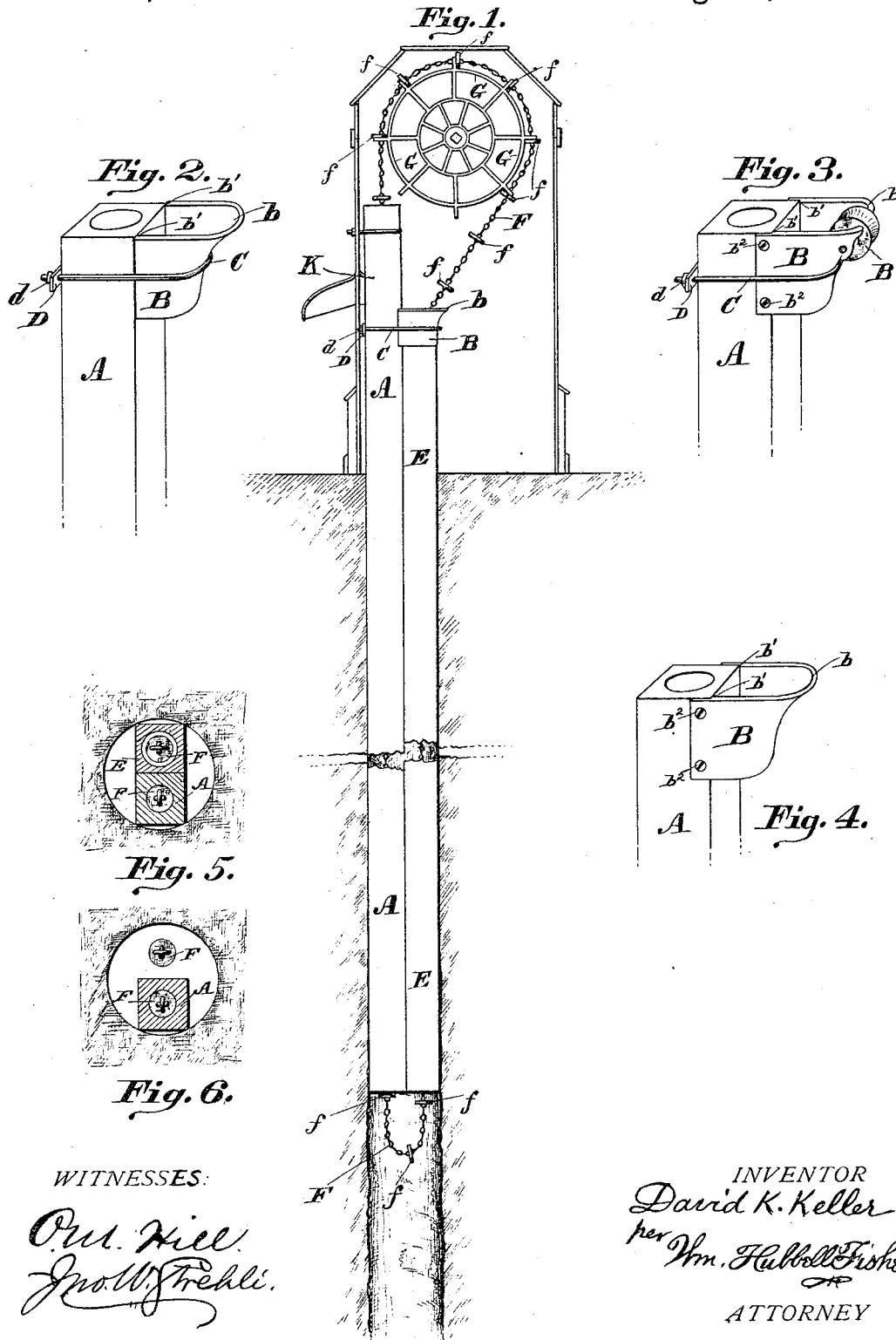


(No Model.)

D. K. KELLER.
PUMP FOR WELLS.

No. 348,286.

Patented Aug. 31, 1886.



