

A. J. DIESCHER.
 REGISTERING MECHANISM.
 APPLICATION FILED NOV. 22, 1909.

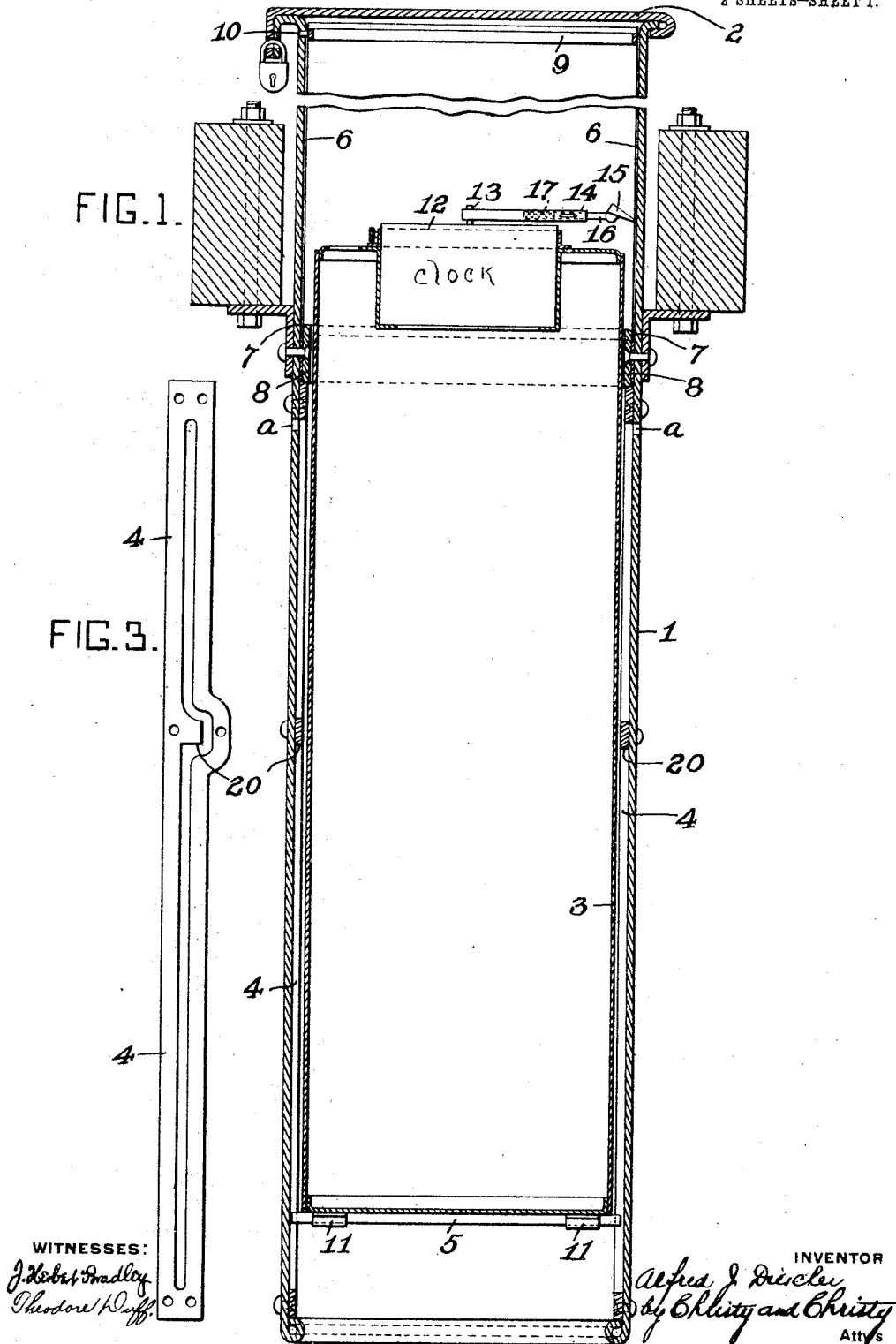
974,756.

Patented Nov. 1, 1910.

2 SHEETS-SHEET 1.

FIG. 1.

FIG. 3.



