

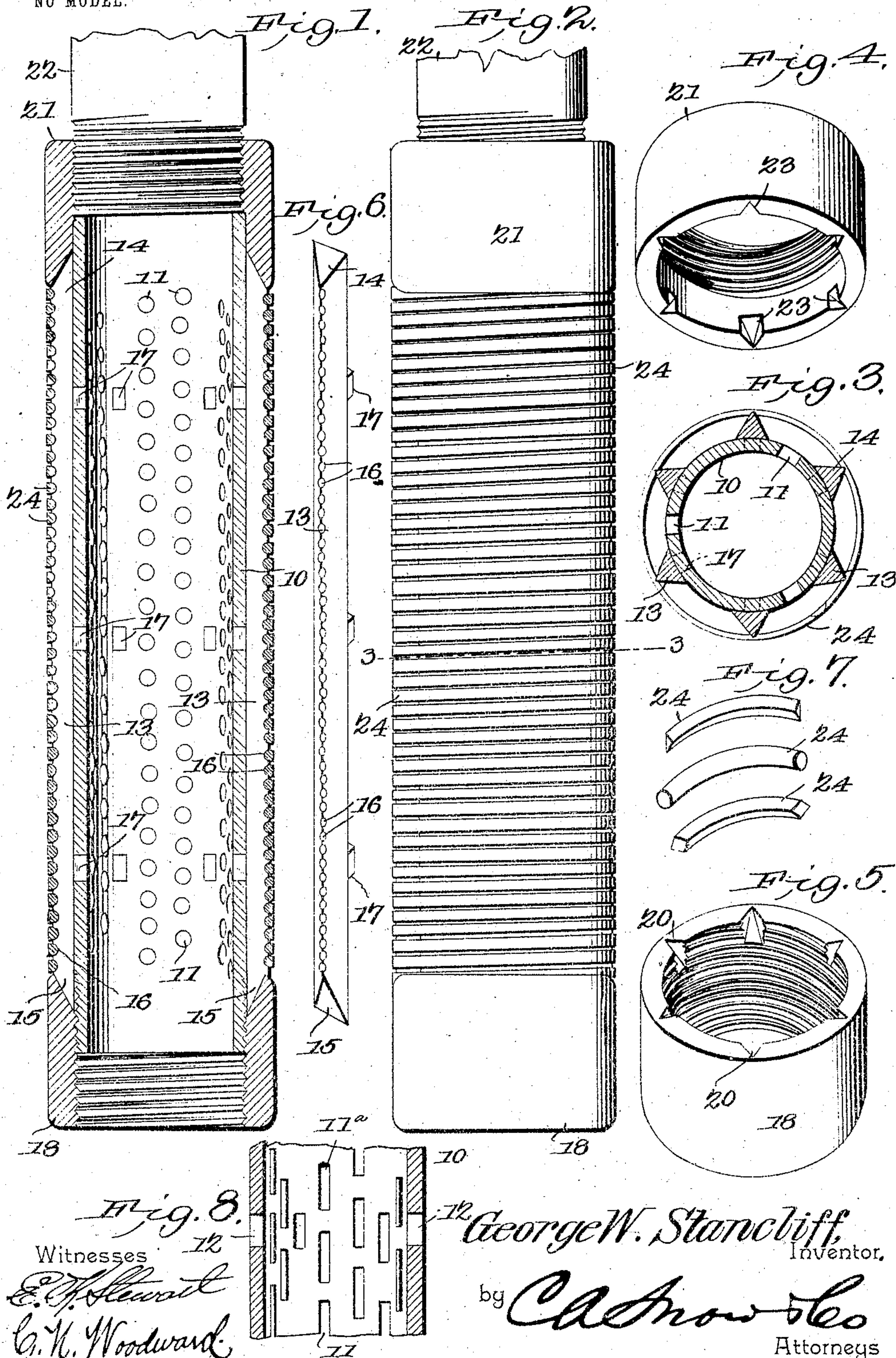
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G. W. STANCLIFF.
WELL SCREEN.

APPLICATION FILED MAY 27, 1904.

NO MODEL.



UNITED STATES PATENT OFFICE.

GEORGE W. STANCLIFF, OF ELCAMPO, TEXAS.

WELL-SCREEN.

SPECIFICATION forming part of Letters Patent No. 772,843, dated October 18, 1904.

Application filed May 27, 1904. Serial No. 210,133. (No model.)

To all whom it may concern:

Be it known that I, GEORGE W. STANCLIFF, a citizen of the United States, residing at Elcampo, in the county of Wharton and State of Texas, have invented a new and useful Well-Screen, of which the following is a specification.

This invention relates to well-screens.

The object of the invention is in a ready, simple, thoroughly feasible, and practical manner to prevent entrance of sand, gravel, or the like to the casing, to assemble the parts in such manner as to insure long-continued use without danger of breakage or disarrangement, and generally to improve the construction and render more efficient devices of this class.

