

No. 895,733.

PATENTED AUG. 11, 1908.

H. R. DECKER.
OIL AND WATER WELL STRAINER.
APPLICATION FILED AUG. 1, 1906.

Fig. 1.

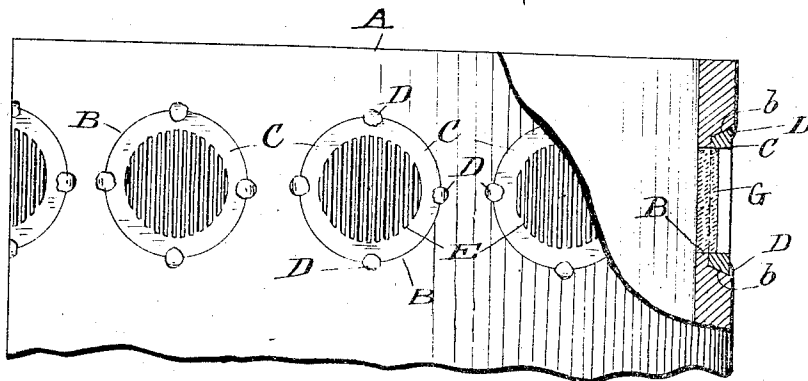


Fig. 2.

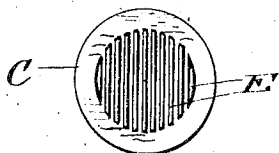


Fig. 3.



Fig. 4.

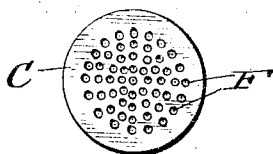


Fig. 5.



Witnesses

Jas. H. Blackwood
W. H. Randolph, Jr.

Inventor

Harry R. Decker
By D. A. Gurick
Attorney

UNITED STATES PATENT OFFICE.

HARRY R. DECKER, OF HOUSTON, TEXAS.

OIL AND WATER WELL STRAINER.

No. 895,733.

Specification of Letters Patent.

Patented Aug. 11, 1908.

Application filed August 1, 1906. Serial No. 328,748.

To all whom it may concern:

Be it known that I, HARRY R. DECKER, a citizen of the United States, residing at Houston, in the county of Harris and State of Texas, have invented certain new and useful Improvements in Oil and Water Well Strainers, of which the following is a specification.

My invention relates to strainers for use in wells, and consists of a tube having perforations therein with their inner portions smaller in diameter than their outer portions and forming shoulders in said perforations, the walls of the outer portions of the perforations being beveled inwardly to the shoulders to receive a slotted or perforated plate that forms the strainer to exclude sand and other foreign substances but permitting fluids such as oil or water to pass therethrough and into the tube to be conveyed to the top of the well.

My invention contemplates riveting the plate referred to securely in the recessed portion of the perforation, by which manner of fastening it becomes substantially a part of the strainer tube and materially strengthens it where it is weak, at the perforations.

The construction and advantages of my improved strainer will be described in detail hereinafter and illustrated in the accompanying drawings, in which—

Figure 1 is a view of a fragment of a strainer tube partly broken away and in section showing my improvements combined therewith, Fig. 2, a detail view of one of the disks, Fig. 3, a cross section of the disk shown in Fig. 2, Fig. 4, a view of a modified form of disk, and Fig. 5, a cross section of the disk shown in Fig. 4.

In the drawings similar referenced characters indicate corresponding parts throughout the several views.

A indicates a tube or pipe in which is drilled a number of holes B having their outer portions formed larger in diameter than the inner portions said outer portions being indicated at *b* and are adapted to receive strainer disks C which seat against shoulders *b'* formed by the differences in the diameter of the inner and outer portions of the holes, and are held in position by upsetting the metal of the pipe surrounding the holes B, as shown at D, so as to clench the disks C in position.

