

No. 757,124.

PATENTED APR. 12, 1904.

O. KAMPFE.
DRIVEN WELL POINT.
APPLICATION FILED JUNE 19, 1903.

NO MODEL.

Fig:1.

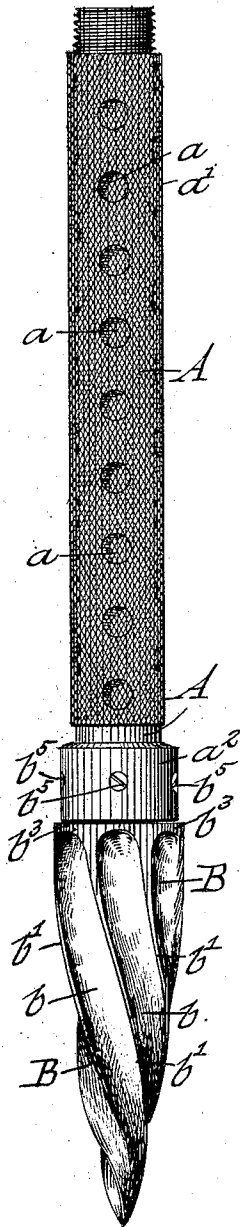
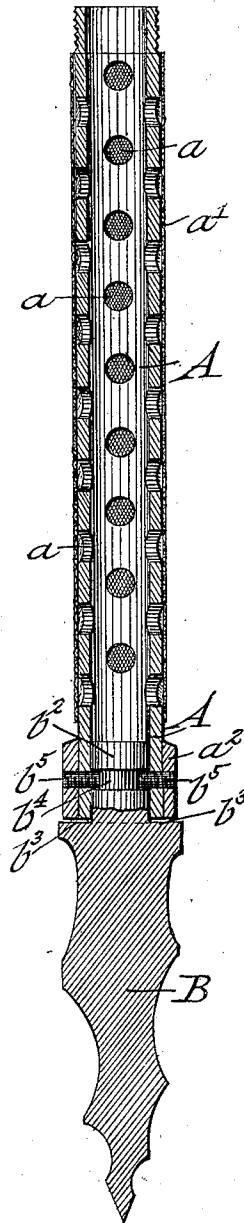


Fig:2.



Witnesses
Kury J. Suhrbier
Frank E. Boyce

Otto Kampfe,
Inventor,
By his Attorneys, Goeppel & Niles.

UNITED STATES PATENT OFFICE.

OTTO KAMPFE, OF NEW YORK, N. Y., ASSIGNOR OF ONE-HALF TO
FREDERICK KAMPFE, OF BROOKLYN, NEW YORK.

DRIVEN-WELL POINT.

SPECIFICATION forming part of Letters Patent No. 757,124, dated April 12, 1904.

Application filed June 19, 1903. Serial No. 162,256. (No model.)

To all whom it may concern:

Be it known that I, OTTO KAMPFE, a citizen of the United States, residing in New York, in the State of New York, have invented certain new and useful Improvements in Driven-Well Points, of which the following is a specification.

The object of this invention is to provide a well-point whereby the well-pipe of a driven well may be driven with greater facility and rapidly and to a greater depth than permitted by the well-points heretofore in use. For this purpose the invention consists of a well-point comprising a support and a rotary tip swiveled to said support and provided with helically-arranged grooves; and the invention consists, further, in certain details of construction and combinations of parts, which will be fully described hereinafter and finally pointed out in the claim.

In the accompanying drawings, Figure 1 is a side elevation of my improved well-point, and Fig. 2 is a vertical central section through the same.

Similar letters of reference indicate corresponding parts.

Referring to the drawings, A indicates the lower end of a driven-well pipe. This lower end or section is provided in the usual manner with openings a and with a netting of fine mesh a' , inclosing the pipe-section and preventing ingress of earth, while permitting entrance of water or other liquid into the pipe. To the lower end of the pipe A is secured a sleeve a^2 , which serves to reinforce said lower end and to increase the exterior diameter of the same, so that friction between the netting a' and the earth which it passes in its travel is avoided. To the lower end of the tube A is secured a tip B of generally conical form, arranged longitudinally of the pipe in line therewith. The point is provided with a helically-arranged groove or plurality of such grooves b , extending, preferably, from the end of the tip to the base or widest portion of the same and forming between them ridges b' , the edges or crests of which are preferably sharp. To secure uniform direction of travel of the tip when passing

through the earth, the grooves are arranged symmetrically about the axis of the tip. The upper ends of the ridges b' between the grooves preferably protect material beyond the groove a^2 , as shown in the drawings, and the lowest portions of the grooves are preferably not so low as to be laterally within the sleeve a^2 or either construction at the lower end of the pipe. The tip B is secured rotatably to the pipe A by any suitable means—as, for example, by a stud b^2 or projection extending from the upper end of the tip and received within the lower end of the pipe. This projection being of smaller diameter than the base of the tip, a shoulder b^3 is formed at the junction, which shoulder abuts with the lower end of the pipe or of the collar a^2 , or both, and insures the driving of the tip ahead. A stud b^2 closely fits the pipe, and thereby rotates the tip B in proper direction. At the same time it closes the lower end of the pipe against ingress of earth. For further rotating the tip in connection with the pipe and without impairing its free rotation relatively thereto an annular groove b^4 is cut in the stud and a screw b^5 or plurality of such screws is inserted through the collar and pipe, so that their inner ends project into said grooves. The tip is thereby swiveled, and thus retained on the pipe notwithstanding an upward movement of the latter, which sometimes becomes necessary in the operation of well-driving.

Wells are driven, when using my improved well-point, by forcibly driving the point downwardly into the earth until water or other desired liquid is reached, such lengths and sections of pipe being from time to time coupled on the section A as may be necessary. The tip guides the pipe in a superior manner and passes obstructions with less difficulty than a stationary tip. Its wedging action is more effective than a plane conical tip of the same length and base, owing to the helical grooves which have opened wedged surfaces.

Having thus described my invention, I claim as new and desire to secure by Letters Patent—
A well-point, consisting of a support, a rota-

table tip provided with helical grooves, a stud
extending from said tip into said support and
provided with an annular groove, and means
connected with said support and forming a
5 swivel connection with said stud, substantially
as set forth.

In testimony that I claim the foregoing as

my invention I have signed my name in pres-
ence of two subscribing witnesses.

OTTO KAMPFE.

Witnesses:

HENRY J. SUHRBIER,

JOHN J. KITTLE.