(No Model.)

W. A. SUMNER.

WELL TILING COUPLER.

No. 491,956. Patented Feb. 14, 1893.

FIG. 1.

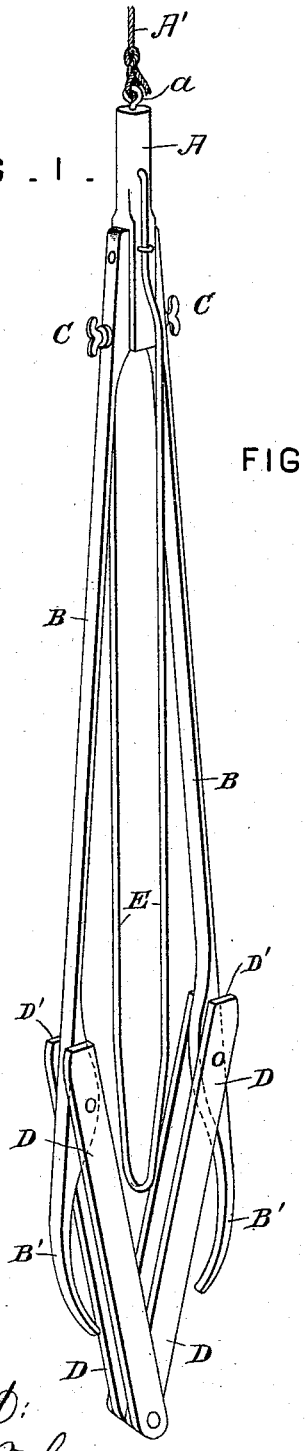
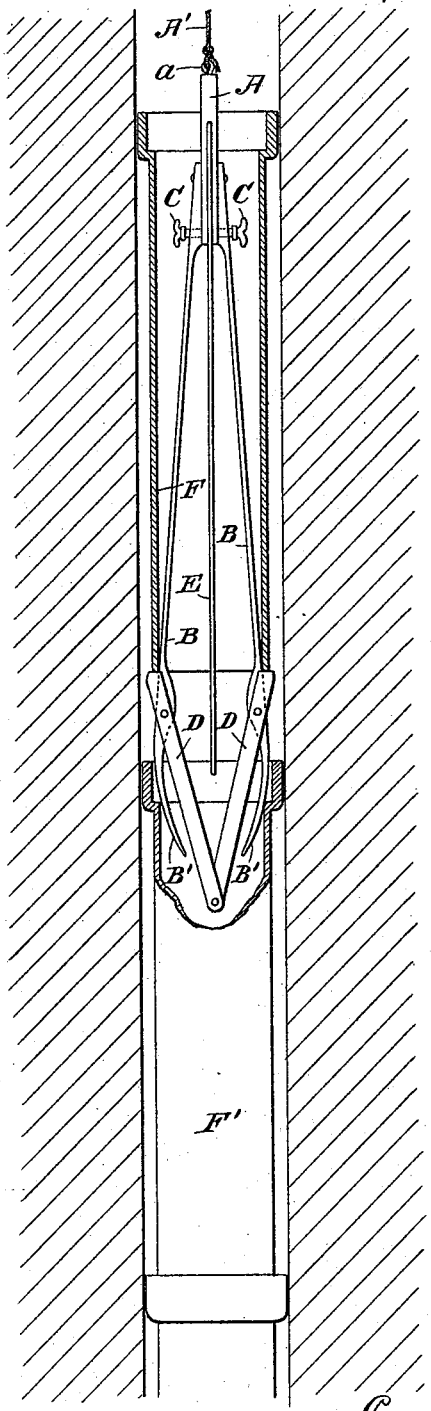


FIG. 2.



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UNITED STATES PATENT OFFICE.

WILLIAM A. SUMNER, OF CLAY CENTER, NEBRASKA, ASSIGNOR OF THREE-FOURTHS TO JOHN C. WARD, GEORGE S. WARD, AND HERMAN E. STEIN.

WELL-TILING COUPLER.

SPECIFICATION forming part of Letters Patent No. 491,956, dated February 14, 1893.

Application filed February 4, 1891. Renewed August 13, 1892. Serial No. 442,970. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM A. SUMNER, a citizen of the United States, residing at Clay Center, in the county of Clay and State of Nebraska, have invented certain new and useful Improvements in Well-Tiling Couplers; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to letters of reference marked thereon, which form a part of this specification.

The object of this invention is to provide an improved tool for lowering lining tiles or tubes into Artesian wells, so that the work can be expeditiously performed, and the successive tile sections squarely seated on those beneath, and to this end the invention consists of the well tiling coupler or tool hereinafter described and claimed.

Figure 1 is a perspective view of the coupler, and Fig. 2 is a sectional view of a well, showing the operation of the tool.

A is the head, provided with a ring *a*, to which the suspension rope A′ is attached.

B B are two arms of spring metal, attached on opposite sides of the head A. These arms extend downward and outward, and at their lower ends, B′, curve inward and form the tripping device by which the tool is released from the lining tile when lowered into place, as hereinafter described. The arms B are attached to the head A by means of a single bolt passing through the arms and the base of the head, and each arm is provided with a thumb-screw C, by means of which a greater or less spread can be given to the arms to fit the tool to pipe of different sizes.

D D are flat bars pivoted or coupled together at their lower ends, and respectively pivoted or hinged to the arms B B at their upper ends. These bars form a V, and the upper end of each has a shoulder or projection D′, which projects out beyond the arms B, and on which shoulders the tiles rest while they are being lowered into place.

The head A has attached thereto a bent U-shaped rod E, placed in a plane transverse to that of the arms B, which bent rod steadies the tiles and holds them in a vertical position while they are being lowered.

The operation of the coupler is as follows: A tile F is placed thereon, as illustrated by Fig. 2, so that the bottom edge of the tile rests on the projections D′, and as many other tiles on top of the same as may be desired. A dozen tiles can thus be lowered at once. They are then lowered down the well, and as the bottoms of the inwardly curved ends B′ of the arms B enter the top of the section of tiling F′, already set, the tool automatically aligns itself, and if it should not strike the tile F true and square it swings into correct alignment.

It should be observed that the outside span of the arms B′ at their widest point is the same as the distance across between the extremities of the projections D′, which distance is of course greater than that of the inner diameter of the tile, and hence, as the coupler is lowered, after the ends B′ of the arms enter the said tile F′, the spring arms are greatly compressed, and when the arms B′ are entirely within the tile F′ the shoulders D′ are drawn in sufficiently to permit the tile F to drop into place true and square on top of the tiles already seated.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. A well tiling coupler, having movable lateral projections to support the tile, and spring arms attached to said projections and having lower curved portions extending down below and laterally beyond the same, for the purpose of detaching the coupler, substantially as and for the purpose set forth.

2. The combination, in a well tiling coupler, of a pair of downwardly extending spring arms, curving inward at their lower ends, with the V-shaped hinged bars coupled to the spring arms respectively, and having shoulders extending out beyond the spring arms, substantially as and for the purpose set forth.

3. The combination, in a well tiling coupler, of a head having a pair of adjustable

spring arms extending downward, with inwardly curved ends, with the V-shaped hinged bars coupled to the spring bars, and having shoulders extending out beyond the spring bars, substantially as described, together with the transverse guide-rod for steadying the tile, as and for the purpose set forth.

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

WILLIAM A. SUMNER.

Witnesses:
HATTIE MOULTON,
A. C. EPPERSON.