

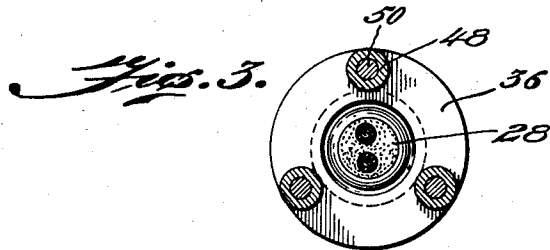
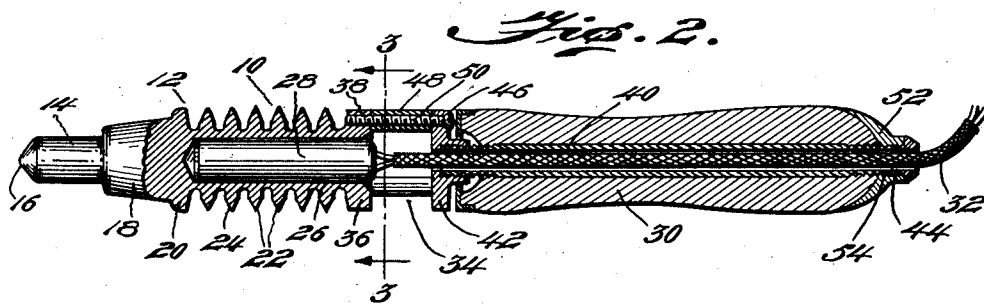
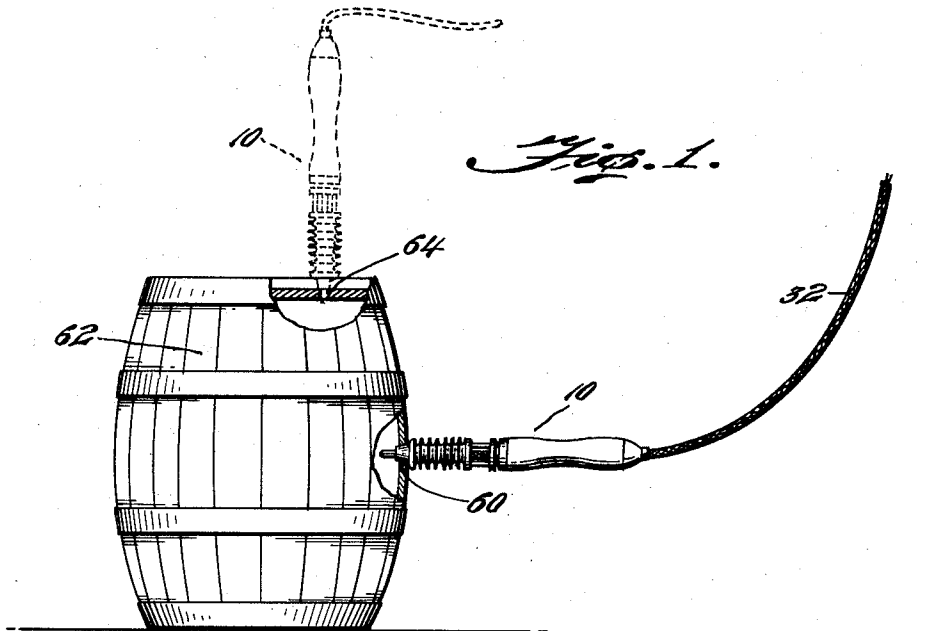
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LIQUID BARREL BUNG AND CORK REAMER

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# UNITED STATES PATENT OFFICE

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## LIQUID BARREL BUNG AND CORK REAMER

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5 Claims. (Cl. 219—21)

My invention relates to improvements in bung and cork reamers for barrels adapted to hold liquid of the type which are provided with a protective plastic, preferably pitch lining to prevent leakage from the barrel and evaporation of the liquid contents in the barrel and to insure that the liquid contents will not absorb impurities from the material of which the barrel is constructed.

My invention is particularly adapted for use in beer barrels where it is highly important, whether the barrels be constructed of wood, metal, or otherwise, to maintain the taste and flavor of the beer, that it be protected from absorbing wild yeasts or other bacteria in the air or any impurities in the material of which the container is fabricated. In every brewery before any barrel is used again, it is relined with pitch or other plastic for this purpose and the pitch has tended to harden in the cork or bung holes thereof. In the prior art bung or cork holes have been reamed out by the ends of heated rods, preferably individually heated by insertion in a coal fire.