In the disk shown in Figs. 1, 2 and 3, paral-

lel slots E are provided therein having beveled sides with the narrowest opening of the slot towards the exterior of the strainer tube, while in the form shown in Figs. 4 and 5 round holes F are made in the disk, the holes having beveled sides with the smaller ends of the holes towards the exterior of the strainer as in the construction of strainer having slots. The beveled holes and slots prevent the obstruction thereof by particles of sand or clay that might be carried therethrough by the fluid.

Among the advantages of this form of strainer are that the outer surface of the strainer tube has no depressions therein to become clogged by accumulating mud and sand, which is the case in strainers in which the strainer surfaces set back from the outer surface of the tube, while the depression that is formed at the inner ends of the holes B provide for the reception of a plug of cement or other plastic material G should it be desired to convert the strainer tube into a well tube for further boring after the exhaustion of a stratum of oil or water. By setting the strainer disk into a depression such as shown at *b* an enlarged strainer surface in proportion to the diameter of the hole B in the tube is secured and, as the disks C are securely held in position and fit snugly the recesses in the tube, because of the beveled walls of the holes in the tube and the beveled sides of the disk, the tube is strengthened where needed at the places where perforated. It will be apparent also that the corresponding beveled sides of the disks and their retaining holes insures the disks fitting closely in the holes so that a fluid tight fit is insured and the oil or water can not enter the strainer except through the strainer openings.

Having thus described my invention what I claim is—

1. In an oil and water well strainer, a tube having holes therein having their outer portions larger in diameter than their inner portions, and perforated disks seated in the outer portions of said holes, said disks being held in position by upsetting the metal of the tube to clench them, substantially as shown and described.

2. In an oil and water well strainer, a tube having holes therein having their outer portions larger in diameter than their inner portions, and slotted disks seated in the outer portions of said holes, said disks being held in

position by upsetting the metal of the tube to clench them, substantially as shown and described.

3. In an oil and water well strainer, a tube
5 having holes therein having their outer portions larger in diameter than their inner portions, and perforated disks seated in the outer portions of said holes, said disks being held in position by upsetting the metal of the
10 tube to clench them, the perforations in said disks having beveled sides with the narrowest portions towards the exterior surface of the tube, substantially as shown and described.

15 4. In an oil and water well strainer, a tube having holes therein having their outer portions larger in diameter than their inner portions, and slotted disks seated in the outer portions of said holes, said disks being held
20 in position by upsetting the metal of the tube to clench them, the slots in said disks having beveled sides with the narrowest portions towards the exterior surface of the tube, substantially as shown and described.

25 5. In an oil and water well strainer, a tube having holes therein with beveled walls, and perforated disks having beveled sides seated in said holes and secured therein by upsetting the metal of the tube to clench them, substantially
30 as shown and described.

6. In an oil and water well strainer, a tube having holes therein with beveled walls, and slotted disks having beveled sides seated in

said holes and secured therein by upsetting the metal of the tube to clench them, substantially as shown and described. 35

7. In an oil and water well strainer, a tube having holes therein with their outer portions larger in diameter than their inner portions, said outer portions having outwardly
40 flaring walls, and perforated disks having beveled sides to fit snugly said flaring walls and secured therein by upsetting the metal of the tube to clench them, the perforations in said disks having beveled sides with the narrowest portions towards the exterior surface
45 of the tube, substantially as shown and described.

8. In an oil and water well strainer, a tube having holes therein with their outer portions
50 larger in diameter than their inner portions, said outer portions having outwardly flaring walls and slotted disks having beveled sides to fit snugly said flaring walls and secured therein by upsetting the metal of the tube
55 to clench them, the slots in said disks having beveled sides with the narrowest portions towards the exterior surface of the tube, substantially as shown and described.

In testimony whereof I hereto affix my
signature in the presence of two witnesses. 60

HARRY R. DECKER.

Witnesses:

A. M. DAVIDSON,
M. E. KEENAN.