F. P. RAND.

STUMP BURNER.

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1,002,752. **Patented Sept. 5, 1911.**

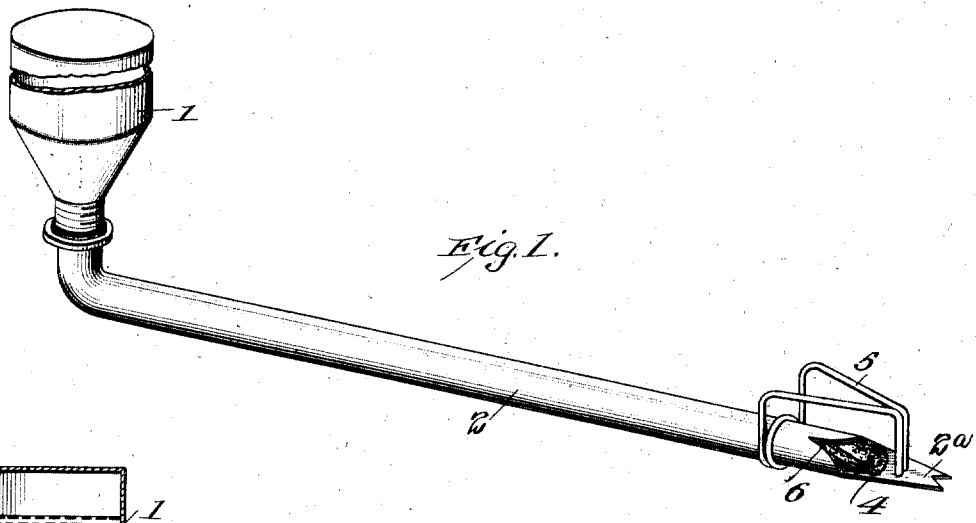


Fig. 1.

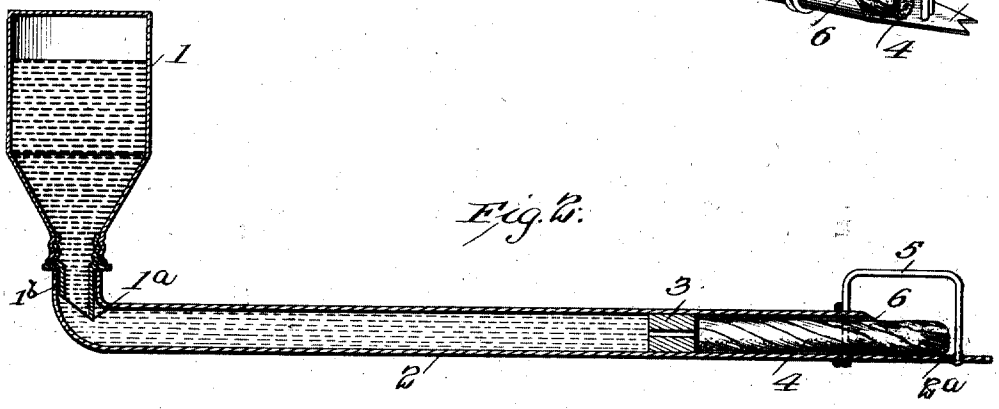


Fig. 2.



Fig. 4.

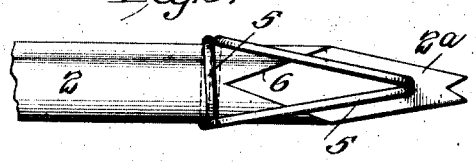


Fig. 3.

WITNESSES:

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STUMP-BURNER.

1,002,752. Specification of Letters Patent. Patented Sept. 5, 1911.

Application filed January 4, 1911. Serial No. 600,696.

To all whom it may concern:

Be it known that I, FRANK P. RAND, a citizen of the United States, and a resident of Spokane, in the county of Spokane and State of Washington, have invented certain Improvements in Stump-Burners, of which the following is a specification.

My invention is an improved device for burning the bodies and roots of stumps, both dry and green.

