

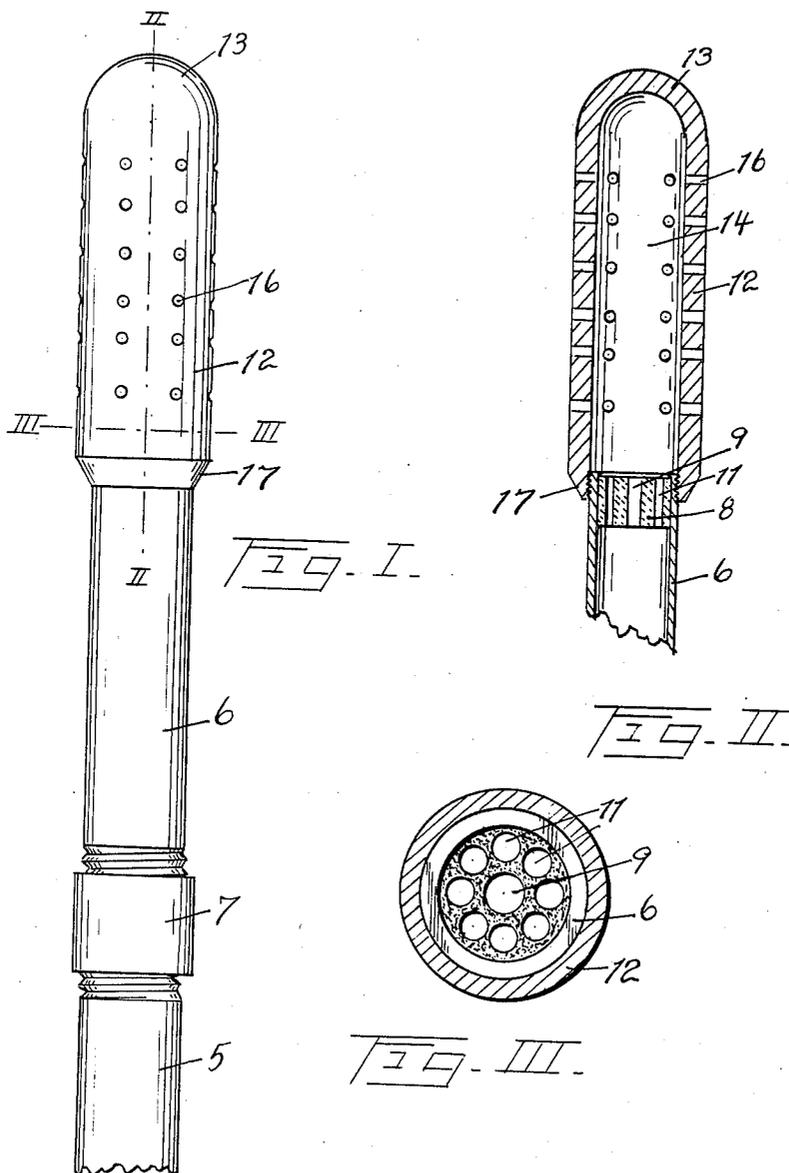
Dec. 19, 1939.

N. M. HANSEN

2,184,142

BURNER FOR DEFITCHING BEER BARRELS

Filed Aug. 22, 1938



INVENTOR.

NIS M. HANSEN

BY *C. H. Drew*
ATTORNEY.

UNITED STATES PATENT OFFICE

2,184,142

BURNER FOR DEPITCHING BEER BARRELS

Nis M. Hansen, San Francisco, Calif.

Application August 22, 1938, Serial No. 226,187

1 Claim. (Cl. 158—116)

This invention relates to improvements in burners and has particular reference to a burner for depitching beer barrels.

The principal object of this invention is to produce a burner which will not burn out.

A further object is to produce a burner which will not become extinguished, a burner which is easy to light, and one which will maintain a uniform degree of heat at all times.

Other objects and advantages will be apparent during the course of the following description.

In the accompanying drawing forming a part of this specification and in which like numerals are employed to designate like parts throughout the same:

Fig. 1 is a side elevation of my device;

Fig. 2 is a cross sectional view taken on the line 2—2 of Fig. 1; and

Fig. 3 is an enlarged cross sectional view taken on the line 3—3 of Fig. 1.

Beer barrels are coated on the inner surface with hot pitch, and it is necessary to melt this pitch off from the inside of the barrel and then repitch the barrel before it may again be filled with beer. It has been common practice to use burners to accomplish this depitching of the barrel. However, these burners burn out rapidly, often in a few hours, due to the intense heat and oxidation of the flame openings.

Applicant has found that he can produce a burner which overcomes these difficulties.

In the accompanying drawing wherein for the purpose of illustration is shown a preferred embodiment of my invention, the numeral 5 designates a gas and air supply pipe to which the burner pipe 6 is attached through the medium of a coupling 7. Positioned within the pipe 6 is a flame arrestor 8 constructed of refractory material having a large central opening 9 and a plurality of smaller openings 11 therethrough radially positioned about the opening 9. Threaded to the end of the pipe 6 is a combustion head 12 having a dome-shaped portion 13 and a combustion space 14. Openings 16 are radially arranged in this combustion head 12 and have an area greater than the combined area of the openings through the member 8. The lower end of the combustion head is chamfered as shown at 17, the purpose of which will be later seen.

In use the gas and air is admitted through the pipe 5 where it engages the flame arrestor 8 and passes through the openings therein, thence into the combustion space 14 and out of the opening 16. By now holding a match to one of the open-

ings 16, the gas issuing therefrom will ignite and travel into the combustion chamber 14. As the gas is passing through the openings 9 and 11, the flame will not pass this arrestor and will all burn within the combustion chamber. The combustion head 12 will soon become heated, thus expanding the burning gas to a point where it will project through the openings 16 as burning flames where it will combine with the outside atmosphere, producing a secondary combustion of very high heat intensity. Thus there is a primary combustion within the head and a secondary combustion outside of the head. The beer barrel is now introduced over the burner while allowing the burner to pass through the side bung hole in the barrel, with the result that this heat from the burner will quickly melt the pitch from the inside of the barrel and permit it to flow from the barrel.

When the barrel is depitched, it is lifted from the burner, and the chamfered portion 17 prevents any possibility of the bung hole catching upon the head.

Thus it will be seen that by producing a burner head wherein the outlet openings in the burner head are of greater area than the flame arrestor, a condition of primary and secondary combustion is possible.

It is to be understood that the form of my invention herewith shown and described is to be taken as a preferred example of the same and that various changes relative to the material, size, shape and arrangement of parts may be resorted to without departing from the spirit of the invention or the scope of the subjoined claim.

Having thus described my invention, I claim:

In a burner for depitching beer barrels, a gas and air fuel supply pipe having a refractory flame arrestor positioned therein, the upper surface of said arrestor being flush with the end of said fuel supply pipe, said arrestor having a plurality of bores therethrough, an elongated tubular combustion head positioned on said fuel supply pipe, said head being closed at the opposite end to its connection to said supply pipe and being dome shaped, and a plurality of radially disposed openings formed in said head, said openings being spaced from said dome shaped end and said arrestor, the combined area of said openings being greater than the combined area of the bores in said arrestor, the lower extremity of the outer surface of said head being tapered downwardly towards the fuel supply pipe.

NIS M. HANSEN.