WITNESSES:

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Theodore W. Duff

INVENTOR

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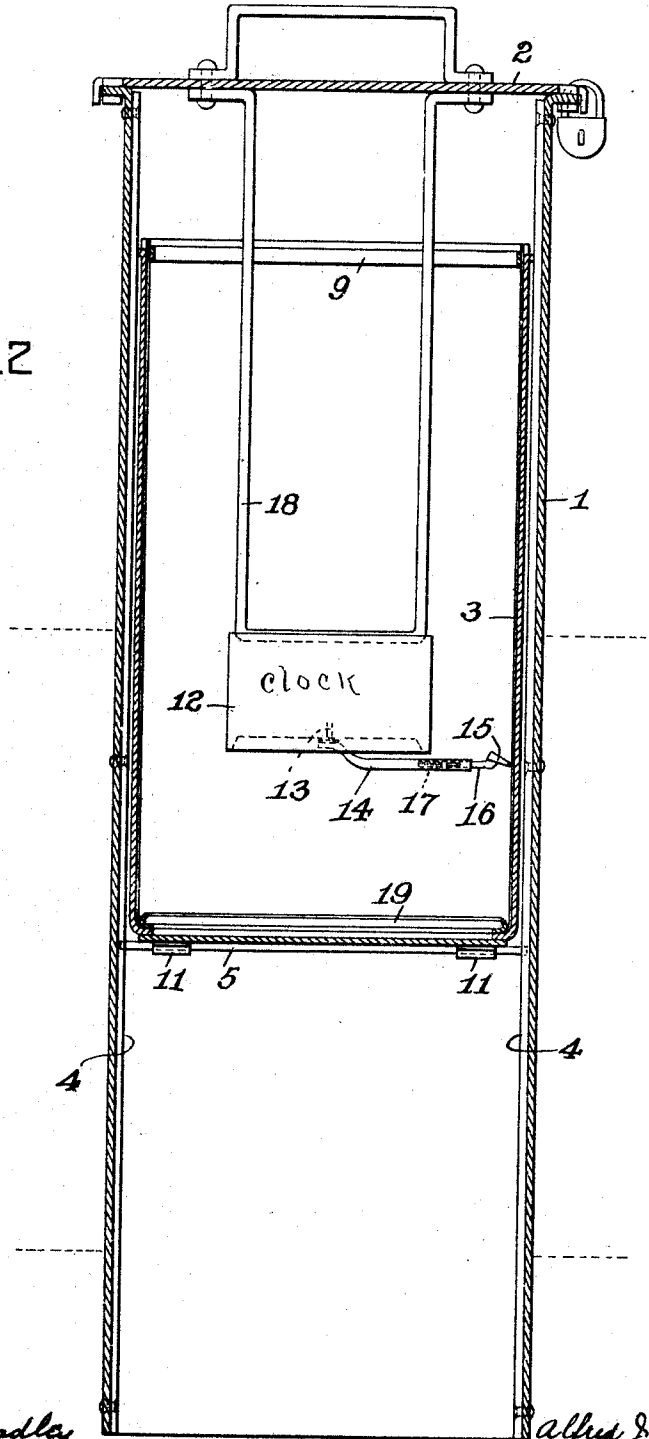
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FIG. 2



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UNITED STATES PATENT OFFICE.

ALFRED J. DIESCHER, OF PITTSBURG, PENNSYLVANIA.

REGISTERING MECHANISM.

974,756.

Specification of Letters Patent.

Patented Nov. 1, 1910.

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To all whom it may concern:

Be it known that I, ALFRED J. DIESCHER, residing at Pittsburg, in the county of Allegheny and State of Pennsylvania, a citizen of the United States, have invented or discovered certain new and useful Improvements in Registering Mechanism, of which improvements the following is a specification.

The invention described herein relates to certain improvements in mechanism for registering the pressure or head of fluids flowing along channels whether open or closed. Heretofore in devices of this kind an arm attached to the movable member of the mechanism has extended out through a stuffing box or opening in the inclosing case or shell to operate a recording device. Such construction is entirely inapplicable for use in connection with gaseous fluids of high pressure, and opportunity is afforded for tampering with and changing the record made.

The invention is hereinafter more fully described and claimed.

