

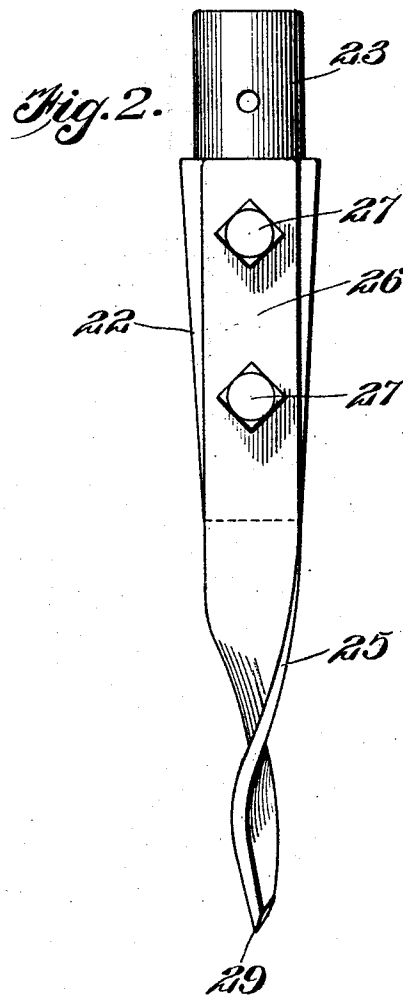
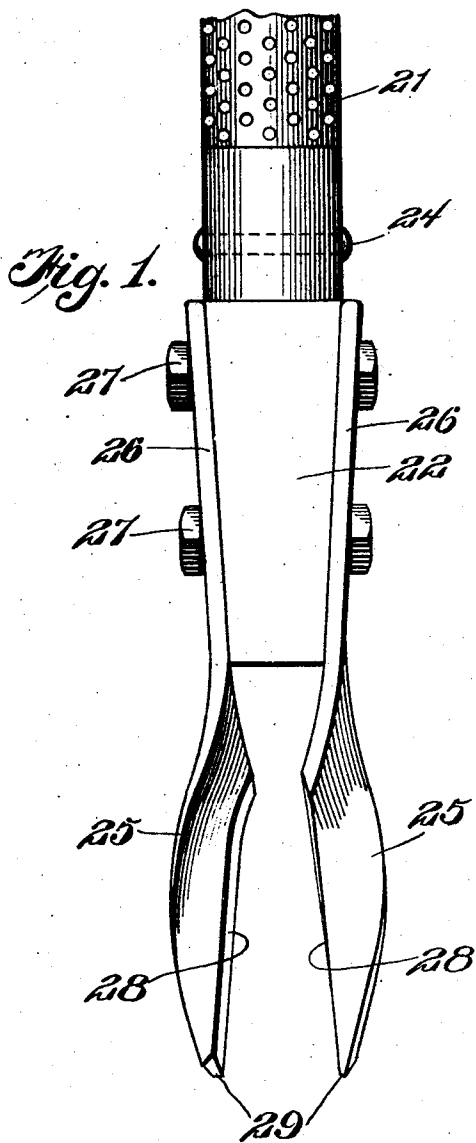
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C. F. D. SMITH

DRIVE WELL POINT

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DRIVE-WELL POINT.

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To all whom it may concern:

Be it known that I, CHARLES F. D. SMITH, a citizen of the United States, residing at Lake Wales, in the county of Polk and State of Florida, have invented certain new and useful Improvements in Drive-Well Points, of which the following is a specification, reference being had to the accompanying drawings.

10 This invention relates to improvements in drive well points and has for an important object thereof an improvement of the construction of the bit proper to enable these bits to be more readily forced into the

15 ground.
An important object of the invention is to provide in combination with a shoe or support a pair of blade members arranged at opposite sides of the support and held rigidly to the support, the blades being so constructed that earth encountered thereby during downward movement will be forced in the proper direction to provide clearance for the drive well pipe and screen if such are

25 employed.
These and other objects I accomplish by the construction shown in the accompanying drawings, wherein for the purpose of illustration I have shown two forms of my invention, in one of which the dirt engaged by the drill points is directed inwardly and in the other of which dirt is directed outwardly.

In the drawings:—
35 Figure 1 is a side elevation of the drive well point;

Figure 2 is a similar view taken at right angles to the view in Figure 1.

In the drawings I have illustrated a drive well point for use with the usual drive well screen and adapted for use in driving water wells. As is well known to those familiar with the art, these drive well screens, a portion of one of which I have illustrated at 45 21, are usually provided with points 22 having a shank 23 extending upwardly into the lower end of the screen and secured thereto by rivets, bolts or the like as at 24. In the usual construction of these drive well points they taper downwardly to an axial point and are made polygonal usually having six or 50 eight sides.

In accordance with my invention, I form the point as an inverted truncated pyramid

and secure to opposite faces thereof a pair 55 of blades 25 each formed from a flat strip of metal one end of which is spirally twisted to provide the blade proper and the opposite end of which is left flat and straight and forms a shank 26. These shanks are secured 60 in position by means of bolts 27 extending through the shanks and point 22. The spirally twisted lower ends of the blades are twisted in the same direction and by their twisted and their outer edges swung outwardly from the drive well point so that 65 they lie upon a circumference greater than the circumference including the upper end of the point and the screen. The twist applied to these blades is preferably three-fourths of a complete revolution and by this twist the opposite or inner edge of the blade is forced inwardly. From a point shortly 70 below the lower end of the drive well point 22 the blades are cut diagonally, as indicated at 28, from the inner to the outer edges thereof leaving points, as at 29, which are arranged upon a very small circumference which is axial to the drive well screen and point. The twist applied to the blades is in 80 the same direction and accordingly if the drive well screen is rotated these blades act as a screw driving downwardly into the ground and causing lowering of the well screen and pipe by rotation as with a large 85 pipe wrench. In event a solid substance is encountered interfering with the downward progress of the drill, this may be broken through by striking the upper end of the pipe line to force the points formed by the 90 taper 28 through the resisting substance. The blades force engaged earth outwardly forming a bore through which the screen and drive pipe may easily follow.

Many changes being possible in the construction above recited, I do not limit myself specifically thereto except as hereinafter claimed.

I claim:—

1. A drive well point for engagement with 100 the screens of drive well apparatus in the form of an inverted truncated pyramid having at its upper or base end a shank for engagement with the drive well screen, said point having attached thereto at opposite 105 faces thereof blades formed from flat material and spirally twisted in the same direction.

2. A drive well point for engagement with the screens of drive well apparatus in the form of an inverted truncated pyramid having at its upper or base end a shank for engagement with the drive well screen, said
5 point having attached thereto at opposite faces thereof blades formed from flat ma-

terial and spirally twisted in the same direction, said blades being twisted through substantially three-fourths of a revolution
10 and tapering in width downwardly.

In testimony whereof I hereunto affix my signature.

CHARLES F. D. SMITH.