portion of the saw, standards hinged at their lower ends to the lower corners of the frame, a supplemental support secured to and disposed laterally from one of said standards, a platform having a rear side bar carried by the upper ends of said standards, a forward side bar carried by said standards and a supplemental forward side bar carried by said supplemental support and in alinement with but spaced from the first-mentioned forward side bar, a rigid arch rising from the adjacent ends of said alined forward side bars and spanning the space between them, and a housing secured rigidly to and projecting forwardly from said arch to house the saw, the forward extremity of said housing being constantly over the said hood.

In testimony whereof I affix my signature.

JAMES McARTHUR. [L. S.].