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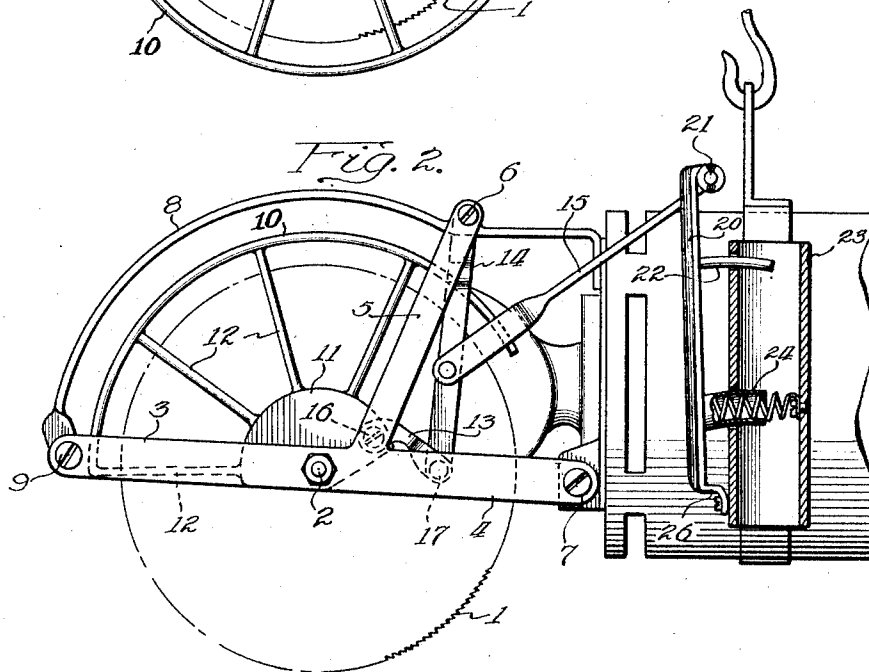
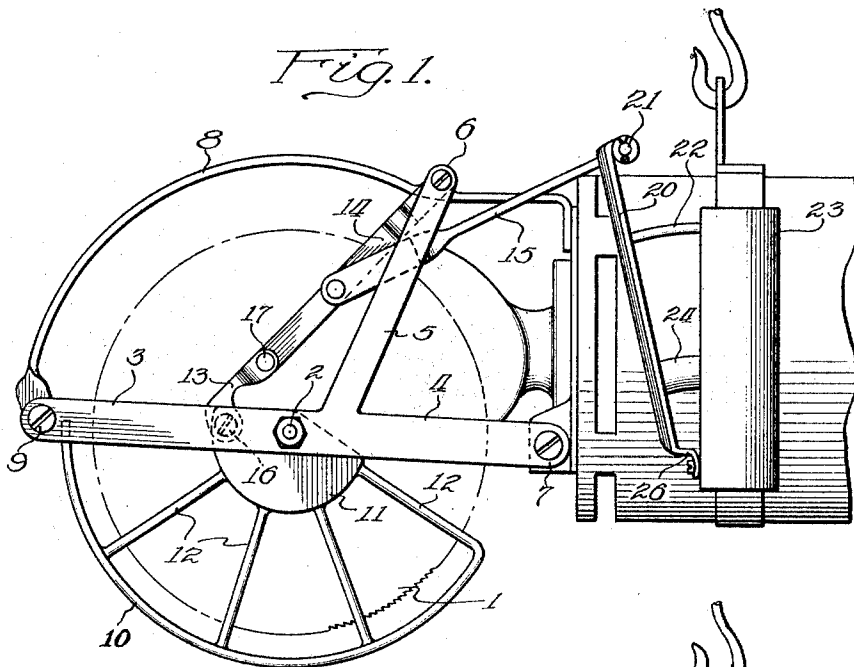
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1,738,896

MEAT SAW GUARD

Filed July 13, 1929

2 Sheets-Sheet 1



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2 Sheets-Sheet 2

Fig. 3.

