

(No Model.)

G. TAGLIABUE.
LIQUID SAMPLING DEVICE.

No. 540,121.

Patented May 28, 1895.

Fig 1

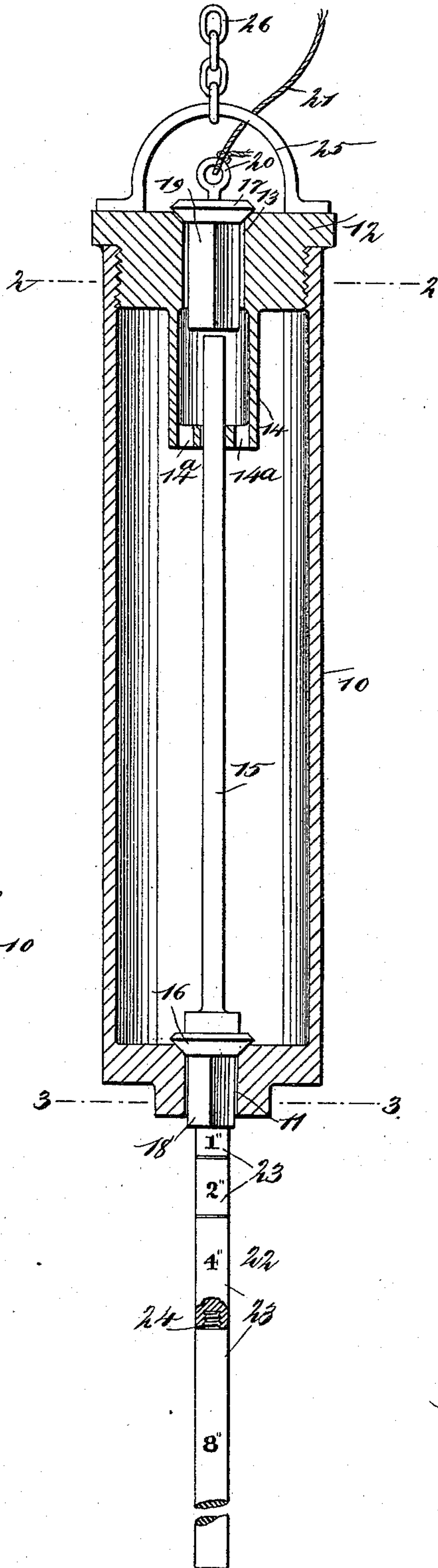


Fig 2

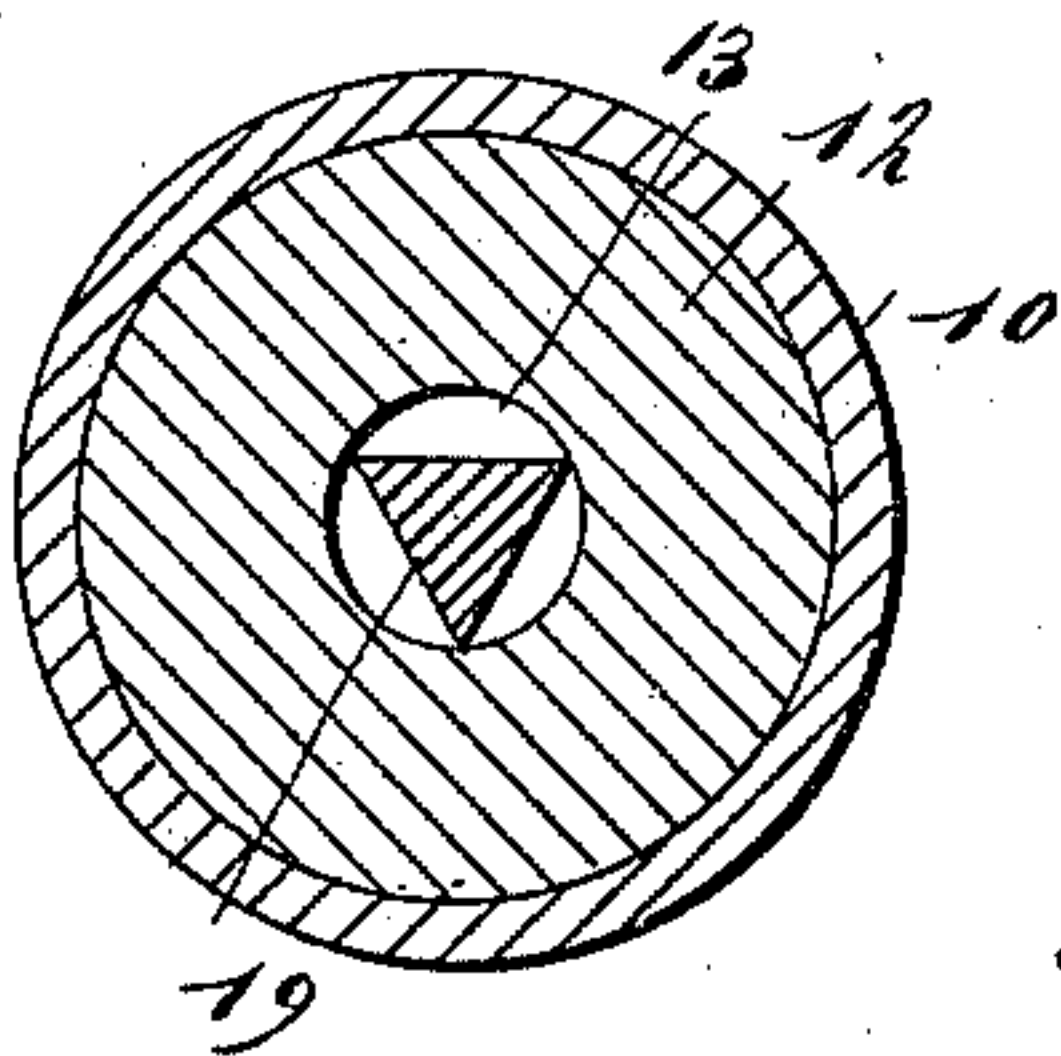
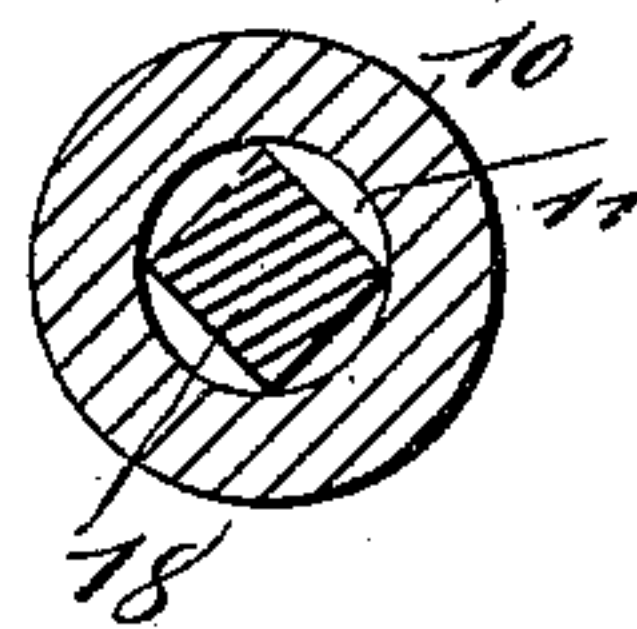


Fig 3



WITNESSES:

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GAETANO TAGLIABUE, OF NEW YORK, N. Y.

LIQUID-SAMPLING DEVICE.

SPECIFICATION forming part of Letters Patent No. 540,121, dated May 28, 1895.

Application filed October 21, 1893. Serial No. 488,784. (No model.)

To all whom it may concern:

Be it known that I, GAETANO TAGLIABUE, of the city, county, and State of New York, have invented a new and Improved Liquid-Sampling Device, of which the following is a full, clear, and exact description.

My invention relates to improvements in devices for obtaining samples of liquid from different parts of a containing tank, and is especially adapted for getting oil samples from an oil tank.

The object of my invention is to produce a very simple device of this kind, which may be lowered to any desired depth in the tank and which, at a certain predetermined level, may be opened at top and bottom to let the liquid flow in; which automatically closes at both ends when it is raised from the tank, and which therefore enables a fair sample to be obtained from the part of the tank desired.

To these ends my invention consists of certain features of construction and combinations of parts, as will be hereinafter described and claimed.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar figures of reference indicate corresponding parts in all the views.

