March 21, 1933. T. PAYTON 1,902,719

METHOD OF CLEANSING METERING DRUMS

Filed Nov. 13, 1931 2 Sheets-Sheet 1

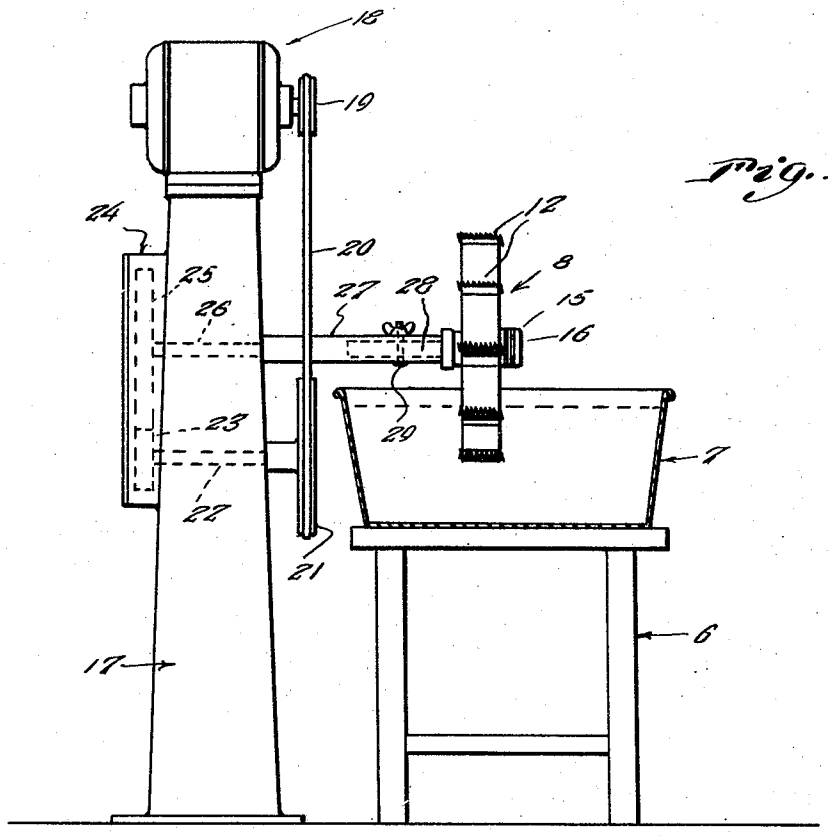


Fig. 1.

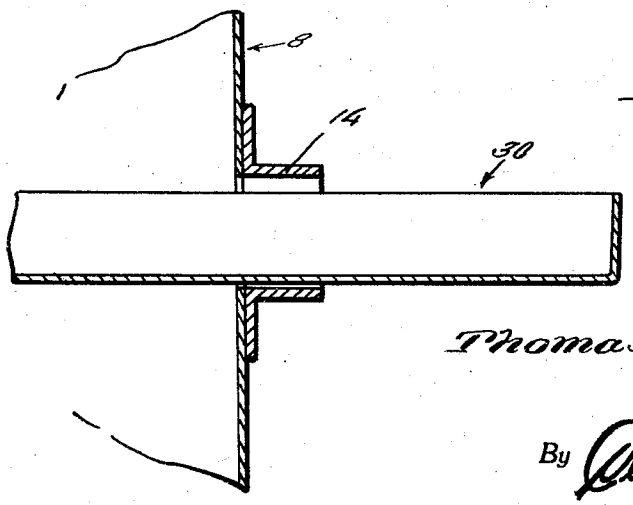


Fig. 5.

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March 21, 1933. T. PAYTON 1,902,719

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Filed Nov. 13, 1931 2 Sheets-Sheet 2

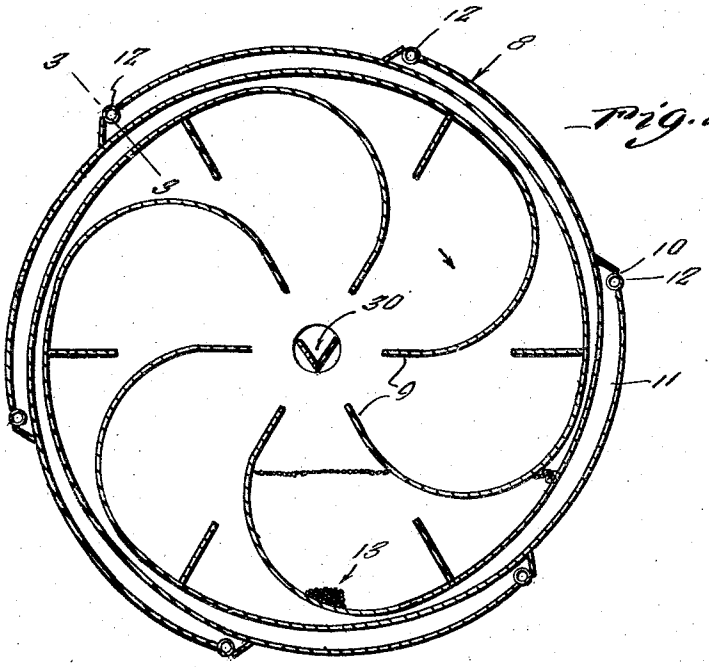


Fig. 2.

Fig. 3.

