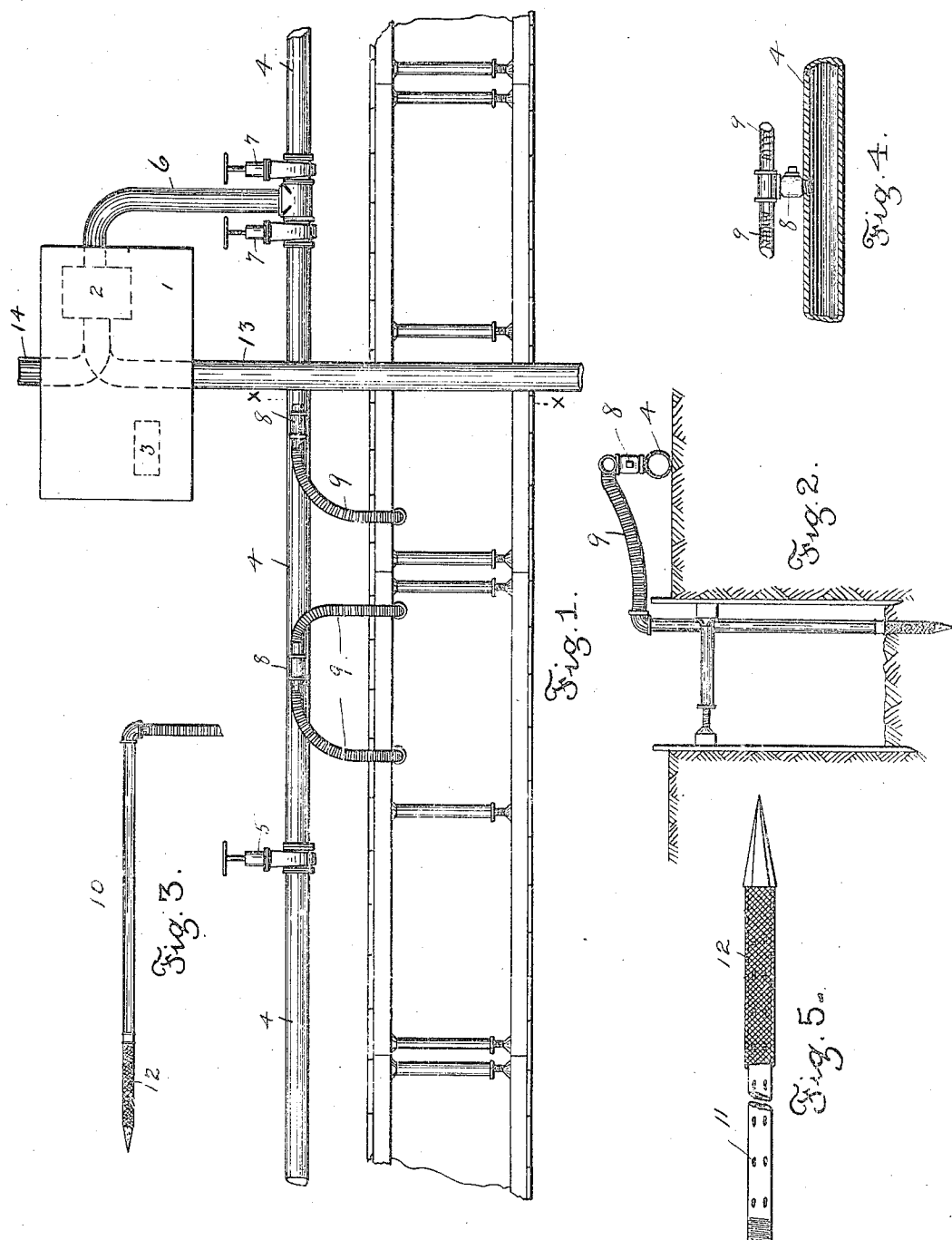


J. M. FERRY.
 APPARATUS FOR REMOVING WATER FROM WATER BEARING SAND.
 APPLICATION FILED JUNE 5, 1916.

1,215,134.

Patented Feb. 6, 1917.



Witnesses:
 J. L. Saebacher.
 Helma Bewley.

