No. 866,508. PATENTED SEPT. 17, 1907.

M. P. O'REGAN.

CIRCULAR SAW GUARD.

APPLICATION FILED JULY 6, 1907.

2 SHEETS—SHEET 1.

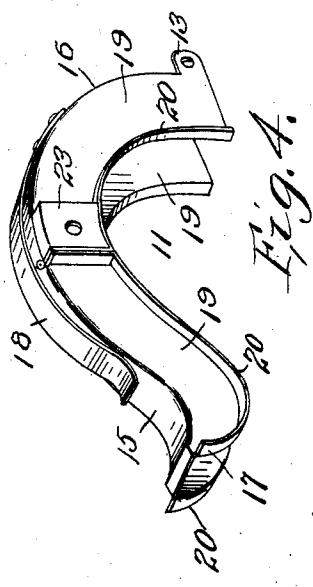

Fig. 4.

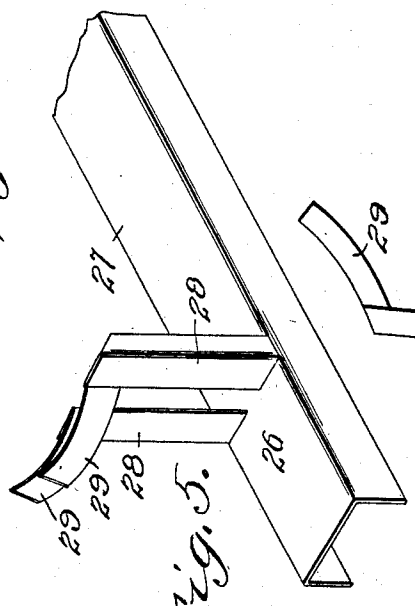

Fig. 5.

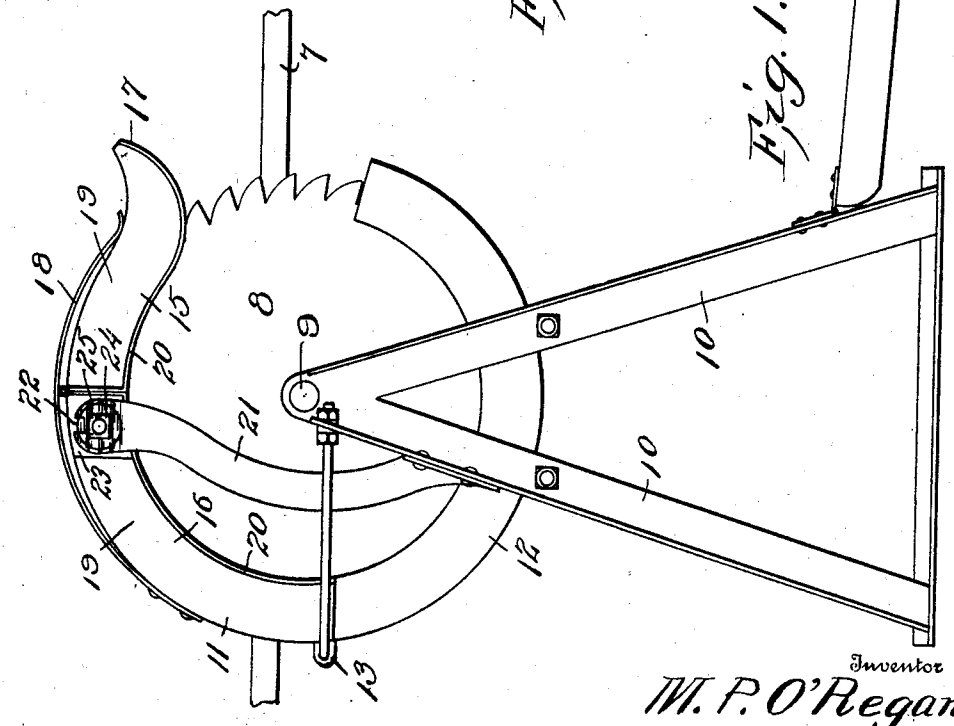

Fig. 1.

Witnesses

A. L. Armstrong

E. J. Ouly

Inventor

M. P. O'Regan,

By Chandlee & Chandlee

Attorneys

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2 SHEETS—SHEET 2.

Fig. 2.

