April 25, 1939. C. VAN WESTRUM 2,155,744

WELL STRAINER

Filed June 23, 1936

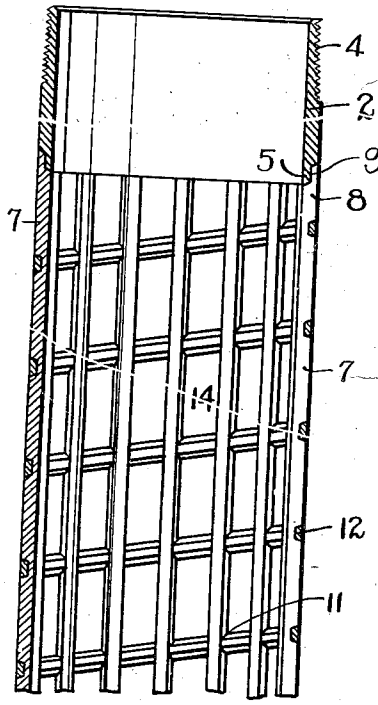


Fig. 1.

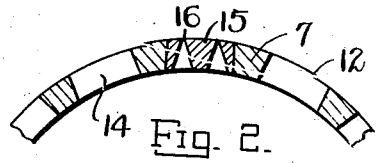


Fig. 2.

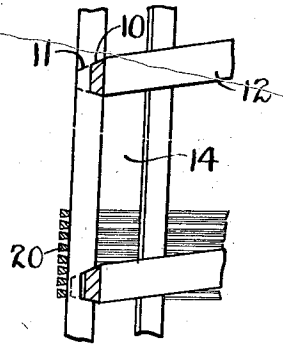


Fig. 3.

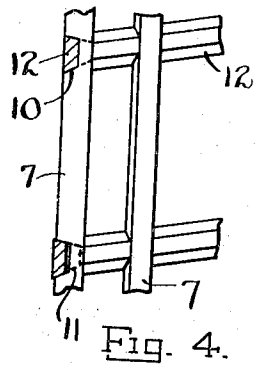


Fig. 4.

INVENTOR
COLBY VAN WESTRUM.
BY Jesse R. Stone
Lester B. Clark
ATTORNEYS

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WELL STRAINER

Colby van Westrum, Houston, Tex., assignor to Leslie A. Layne, Houston, Tex,

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2 Claims. (Cl. 166—6)

The invention relates to an improvement in frames for well strainers and particularly of the type where a light weight sturdy strainer is required.

One of the objects is to form a framework of longitudinal bars which are retained in spaced relation by a spiral band fixed at its intersection with the bars.

Another object is to provide the combination of a frame made up of spaced bars reenforced by a spiral band fixed to the bars.

Another object is to provide a spirally reenforced strainer frame which is adapted to carry the strainer.

Other and further objects of the invention will be readily apparent when the following description is considered in connection with the accompanying drawing wherein:

Fig. 1 is a vertical section through the strainer frame and illustrating the arrangement of the parts.

Fig. 2 is a transverse sectional detail of the frame showing a strainer insert as carried by the frame.

Fig. 3 is a modified form of the frame where the reenforcing band is positioned on the inside and where a strainer wire is wrapped about the frame.

Fig. 4 shows the interfitting connection between the band and the bars which make up the frame.

The present framework used to support the strainer portion is provided in lieu of the usual perforated or slotted pipe which is used for the strainer foundation.

The frame is made up of the end nipples 2 and 3 which are preferably threaded at 4 and have a reduced end as at 5. The longitudinal bars 7 may be provided in any desired number and will be uniformly arranged in a circle with their ends 8 undercut at 9 and positioned on the reduced end 5 of the nipples. The bars may be affixed by welding or otherwise.

At spaced intervals along the outer face of each bar 7 is formed a depression 10 which may be of any configuration. These depressions are arranged on the bars so that they follow the path of a spiral around all of the bars.

In order to reenforce the bars 7 which may have considerable length a band 12 of suitable metal may be wrapped about the bars 7. This band will have depressions 11 of a configuration to interfit snugly with the depressions 10 in the bars 7. This band will extend spirally about the bars so that it forms a coil of reenforcing about the bars and lends stability to the entire assembly. The ends of this band may be suitably affixed to the couplings 2 and 3.

The arrangement of the bars and band when assembled as seen in Fig. 1 provide recesses 14 which as seen in Fig. 2 serve to carry the strainer elements or inserts 15. These inserts may be formed in any desired manner. Regardless of the material of which such inserts are made or the size or shape of the strainer openings 16 therethrough the inserts may be positioned in the recesses 14 and fixed by welding or otherwise to form a composite screen member. When the inserts are in position a substantially solid and rigid screen is provided.

Fig. 3 shows a slightly different form of frame when the same parts are used but the depressions 10 are formed on the inner face of the bars 7 to receive the spiral band 12 while the depressions 11 in the band 12 are formed on the outer face instead of on the inner face as seen in Fig. 1.

Fig. 3 shows a strainer wire 20 as wrapped about the frame to form the strainer area and as such wire is well known in the art further explanation thereof is not believed to be necessary. While the wire is shown in Fig. 3 it is intended that such wire may be applied to the frame of Fig. 1 as well.

Fig. 4 shows the interfitting relationship of the bars and the band and while this has been described as being accomplished by interfitting the depressions the ribs and bands may be placed in contact and a fusion weld accomplished without previously providing the depressions.

What is claimed is:

1. A foundation frame for well strainers comprising longitudinally arranged rib members, a nipple fixed to each end of the assembled members, and a spirally wrapped band embedded in the outer faces of said ribs to space and reenforce the ribs, whereby a plurality of recesses are provided, and strainer inserts disposed in said recesses.

2. A well strainer of the character described comprising end nipples, a plurality of bars arranged in spaced relation and having their ends fixed to said nipples, a band wrapped about said bars in a spaced spiral and fixed at its crossing with each bar, and strainer inserts disposed in the openings formed by said bars and band.

COLBY VAN WESTRUM.