In the accompanying drawing forming a part of this specification Figure 1 is a sectional elevation of my improved apparatus; Fig. 2 is a similar view showing a modification of the same, and Fig. 3 is a detail view showing in elevation one of the guides for the float.

The invention as shown and described herein is adapted for use for the determination of the volume of the flow of water or quantity delivered to branch or lateral channels in an irrigating plant, and consists of a casing 1 adapted to be supported to a suitable depth in the channel at a point adjacent to but above the weir, which is generally employed for measuring the water. This casing is open at its lower end and is provided with a removable cap or cover 2 at the upper end. Within the casing is arranged a cup-shaped float 3 provided with suitable means whereby a rotary movement is prevented during the rise and fall of the float. In the construction shown this means consists of grooved plates 4 secured to the inner wall of the casing diametrically opposite each other, and a guide rod 5 detachably secured to the underside of the float, with its ends projecting into the grooves of the guide-plates 4.

In the construction shown in Fig. 1 the casing is made sufficiently longer than the float to provide sufficient room for a record-

ing sheet 6 at its upper end, such sheet being arranged against the inner wall of the casing and having its lower end inserted into a groove 7 formed by the wall of the casing and an externally beveled ring 8 riveted to the inner wall of the casing. The upper edge of the sheet is held in position by a spring 9, such ring being preferably provided with a pin 10 adapted to pass through the sheet and enter a hole in the wall of the casing. The ring 8 in addition to supporting the recording sheet serves as a guide to prevent any lateral swaying of the float in its vertical movement. In order to connect the guide rod 5 to the float, one or more openings *a* are formed through the wall of the casing in line with the groove in the guide plates 4 for the insertion of the rod into straps 11 on the lower end of the float. Suitable means are provided at the upper end of the float as a pocket 12 for the reception of a clock work for operating the marking pen or pencil at a uniform and regular speed. The main shaft 13 of this clock work has secured thereto an arm 14 carrying a fountain pen or a pencil at its outer end. The pen or pencil is held by a socket 15 on a pin 16 entering an axial opening in the arm 14 and pressed outwardly by a spring 17. As the record paper is of course profiled as is customary, *i. e.*, having horizontal and vertical lines thereon, and as the pen is rotated by the clock-work, a line will be drawn around on the sheet, the vertical position of the line at any time being determined by the level of water in the channel.

In Fig. 2 is shown a construction in which the clock-work is secured to the lower end of a bracket 18 secured to the underside of the cover 2 of the casing, and the profile paper is arranged inside the open topped float, the lower edge of the paper being arranged in a groove formed by the inner wall of the float and a ring 19 secured thereto. The upper end of the paper is held in position by a spring ring 9. The arrangement of the profile paper within the float permits of a reduction of the height of the casing and the employment of a shorter float.

In order to limit the upward movement of the float in the construction shown in Fig. 1 so as to prevent the pen being forced into contact either with the holding ring 9 or with the cover 2, the guideways are constructed with a stop 20 formed by offsetting

the groove to one side. This offset will also prevent any substance inserted through the opening made for the insertion of the rod 5 from descending the full length of the groove and preventing the rise and fall of the float.

I claim herein as my invention:

1. In a registering mechanism, the combination of a casing adapted to be connected to a channel conveying the fluid to be measured, a member arranged in the casing and adapted to be moved in accordance with changes of pressure or head in said fluid, and recording means consisting of a uniformly operated marker, and means for retaining a record sheet in position, said elements being arranged within the casing, and one of said elements being carried by the float and the other by the casing.

2. In a registering mechanism the combination of a casing adapted to be connected to a channel conveying the fluid to be measured, a member arranged in the casing and

adapted to be moved in accordance with changes of pressure or head in said fluid, a uniformly operated marker arranged within and supported by the casing and means for holding the record sheet on the movable member.

3. In a registering mechanism the combination of an opened bottom casing adapted to be partially immersed in the fluid to be measured, an open-topped float provided with means for supporting the record sheet against its inner wall and arranged in the casing, a bracket secured to the cover of the casing and extending down into the float, a motor carried by the bracket, and a marker movable along the record sheet by the motor.

In testimony whereof, I have hereunto set my hand.

ALFRED J. DIESCHER.

Witnesses:

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FRANCIS J. TOMASSON.