W. W. WILDER.

PUMP.

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986,035. Patented Mar. 7, 1911.

Fig. 1.

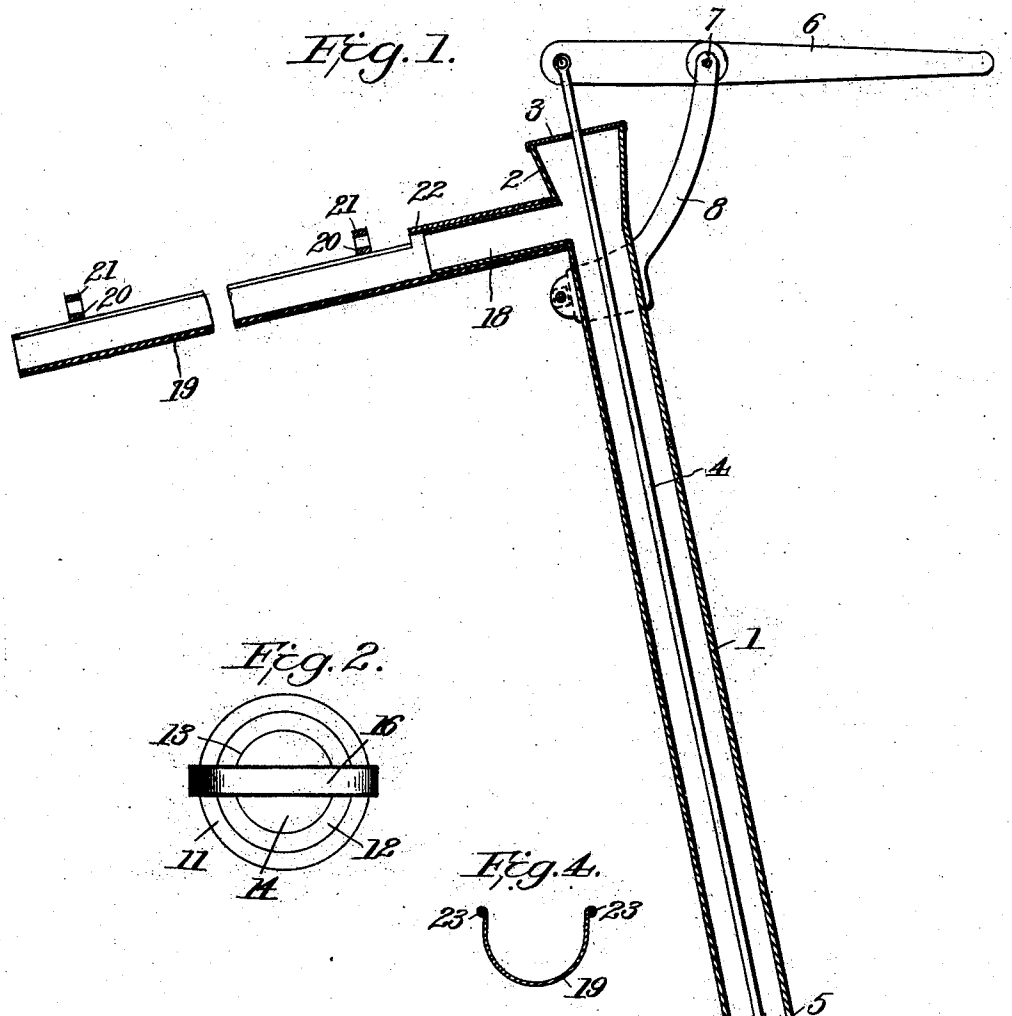
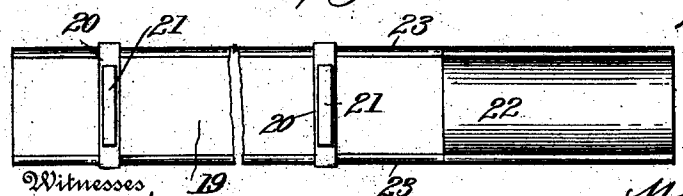


Fig. 2.

Fig. 4.

Fig. 3.



Witnesses

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PUMP.

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To all whom it may concern:

Be it known that I, WILLIAM WILLIS WILDER, a citizen of the United States, residing at Savannah, in the county of Chatham and State of Georgia, have invented certain new and useful Improvements in Pumps, of which the following is a specification.

This invention relates to pumps.

In taking hot or molten rosin from vats to barrels, the rosin is generally dipped out of the vat with dippers on long handles, and delivered to the barrels, resulting in considerable waste from drippings from the dippers and also because of the hot rosin splashing out of the vat in the dipping operation.

One object of the present invention is to provide a galvanized or other iron pump adapted to pump the rosin from the vat in its liquid state and deliver it to the barrels without shifting the latter or the vat or the pump itself, thereby expediting the removal of the rosin from the vat to the barrels and without unnecessary waste of the rosin.

Another object of the invention resides in the provision of a pump embodying such characteristics that it may efficiently pump pitch, tar, and other commodities that are heavy, including oils which are heavy-bodied, although the pump is particularly adapted for pumping rosin from vats into barrels, the pump having a sufficiently long reach from the bottom of the vat to the top of the rosin barrel, it standing on end so that the rosin will run by gravity from the spout into the barrel.