My invention relates to improvements not only in the actual construction of the reaming front end of my reamer which makes it adaptable for use either in reaming a cork hole, as is usually provided at the end of a barrel or the bung hole as is usually provided in the side of the barrel, but also includes the provision of means, such as an annular flange to prevent the pitch from running down the rod or reamer and a plurality of thin spaced, preferably annular cooling fins in rear of the reaming end thereof, the purpose of these fins being to radiate the heat adjacent this portion of the reamer to drive it forward into the heat conductive reaming end. In addition, I preferably provide a reaming end of the nature described and attach it to a handle portion so as to provide a heat insulated air gap between the reaming end and the handle portion.

While the advantageous construction heretofore described may be employed on any type of reamer, no matter how heated, my invention particularly relates to the provision of such features in a reamer provided with a hollow front reaming end adapted to receive an electrical resistance therein and I provide an electrical conductive wire connected to said resistance, in my preferred embodiment, preferably through a hollow handle with the cord or wire extending to any conveniently adjacent electric socket and I believe I am the first therefore to provide an electric bung

reamer provided with a short handle which may be readily grasped and manipulated by the workman in use with a slack electrical cord permitting all desired freedom of movement of the reamer in either reaming a cork or a bung hole.

It is apparent that a further advantage of my improved electrically heated reamer is that it may be heated for use in a very short time without the necessity of building a fire for this purpose.

A further feature of my invention is that it eliminates the fire hazard from open fires and permits the use of the pitch reamer indoors as well as outdoors.

These and such other objects of my invention as may hereinafter appear will be best understood from a description of an embodiment thereof, such as is shown in the accompanying drawing.

In the drawing, Fig. 1 is a side elevation showing my invention in full lines being employed to ream out a bung hole of a wooden barrel and in dotted lines to ream out the cork hole of a wooden barrel.

Fig. 2 is a longitudinal sectional view taken through my improved reamer.

Fig. 3 is a cross sectional view taken along the line 3—3 of Fig. 2.

In the drawing, wherein like characters of reference indicate like parts throughout, generally indicates a barrel bung hole and cork hole reamer constructed in accordance with my invention.

As stated hitherto, my invention is primarily adapted for use in reaming out the holes of a container for liquid and while primarily adapted to be used on containers of barrel size, whether they are constructed of wood, metal, or other material, is equally adapted for use on any size liquid package, whether it be a keg, half barrel, hogshead, etc., particularly in the brewing trade and I employ the word "barrel" to include any liquid container of this description. It has been customary in the brewing trade to reline the barrel with pitch or other plastic material to additionally protect it against wild yeasts or bacteria in the air, or from absorbing impurities from the container, every time it is used and for this purpose, pitch or other plastic has been sprayed into the barrel and on hardening has tended to obstruct the usual bung and cork holes. In the prior art crow-bars, or other types of bars have been heated in a coal forge outdoors to ream out the pitch obstructions and my invention relates to the provision of a scientifically

constructed tool which may be readily and safely used indoors for this purpose and certain aspects of my invention relate to the heat conductive member 12 I preferably employ, whether it be a separate portion of an electrically heated reamer, as shown in my preferred embodiment or a head of a crow-bar or other bar. I construct my heat conductive member out of metal or any other heat conductive material and preferably provide it with a solid front end 14, preferably tapered to a point 16, said end 14 being substantially the size of the usual barrel cork hole 64 and I provide said end with an intermediate portion 18 in rear of said end portion 14 tapered from rear to front as a bung hole and of substantially the size of the barrel bung hole 60. In order to prevent pitch from flowing backwards down the rod or member I preferably provide an annular flange 20 at the rear end of said tapered bung hole portion 18. In order to prevent the heat from being conducted towards the handle portion or rear end of the bar, I preferably provide a portion 24 in rear of said flange having a plurality of thin spaced heat radiating cooling fins 22 on the periphery thereof, preferably a plurality of annular spaced fins 22. In the preferred construction shown, I preferably provide said portion 24 with a hollow center portion 26 for containing a heating element 28 and with this construction, it is obvious that the heat from the heating element will be conducted towards the solid end 18—14 and radiate outwards through the fins 22, so as not to be carried up the bar or towards the handle. It is also apparent that these fins 22 may supplementally function to catch any pitch which may tend to run down the handle. I also preferably construct my improved reamer 10 so as to provide an air gap 34 between the handle 30 thereof or bar handle portion and the reaming portion 12 thereof, said air gap 34 being provided with connecting means between the handle 30 and heating member or portion 12 of relatively small area.

So much of my construction hitherto described is novel in any type of a reamer, but as stated, my invention particularly relates to a portable and manipulatable electrically heated reamer which may be provided with a suitable handle portion 30 of relatively short length for the ready manipulation thereof and the electrically conductive wire 32 connected to the heating element 28 contained in said hollow portion 26 adapted to be connected to any source of supply of electricity and provided with sufficient slack therein for the ready manipulation of my improved reamer 10. While the electrically conductive wire may be suitably connected to the heating element 28 in any suitable fashion, I preferably employ a hollow handle 30 for receiving the wire 32 therein and connecting it to the heating element 28 through the air gap 34.

