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E. E. HOAGLUND

SANITARY WELL CAP AND PIPE CLAMP

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Fig. 1

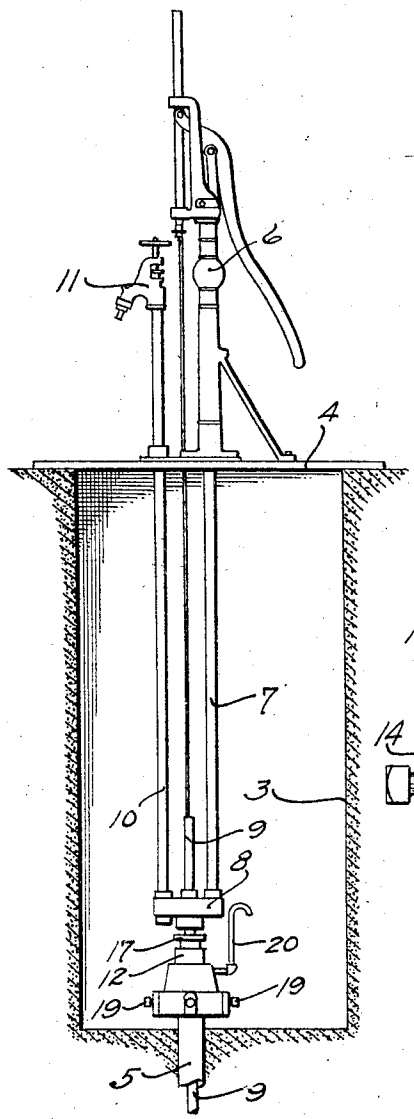
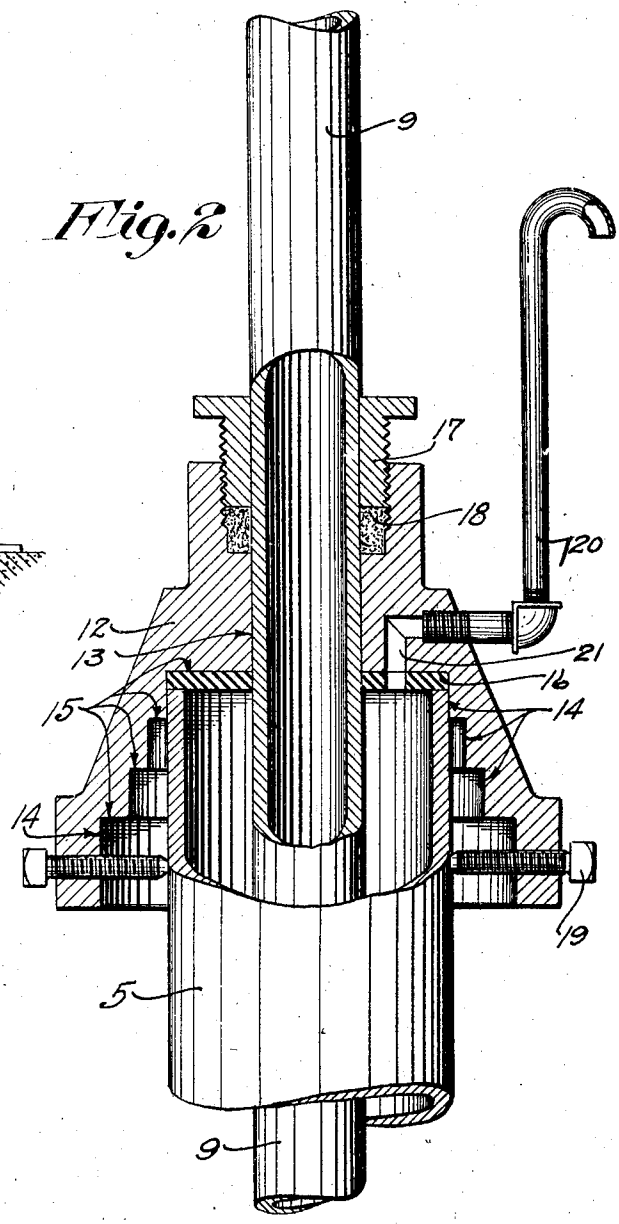


Fig. 2



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EARNEST E. HOAGLUND, OF MINNEAPOLIS, MINNESOTA.

SANITARY WELL CAP AND PIPE CLAMP.

