

No. 828,714.

PATENTED AUG. 14, 1906.

W. F. COOK.
TUBE WELL STRAINER.
APPLICATION FILED MAR. 27, 1906.

FIG. 1.

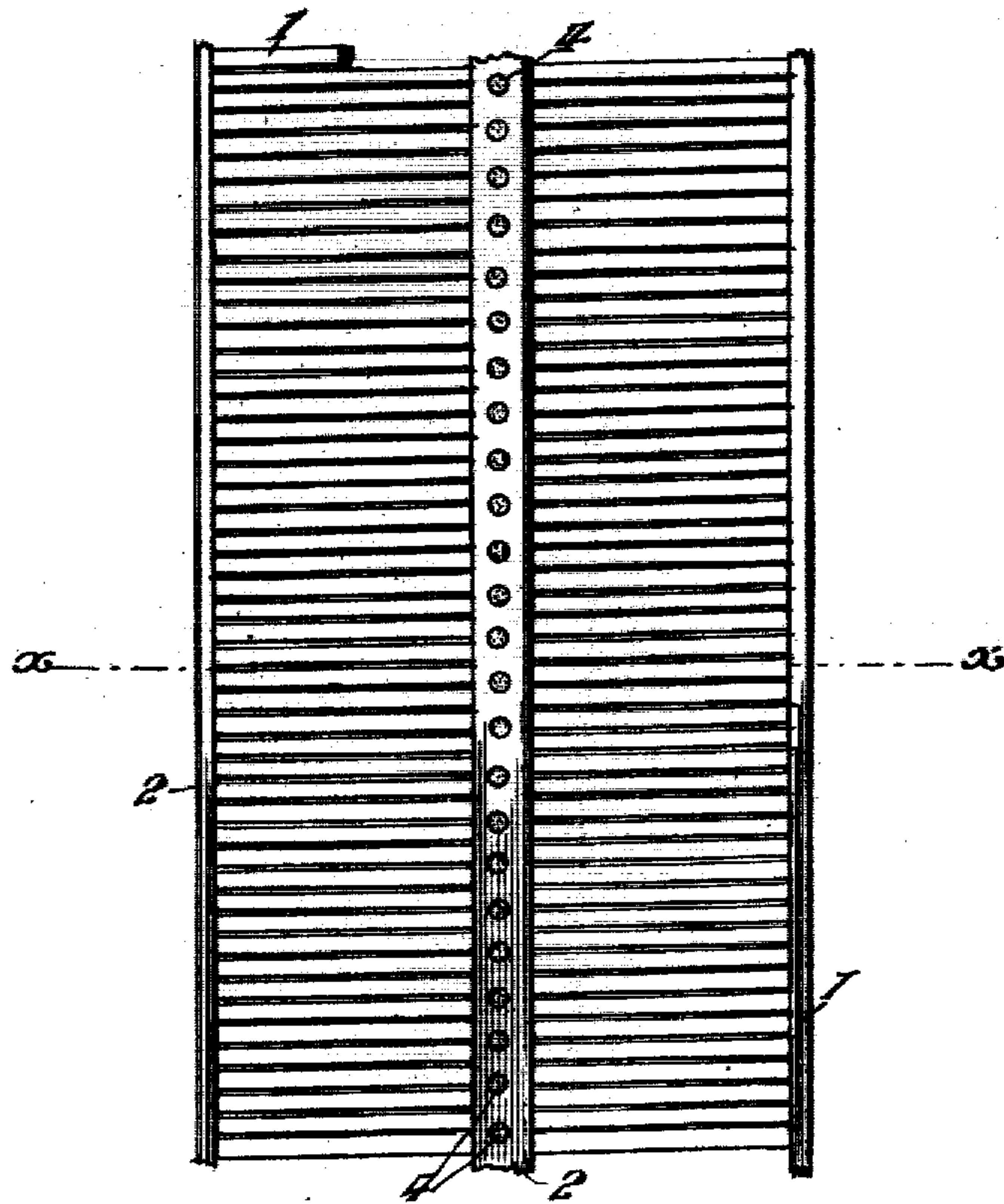
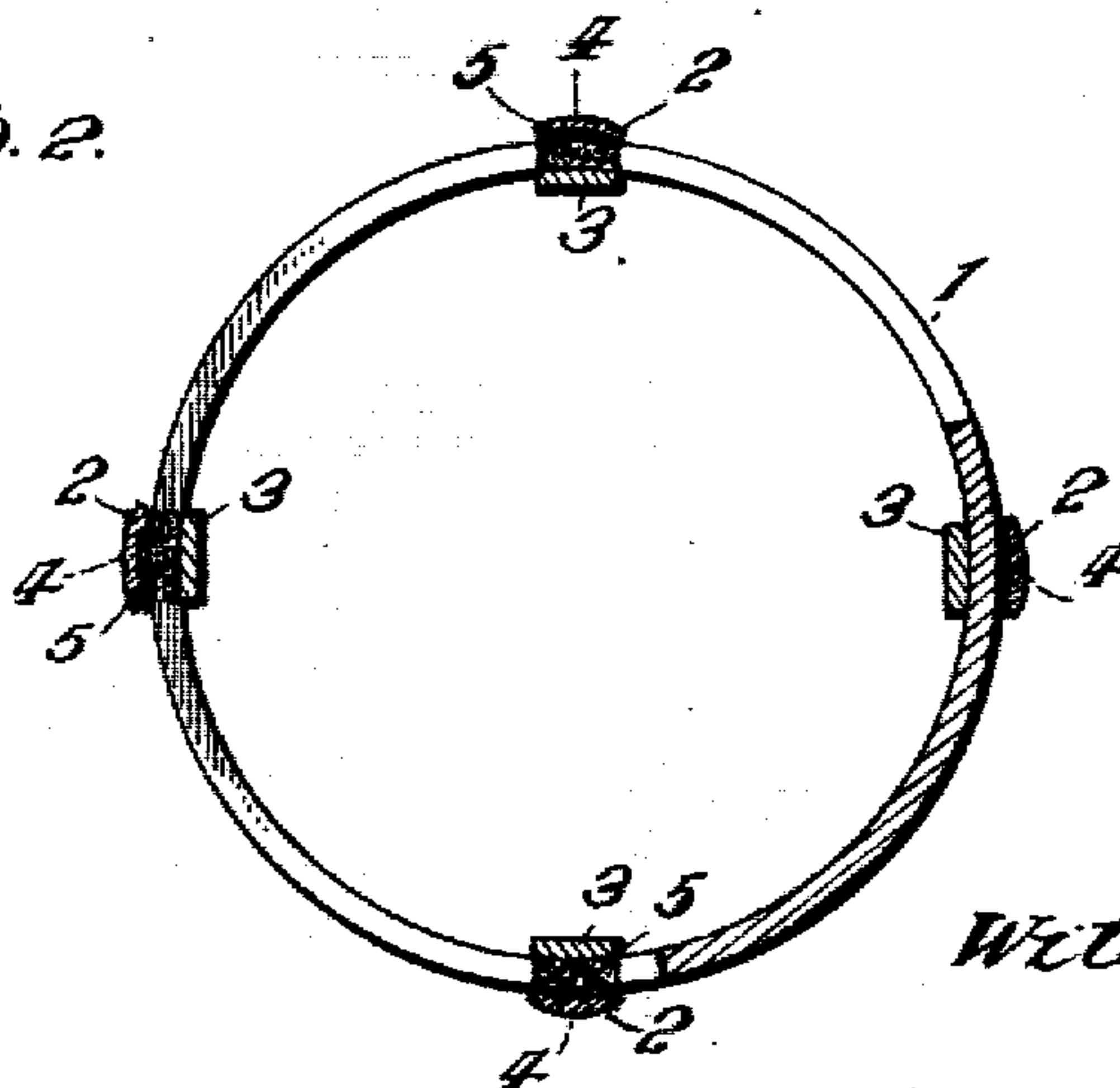