The construction and manner of using the device are as hereinafter described, and illustrated in the accompanying drawing, in which—

Figure 1 is a perspective view of my invention. Fig. 2 is a longitudinal section of the same. Fig. 3 is a plan view of the inner end of the device. Fig. 4 is a perspective view of the perforated partition or guard arranged in the tubular body of the device.

Referring particularly to Figs. 1 and 2 of the drawing, the numeral 1 indicates a funnel-shaped oil reservoir and feeder, 2 an elongated tubular conductor for the oil, 3 a perforated block or partition arranged in the conductor, 4 an asbestos wick, and 5 a wire guard arranged over the inner end of the device, said guard serving to prevent contact of live coals or other material with the portion of the asbestos wick lying exposed on the part 2^a.

The liquid fuel employed is petroleum or kerosene, and the same is conveyed into the tubular conductor 2 by the funnel-shaped tank or reservoir 1 which is provided with a detachable nozzle 1^a adapted for insertion in the upturned outer end of the tube 2. The nozzle is screwed to the tank 1, and has a circular flange or collar. The discharge end of the nozzle 1^a is cut away upon a slant or angle of about 45°, and the nozzle is of such diameter that it fits very loosely into the upturned end of the conductor 2, the space 1^b thus formed serving as a passage which permits the entrance of air to supply the vacuum above the oil in the reservoir.

In order to prevent the oil flowing too rapidly, or rather discharging at the inner end too freely, a guard or partition in the form of a block 3 having a longitudinal perforation is arranged in the tube 2 a short distance from its discharge end. Thus the block not only serves to hinder the too rapid discharge of oil, but it serves also as a stop for the asbestos wick 4 which is inserted and held in the discharge end of the tube. The latter is extended on the lower side, or, in other words, cut away on the upper side which is also incised as shown in Fig. 3, to form a V-shaped opening at 6, the same extending back an inch or thereabout in the body of the tube. This leaves a considerable portion of the wick 4 exposed and also leaves a free space for the flame, while the lower side or extended portion 2^a serves as a support for the wick and also for attachment of the guard 5, which is so arranged as to project above and over the outer end of the wick. The guard 5 is formed of wire which is coiled at its middle about the body of the tube 2 and the ends of the same are fastened to the end 2^a of said tube, the intervening portions projecting upward as shown. The outer end 2^a of the tube is provided with teeth which aid in supporting the device in working position in some situations.

In using the device, it is preferable to attack a large root of a stump rather than the body thereof. A hole is bored in the root adjacent to the stump, or just below the ground surface, and the end 2^a of the device heretofore described is inserted in the hole, and then, the wick being ignited, the reservoir 1 is placed on the upturned end of the conductor 2. The hole in the root may be made considerably larger than required to receive the device and thus smoke will escape and be blown away on one side or the other. It is preferable to allow as little draft as possible so that the roots may be converted to charcoal.

Another method is to bore a hole into the base of the stump past the middle or "heart" of the same, and also to bore a second hole from above, at an angle of say 45° to the first one, so that the two will communicate. The burner is then to be inserted in the lower hole, and the blaze will soon convert the adjacent portions into live coals, the smoke in such case escaping mainly by the upper hole. Thus the body of the stump will in general be converted into charcoal without being burned to ashes, which is of course a preferable result.

A green stump cannot be burned successfully from the outside by means of an ordinary fire, but by use of my invention even a green stump will burn well by attacking it in the manner above described.

It will be understood that the burner may be withdrawn as soon as the root or stump body begins to burn well.

My improved device enables a stump to be destroyed comparatively quickly and very easily, without the use of any dangerous explosive, while the construction of the same is such that it may be easily manipulated and may be produced at small cost.

What I claim is:—

The improved device for the purpose specified, comprising a tube for conducting the liquid fuel, the discharge end of the same being cut away on the upper side, a wick inserted in such end and projecting therefrom and being supported on the extended lower portion of the tube, and a wire guard applied to and projecting above such discharge portion, one end of the guard being secured to the extended lower portion of the tube and the other end attached to the body of the same, the intervening portions overlying the exposed portion of the wick, substantially as described.

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Witnesses:
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