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My invention has for its object to provide a simple and highly efficient sanitary well casing cap and drop-pipe clamp, and to this end it consists of the novel devices and combinations of devices hereinafter described and defined in the claim.

As is well known, driven or drilled wells are dug the first few feet to form a pit that is covered with a pump platform and the top of the well casing is usually open and terminates substantially at the bottom of the pit so that drainage in the pit will flow into said casing and pollute the water in the well. Also by leaving the casing open frogs, lizards, and other vermin get into the water in the well. Furthermore, when pumps are operated by wind mills, the action thereof lifts the drop-pipe in the casing.

By the use of my invention the top of a casing is sealed and water tight joints formed between the cap and casing and the drop-pipe. The cap also forms a connection between the drop-pipe and casing and prevents said drop-pipe from lifting under the pumping action of a windmill.

In the accompanying drawings, which illustrate this invention, like characters indicate like parts throughout the several views.

Referring to the drawings:

Fig. 1 is a view of a well pump having this invention applied to the casing and drop-pipe; and

Fig. 2 is a view partly in elevation and partly in central vertical section showing the invention and portions of the casing and drop-pipe to which it is applied.

The numeral 3 indicates a well pit covered by a pump platform 4, and the numeral 5 indicates a well casing, the top of which terminates in said pit, just above the bottom thereof.

Mounted on the platform 4 is a pump 6 having an air chamber pipe 7 extending into this pit and connected to a branch coupling 8 interposed in a drop-pipe 9, above the top of the casing 5. Said drop-pipe 9 extends axially into the casing 5. Leading from the branch coupling 8 is a discharge pipe 10 which extends above the platform 4 and has at its upper end a spout 11.

The parts thus far described are of standard and well known construction.

Referring now in detail to the improved cap which is indicated by the numeral 12, the same is provided with an axial passage 13 through which the drop-pipe 9 extends. The flange of the cap 12 is internally stepped by progressively decreasing the diameter thereof upward to form a plurality of axially spaced cylindrical sections 14, the tops of which afford shoulders 15. These cylindrical sections 14 are of such diameters as to telescopically recover casings of different sizes. It will be noted that the casing 5 fits into the cylindrical sections of the smallest diameters, and a gasket 16 is interposed between the respective shoulder, which in the present instances is the under surface of the top of the cap 12, and the upper end of the casing 5. When the cap 12 is applied to a casing larger than the casing 5 a gasket will be provided to fit the respective shoulder 15. Obviously, this gasket 16 forms a water-tight joint between the cap 12 and casing 5.

Embodied in the cap 12, at its passage 13, is a stuffing box 17 containing a packing 18 that is compressed onto the drop-pipe 9 by the gland of said stuffing box. This packing 18 not only forms a water-tight joint between the cap 12 and drop-pipe 5, but it frictionally clamps said cap to the drop-pipe and prevents lifting thereof under pumping action.

This cap 12 is rigidly and detachably secured to the casing 5 by a plurality of circumferentially spaced set screws 19 that have threaded engagement with the flanges of the cap 12, at its internal sections 14 of the greatest diameter, and arranged to impinge against the casing 5. By locating the set screws 19, as shown, the same may be used for securing the cap 12 to all of the different sized casings 5 to which said cap may be applied.

A vent pipe 20 with a goose neck is attached to the cap 12 and has communication with the casing 5 through a port 21 formed in said cap and the gasket 16.

From the above description it is evident that when the cap 12 is applied to a well casing and clamped onto a drop-pipe, as shown in Fig. 2, the well casing is completely closed and water tight joints formed to prevent leakage from its well pit into the casing, the flow of water down the drop-pipe into the said casing and the exclusion of animals, reptiles, insects, and other vermin and thus keeps the water in the well in a sanitary condition.

What I claim is:

A well casing cap and drop pipe clamp having a drop pipe passage, the flange of the cap being arranged to be loosely telescoped

onto a well casing, an annular internal packing in the cap, means for compressing the packing to contract the same onto a drop pipe extending through said passage for frictionally holding said pipe against lifting movement during pumping action, a compressible gasket in the cap arranged to rest on the upper end of the casing and support the cap thereon and be compressed thereby to seal the joint between said cap and casing, and a set screw having threaded engagement with the flange of the cap and arranged to impinge against the casing.

In testimony whereof I affix my signature.

EARNEST E. HOAGLUND.