With the above and other objects in view, as will appear as the nature of the invention is better understood, the same consists in the novel construction and combination of parts of a well-screen, as will be hereinafter fully described and claimed.

In the accompanying drawings, forming a part of this specification, and in which like characters of reference indicate corresponding parts, there is illustrated one form of embodiment of the invention capable of carrying the same into practical operation, it being understood that the elements therein exhibited may be varied or changed as to shape, proportion, and exact manner of assemblage without departing from the spirit thereof, and in these drawings—

Figure 1 is a view in vertical section through a well-screen constructed in accordance with the present invention. Fig. 2 is a view in side elevation. Fig. 3 is a view in transverse section, taken on the line 3-3, Fig. 2. Figs. 4 and 5 are perspective detail views of the couplings or collars by which the device is attached to the well-casing. Fig. 6 is a detached detail view in perspective of a spacing element employed in keeping the strainer out of contact with the body of the device. Fig. 7 is a collective detail view of three different forms of wire to be used in the construction of the strainer. Fig. 8 is a sectional detail view of a slightly-modified form of body.

Referring to the drawings, 1 designates the

body of the screen, which is constructed of a length of tubing of any desired diameter and is provided with orifices 11, through which the liquid enters the body. These orifices may be circular, as shown in Fig. 1, or oblong, as shown at 11^a in Fig. 8, or may be of any other preferred contour desired. In addition to the orifices 11 the body is provided with a series of apertures 12, the function of which will presently appear.

Disposed longitudinally of the exterior of the body is a series of spacers 13, which, as shown in Fig. 3, are preferably triangular in cross-section, although the invention is not to be limited to this precise contour, the object sought being to present a thin edge to the strainer, thus to interfere as little as possible with the passage of the liquid to the body. The terminals of each spacer are beveled in opposite directions at 14 and 15, and the outer or sharp edge of the spacer is provided with notches 16 and its back with a plurality of lugs 17, adapted to engage with the apertures 12 to hold the spacers combined with the body. The apertures are herein shown as rectangular, as also the lugs; but it is to be understood that these parts may be otherwise shaped, if found necessary or desirable. In this instance there are six of the spacers employed, as shown in Fig. 3, and the notches 16 of the successive spacers are so disposed relatively to each other as to form a spiral groove which is engaged by the strainer presently to be described. At one end of the body, which in this instance will be the upper one in use, is secured a coupling 21, internally threaded for a portion of its length to be engaged by a section of the well-casing 22. That portion of the coupling that engages the body is devoid of threads and is preferably combined with the body by being shrunk thereon. The inner lower edge of the coupling is provided with a series of notches 23 of a contour to receive the beveled terminal 14 of the spacer, and thus positively hold the same at this part of the body against disconnection. At the opposite end of the body, or that in this instance which will be the lower one in use, there is arranged a coupling 18, which is internally threaded throughout its length and is screwed

to the body. The upper inner edge of the coupling is provided with series of recesses or notches 20 of a contour to receive the bevel terminal 15 of the spacer.

5 The strainer 24, to which reference has been made, is constructed from a length of wire which is seated in the notches 16 and the whirls of which are so disposed as while permitting free passage of liquid to the body
10 positively precludes the entrance of sand, gravel, or the like. As shown in Figs. 1 and 2, the wire of which the strainer is made is semicircular in cross-section, and this will generally be preferred; but, if desired, the
15 wire may be triangular, circular, or diamond shape in cross-section, as shown in Fig. 7. The terminals of the wire are secured in any preferred manner to the body, as by being soldered thereto.

20 In assembling the parts of the screen the coupling 18 is secured onto the body and the spacers are then positioned around the body with their beveled terminals 15 engaging the notches 20 of the coupling. The coupling 21
25 is then positioned by being shrunk on, its notches 23 being in engagement with the beveled ends 14 of the spacers. The strainer-wire is then wound around the spacers and its terminals secured in the manner described.

30 The screen of this invention while exceedingly simple of construction will be found thoroughly efficient and durable in use for the purpose designed and in case of injury may readily be repaired.

Having thus described the invention, what 35 is claimed is—

1. A well-screen comprising a perforated body, a plurality of spacers combined therewith and having their outer edges notched, and a strainer held in place by the notches. 40

2. A well-screen comprising a perforated body, a plurality of spacers combined therewith and having their outer edges notched to form a spiral groove, and a strainer held in position by the grooves. 45

3. A well-screen comprising a perforated body provided with apertures, a plurality of spacers having lugs to engage the apertures, and a strainer held in position by the spacers.

4. A well-screen comprising a perforated 50 body, provided with apertures, a plurality of spacers having lugs to engage the apertures and provided with beveled terminals, couplings having notches to receive the beveled terminals, and a strainer held in position by 55 the spacers.

5. A well-screen comprising a perforated body, a plurality of spacers disposed exteriorly thereof, detachable means for holding the spacers combined with the body, and a 60 strainer held in position by the spacers.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in the presence of two witnesses.

GEORGE W. STANCLIFF.

Witnesses:

G. A. RIVES,

MARTIN THOMPSON.