

July 15, 1958

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2,843,164

CHAIN SAW

Filed Nov. 1, 1955

Fig. 1

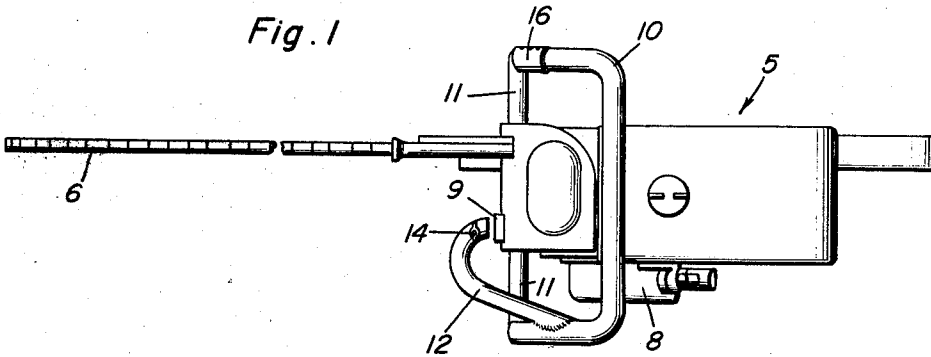


Fig. 2

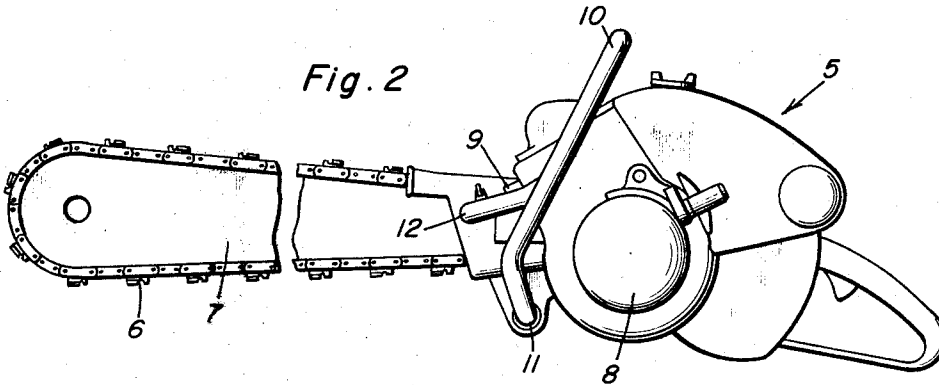


Fig. 3

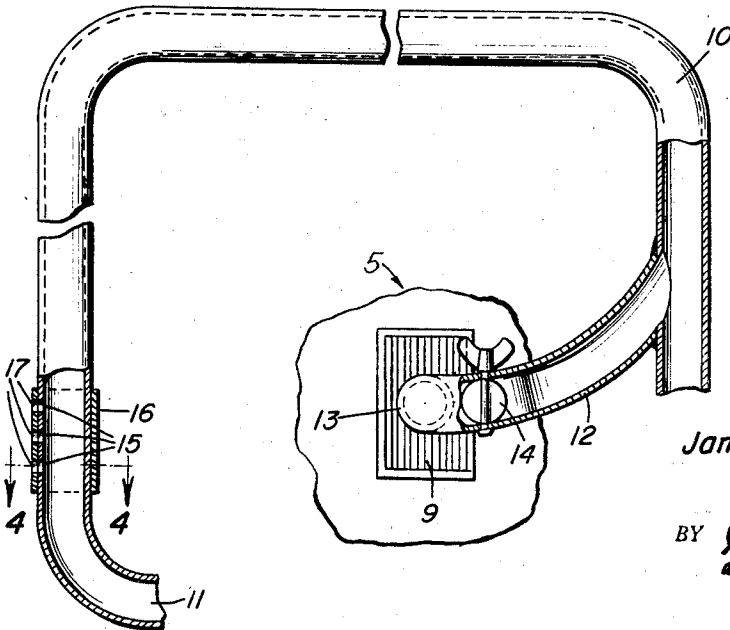
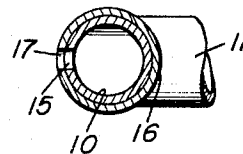


