

A. P. SCHNYDER.
 APPARATUS FOR CONSTRUCTING SAND WELLS.
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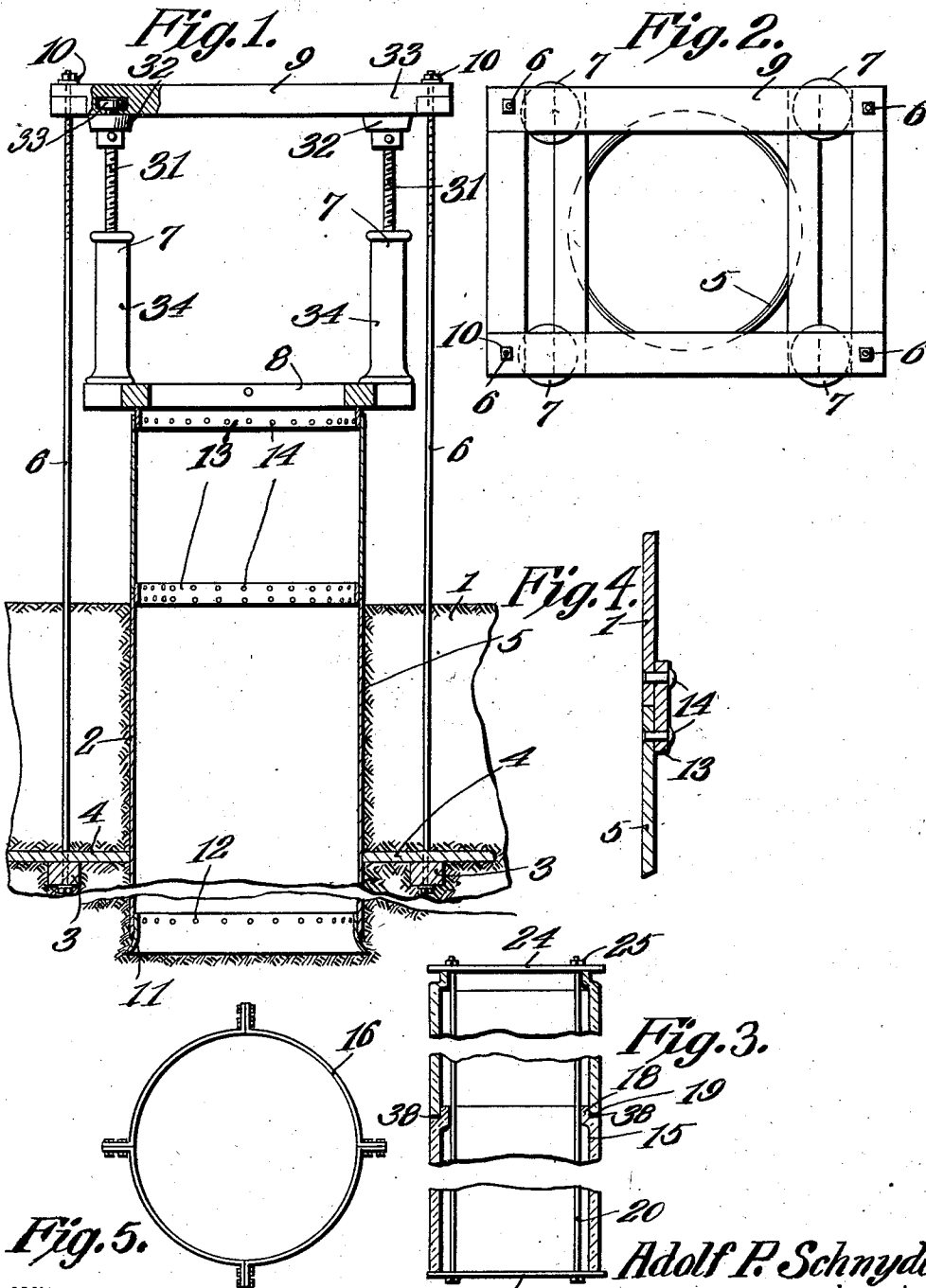


Fig. 5.

Witnesses

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Fig. 3.

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Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, ADOLF P. SCHNYDER, a citizen of the United States, residing at Poag, in the county of Madison and State of Illinois, have invented a new and useful Apparatus for Constructing Sand Wells, of which the following is a specification.

It is the object of the present invention to provide an improved apparatus for sinking wells, cisterns, and the like.

The primary aim of the invention is to provide a novel sectional casing and novel means for forcing the same into the ground to the proper depth, the lining for the well being built into this casing after the latter has been driven into the ground to the desired depth, and the casing being then removed leaving the lining in place.

