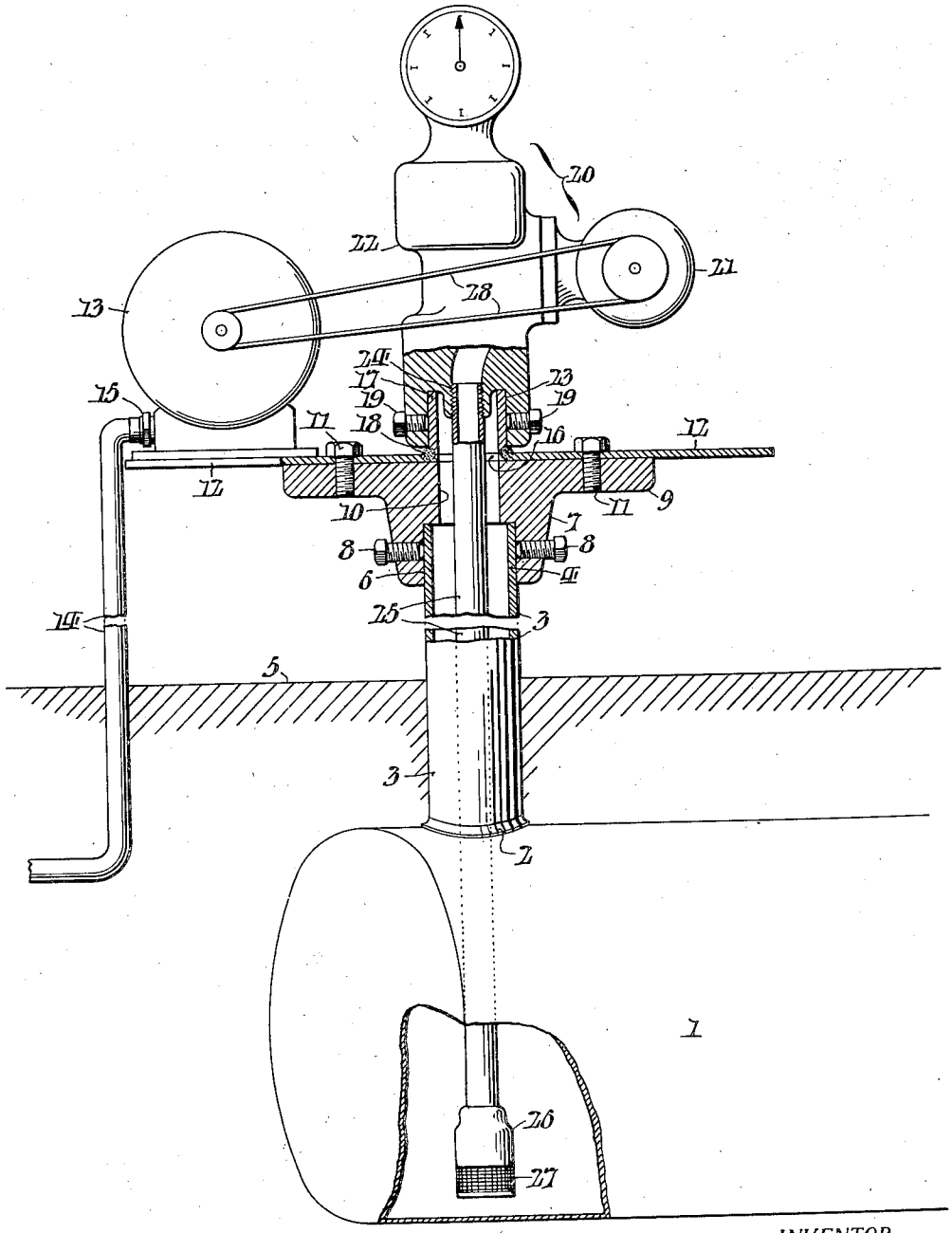
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GASOLINE DISPENSING PUMP

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WITNESSES

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GASOLINE DISPENSING PUMP

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This invention has general reference to liquid dispensing apparatus and, more particularly, relates to the form thereof commonly known as gasoline dispensing pumps of the species for connection to an underground or sub-surface reservoir or storage tank. Apparatus of the type referred to usually comprise a tubular-standard or support secured at its lower end to the underground storage tank and to the upper end whereof, above ground level, is detachably applied a combined pump and metering unit.

Installations of the indicated type, while satisfactory in many respects, are cumbersome and expensive to install or service owing to their lack of convenient separability when repair becomes necessary or essential.

Accordingly the primary object of my invention is to provide an stallation of the above indicated species which includes structural refinements whereby the servicing or repair of the various parts of the pump unit are made easy of accomplishment; while initial installation of the unit is much more easily effected than hitherto possible.

Another object of my invention is the provision of an improved gasoline dispensing pump in which the motor unit, as well as the combination pump-and-meter unit, with the attached suction-line and foot-valve, are respectively detachable relative to the base or stand-pipe connection from the underground reservoir or storage tank, whereby the time and labor costs involved in making an installation or effecting a disconnection for repair and replacement are substantially reduced.

Other objects, with ancillary advantages of this invention will be evident to those skilled in the art upon a full understanding of the construction, arrangement and assembly of the means hereinafter fully disclosed; but it will also be appreciated that my invention is susceptible of structural modification coming equally within the terms and scope of the claims.

