

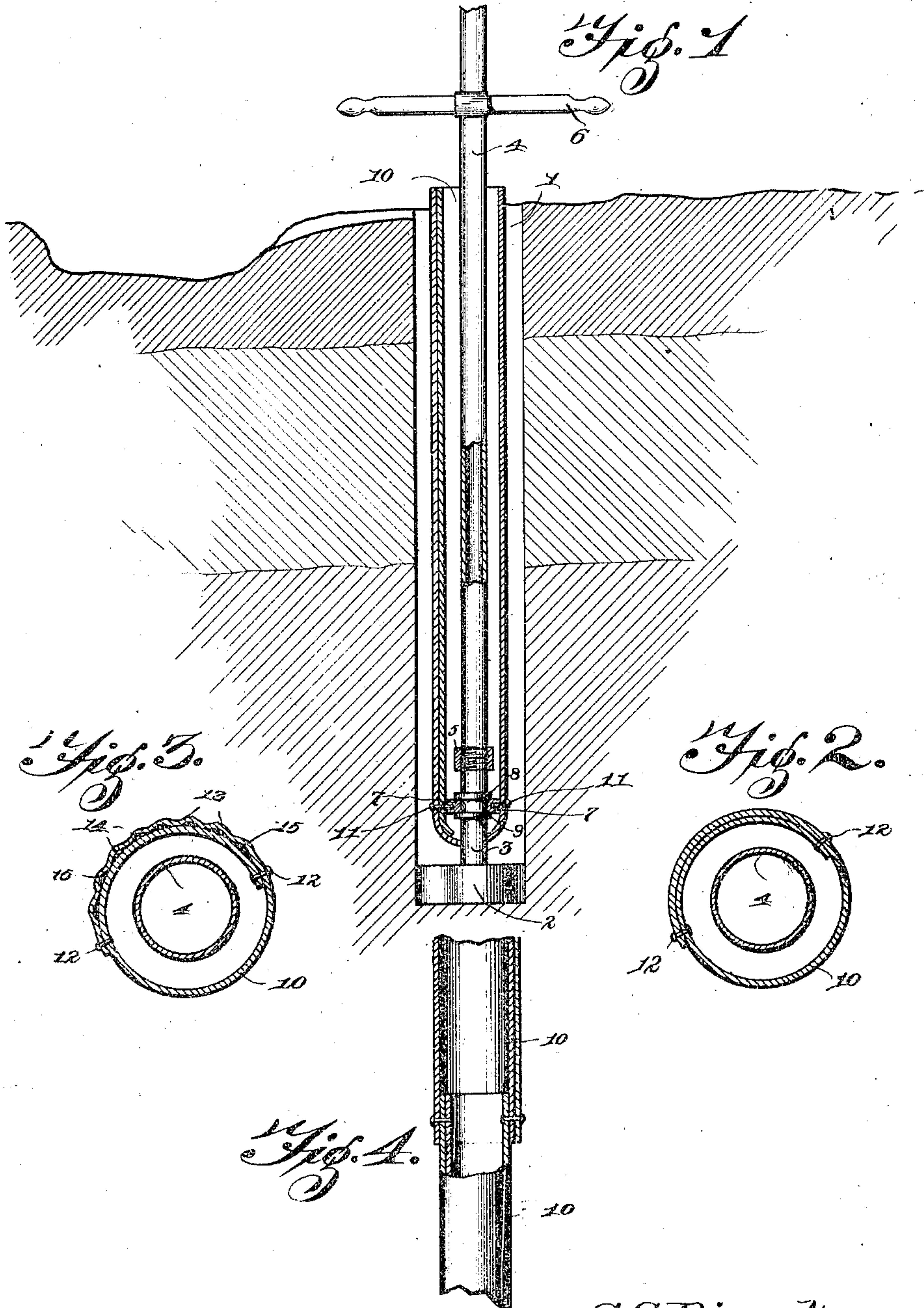
No. 665,886.

Patented Jan. 15, 1901.

G. C. DIMOCK.  
TUBE FOR TUBULAR WELLS.

(Application filed Feb. 26, 1900.)

(No Model.)



Witnesses

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# UNITED STATES PATENT OFFICE.

GORDON CARLTON DIMOCK, OF NEWMAN GROVE, NEBRASKA.

## TUBE FOR TUBULAR WELLS.

SPECIFICATION forming part of Letters Patent No. 665,886, dated January 15, 1901.

Application filed February 26, 1900. Serial No. 6,630. (No model.)

*To all whom it may concern:*

Be it known that I, GORDON CARLTON DIMOCK, residing at Newman Grove, in the county of Madison and State of Nebraska, have invented certain new and useful Improvements in Permanent Tubes; and I do hereby declare that the following is a full, clear, and exact description thereof, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, which form a part of this specification.

This invention relates to casings or packings for Artesian wells, and has for one object to provide an improved casing which is constructed to permit of the inflow of liquid for the entire length of the casing, so as to directly receive the liquid from the different strata through which the well may pass, and thus afford a much greater inlet than that afforded by the open lower end of the casing. It is furthermore designed to provide the casing with an improved arrangement of filtering media, so that the liquid may be effectively filtered before passing into the interior of the casing.