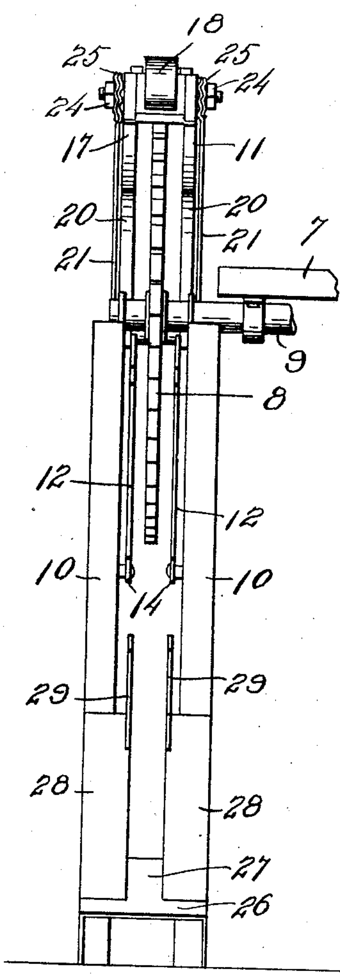
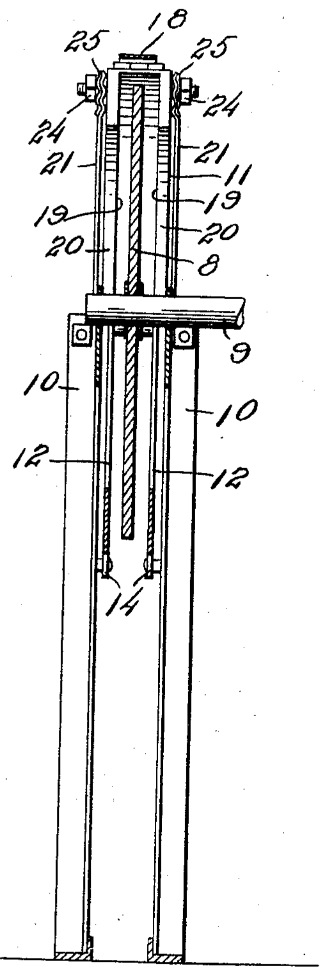


Fig. 3.



Inventor

M. P. O'Regan,

Witnesses

By Chandlee & Chandlee

Attorneys

UNITED STATES PATENT OFFICE.

MAURICE P. O'REGAN, OF DORCHESTER, IOWA.

CIRCULAR-SAW GUARD.

No. 866,508. Specification of Letters Patent. Patented Sept. 17, 1907.

Application filed July 6, 1907. Serial No. 382,479.

To all whom it may concern:

Be it known that I, MAURICE P. O'REGAN, a citizen of the United States, residing at Dorchester, in the county of Allamakee, State of Iowa, have invented certain new and useful Improvements in Circular-Saw Guards; and I 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.

The present invention has reference to circular saw guards, and it aims to provide a device of that nature which is designed to partially incase the saw-teeth, and thus prevent injury to the operator.

The invention further aims to provide a circular saw-guard comprising an upper and a lower section hinged together at their rear ends and removably connected with the frame upon which the saw is mounted, the upper section of the guard being in turn, formed by a pair of members hinged together and held in place by a leaf-spring, the front member of such upper section being thus rendered capable of being raised when a log of wood of extra thickness is fed to the saw by the carrier, and of returning automatically to its normal position when the log has been cut.

With the above and other ends in view, the invention consists in the construction, combination, and arrangement of parts, all as hereinafter more fully described, specifically claimed, and illustrated in the accompanying drawings, in which like parts are designated by corresponding reference numerals in the several views.

Of the said drawings, Figure 1 is a side elevation of the present invention applied to a circular saw, Fig. 2 is an end view thereof, Fig. 3 is a vertical section through Fig. 1. Fig. 4 is a perspective view of the guard detached from the saw table, Fig. 5 is a detail perspective view of the member which carries the guard fingers.

Referring more particularly to the drawings the numeral 7 designates a saw table of any conventional type against which is disposed a circular saw 8 mounted upon the projecting end of a shaft 9, which is journaled in brackets secured to the under face of the table, and is driven from any source of power. The extremity of said shaft fits in a bearing formed in the upper end, or apex, of each member of a triangular frame 10 to which the saw-guard, which incases the saw, is attached, the saw and its guard being disposed between the members of the frame, as shown. The saw-guard comprises an arcuate upper section 11, and a lower section 12, of similar shape, which sections are hinged together at their rear ends, the hinge-bolt passing through the rearwardly projecting ears 13 formed on said sections, and through the flange formed on the adjacent leg of the corresponding frame member, which members are constructed of angle-iron.

The lower section of the guard consists of a pair of alining semi-circular plates which are arranged in spaced relation to each other, to provide an opening therebetween into which the saw extends, the formation of such opening also permitting the saw-dust to fall into the usual trough. The plates which form the lower section of the guard are further provided with perforated depending legs 14 through which pass the bolts for fastening the guard to the frame legs.

The upper section of the guard consists of a front member 15 and a rear member 16 which are likewise hinged together at their mutually-adjacent ends, the front member having its forward end disposed some distance above the plane of the upper face of the saw table, and bent slightly upwards to provide the curved lip 17, said member being, however, pressed yieldingly downwards towards the table by the action of a leaf-spring 18 which is secured at its rear end to the member 16, both of the members of the upper guard section being U-shaped in cross-section, their sides 19 extending adjacent the opposite faces of the saw. The outer edge of each side 19 is bent at right-angles to the body-portion thereof, to form a flange 20, the mutually-adjacent end portions of said flanges being held in contact with each other, under the action of the spring 18, thus, limiting the downward movement of the member 15. The rear member 16 of the upper guard section is further connected with the frame 10 by means of a pair of braces 21, which are disposed upon opposite sides thereof, each brace being made fast at its lower end to the adjacent leg of the corresponding frame member, while its upper end is vertically slotted, as at 22, such slot registering with a bolt hole formed in a projection 23, disposed at the forward end of each side 19 of said member 16. Owing to this construction it will be apparent that the upper member of the guard is capable of a slight movement towards or from the lower member, and that it may be held in adjusted position by means of the fastening bolt 24 which extends through said slots and perforations and is provided at each end with a transversely serrated washer 25 which engages the correspondingly serrated upper end of the adjacent brace.