With the above and other objects in view, the present invention consists in the combination and arrangement of parts hereinafter more fully described, illustrated in the accompanying drawings and particularly pointed out in the appended claims, it being understood that changes may be made in the form, proportion, size and minor details without departing from the spirit or sacrificing any of the advantages of the invention.

In the drawings:—Figure 1 is a sectional view of a pump embodying my invention. Fig. 2 is an inverted plan view of the lower end of the pump. Fig. 3 is a top plan view of the trough or gutter detached from the pump. Fig. 4 is a transverse sectional view of the gutter.

Referring now more particularly to the accompanying drawings, the reference character 1 indicates a pump barrel whose upper end is flared at 2 and closed at 3 with the closure provided with a central perforation for the guidance of the plunger rod 4 mounted preferably centrally of the barrel and provided at its lower free end with the ordinary valve mechanism 5, the plunger rod 4 being operated through the instrumentality of a lever 6 pivoted at 7 on the bracket 8 secured to the barrel 1 in any suitable manner. This lever 6 may be operated by hand or foot power or in any other suitable manner, as may be preferred.

The lower end of the barrel 1 is flared outwardly, as at 9, with the extremity of the flared portions 9 crimped or otherwise formed to provide the upper and lower annular shoulders 10 and 11, respectively, adapted to receive the annular or disk-shaped valve seat 12 provided with a central opening 13 over which operates the valve 14 hinged in any suitable manner at 15 to the valve seat 12.

The character 16 indicates a strap-like foot piece which is substantially U-shaped, with its leg portion 17 adapted to embrace the lower flared portion 9 of the barrel of the pump, the bight portion of the strap being in spaced relation to the lower end of the barrel so that the rosin may enter the barrel without hindrance from the foot piece 16. This foot piece 16 is adapted to tightly embrace the lower end of the barrel to prevent accidental shifting or detachment thereof, and also to provide against an outward spreading of the lower flared end 9 of the barrel to prevent accidental displacement of the valve seat 12. Additional means 24 may be employed to hold the foot piece 16 against displacement, if desired.

The barrel 1 is provided at its upper end with a spout 18 which is preferably cylindrical in cross section, and through which rosin drawn up through the barrel is discharged.

The character 19 indicates a trough or gutter which is substantially semi-circular in cross section throughout practically its entire length, with metallic or other strips 20 embracing the longitudinal edges of the gutter for the support of handles 21, whereby the gutter may be easily handled for transportation from one place to another. The inner end of the gutter is preferably cylindrical in cross section, thereby providing

what may be termed an apron 22 adapted to fit over the spout 18 and by which the gutter is loosely supported upon the spout 18. It will be seen that the edges of the gutter are curled for the purpose of strengthening the edges thereof, as indicated at 23 in Fig. 4.

The pump barrel is formed preferably of galvanized iron, and the iron of the pump is all riveted, so that the heat of the hot or molten rosin will not affect it. The rosin sticks and gums up the pump after being used each time, but can be easily cracked off or, after being used on one vat of rosin, the rosin that may stick or cling to the pump in the removal of the rosin from said vat will be quickly melted when the pump is inserted in another vat full of hot rosin and the pump operated, thereby maintaining the pump in satisfactory operable condition. The rosin that may stick to the gutter may be easily chipped or cracked off, as will be obvious, but in the event that it is not chipped or broken off in any other suitable manner, the rosin that may cling to it, as the result of operation, will be easily and quickly melted when the pump is again put into commission.

In the accompanying drawings, the pump barrel is shown as being disposed upon an incline. In this position it will be understood that the lower end of the barrel is positioned in a vat of hot rosin (not shown), with the outer end of the gutter 19 disposed upon the upper edge of a barrel. By operating the lever 6, the plunger is manipulated to open and close the valves 5 and 14, respectively, to lift the hot rosin from the vat upwardly through the barrel and out through the spout 18 into the gutter 19 to the rosin receiving barrel (not shown), all without waste of rosin and greatly expediting the filling of the barrels, as compared with the old method hereinbefore referred to. It will be understood, however, that the pump need not be inclined, as shown, but that the same may be disposed vertically without departing from the spirit of the invention or interfering with an efficient operation of the device. However, when the pump and its aggroupments are positioned as shown in the drawings, there is a greater gravitation provided for the flow of rosin to the barrel, especially is there a greater gravitation in the gutter 19.

What is claimed is:—

1. A pump comprising a barrel composed of sheet metal and having its lower end flared with the outer end of the flared portion crimped to provide inwardly directed, spaced, annular shoulders, an annular valve seat positioned between said shoulders, a valve hinged on said seat, a foot piece secured to the flared portion of the barrel, a plunger operable in the barrel, a bracket secured to the barrel with its outer end extending beyond the upper end of the barrel, and a lever fulcrumed on the bracket and having operable connection with the plunger to operate the latter.

2. A pump comprising a barrel having its lower end flared outwardly, with its outwardly flared portion having its lower edge formed to provide a shoulder, a valve seat positioned between said shoulder and the inner end of the flared portion of the barrel, a valve hinged on said seat, a foot piece secured to the flared portion of the barrel, a spout connecting with the barrel, a plunger operable in the barrel, and means for operating the plunger.

In testimony whereof I affix my signature in presence of two witnesses.

WILLIAM WILLIS WILDER.

Witnesses:
HENRY HENKEN,
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