The accompanying drawing is a broken elevational view of a gasoline dispensing pump installation, embodying this invention, with parts broken out and in section for the clearer illustration of important structural details.

Referring more in detail to the illustrative drawing the reference character 1 designates a broken out portion of an underground gasoline storage tank having a suitable fitting 2, into which is screw-threaded or otherwise secured the lower end of a tubular standard or base 3, the upper portion 4 whereof extends above ground surface level 5, to the desirable height. Seated on the

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upper portion 4 of the base 3 by aid of a counterbore 6 therein is a socket-fitting 7 which is attachable in position by means of suitable set-screws 8; while said fitting embodies a flange 9, and a relatively smaller bore 10.

Mounted on and secured to the upper face of the socket-fitting flange 9, as by screw-studs 11 for example, is a bed-plate 12 which affords firm support for a suitable motor 13, the latter being supplied with electric current by way of a conduit 14, having an appropriate coupler connection 15, as readily understood by those conversant with such matters.

Concentric with the smaller bore 10 of the fitting 7, the bed-plate 12 is provided with a conformatory aperture 16, while an axially aligned collar 17 is conveniently integrated to said plate by a surrounding weld 18. Thus it will be readily understood that the parts 17, 16, 10, 4 and 3 are all concentrically aligned.

Mounted on and secured to the collar 17, as by set-screws 19 is a combination pump-and-meter unit 20 including a rotary pump 21 with an associated metering device 22, said unit 20 having a bore 23 for snug engagement on the collar 17, in an obvious manner, as well as an interiorly screw-threaded portion 24 for attachment of the pump suction-pipe 25; while said pipe is fitted at its lower end, within the storage-tank 1, with a suitable check or foot-valve 26, having a surrounding screen 27; whereas 28 designates a removable drive-connection, such as a V-belt, intermediate the pump 21 and the motor 13.

From the foregoing it will be readily seen that by my invention the installation, servicing and/or repair of the various parts of the pump are rendered easy to accomplish; whereas the initial setting up of the pump can be very quickly and economically carried out. It is to be noted that by simply loosening or backing the set-screws 19 from clamping engagement with the socket-fitting collar 17 that the combination pump-and-meter unit 20, together with the suction-pipe 25 and foot valve 26, can be easily removed from the pump installation for servicing and/or repair; and by simply removing the drive connection or V-belt, in an obvious manner. When making the initial installation of the dispensing pump, a single mechanic is enabled to handle two separate comparatively light components, first the motor 13 and bed-plate 12, and secondly the pump-and-motor unit 20; whereas, heretofore at least two men have been needed to handle the pump-motor combination as a unit. It is further noteworthy, that when trouble develops in the meter

or pump 22, 21, respectively, due to rust or particles of foreign matter getting into the close-fitting parts thereof, which is a very common cause of trouble in kindred means, a mechanic can quickly loosen the set-screws 19 and remove the unit 20 and suction-pipe 25, quickly make replacement with a spare unit 20, and then take the said defective unit to a repair depot for cleaning and adjustment. Such procedure is obviously much easier and more economical than attempting to make repairs in the field, possibly under adverse weather conditions and certainly without adequate equipment. It is further self-evident that removal and replacement of the unit 20 can be accomplished without the necessity of breaking any electrical connections and, by having only one pipe connection at 24, the suction-pipe 25 may be quickly detached from the defective unit 20 and re-installed in the replacement unit. Finally it is equally apparent that should the motor 13 fail, for any unforeseen cause, said motor can be readily removed for repair or replacement by the simple expedient of releasing the coupler 15 and V-belt 28, without disturbing any other part or parts of the installation.

Having thus described my invention, I claim:

1. In a liquid dispensing apparatus, for attachment to an underground storage tank of the liquid, including a tubular standard, the combination of a detachable motor-mounting assembly with a dependent socket fitting engageable on the tubular standard free end and an axially aligned opposingly directed collar; a combined pump and metering unit, said unit including a suction pipe for passage through the tubular standard into the storage tank and socket engagement on the motor-mounting assembly collar; means for removably attaching the motor-mounting assembly socket fitting to the free end of the tubular standard; and similar means for securing the combined pump and metering unit to the motor-mounting assembly collar, whereby said combined unit together with the suction pipe are detachable from the motor-mounting assembly or all of said parts, in assembly, are similarly detachable from the storage tank tubular standard free end.

2. The invention of claim 1 wherein the pump is of the rotary type and motor operated; wherein said motor is of the electric type; and wherein the pump and motor are operatively coordinated by a detachable V-belt drive.

3. The invention of claim 1 wherein the motor-mounting assembly comprises a bed-plate with the socket-fitting removably attached thereto; wherein said fitting has a counterbore having the smaller diameter portion axially registering with an aperture through the bed-plate; wherein the motor-mounting assembly collar is axially aligned with said aperture and is integrated to said bed-plate; wherein the larger section of the counterbore is adapted to fit over the tubular standard free end; and wherein the socket-fitting is releasably secured to said free end.

4. The invention of claim 1, wherein the pump-and-metering unit comprises a rotary-pump and an associated metering unit; wherein the metering unit has a bore for engagement over the motor-mounting assembly tubular collar; wherein said unit is attached to the tubular collar by set-screws; and wherein the unit aforesaid embodies a screw-threaded portion for attachment of the pump-suction pipe upper end.

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