

S. R. DRESSER.

ANCHOR OR SUPPORT FOR DEEP WELL PACKERS OR TUBING.

No. 387,675.

Patented Aug. 14, 1888.

Fig 3

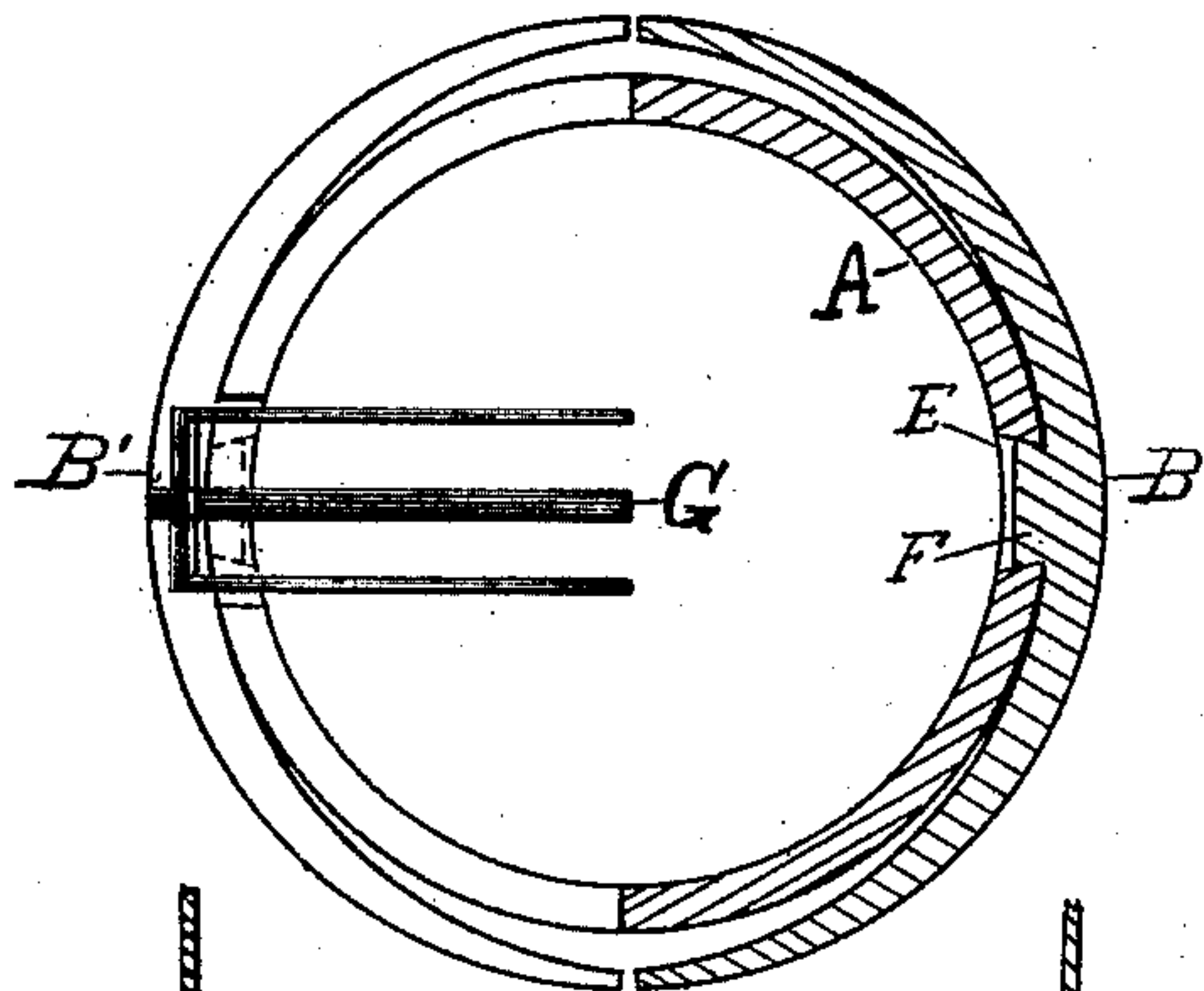


Fig 1.