Inventor:
 John M. Ferry
 By Chapman & Ferguson
 Attorneys

UNITED STATES PATENT OFFICE.

JOHN M. FERRY, OF BALTIMORE, MARYLAND, ASSIGNOR TO JAMES FERRY & SONS,
INCORPORATED, A CORPORATION OF PENNSYLVANIA.

APPARATUS FOR REMOVING WATER FROM WATER-BEARING SAND.

1,215,134.

Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, JOHN M. FERRY, a citizen of the United States, residing at Baltimore, in the State of Maryland, have
5 invented certain new and useful Improvements in Apparatus for Removing Water from Water-Bearing Sand, of which the following is a specification.

This invention relates to improvements in
10 apparatus for removing water from water-bearing sand, and has for its object to provide a simple and efficient device whereby the water can be removed from the sand ahead of the work in the construction of
15 sewers, conduits and the laying of sewer or water pipes.

The invention consists of the novel construction and arrangement of the parts and combination of parts hereinafter more fully
20 set forth in the following specification and pointed out in detail in the appended claims.

In the accompanying drawings,—

Figure 1 is a plan view of a portion of a trench in which sewer pipes are to be laid
25 and showing the application of my invention thereto.

Fig. 2 is a section on the line X—X of Fig. 1.

Fig. 3 is a detail view of one of the well
30 points and the flexible connection at the top thereof.

Fig. 4 is a detail vertical section, on an enlarged scale, of a portion of the main line sections, showing one of the valves to which
35 the well-points are connected.

Fig. 5 is a detail view, on an enlarged scale of one of the well points with a portion of the wire screen removed therefrom.

Referring to the accompanying drawing
40 forming part of this specification, and in which like reference numerals designate like parts throughout the several views thereof, 1 designates the pump house in which is located a pump 2 and a motor 3 for operating
45 said pump. The main suction line is made up of a number of sections 4 each connected by a gate valve 5 and the said main suction line being connected with the pump 2 by a pipe 6 on each side of which at the point
50 where it connects with the said main suction pipe is a gate valve 7. Each section 4

being adapted to be cut off from the main line and removed therefrom and connected to the other end of the line as the work progresses. Arranged along the section 4
55 are a suitable number of valves 8 to each side of which is connected a flexible pipe 9 each of which latter is connected to a well-point 10, the lower end of which is perforated at 11, said perforations being covered
60 with a very fine wire meshed-screen 12 through which the sand cannot pass. These points are driven into the sand at suitable intervals along the work and the suction created by the pump 2 causes the water to be
65 drawn through the screen 12 and apertures 11 into the main suction pipe and then through the pump 2 and discharged through the discharge pipes 13 and 14. It will thus
70 be seen that as the work progresses the sections 4 are disconnected and moved to the other end of the main line and when the work has progressed sufficiently the said
pump house is moved along the work. It
75 will be seen that by the use of my invention the water is being constantly removed as the work progresses and the difficulties which are usually encountered by the presence of water in the sand are obviated.

Having thus described my invention, what
I claim is:

1. The combination of a main pipe line comprising a number of independently connected detachable sections, a pump, a pipe
85 connecting the pump with the main pipe line, a number of perforated pipes adapted to be driven into the sand, and flexible connections between said perforated pipes and the main pipe line.

2. The combination of a main pipe line
90 comprising a number of sections, a gate valve between each two sections, a pump, a pipe connecting the pump with the main pipe line, a number of valves in each of the main pipe line sections, a number of perfo-
95 rated pipes adapted to be driven into the sand, and a flexible connection between the said perforated pipes and the valves of said main line sections.

3. The combination of a main pipe line
100 comprising a number of sections, a gate valve between each two sections, a pump, a

pipe connecting the pump with the main
pipe line, a number of valves in each sec-
tion of the main pipe line, a number of
perforated pipes adapted to be driven into
5 the sand, a fine meshed screen surrounding
the perforated portion of said perforated
pipes, a flexible connection between each of
said perforated pipes and a valve of the

main pipe line sections, and a discharge pipe
leading from said pump. 10

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

JOHN M. FERRY.

Witnesses:

CHAPIN A. FERGUSON,
SHELMA BEWLEY."