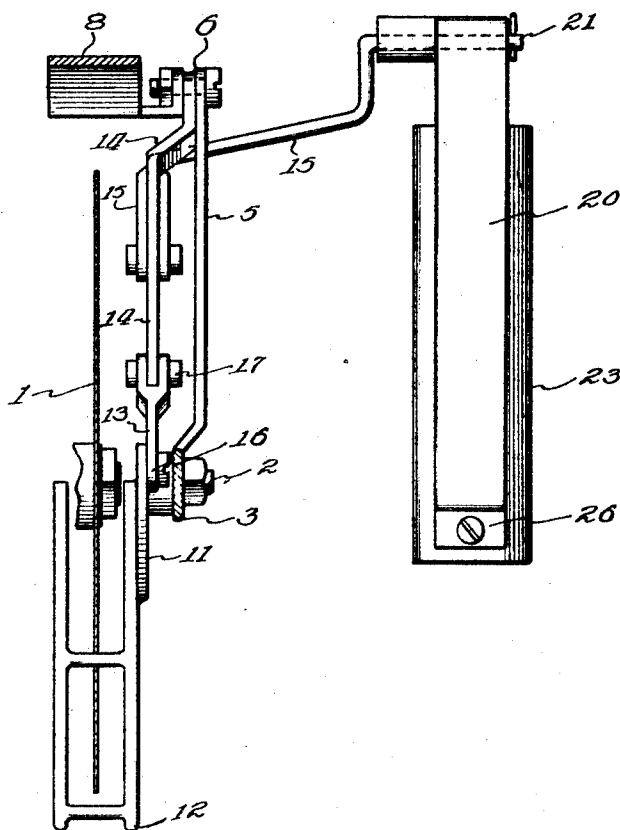
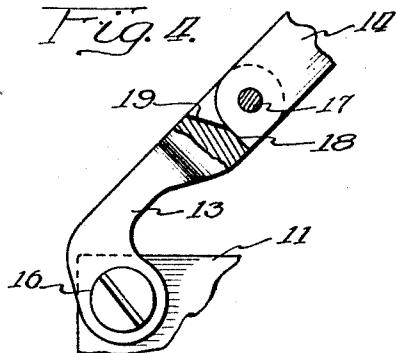
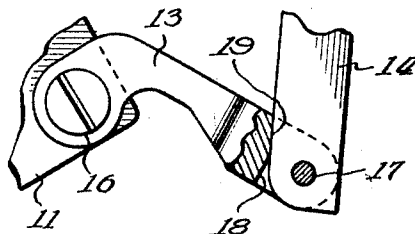


Fig. 4.



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Fig. 5.



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UNITED STATES PATENT OFFICE

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MEAT-SAW GUARD

Application filed July 13, 1929. Serial No. 373,142.

My invention relates to portable, power-driven, rotary-blade cutting machines and particularly to the guards for protecting circular saw blades while not in use.

5 The main object of my invention is to provide an improved form of guarding device and operating mechanism therefor which renders it self-locking and substantially impossible to accidentally expose the blade of
10 the saw unless the handle is gripped by the operator in a particular manner for performing a cutting operation.

Other objects are to provide a guard of the class described which will operate with a
15 minimum of effort on the part of the operator, and which can be operated by unskilled labor without instruction; and to so organize and arrange the mechanism that the desired control shall be effected naturally and with mini-
20 mum conscious attention.

A specific embodiment of this invention in the form of a meat saw is illustrated in the accompanying drawings in which:

25 Figure 1 is a side elevation with part of the motor and housing broken away and showing the movable guard in the guarding position which it assumes when the saw is not in use.

Fig. 2 is a similar view showing the movable guard in the retracted position it assumes when the saw is in use, exposing the
30 cutting edge of the saw blade.

Figure 3 is a front end view of the movable guard and its operating mechanism, other parts of the machine being omitted.

35 Figure 4 is an enlarged detail view of the toggle mechanism, part of one of the links being broken away to show the stop shoulder construction, the toggle being in its locked position.

40 Figure 5 is similar to Figure 4 but shows the toggle in its released position.

Referring to the drawings, the circular saw blade 1 revolves about a shaft having its axis at 2. The frame on which the saw is mounted
45 in an extension of the motor housing and houses the driving gearing which is not shown in the drawing. The movable guard is mounted coaxially with the shaft 2 and is carried by a fixed frame which consists of
50 spider members 3, 4 and 5, which are rigidly

fixed at 6 and 7 to other parts of the frame of the portable saw.

