(No Model.)

J. E. WAKEFIELD.

PIPE WRENCH.

No. 529,982. Patented Nov. 27, 1894.

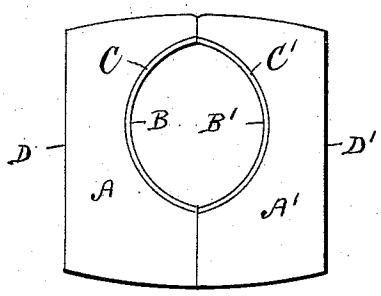

Fig. 1.

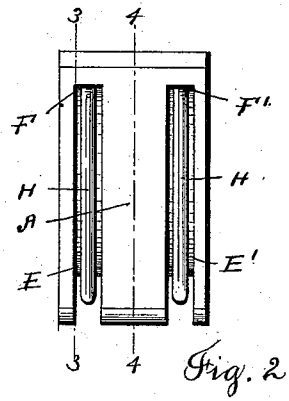

Fig. 2.

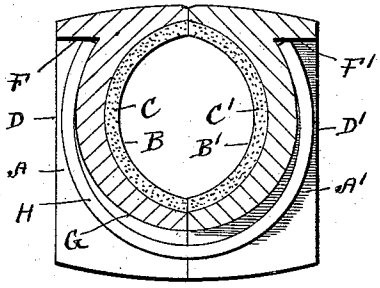

Fig 3.

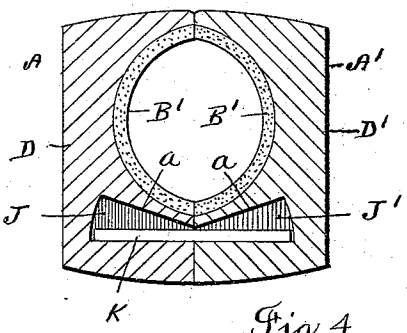

Fig. 4.

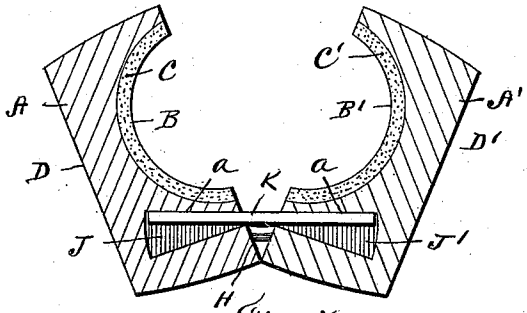

Fig. 5.

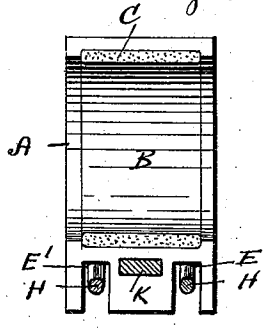

Fig. 6.

Witnesses.
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UNITED STATES PATENT OFFICE.

JOHN E. WAKEFIELD, OF WORCESTER, MASSACHUSETTS.

PIPE-WRENCH.

SPECIFICATION forming part of Letters Patent No. 529,982, dated November 27, 1894.

Application filed April 21, 1892. Serial No. 430,141. (No model.)

To all whom it may concern:

Be it known that I, JOHN E. WAKEFIELD, a citizen of the United States, residing at Worcester, in the county of Worcester and State of Massachusetts, have invented a new and useful Improvement in Jaws for Finished Pipe, of which the following is a specification, reference being had to the accompanying drawings, in which—

Figure 1 represents a pair of jaws embodying my invention, shown in front view. Fig. 2 is an edge view of the same. Fig. 3 is a sectional view on lines 3, 3, Fig. 2. Fig. 4 is a sectional view on line 4, 4, Fig. 2. Fig. 5 is a sectional view on line 4, 4, Fig. 2, but showing the jaws opened to receive the pipe and Fig. 6 represents the inner surface of one of the jaws.

Similar letters refer to similar parts in the different figures.