Figure 1 is a broken longitudinal section of the device embodying my invention with the valves at both ends in a closed position. Fig. 2 is a cross-section on the line 2 2 in Fig. 1, and Fig. 3 is a cross-section on the line 3 3 in Fig. 1.

The device is provided with a hollow case or barrel 10, which is preferably of cylindrical form, and which has a bore 11 at its lower end, while in its upper end is screwed a plug 12 through which also is a bore 13, and the latter aligns vertically or longitudinally with the hollow stem 14 on the lower end of the plug, which stem has perforations 14^a in its lower end through which oil or other liquid may pass. The stem 14 also acts as a guide for the stem 15. Extending longitudinally through the cylinder or case is a stem 15 on the lower end of which is a valve 16 adapted to close the bore 11, while above the stem is a similar valve 17 adapted to close the bore 13, both the valves being arranged to seat by gravity; and the lower valve 16 has a guide

shank 18 extending down through the bore 11, which shank has faceted sides so as not to interfere with the flow of liquid through the bore when the valve is open and, as illustrated, this shank is of rectangular cross section, while the valve 17 is provided with a similar shank 19, except that the latter is of triangular cross section. The particular section does not matter in either case, however, but the guide shanks are preferably faceted for the reason stated. It will be seen that both valves will be opened when the stem 15 is raised, and both valves will be closed when the stem is dropped.

An eye 20 is secured to the upper valve 17 and to this is secured the cord 21, so that if desired, the valve 17 may be opened without disturbing the lower valve and the liquid permitted to run in the barrel.

To the lower end of the stem 15, that is, to the bottom of the guide shank 18 which really forms a part of the stem, is attached an extensible rod 22, consisting of a series of sections 23 screwed together, as shown at 24, and these sections are of different lengths, being preferably one, two, four and eight inches each in length, but this arrangement is arbitrary and they may be made of other lengths if desired. It will be seen, however, that by properly adjusting the several sections, the rod 22 may be made of any desired length within certain limits, so that when the barrel 10 is dropped into an oil tank, the valve rod 22 will strike the bottom and lift the valves 16 and 17 when the barrel 10 is the desired distance from the bottom of the tank.

The barrel 10 has, at its top, a bail 25 which is secured to the plug 12 and is supported by a chain 26, although any equivalent support may be used, and by this the barrel may be lowered. If the valve is to be opened at the top of the barrel 10, the barrel is lowered into the tank, to the required distance, by the chain 26, and the valve 17 is then opened by pulling upward on the cord 21 and the barrel permitted to fill, after which the valve 17 is permitted to drop back to its seat and the barrel drawn out and its contents sampled.

It will be observed that when the barrel is filled from the bottom of the tank, in the manner described, the oil will run into the

barrel from both ends and the valves will automatically close by gravity when the barrel is raised.

Having thus described my invention, I
5 claim as new and desire to secure by Letters
Patent—

1. The combination, with the barrel having
a bore at each end, of a gravity valve in the
upper end of the barrel, a similar valve in
10 the lower end of the barrel, a stem secured
to the lower valve and extending upward be-
neath and to within a short distance of the
upper valve, and a rod extending downward
from the lower valve outside the barrel, sub-
15 stantially as described.

2. A liquid sampling device, comprising a
barrel having a reduced bore at each end, a
gravity valve in the upper bore of the barrel,
a similar valve in the lower bore, a stem se-
20 cured to the lower valve and extending up-
ward beneath and to within a short distance
of the upper valve, and an extensible rod pro-
jecting downward and outward from the lower
valve, substantially as described.

3. A liquid sampling device, comprising a 25
barrel having a reduced bore at one end and
a bored plug at the other, a gravity valve in
the plugged end of the barrel, a similar valve
in the reduced bore, a stem secured to the
valve in the reduced end and extending up- 30
ward beneath and to within a short distance
of the valve in the opposite end, a guide for
the stem, and an extensible rod extending
downward from the lower valve, substantially
as described.

4. The combination, with the barrel having 35
a gravity valve at each end, of a stem extend-
ing from the lower valve to within a short
distance of the upper valve, means for inde-
pendently raising the upper valve, and a rod 40
secured to the lower valve and made up of
sections of different lengths, substantially as
described.

GAETANO TAGLIABUE.

Witnesses:

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