Any suitable type of electrically heating resistance 28 may be provided, but I have shown in the drawing a type sold under the name of a heating cartridge having the end of the wire 32 suitably connected thereto, the other end being connected with a suitable terminal (not shown) for the ready connection to any type of electrical socket.

In my preferred form shown for ease of assembly and construction, I preferably construct my improved handle 30 and air gap 34 as follows. I provide the rear end of the cooling portion 24 with a flange 36 provided with suitable circum-

ferentially spaced screw holes 38. I provide a sleeve 40 adapted to enclose the wire 32 and extend through the hollow wooden handle portion 30 having the flange 42 secured to the front end thereof, the rear end of said sleeve 40 being externally threaded as at 44. The flange 42 is provided with a cooperating member of screw holes 46 as employed in the flange 36 and the sleeves 48 are adapted to be inserted between the flanges 36 and 42 in line with said screw holes 38 and 46 and suitable screws 50 are adapted to be inserted, preferably from the rear through the screw holes 46, the sleeves 48 and screw holes 38 to rigidly attach the flanges 36 and 42 together, the flanges being thus spaced from each other by the sleeves 48. I provide a hollow cap 52 for the rear end of said handle having an inner periphery internally threaded as at 54, so that after the handle sleeve 40 is rigidly attached to the flange 36 in the manner explained, the wooden handle 30 may be compactly slid over the sleeve 40 until it substantially abuts the flange 42 when the cap 52 may be rigidly secured on the threaded rear end 44 of the sleeve 40 to compactly secure all parts together. It is thus obvious that I have provided a construction which may be readily assembled and disassembled.

In use, it is apparent that the radiating fins 22 tend to dissipate the heat near the rear end of the reaming portion 12 and that the air gap 34 tends to heat insulate the heat conductive member or portion 12 from the wooden handle 30 so that in actual use, the operator's hand can be brought very close to the reaming end for the accurate alignment and manipulation thereof without danger of being burned and it is apparent that the shortness of the reamer permits of its ready manipulation.

I have shown in Fig. 1 my invention in the act of actually reaming out the bung hole 60 of a barrel 62 and shown it in dotted lines in the act of reaming out a cork hole 64 which is usually located in the end of the barrel.

It is apparent therefore that I have provided a novel type of barrel bung and cork reamer with the advantages described above.

It is understood that my invention is not limited to the specific embodiment shown and that various deviations may be made therefrom without departing from the spirit and scope of the appended claims.

What I claim is:

1. A barrel bung hole and cork hole reamer, comprising a metal heat conductive member having a solid front end substantially the size of a barrel cork hole and a solid intermediate tapered portion of substantially the circumference size of a barrel bung hole having an annular flange at the rear end thereof and a hollow portion in rear of said flange having a plurality of thin spaced cooling fins on the periphery thereof, electrical resistance heating means contained within said hollow portion, an electrically conductive wire cord leading rearwardly therefrom, a hollow handle portion containing said cord and circumferentially spaced posts detachably securing the handle front end to the rear end of said heat conductive member forming an air gap therebetween.

2. A barrel bung hole and cork hole reamer, comprising a metal heat conductive member having a front end substantially the size of a barrel cork hole, an intermediate tapered portion of substantially the size of a barrel bung hole

having an annular flange at the rear end thereof, electrical resistance heating means in association therewith, an electrically conductive wire connected thereto and a handle portion for said

5 conductive member.

3. A barrel bung hole and cork hole reamer, comprising a metal heat conductive and storage member having a front end substantially the size of a barrel cork hole and an intermediate tapered

10 portion of substantially the size of a barrel bung hole having an annular flange at the rear end thereof and a portion in rear of said flange having a plurality of thin spaced cooling vanes on the periphery thereof.

15 4. A barrel bung hole and cork hole reamer, comprising a metal heat conductive and storage member having a front end substantially the size of a barrel cork hole and an intermediate portion of substantially the size of a barrel bung

hole, said portion having an annular flange at the rear end thereof.

5. A barrel bung hole and cork hole reamer, comprising a metal heat conductive member having a solid front end substantially the size of a barrel cork hole and a solid intermediate tapered portion of substantially the size of a barrel bung hole having an annular flange at the rear end thereof and a hollow portion in rear of said flange, electrical resistance heating means contained within said hollow portion, an electrically conductive wire cord leading rearwardly therefrom, a hollow handle portion containing said cord and circumferentially spaced posts detachably securing the handle front end to the rear end of said heat conductive member forming an air gap therebetween.

HUBERT MARTIN.