From the above description, it will be understood that the upper section of the guard may be raised and swung backwards upon its hinge, to completely uncover the saw, by merely withdrawing the fastening bolt 24, and it will be also understood that the front member of said section will be swung upwardly and rearwardly upon its hinge, against the action of the leaf-spring 18 when a log or slab of wood of extra thick-

ness is fed to the saw from the carrier 26, the wood contacting with the upwardly curved lip 17. The carrier, as shown, comprises a beam 27, which is hinged at its lower end to the adjacent frame legs and is therefore, movable in a vertical plane towards and from the saw. Towards its upper end, this beam is provided with a pair of arms 28, so disposed that when the carrier is swung into its vertical position the saw will pass between these arms, which are arranged in spaced relation to each other, and at right-angles to said beam. Each arm, is, in turn provided at its free end with an upwardly projecting curved finger 29, which lies in the same vertical plane as the inner side edge of the corresponding arm. The lower ends of these fingers, and the forward ends of the arms to which they are secured will contact with the upper ends of the adjacent frame members, to prevent the saw teeth from injuring or becoming injured by the carrier beam.

What is claimed, is,

1. The combination, with a circular saw, of a saw frame comprising a pair of spaced members between which the saw is mounted; a saw-guard incasing the saw and consisting of an upper and a lower section, hinged together at their rear ends and having their forward ends spaced apart from each other; and a brace secured at one end to each member of the frame and adjustably connected at its opposite end with the adjacent side of the upper section of the guard.

2. The combination, with a circular saw, of a saw-frame comprising a pair of spaced members between which the saw is mounted; a saw-guard incasing the saw and consisting of an upper and a lower section, hinged together at their rear ends, and having their forward ends spaced apart from each other; the upper section being composed of a front member and a rear member hinged together at their mutually-adjacent ends, each member being U-shaped in cross-section; a spring secured at one end to the rear member of said upper section, and bearing at its opposite end against the front member thereof, to press the latter yieldingly towards the lower guard section; and a brace secured at one end to each member of the frame and adjustably connected at its opposite end with the adjacent side of the rear member of the upper section of the guard.

3. The combination, with a circular saw, of a saw frame comprising a pair of spaced members between which the saw is mounted; a saw-guard incasing the saw and consisting of an upper and a lower section, hinged together at their rear ends and having their forward ends spaced apart from each other; the upper section consisting of a front member and a rear member U-shaped in cross-section and hinged together at their inner ends, the front member having its outer end bent upwardly to form a curved lip; a spring fastened at one end to said rear member and bearing at its opposite end upon said front member, to press the latter yieldingly towards the lower section of the guard; a brace secured at one end to each member of the frame and adjustably connected at its opposite end with the adjacent side of said rear member; and a vertically-movable carrier hinged at its lower end to the frame and provided towards its opposite end with a pair of spaced arms adapted to pass on opposite ends of the saw when the carrier is swung into its vertical position.

4. The combination, with a circular saw, of a saw frame comprising a pair of spaced members between which the saw is mounted; a saw-guard incasing the saw and consisting of an upper and a lower section hinged together at their rear ends and having their forward ends spaced apart from each other; a brace secured at one end to each member of the frame and adjustably connected at its opposite end with the adjacent side of the upper section of the guard; and a vertically-movable beam hinged at its lower end to the frame and provided towards its forward end with a pair of spaced arms disposed at right-angles to the beam and adapted to pass on opposite sides of the saw, when the beam is swung into its raised position, each of said arms having an upwardly-projecting curved finger located at its free end.

5. The combination, with a circular saw, of a saw frame comprising a pair of spaced members between which the saw is mounted; a saw-guard incasing the saw and consisting of an upper and a lower section, hinged together at their rear ends and having their forward ends spaced apart from each other; the upper section being composed of a front member and a rear member hinged together at their mutually-adjacent ends, each member being U-shaped in cross-section; a spring secured at one end to the rear member of said upper section, and bearing at its opposite end against the front member thereof, to press the latter yieldingly towards the lower guard section; a brace secured at one end to each member of the frame and adjustably connected at its opposite end with the adjacent side of the rear member of the upper section of the guard; and a vertically movable beam hinged at its lower end to the frame and provided towards its forward end with a pair of spaced arms disposed at right-angles to the beam and adapted to pass on opposite sides of the saw when the beam is swung into its raised position, each of said arms having an upwardly-projecting curved finger located at its free end.

In testimony whereof, I affix my signature, in presence of two witnesses.

MAURICE P. O'REGAN.

Witnesses:

MARTIN MCLAUGHLIN,

WILLIAM WATERS.