The bowed member 8 and members 3, 4 and 5, together with the driving gear housing form a fixed guard for the upper part of the
55 saw. The movable guard consists of the arc shaped rim member 10, and hub plate 11, and the arms 12, and is pivotally mounted at 2 on the axis of the saw. The movable guard is actuated and controlled by a pair of toggle
60 links 13 and 14. Link 13 is pivotally and eccentrically mounted on the hub plate of the movable guard at 16 and is forked to connect with link 14 at 17, and this joint is provided
65 with limit stops 18 and 19 corresponding to the extended and retracted positions respectively of the guard 10, as shown in Figures 4 and 5. Link 15 connects toggle link 14 to the
70 lever 20 at 21. The rod 22 enters the handle 23 acting as a guide to hold the lever 20 in position, as does the guide 24 which consists of a tube which houses a spring 25.

This spring forces the lever 20 away from the handle expanding the toggle to force the
75 movable guard into the closed or guarding position and bringing the stop shoulder 18 into engagement to lock the guard against accidental retraction.

In operation, when the operator grips the handle 23 to move the saw into engagement
80 with the work, the pressure of the fingers on the lever 20 compresses the spring 25, pulls the link 15 so as to collapse the toggle joint to bring the movable guard into the retracted position shown in Fig. 2 and expose the saw
85 blade for use. When the operator removes his hand from the handle 23 the spring 25 forces the lever 20 away from the handle 23, pushing the toggle mechanism and forcing link 15 so as to expand the movable guard
90 into the position shown in Fig. 1.

Although but one specific embodiment of this invention has been herein shown and described, it will be understood that various details of the construction shown may be
95 altered or omitted without departing from the spirit of this invention as defined by the following claims.

I claim:

1. A device of the character described, 100

- comprising a support having a handle for manual movement of said support, a rotary power operated cutter mounted on said support, a fixed guard on said support for the non-working side of said cutter, a movable guard to protect the working side of said cutter when the device is not in use, and control means adjacent said handle for retracting the latter guard coincidently with gripping the handle, said control means including a toggle for locking the movable guard in its cutter protecting position.
2. A device of the character described, comprising a support having a handle for manual movement of the support in use, a rotary power operated cutter mounted on said support, a fixed guard on said support for the non-working side of said cutter, a movable guard to protect the working side of said cutter when the device is not in use, and control means connected to said handle for retracting the latter guard coincidently with gripping the handle, said control means comprising a pair of toggle links connecting a part of said guard near its axis and a part of said support remote from said axis, and a link connecting a medial part of said toggle device with said handle.
3. A device of the character described, comprising a movable support having a rotary cutter mounted thereon, a handle on said support for manipulating the cutter, a cutter guard swingingly mounted on said carriage coaxially with said cutter, and guard retracting means operatively related to said handle for actuation by the operator on gripping the handle, said last named means being self locking in its released position.
4. A device of the character described, comprising a movable support having a rotary power operated cutter mounted thereon, a handle on said support for manipulating the latter, a cutter guard swingingly mounted on said carriage coaxially with said cutter, guard retracting means operatively related to said handle for actuation by the operator on gripping the handle, and self-locking means normally urging said guard to its effective position.
5. A device of the character described, comprising a rotary cutter, a support whereon said cutter is mounted, a rotary guard for said cutter including a central hub pivoted coaxially with said cutter and an arcuate guard rim and means rigidly connecting said hub and rim, and control means including a pair of toggle links connecting said support at a point remote from the hub axis with said hub, for bracing said guard against accidental retraction, stops on said toggle links coacting in their bracing position, and a spring normally urging said toggle links to engage said stops.
6. In a device of the character described, a guard movable into and out of position to protect the exposed portion of a rotary blade, toggle mechanism connected to shift said guard, a handle for manipulating said device, a lever extending along said handle in such position that the hand of the operator gripping the handle may also grip the lever to actuate said toggle for exposing the blade, and a spring acting between said lever and handle and normally acting through said toggle to brace said guard in its effective position.
- Signed at St. Joseph, Mo., this 5 day of July, 1929.
- OTTO C. HANSEN.

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