

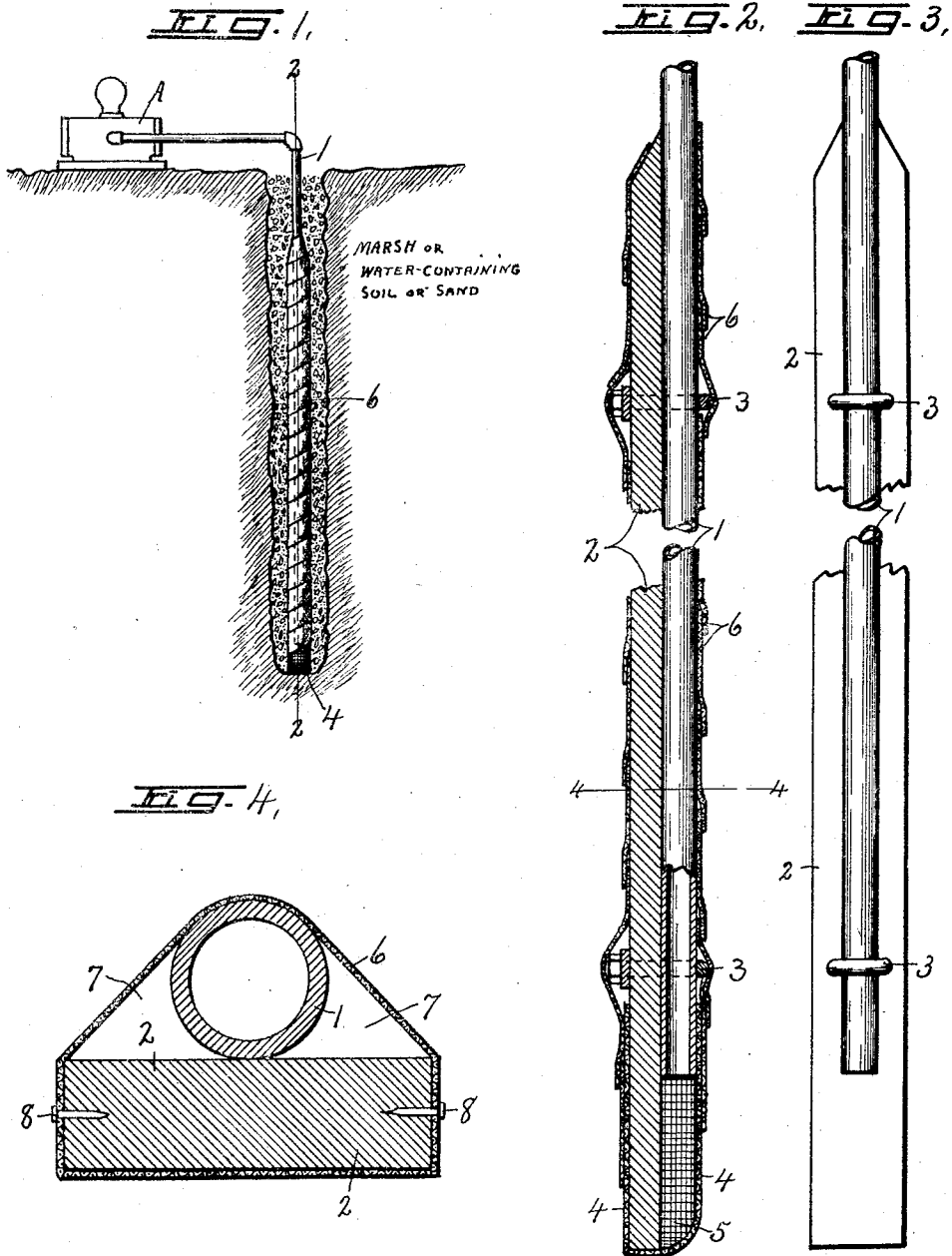
Jan. 26 , 1926.

1,570,697

T. F. MOORE

WELL POINT

Filed Dec. 8, 1924



WITNESS  
*H. H. Hurst.*

INVENTOR  
*Thomas F. Moore*  
BY *Devism & Thompson*  
ATTORNEYS

Patented Jan. 26, 1926.

1,570,697

# UNITED STATES PATENT OFFICE.

THOMAS F. MOORE, OF MORRIS PLAINS, NEW JERSEY.

## WELL POINT.

Application filed December 8, 1924. Serial No. 754,617.

*To all whom it may concern:*

Be it known that I, THOMAS F. MOORE, a citizen of the United States of America, of Morris Plains, in the county of Morris, in the State of New Jersey, have invented new and useful Improvements in Well Points, of which the following, taken in connection with the accompanying drawings, is a full, clear, and exact description.

10 This invention relates to a device for removing water seepage from wells, sink-holes, marshes and other water-saturated earth and for convenience of description may be turned a "well-point."

15 In the laying of sewer pipes, water mains and other conduits for public or private purposes it is frequently necessary to dig the trenches for receiving such conduits through marsh lands, sink-holes and other water-saturated earth containing more or less silt, quicksand and other comminuted materials, which, together with the water seepage greatly increase the difficulties encountered and adds materially to the cost of laying the conduits or other structures which it may be desired to sink to a greater or less depth in such soil, and the main object of this invention is to provide simple and efficient means for removing the excess water from the soil, as the work progresses, without liability of clogging the pumps with sand and other foreign matter.