Fig. 4



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CHAIN SAW

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Application November 1, 1955, Serial No. 544,297

1 Claim. (Cl. 143—32)

The present invention relates to new and useful improvements in portable power chain saws of the internal combustion engine actuated type and has for its primary object to provide, in a manner as hereinafter set forth, a device of this character which utilizes the hot exhaust gas from the engine for heating or warming the main handle of the machine for warming the hand of the operator which grips said handle.

Another very important object of the invention is to provide a portable power chain saw of the aforementioned character wherein the handle heating means may readily be regulated or controlled as desired.

Other objects of the invention are to provide a heated chain saw handle which will be comparatively simple in construction, strong, durable, compact, and which may be manufactured at low cost.

These together with other objects and advantages which will become subsequently apparent reside in the details of construction and operation as more fully hereinafter described and claimed, reference being had to the accompanying drawings forming a part hereof, wherein like numerals refer to like parts throughout, and in which:

Figure 1 is a top plan view of a portable chain saw equipped with a handle constructed in accordance with the present invention;

Figure 2 is a view in side elevation thereof;

Figure 3 is a fragmentary view in front elevation of the handle with portions broken away in section; and

Figure 4 is a view in horizontal section, taken substantially on the line 4—4 of Figure 3.

Referring now to the drawing in detail, it will be seen that reference character 5 designates generally a portable chain saw comprising a conventional endless cutting chain 6 operable on a support or arm 7 and driven in the usual manner by an internal combustion engine 8 provided with the usual forwardly projecting exhaust outlet 9.

Substantially circling the saw 5 at an intermediate point is a tubular metallic handle 10 of substantially the shape or configuration shown, said handle including inturned end portions 11 which are secured in the lower portion of the saw 5.

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Affixed to the handle 10 and communicating therewith on one side thereof is an intake pipe or tube 12. The pipe 12 terminates in an open free end 13 which is located adjacent the exhaust outlet 9 for receiving hot gases from the engine 8. A control valve 14 is mounted in the intake end portion of the pipe 12.

The other side portion of the handle 10 has formed therein a series of longitudinally spaced discharge ports 15. A sleeve valve 16 is operable on the handle 10 for controlling the ports 15, said sleeve valve including spaced openings 17 for registry with said ports.

It is thought that the operation of the invention will be readily apparent from a consideration of the foregoing. Briefly, with the engine 8 functioning and the valves 14 and 16 in open position, hot gases from the exhaust 9 of the engine enter the pipe 12 and pass therefrom into and through the tubular handle 10 for heating or warming same in an obvious manner, said gases escaping to the atmosphere through the registering ports 15 and 17. By adjusting either of the valves 14 or 16, the flow or circulation of hot exhaust gases through the handle 10 may be controlled, as desired.

The foregoing is considered as illustrative only of the principles of the invention. Further, since numerous modifications and changes will readily occur to those skilled in the art, it is not desired to limit the invention to the exact construction and operation shown and described, and accordingly, all suitable modifications and equivalents may be resorted to, falling within the scope of the invention as claimed.

What is claimed as new is as follows:

In combination, a portable power chain saw machine comprising an internal combustion engine including an exhaust opening to the atmosphere, said machine further comprising a substantially U-shaped tubular handle having closed ends secured to the machine, a pipe having one end connected to one side portion of the handle and communicating therewith, the other end of said pipe being opposed to the exhaust opening for receiving exhaust gases therefrom for delivery to the handle for warming same, the other side portion of the handle having discharge ports therein, and a sleeve valve rotatably mounted on said other side portion of said handle for controlling the discharge ports and the flow of the exhaust gases through the handle.

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