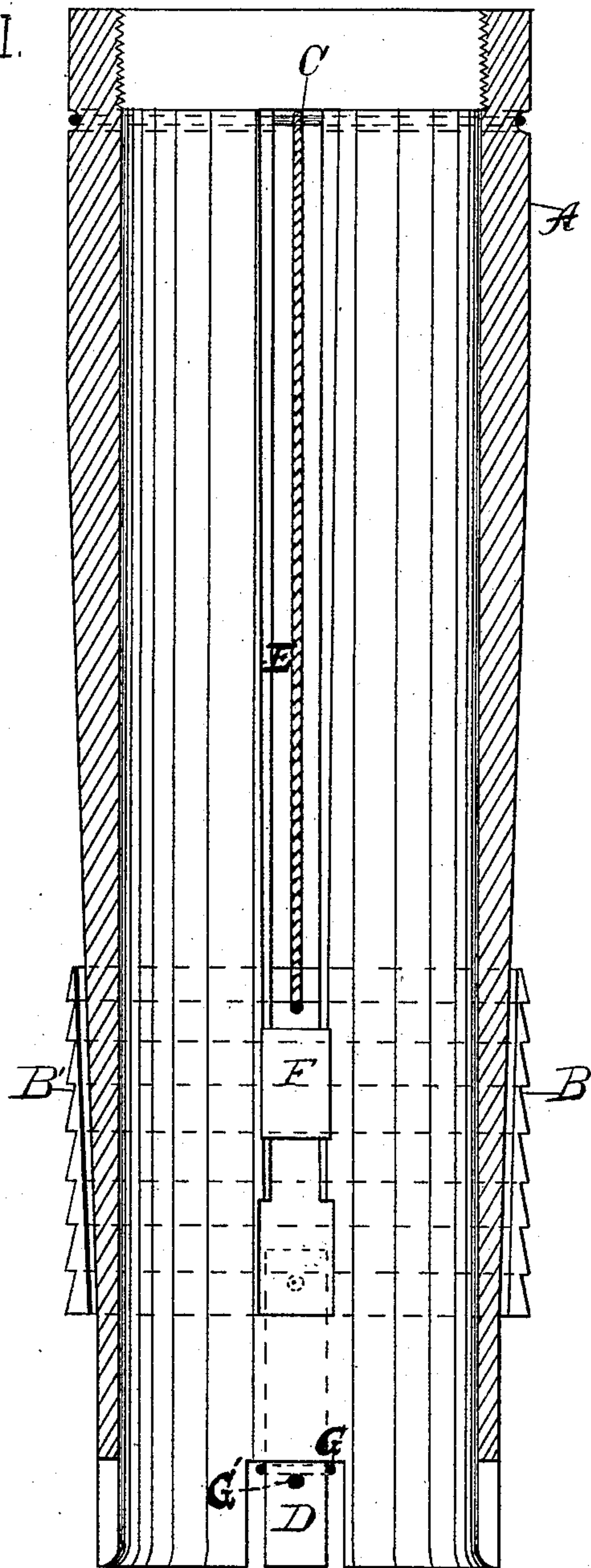
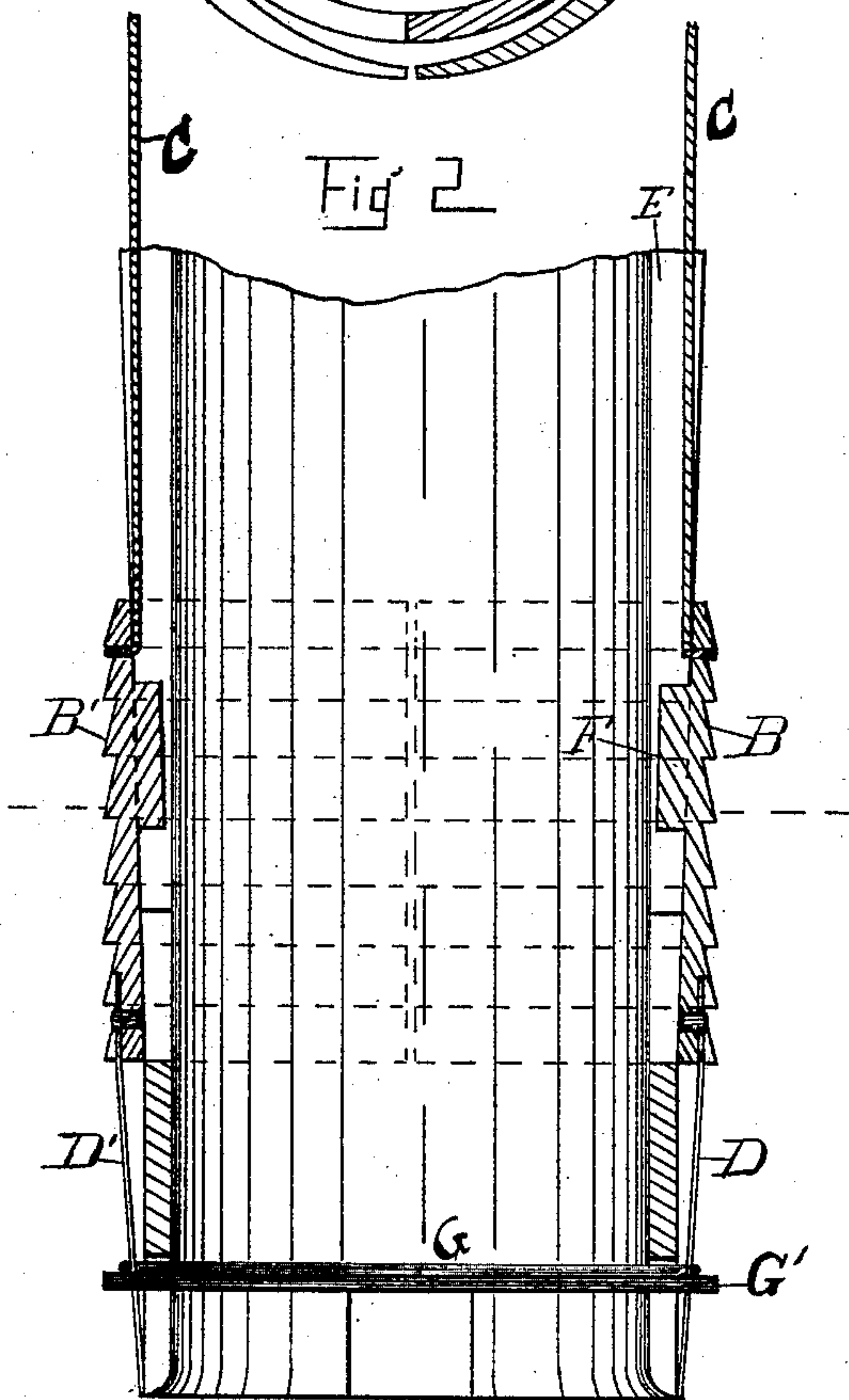