The object of my invention is to provide means, whereby finished pipe can be held and turned by a pipe wrench, or similar tool, without marring, or defacing the surface of the pipe; and it consists in the employment of a pair of jaws, each of which is provided with opposing concave faces preferably lined with a soft metal and having outer parallel sides to be seized by the wrench, the jaws being united and pressed upon the pipe by a spring as hereinafter described.

Referring to the drawings A, A′ denotes the jaws provided with concave faces B, B′, preferably lined with a soft metal C, C′, and forming an elliptical opening with its minor axis less than the diameter of the pipe and having the edges D, D′, opposite the faces B, B′, parallel and adapted to be seized by the jaws of a wrench.

The jaws A, A′ are provided with grooves, or channels E, E′, each forming, when the jaws are placed together, a continuous groove having its ends closed by the walls F, F′, the bottom of the groove being curved at G and adapted to receive a bent spring H with the ends of the spring resting against the walls F, F′. The diameter of the groove to receive the spring is greater through the center of the jaws, or upon the broken line I, than the distance between the ends of the spring H, which serves to retain the spring in its position upon the jaws; and the spring is made somewhat longer than the curved bottom G of the groove; so as to allow the jaws to be opened against the tension of the spring in the position shown in Fig. 5.

In order to limit the motion of the jaws and prevent an undue strain from being brought upon the springs H by opening the jaws farther than is necessary to allow the pipe to enter, I form mortises J, J′ in the jaws A, A′ and within which is placed a bar K. The mortises J, J′ are widest at their outer ends and when jaws are opened, in the position shown in Fig. 5, the walls *a*, *a*, of the mortises J, J′, are brought into contact with the bar K, thereby limiting the movement of the jaws. It will be obvious that the bar K might be held rigidly in one of the jaws and permit a movement of the opposite jaw; or the bar K might be formed integrally with one of the jaws and extend into a mortise, or opening, in the opposite jaw and accomplish the result already described; but I prefer the construction shown, in which both jaws are mortised with the bar K forming a separate piece inserted therein.

The springs H hold the jaws in contact when not in use and their tension is sufficient to press the concave faces B, B′, against the surface of the pipe and hold it from slipping, in case the pipe is in a vertical position.

The wrench is applied to the parallel edges D, D′ and the jaws pressed together to prevent their rotation upon the surface of the pipe as it is being turned by the wrench.

So far as my invention relates to the employment of the spring actuated jaws in the manner described, I do not confine myself to the special construction as shown by which the motion of the jaws is limited.

What I claim as my invention, and desire to secure by Letters Patent, is—

1. The combination of a pair of jaws A, A′ provided with internal concave faces B, B′ adapted to inclose the sides of a circular pipe and having the outer sides of said jaws provided with the plane surfaces D, D′ adapted to receive a wrench and a spring H with its tension applied to close said jaws, substantially as described.

2. The combination of jaws A, A′ provided with concave faces B, B′ and parallel sides D, D′ and having a recessed groove, or channel

and a spring held in said groove to hold said jaws together, substantially as described.

3. The combination with a pair of jaws having concave faces to inclose a pipe and having their opposite edges parallel to receive a wrench and provided with a groove, or recess having a curved bottom G, of a curved spring H with the distance between the ends of said spring less than the diameter of the curved bottom G, whereby said spring is held in position with its tension applied to hold said jaws together, substantially as described.

4. The combination of jaws A, A′ provided with concave faces B, B′ and with mortises J, J′ and a bar K held in said mortises, whereby the angular motion of said jaws is limited, substantially as described.

5. The combination of a pair of jaws adapted to inclose a circular pipe, a spring with its tension applied to said jaws to hold them together, and a bar held in one of said jaws and entering a recess in the opposite jaw, whereby the motion of the jaws is limited, substantially as described.

6. The combination of a pair of jaws A, A′, adapted to inclose a circular pipe and provided with grooves, or channels E, E′, and walls F, F′ of springs H, H, held in said grooves with the ends resting against the walls F, F′, substantially as described.

Dated the 16th day of April, 1892.

JOHN E. WAKEFIELD.

Witnesses:
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