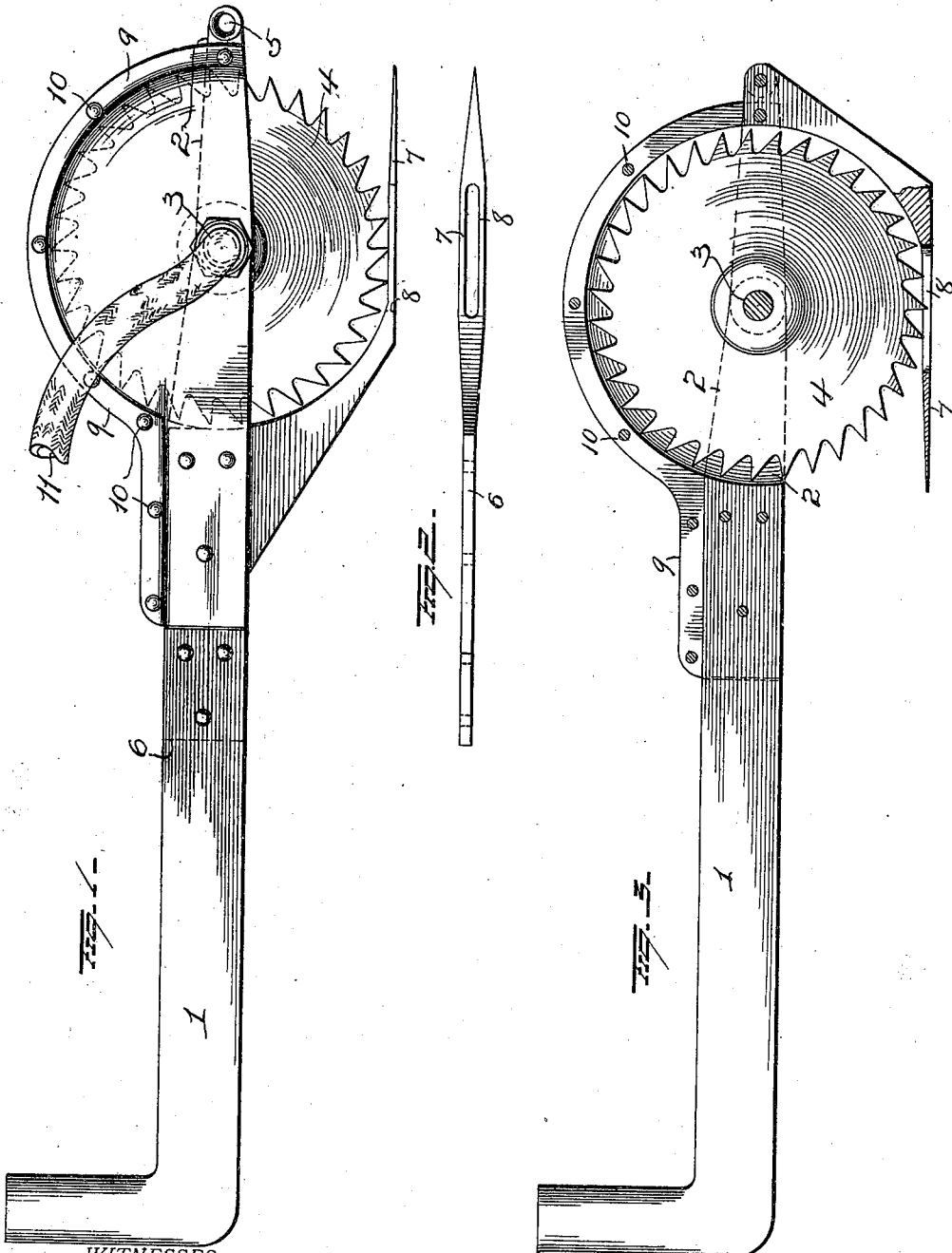


F. E. KEYES.
MACHINE FOR CUTTING FIBER.
APPLICATION FILED JULY 15, 1910.

995,971.

Patented June 20, 1911.



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MACHINE FOR CUTTING FIBER.

995,971.

Specification of Letters Patent. Patented June 20, 1911.

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To all whom it may concern:

Be it known that I, FRANK E. KEYES, of New York city, in the county of New York and State of New York, have invented certain new and useful Improvements in Machines for Cutting Fiber; 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.