UNITED STATES PATENT OFFICE.

DAVID K. KELLER, OF MONTGOMERY, OHIO.

PUMP FOR WELLS.

SPECIFICATION forming part of Letters Patent No. 348,286, dated August 31, 1886.

Application filed September 14, 1885. Serial No. 176,992. (No model.)

To all whom it may concern:

Be it known that I, DAVID K. KELLER, a resident of the town of Montgomery, in Hamilton county, and State of Ohio, have invented certain new and useful Improvements in Pumps for Wells, of which the following is a specification.

My invention is an adaptation of a chain-pump for use in wells of small diameter, such as bored wells and the like.

In chain-pumps, as at present and heretofore used, the chain after passing over the wheel is allowed to drop loose on its downward movement and take up quite a space, rendering it unfit to be employed in wells of small diameter. My invention not only obviates this objection to its use, but also furnishes advantages to be hereinafter specified.

In the accompanying drawings, making part of this specification, Figure 1 is a side elevation of a pump, illustrating my invention. Fig. 2 is a perspective view of the upper end of a pump-stock provided with my improved chain-guide. Fig. 3 shows a modification of the guide. Fig. 4 shows a modification in the means of securing the guide to the pump-stock. Fig. 5 is a cross-section of a well provided with a stock for the down-chain, and also a stock for the up-chain. Fig. 6 is a cross-section of a well in which the stock for the down-chain is omitted.

The stock A for the up chain has attached to its rear side near its top the guide B. The guide B is provided with the flaring lips *b*, and the shoulders *b'*, which latter, when the guide is in position, fit up against the stock A, and may be secured to the stock by screws, as *b''*.

The guide B may be secured to the stock A by the clasp C, and in such event the shoulders *b'* and screws *b''* may be omitted, and the edges of the guide rest directly and wholly against the stock, as shown in Fig. 2. This clasp C is a yoke which passes around the stock A and the guide B. Its ends pass through openings in the bar D, and the whole is tightened by the nuts *d*. The pump is preferably provided, as shown in Figs. 1 and 5, with a stock, E, for the down-chain. This stock E is placed immediately under the

guide B, and is practically a continuation thereof.

The caliber of the orifice in the stock E will usually be slightly larger than that of stock A, to allow the disk of the chain to freely pass through the stock E. The stock E when extended down as far or about as far as stock A, (see Fig. 1,) holds the chain steady, prevents the oscillation of the latter in any direction, and enables it, after leaving stock E to pass regularly and properly up into the stock A without catching against the edge of the bottom of the orifice of stock A. By the use of stock E of such length, the water in the well may be aerated, the air above ground being carried down through stock E by the disks of the chain, and mixed with the water in the well, thereby aiding in purifying the water.

The stock E may, when desired, be made in one piece with the stock A, and this will be a preferable mode of manufacture, when the stocks are made of wood.

The endless chain F is provided at regular intervals with circular disks *f*, which fit rather snugly in the stock A. These disks may be of rubber or metal, or other suitable material. The endless chain F passes up through stock A, over wheel G, down through guide B and stock E, when the latter is present, and back again through stock A.

In Fig. 3, I have shown a modification of the guide B. In the modification I have placed a pulley, B', in the lip *b*. This pulley lessens the friction of the chain passing through the guide B.

The compactness of the pump allows it to be used in a well of small diameter, thus securing for a bored well or the like all the advantages of a chain-pump.

While the several features of my invention are preferably employed together, one or more of said features may be used without the remainder, and in so far as applicable, one or more of said features may be used in connection with curbs other than the one specifically herein set forth.

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

1. In a chain-pump, the combination of

stock A and stock or guide E, said guide extending in a line and contiguous with stock A and terminating in a lip above the platform, substantially as and for the purposes set
5 forth.

2. In a chain-pump, the combination of stock A and guide B, said guide tapering or

being inclined from its mouth downward to its base to bring the chain to the stock, substantially as and for the purposes specified.

DAVID K. KELLER.

Witnesses:

O. M. HILL,

JNO. W. STREHLI.