Fig 2



WITNESSES:

L. Chapin.
G. W. Cassidy.

INVENTOR,

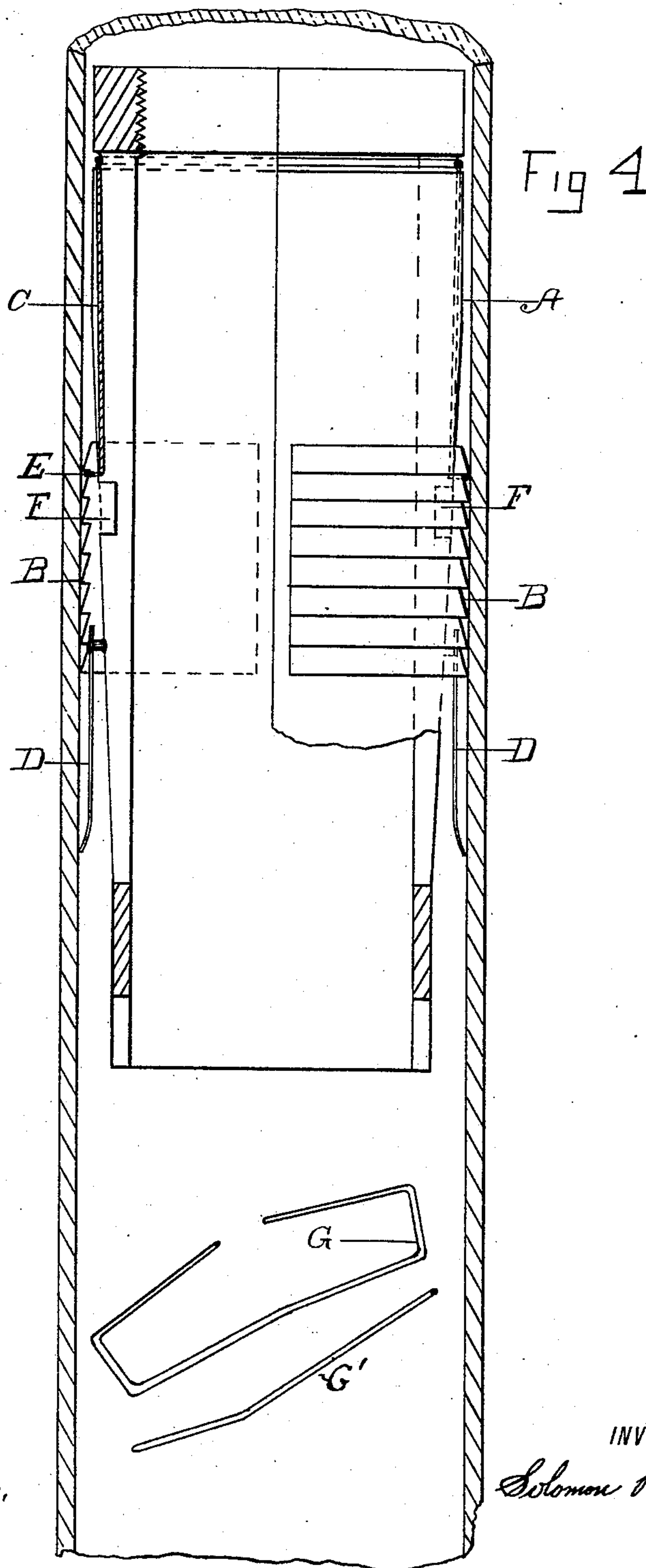
Solomon R. Dresser.