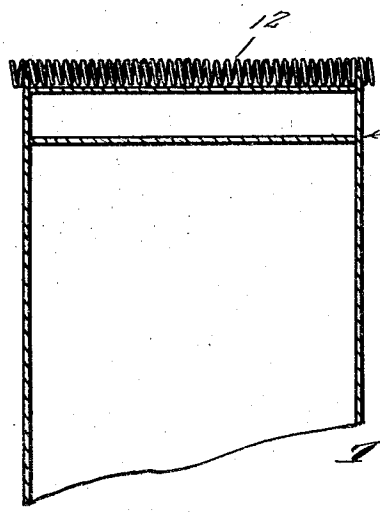
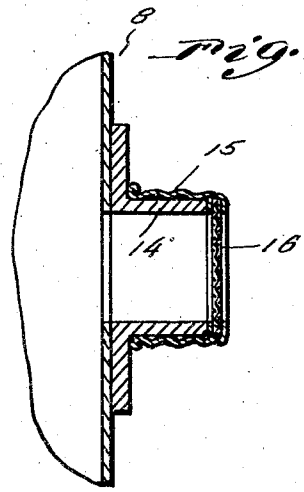


Fig. 4.



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UNITED STATES PATENT OFFICE

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METHOD OF CLEANSING METERING DRUMS

Application filed November 13, 1931. Serial No. 574,881.

This invention relates to a novel method for bathing and cleansing internal and external surfaces of a steam meter.

By way of introduction, it is to be pointed out that there are various types of steam condensation meters on the market and in operation the metering drum becomes coated both inside and out with oily and greasy deposits. In fact, much sediment is accumulated on the interior. In making this statement I have in mind well known types of condensation meters such as the Cadillac and Detroit.

I have found it expedient and practical to accomplish the desired result by attaching the metering drum to a rotary driven shaft and submerging the drum while in motion in a cleansing solution such as for example kerosene, gasoline, benzine, or the like.

More specifically stated, I provide temporary quick attachable closing means for the entrance slots in the peripheral portion of the metering drum, a screened closing cap for the hub on one side, and means for attaching the hub portion of the drum to a rotary electric motor driven shaft.

The particular structural arrangement for accomplishing these advantageous results will become more readily apparent from the following description and drawings.

In the drawings:

Figure 1 is a view in section and elevation showing the set-up and structural arrangement for subjecting the metering drum to a cleansing bath.

Figure 2 is a sectional view through the drum with certain accessories attached thereto to adapt it for the cleansing bath.

Figure 3 is a cross section on the line 3—3 of Figure 2.

Figure 4 is a fragmentary sectional view of the closing cap on one side of the hub portion.

Figure 5 is a similar sectional view showing a removable shot collecting and removing trough.

In Figure 1, the numeral 6 designates a stool or suitable support for a vat, trough or the like 7. As before implied, this tub serves as a container for the washing and cleansing solution which in most instances is kerosene.

The metering drum is generally designated by the numeral 8 and it is adapted to be supported and rotated while in a partially submerged state in the kerosene. The metering drum shown is the one sold on the market under the trade-mark Cadillac and as seen in Figure 2 it is provided on its interior with a multiplicity of circumferentially spaced baffles 9 defining the condensate compartments or pockets.

The entrance slots 10 communicating with the ducts 11 are temporarily closed by the use of spring closures 12. Each closure is an ordinary coiled spring which is stretched across the slot as seen in Figure 3 with the end convolutions snapped onto the surrounding rim. This allows the free circulation of cleansing solution and avoids displacement of the shot 13 which are placed on the interior for cleaning the surface of the baffles and walls, etc.

I have found it practical to place three to five pounds of shot temporarily in the drum to produce the desired agitation and swish-swashing of the kerosene. On one side of the drum is a hub 14 which in accordance with the present invention is partly closed to prevent escape of the shot through the medium of a cap. This cap comprises a corrugated rim 15 and a multiple ply closing screen 16.

I next call attention to the numeral 17 in Figure 1 which designates a standard having appropriate electric motor 18 at its top. The motor shaft is provided with a small pulley 19 over which a belt 20 is trained. The belt is also trained over a companion pulley 21 mounted on the drive shaft 22. The drive shaft is provided with a pinion 23 located in the gear case 24 on one side of the standard.

The pinion is in mesh with a speed reducing gear 25 carried by the driven shaft 26, and the driven shaft serves to operate the complemental tubular shaft 27 to which the coupling shaft 28 of the metering drum is detachably connected as indicated at 29. Hence, when the motor is set into operation, the metering drum 8 may be rotated either clock-

wise or counterclockwise at the rate of about forty or fifty revolutions per minute, and as it is partially submerged in the cleaning solution in the tub, it is evident that greasy coatings and internal accumulations are successfully removed. Consequently, the structure serves as a convenient means for washing and cleaning conventional marketed metering drums.

In Figure 5, the numeral 30 designates a removable V-shaped trough which is adapted to be inserted through the hub into the interior of the drum for retrieving and removing the balls or shots. The drum is rotated and the balls are obviously collected in the trough and then the trough is withdrawn. The screen cap is of course removed to permit this result to be attained. The trough can be simply held in position by hand.

It is thought from the foregoing description that the advantages and novel features of the invention will be readily apparent.

It is to be understood that changes may be made in the construction and in the combination and arrangement of the several parts provided that such changes fall within the scope of the appended claim.

I claim:

The herein described method of washing and cleansing a metering drum of the type having an axial hub, peripheral slots, and circumferentially spaced baffles therein, comprising placing and confining shot within the drum while permitting the passage of cleaning solution into and out of said drum through said slots, then rotating said drum containing shot with its axis substantially horizontal and its lower part dipping into a cleaning solution, and finally removing the shot through said hub while said drum rotates.

In testimony whereof I affix my signature.

THOMAS PAYTON.