FIG. 2.



Witnesses

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TUBE WELL STRAINER.

No. 828,714.

Specification of Letters Patent.

Patented Aug. 14, 1906.

Application filed March 27, 1906. Serial No. 308,290.

To all whom it may concern:

Be it known that I, WILLIAM F. COOK, a citizen of the United States, residing at Louisville, in the county of Jefferson and State of Kentucky, have invented certain new and useful Improvements in Tube Well-Strainers, of which the following is a specification.

This invention is designed to provide a strainer for wells of the tubular type whether bored or driven, the purpose being to supply a screen which, while strong and durable, will provide in the aggregate a large amount of strainer-openings compared with the entire surface or area of the device.

The invention consists of a strainer formed of a wire coiled upon itself into cylindrical form, the several coils being connected by means of strips which also serve to stiffen and brace the device.

For a full description of the invention and the merits thereof and also to acquire a knowledge of the details of construction of the means for effecting the result reference is to be had to the following description and accompanying drawings.

While the invention may be adapted to different forms and conditions by changes in the structure and minor details without departing from the spirit or essential features thereof, still the preferred embodiment is shown in the accompanying drawings, in which—

Figure 1 is a side view of a strainer embodying the invention. Fig. 2 is a horizontal section of the strainer on the line xx of Fig. 1.

The strainer is of cylindrical form and its body portion is composed of a wire coiled or wound upon itself in spiral form. The wire 1 may be of any material, metal being preferred, and of any cross-sectional outline. The metal found to give the best results is either brass or copper, although zinc or other metal not liable to corrode by dampness may be employed. The wire is coiled so as to provide a minute space between adjacent coils, thereby excluding sand from finding its way into the strainer and into the tubing comprising the well. The strainer may be of any length and is preferably of uniform diameter and is strengthened by vertical or longitudinal strips 2 and 3, arranged upon opposite sides of the body of the structure and secured thereto and to one another. The strips 2 and 3 constitute stays as well as stiffeners and ties, the latter function result-

ing from the binding together of the several coils or winds of the wire. The strips 2 and 3 are preferably soldered to the coils comprising the body of the strainer, and the strips 2 are convex upon their outer sides between their vertical and longitudinal edges and are formed at intervals with openings 4 to admit of flowing solder into the joints formed between the strips 2 and 3 and the coils or winds of the wire, so as to bind all together in a firm and substantial way. The outer strips 2 are bent outward between their longitudinal or vertical edges to form a space 5 between the outer side of the body of the strainer and the inner concaved side of said strips to receive the solder flowed therein through the openings 4. The strips have a parallel relation and by reason of the attachment of the coils thereto serve to maintain the same in proper relation. The solder flowed between the coils acts as spacing means, besides serving to unite the strips to each other and to the coils.

The wire may be coiled about a mandrel in the formation of the body of the strainer or may be bent in any manner, so as to form the structure and space the coils or winds apart the desired distance. After the body of the strainer has been formed the coils are united and the structure braced by application of the strips 2 and 3 thereto, said strips being provided in pairs and arranged upon the inner and the outer sides of the body and secured to each other and to the coils in any manner, preferably by flowing solder through the openings 4. The provision of the openings 4 prevents spreading of the solder beyond opposite edges of the strips, thereby maintaining a maximum-sized opening or space between adjacent strips. The space between adjacent coils is minute or comparatively small, so as to exclude sand.

A strainer formed substantially as herein set forth is exceedingly strong, because composed wholly of parts such as the wire 1 and strips 2 and 3, which are drawn and which are possessed of extreme linear strength, due to their formation by the process of drawing.

Having thus described the invention, what is claimed as new is—

1. A tube well screen comprising a body formed of a wire coiled upon itself and having the coils spaced apart, and strips applied to a side of the body and spaced apart and provided at intervals in their length with open-

ings through which solder is flowed to unite the strips to the body of the screen and to join the coils thereof.

2. A tube well screen comprising a body
5 formed of a wire coiled upon itself and having the coils spaced apart, and strips applied to a side of the body and spaced apart and provided upon the side adjacent to the body with spaces and having openings at intervals
10 in their length in communication with said spaces and through which openings solder is adapted to be flowed into the spaces and between the coils.

3. The herein-described tube well screen
15 comprising a wire coiled upon itself into cylindrical form and having the coils spaced

apart, and pairs of strips embracing opposite sides of the body, the outer strips being bent outward between their longitudinal or vertical edges to form an outer convex surface and an inner concave surface, said outer strips having openings at intervals in their length through which solder is flowed to unite the pairs of strips to each other and to the several coils of the body.

In testimony whereof I affix my signature in presence of two witnesses.

WILLIAM F. COOK. [L. s.]

Witnesses:

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