In the accompanying drawings; Figure 1 is a vertical transverse sectional view through the apparatus embodying the present invention. Fig. 2 is a top plan view thereof. Fig. 3 is a vertical sectional view through a portion of the lining of the well. Fig. 4 is a detail sectional view through the connected ends of two of the sections of the tubing shown in Fig. 1 of the drawings. Fig. 5 is a plan view of a ring which is clamped about the upper end of the tubing and is to be engaged by the apparatus for the purpose of withdrawing the tubing after the well lining has been built into place.

In the drawings, the numeral 1 denotes the ground into which the well is to be sunk and in carrying out the invention, a pit is dug to the depth of four or five feet and in the bottom of the pit are laid beams 3 upon which a base 4 is disposed. The pit is then refilled with earth, the lowermost section 5 of the tubing forming a part of the apparatus being disposed within the pit prior to filling in the same, and the material with which the pit is filled being packed tightly around the said section of tubing and upon the base 4.

The tubing mentioned above will presently be more specifically described but at this point it may be stated that upon the upper end of the tubing there is disposed a frame 8 upon the corners of which rest jacks 7 designed to be operated to exert a downward pressure upon the frame, and consequently upon the tubing. A frame 9 is positioned upon the upper ends of the jacks 7 and is held in proper position and against upward displacement by means of

rods 6 having nuts 10 threaded upon their upper ends and bearing against the upper side of the frame 9. The nuts 10 may be adjusted upon the rods to position the frame 9 at a greater or less elevation. The jacks 7 include each a fixed standard section 34 and a threaded standard section 31 fitting into the fixed section and carrying at its upper end a head 32. The heads of the jacks are swiveled in the corners of the frame 9 as is clearly shown in Fig. 1 of the drawings at 33 and it will be readily understood that by manipulating the jacks in the usual manner, downward pressure will be exerted against the frame 8 serving to force the tubing 5 into the ground.

The sections of the tubing 5 are cylindrical and are connected end to end by means of bands 13 which are riveted as at 14 to the inner surfaces of the sections at their said connected ends it being understood that the sections are added one at a time as the tubing is forced into the ground. The lowermost section of the tubing carries at its lower end an annular cutter 12 having a sharpened flared lower edge 11 it being understood that this cutter provides for ready passage of the tubing through the soil. As the tubing is forced into the ground, the soil is removed from the interior thereof and when the tubing has been sunk to the desired depth, the lining for the well is built into the same.

The well lining, mentioned above, consists of a plurality of sections 15 of any suitable material disposed and connected end to end as at 18 and held connected by means of tie rods 20 secured at their ends through cross pieces 22 and 24 at the lower and upper ends of the lining, respectively. It will be understood however that this lining may be of any other suitable form and it constitutes no part of the present invention and is merely herein described for the purpose of illustrating the manner in which the well is completed.

When the lining has been completely assembled within the tubing, the band shown in Fig. 5 of the drawing and consisting of the several sections 16, is clamped around the upper end of the uppermost one of the tubing sections immediately below the ring 13 and the ring 16 is connected to the frame 8 by any means, so that when the standards 31 of the jacks are rotated in an opposite direction the tubing will be gradually with-

drawn leaving the lining in place in the well. After the tubing has been completely withdrawn, the space which it previously occupied may be filled in either with soil or
5 with cement.

What is claimed is:—

1. In an apparatus of the class described, a frame structure held against upward displacement, a sectional tubing, a cutter at
10 the lower end of the tubing, a frame disposed against the upper end of the tubing and beneath the upper portion of the frame structure, and means positioned between and cooperating with the said upper portion of
15 the frame structure and the frame upon the tubing for exerting downward pressure against the tubing.

2. In apparatus of the class described, a frame structure held against upward displacement and including a vertically ad-
20 justable top, a sectional tubing, a cutter at the lower end of the tubing, a frame dis-

posed upon the upper end of the tubing, and means interposed between and cooperating with the top of the frame structure and the
25 frame upon the tubing for exerting downward pressure against the frame.

3. In apparatus of the class described, a frame structure including a vertically adjustable rectangular top, a sectional tubing,
30 a rectangular frame disposed upon the upper end of the tubing, and means positioned between and cooperating with corresponding corners of the said top of the frame structure and the frame upon the tubing for exerting
35 downward pressure against the said frame.

In testimony that I claim the foregoing as my own, I have hereto affixed my signature in the presence of two witnesses.

ADOLF P. SCHNYDER.

Witnesses:

THOMAS WAUGH,
JOHN GROSHAUS.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."