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WITNESSES:

Geo. P. Boothe,
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INVENTOR,

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UNITED STATES PATENT OFFICE.

SOLOMON R. DRESSER, OF BRADFORD, PENNSYLVANIA.

ANCHOR OR SUPPORT FOR DEEP-WELL PACKERS OR TUBING.

SPECIFICATION forming part of Letters Patent No. 387,675, dated August 14, 1888.

Application filed August 18, 1887. Serial No. 247,308. (No model.)

To all whom it may concern:

Be it known that I, SOLOMON R. DRESSER, a citizen of the United States, residing at Bradford, in the county of McKean and State of Pennsylvania, have invented certain new and useful Improvements in Anchorage or Supports for Deep-Well Packers or Tubing; 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.

My invention relates to means for packing oil, gas, or Artesian wells.

The object of the invention is to provide means for anchoring or supporting the tubing in such wells at any desired depth without resting the tubing on the bottom, as is customary.

The invention consists of construction and combination, all as will hereinafter be described in the specification and pointed out in the claims, reference being had to the accompanying drawings, in which—

Figure 1 represents a longitudinal section of my device with parts set for lowering it in the well; Fig. 2, a similar section taken on a line at right angles to that shown in Fig. 1; Fig. 3, a bottom plan, partly in section; Fig. 4, a longitudinal section showing the parts of the device set in place in a well.

A represents a tubing or casting tapering in form and having dovetail slots E in the sides; B B', slip-wedges having dovetail lugs F upon their inner faces, said lugs being inserted in the dovetail slots E to hold the wedges against the tapering tube and to guide them in their up-and-down movement, as will hereinafter be described; and C C are elastic cords or springs for drawing the wedges up the inclined faces when the latter are released by the retaining device that holds them at the lower end of the casting, which is of less diameter at this point, so that the wedges will not interfere with lowering the device in the well.

The manner of retaining the wedges at the lower end of the casting is various. My preferred means are those shown in the drawings. In this form catch-springs D and D' are secured to the wedges and project downward and are secured by any suitable means.

In wells of ordinary pressure the springs D

and D' are retained in place by means of a loop, G, which encircles the springs, and a pin, G', which is inserted in holes in the ends of the springs.

The operation of the device is as follows: The wedges are slipped down to the lower end of the tapering tube and secured in place by the pin G', which is placed across the bottom of the tube and inserted in the holes in the springs D and D' to prevent the springs C from drawing the wedges upwardly. The loop G is then sprung over the ends of the springs D and D' to prevent the free ends from springing outwardly. The tapering tube is then attached to the tubing that is to be placed in the well, or the tapering tube can be secured to the tubing before the wedges are set, if it be so desired. The tubing is lowered in the well in the usual manner until the tapering tube is opposite that part of the well where it is to be attached. A piece of tubing or other device, which may be sharpened on the lower end, is dropped down the tubing upon the loop G and wire G' to cut or break the same. This releases the springs D and D' and allows the springs C to draw the wedges up the tapering sides of the tube until the wedges strike the wall, where they wedge themselves firmly, thus supporting the tubing at the point desired, and allowing the weight of the tubing to rest on the packer, the same as though the tubing rested on the bottom of the well.

Should the elastic cord or spring fail to draw the slip-wedges to the larger part of the tapering tube, the catch-springs D and D' will catch in the wall of the well and hold them at the point where they are released, so that lowering the tubing will cause them to wedge between the wall of the well and the tapering casting or tubing, the same as though no elastic cord were used.

What I claim as new is—

1. In a tubing-supporter, the combination of a tapering piece of tubing or casting, slip-wedges in said tubing, and a removable retainer for holding the wedges at or near the apex of the tapering tube, for the purpose set forth.

2. The combination of tapering casting or tubing A with dovetailed slots E, slip-wedges B and B', with dovetailed lugs F, elastic cord

or spring C, and catch-springs D and D', with wire G, substantially as shown and set forth.

3. The combination of tapering casting or tubing A, slip-wedges B and B', catch-springs
5 D and D', and wire G, substantially as shown and set forth.

4. The combination of tapering casting or tubing A, slip-wedges B and B', elastic cord or

spring C, with wires G, substantially as shown and set forth.

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

SOLOMON R. DRESSER.

Witnesses:

G. CHAPMAN.

G. W. CASSEDY.