My invention relates to a machine for cutting fiber and particularly for severing the wet sheet or board from the machine that makes it.

The sheets or boards are formed by depositing layers of paper or other pulp on a large winding roll so as to form a solid felted mass, and is released from the roll by cutting with a knife or tearing it lengthwise the roll, after which it is removed and dried for the market. This method is slow and tedious and as the roll must remain idle until the board has been released therefrom and removed, the delay occasioned is expensive.

The object of my invention is to provide a portable cutter that will be safe to handle and adapted to rapidly sever the wet board on the roll, without injury to the winding roll.

With these and other objects in view my invention consists in the details of construction and combination of parts as will be more fully explained and pointed out in the claim.

In the accompanying drawings, Figure 1 is a view in side elevation of my improved cutter. Fig. 2 is a plan view of the saw guide removed, and Fig. 3 is a view of a modified form, one section of the shield being removed.

1 represents a handle preferably made of wood and provided with an upwardly turned end, by which it is grasped and manipulated, and 2 are metal side frames secured to the opposite sides of the handle 1 at its opposite end and projecting beyond the latter as shown in dotted lines in Figs. 1 and 2. These side frames 2 are provided with bearings for the axle 3 of the saw 4, and are connected at their outer ends, and provided with means, (a hole 5 in the present instance), for the attachment of a wire, hook or other device which may be used to pull or draw the cutter across the board and thus

assist the operator, who manipulates the handle 1, in severing the board.

Secured within a kerf in the handle at the end adjacent the saw 4, is the guard 6. This guard is plow shaped and is made of thin metal as shown in Fig. 3 and is secured within said kerf or slot by bolts or rivets, it projects downwardly to a plane below the saw, and in line with the latter so as to shield the latter from injury and also to protect the operator, and is curved on its edge adjacent to the saw in the arc of a circle concentric with the saw, to a point slightly above the lower edge of the teeth, and terminates in a flat extension which projects forwardly preferably to a point beyond the front edge of the saw. The lower face of the horizontal extension of the guide is flat so as to conform to the surface of the winding roll, while the extreme free end is pointed so as to permit it to be readily entered between the fiber board and the winding roll. The central portion of the horizontal section of the guard is widened as at 7, and this widened portion is provided with a slot 8 into which the teeth of the saw project, thereby enabling the saw to cut entirely through the pulp board, which during the operation of cutting, is above the horizontal section of the guard.

The portion of the saw that projects above the frame 2 is covered and protected by the two part metallic shield 9, which latter is secured to the handle 1 and also to the frame 2, the two parts of the shield being secured together by rivets 10. The saw may be driven by any approved form of power transmitting mechanism and for the purpose of illustration I have shown a flexible driving shaft 11, coupled up to the axle 3 of the saw.

In the operation of the device, the operator grasps the handle, and introduces the pointed end of the guard between the winding roll and the wet pulp board thereon, and pushes the device lengthwise the winding roll, and as the saw is being rapidly rotated by the driving shaft 11, it operates to quickly sever the pulp board. As soon as the latter is severed it falls away from the roll and can be instantly removed.

In the construction shown in Fig. 3 the guard is reversed so that the device operates by a pull instead of a push.

By providing the device with the guard

6, the saw is kept out of contact with the winding roll thus preventing injury to these parts, and the pulp is raised to the level of the saw thus enabling it to make a clean cut
5 entirely through the pulp.

It is evident that many slight changes might be resorted to in the relative arrangement of parts shown and described without departing from the spirit and scope of my
10 invention hence I would have it understood that I do not wish to confine myself to the exact construction and arrangement of parts shown and described, but,

Having fully described my invention what
15 I claim as new and desire to secure by Letters-Patent, is:—

A portable cutter, comprising a handle,

side frames secured to the latter at one end and projecting beyond the handle, a jaw
20 journaled in and between said side frames, a fixed shield covering that portion of the saw above the side frames, and a fixed plow shaped guard extending downwardly and terminating in a thin flat plate having a
25 pointed front end, the plate portion of the guide being approximately parallel with the handle.

In testimony whereof, I have signed this specification in the presence of two subscribing witnesses.

FRANK E. KEYES.

Witnesses:

WM. J. MAHON,

W. F. KEYES.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."