25 In other words, I have sought to provide a special type of well-point capable of being inserted into the water-soaked soil either by driving or into a previously made hole and which is equipped with water-perVIOUS sand-baffles or screens and suitable chambers surrounded by the baffles to allow the water to pass from the exterior into the chambers and thence to the pipe to be withdrawn by a suction pump connected to said pipe and at the same time to exclude sand, gravel and other foreign matter from entering the pipe.

Other objects and uses relating to specific parts of the device will be brought out in the following description.

In the drawings:

50 Figure 1 is a side elevation of a well-point embodying the various features of my invention showing a section of a well and also a suction pump adapted to the well-point for withdrawing the water which may be diverted from the soil to the pipe.

Figure 2 is an enlarged vertical sectional

view, partly in elevation, of the lower portion of the detached well-point showing the essential features of the invention.

Figure 3 is a side elevation, partly broken 60 away, of the same device omitting the screens.

Figure 4 is an enlarged transverse sectional view taken in the plane of line 4—4 Figure 2. 65

The construction shown in Figures 1 to 4 inclusive comprises a suction pipe —1— adapted to be inserted more or less vertically into the water-containing soil to be drained and its upper end connected to a suction pump —A— preferably on the surface of the soil or in some other convenient location for withdrawing the water from the soil and depositing it in some remote location where it is prevented from re-entering 75 the soil in which the operation such as trench digging are progressing.

A plate —2— of wood or other suitable material is firmly secured by clamping bolts —3— to the outer face of the pipe and extends laterally some distance to opposite sides thereof as shown more clearly in Figure 4, and also extends longitudinally some distance beyond the receiving end of the pipe as shown in Figures 2 and 3 after which a 85 relatively stiff wire screen —4—, is wrapped around the outer face of the pipe and plate and across the lower ends thereof and firmly secured to said pipe and plate by any suitable fastening means, as for example, by 90 nailing it to the wooden plate —2— to form a screen chamber —5— below the lower end of the pipe and around the lower end thereof.

A flexible screen —6— of burlaps or other 95 reasonably strong water pervious material is then wrapped spirally around the plate —2— and adjacent portion of the pipe —1— and also around the wire screen —4—, so as to form with the pipe and plate opposite 100 water-receiving chambers —7—, said screens —4— and —6— serving as baffles to prevent entrance of sand and other foreign matter into the pipe.

That is, the chambers —7— communicate 105 with the chamber —5— so that any water which may surround the well-point at any level throughout the length of the screened-in portion of the pipe or plate will seep through the screens into the chambers —5— 110 and —7— to the exclusion of the sand or other foreign matter, thus permitting the

water to be drawn by suction upwardly through the pipe and discharged to some remote locality by the pump —A—.

The screen —6— may be firmly held in operative position around and upon the pipe —1— and plate —2— by suitable nails or tacks —8— driven through the sides of the screen into the wooden plate —2— thereby holding the screen in fixed relation to the pipe by reason of the securement of the plate —2— to said pipe by the clamping bolts —3—.

#### *Operation.*

When it is desired to withdraw the water from a pit or trench the well-point constructed in the manner described is inserted into said pit or trench with its lower end in close proximity to the bottom thereof and its upper end connected to a pump as —A— so that by the operation of the pump any water which may seep through the screens —4— or —6— into the chambers —5— or —7— gravitates to the lower open end of the pipe and is then drawn upwardly through the pipe and discharged to a remote locality by the pump —A—, the screens serving to prevent the entrance of sand and other solid matter to the pipe while the stiffer screen —4— at the bottom may allow the well-point to be gradually sunk to the bottom of the pit to displace the solid matter and allow the water to seep into the chambers —5— and —7— for further withdrawal by suction through the pipe —1—.

This device is easily portable and may be withdrawn from one pit or trench and in-

serted into another pit or trench or into various parts of the same trench where it may be desired to remove water therefrom.

What I claim is:

1. In a well point of the character described, a suction pipe, a plate secured flatwise to one side only of the receiving end of the pipe and extended laterally some distance beyond opposite sides of said pipe and a screen wrapped around said plate and pipe and forming therewith collecting chambers external to the pipe for receiving water passing thru the screen.

2. In a well point of the character described, a suction pipe, a plate secured flatwise to one side only of the receiving end of the pipe and extending some distance beyond opposite sides and the receiving end of said pipe, and a stiff wire screen extending around and across the lower ends of the pipe and plate and secured to said plate.

3. In a well point of the character described, a suction pipe, a plate secured flatwise to one side only of the receiving end of the pipe and extending some distance beyond opposite sides and the receiving end of said pipe, and a stiff wire screen extending around and across the lower ends of the pipe and plate and secured to said plate, and an additional screen wrapped around the remaining portions of the plate and adjacent portions of the pipe.

In witness whereof I have hereunto set my hand this 20th day of November, 1924.

THOMAS F. MOORE.