With these and other objects in view the present invention consists in the combination and arrangement of parts, as will be hereinafter more fully described, shown in the accompanying drawings, and particularly pointed out in the appended claims, it being understood that changes in the form, proportion, size, and minor details may be made within the scope of the claims without departing from the spirit or sacrificing any of the advantages of the invention.

In the drawings, Figure 1 is a vertical sectional view of the improved casing applied to a well. Fig. 2 is a transverse sectional view of the casing. Fig. 3 is a similar view of a modified form of the casing. Fig. 4 is a detail sectional elevation showing two sections of the casing connected together.

Corresponding parts in the several figures of the drawings are designated by like characters of reference.

Referring to the drawings, 1 designates the bore of a well which has been formed by the earth-auger 2, that has a stem 3, which is removably connected to the lower end of the operating-shaft 4 by means of a screw-thread-

ed collar 5. The shaft has a suitable operating device, such as a handle-bar 6, by which the auger may be rotated. After the well has been completed the shaft is turned in a reverse direction, so as to disconnect the shaft from the stem by means of the screw-threaded collar 5, in order that the auger and its comparatively short stem may be left in the bottom of the well.

Intermediate of the opposite ends of the stem 3 there is provided a swiveled head 7, which is held against longitudinal movement by means of the opposite fixed collars or annular flanges 8 and 9, so that the head may remain fixed with respect to the rotary movement of the shaft during the operation thereof.

As the head 7 is solid or imperforate and snugly fits the lower end of the tubular casing, which latter terminates short of the upper side of the auger, said head also forms a closure for the open lower end of the casing, so as to exclude the dirt and borings from the auger.

The present form of casing 10 surrounds the shaft and snugly embraces the head 7, to the periphery of which it is connected by means of suitable fastenings 11, so that the casing may remain fixed against rotation during the operation of the shaft and at the same time will be carried downwardly with the auger.

The present casing is formed in sections, as usual, and each section is formed from a single length of sheet material, preferably metal, which is bent into tubular form, with its opposite longitudinal edges overlapped, as plainly shown in Figs. 2 and 3 of the drawings, said overlapped portions being fastened by rivets or the like 12, which are arranged at the respective edges only of the sheet of metal. By this formation of tubular casing an overlapped joint is provided for the entire length of the section, and through this joint or longitudinally-continuous inlet the liquid may enter the interior of the casing. Thus the casing may receive the liquid from several strata through which it may pass, and therefore the casing has a more extensive inlet than that afforded by the usual open lower end of the casing.

In order that the liquid may be filtered be-



fore entering the interior of the casing, the outer or both overlapped portions of the casing may be corrugated, as shown at 13 in Fig. 3, so as to form a plurality of pockets or recesses 14, which extend for the entire length of the section. In some or all of these pockets there is placed suitable filtering material 15, through which the liquid must pass to enter the casing and is thereby effectively filtered.

It will of course be understood that the auger is of greater diameter than the casing, so that the latter may pass downwardly without interfering with the operation of the auger, and additional sections of casing are secured to the uppermost casing, as indicated in Fig. 4, as it becomes necessary on account of the sinking of the auger.

What is claimed is—

1. In a well-boring apparatus, the combination of an earth-auger, having a stub stem, a rotatable shaft operatively and removably connected to the stem, an annular head swiveled upon the stem intermediate of the auger and the detachable connection with the shaft, and a permanent tubular well-casing inclosing the shaft, terminating adjacent to the upper side of the auger, and snugly receiving the head within the lower end thereof, said head forming a closure for the open lower end of the casing, and the latter being permanently and fixedly connected to the head, whereby the latter and the casing remain relatively stationary with respect to the rotary motion of the shaft.

2. In a well-boring apparatus, the combination of an earth-auger, having a stub stem, a rotatable shaft operatively and detachably connected to the stem, opposite annular flanges upon an intermediate portion of the stem, a head loosely receiving the stem and held between the flanges, and a tubular well-casing inclosing the shaft, terminating short of the

auger, and snugly receiving the head within the lower end thereof, said head forming a closure for the lower end of the casing, and fastenings driven through the casing and into the peripheral edge of the head, whereby the latter and the casing are fixedly and permanently connected and remain stationary, with respect to the rotary movement of the shaft.

3. A permanent tubular well-casing, having an overlapped longitudinal joint, the latter forming a continuous inlet for the entire length of the casing.

4. A permanent tubular well-casing, having a corrugated overlapped longitudinal joint, the latter forming a continuous inlet for the entire length of the casing, and filtering material held within some or all of the corrugations.

5. A permanent tubular well-casing, formed from sheet metal, which is bent into tubular form, the opposite longitudinal edges thereof being overlapped, and rivets or analogous fastenings connecting the respective edges to the adjacent portions of the casing, the joint formed by the overlapped edges of the sheet metal also forming a continuous inlet.

6. A permanent tubular well-casing, formed from sheet metal, which is bent into tubular form, the opposite longitudinal edges of which are overlapped, one of the overlapped edge portions being corrugated longitudinally for its entire length, rivets or analogous fastenings connecting the respective edges to the adjacent portions of the casing, the joint formed by the overlapped edges of the casing, also forming a continuous inlet for the entire length of the casing, and filtering material held within some or all of the corrugations.

Signed in the presence of two witnesses.

GORDON CARLTON DIMOCK.

Witnesses:

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