

No. 632,398.

Patented Sept. 5, 1899.

B. E. CHOLLAR.
MANHOLE COVER FOR GAS PURIFIERS.

(Application filed Mar. 11, 1899.)

(No Model.)

Fig. I.

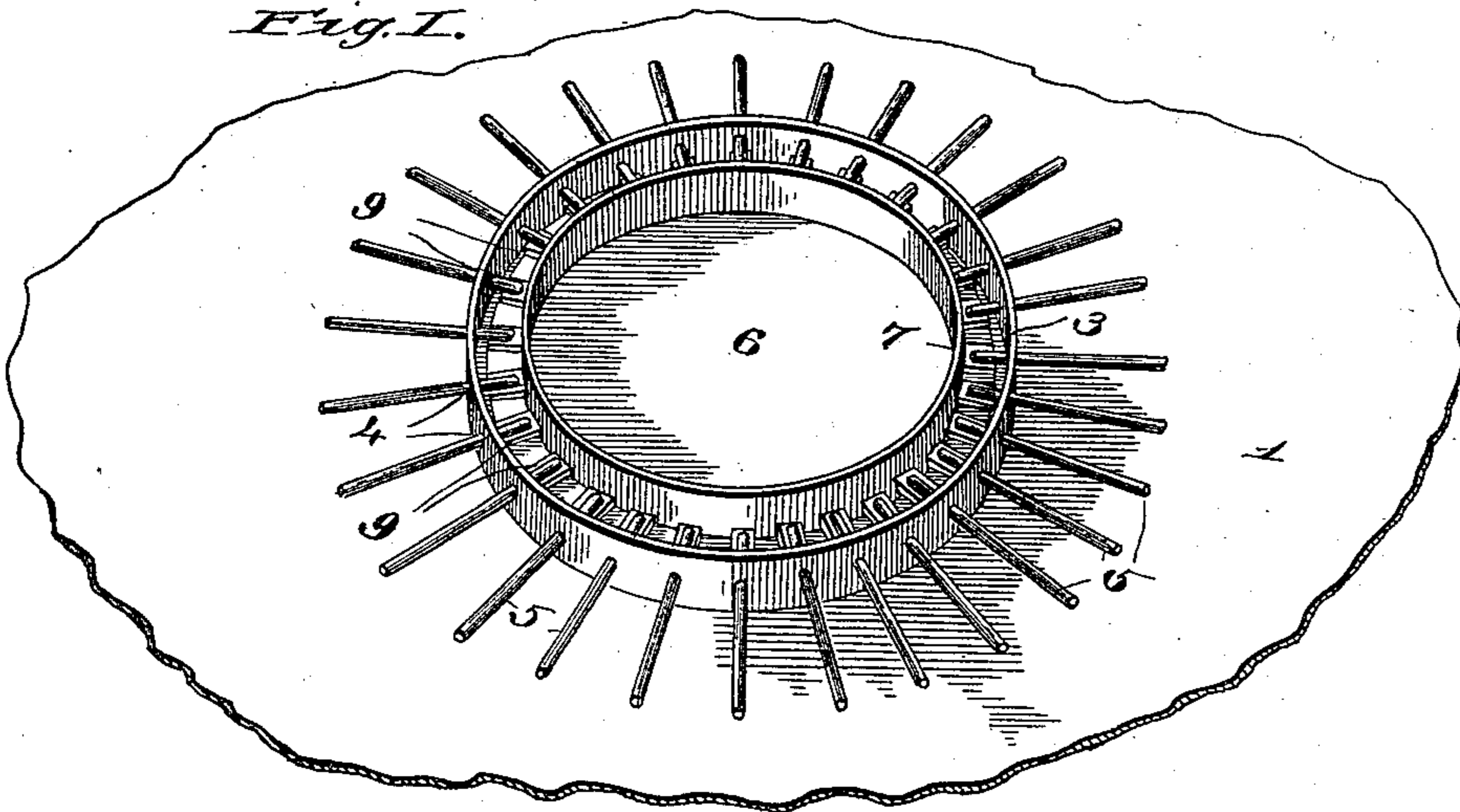


Fig. II.

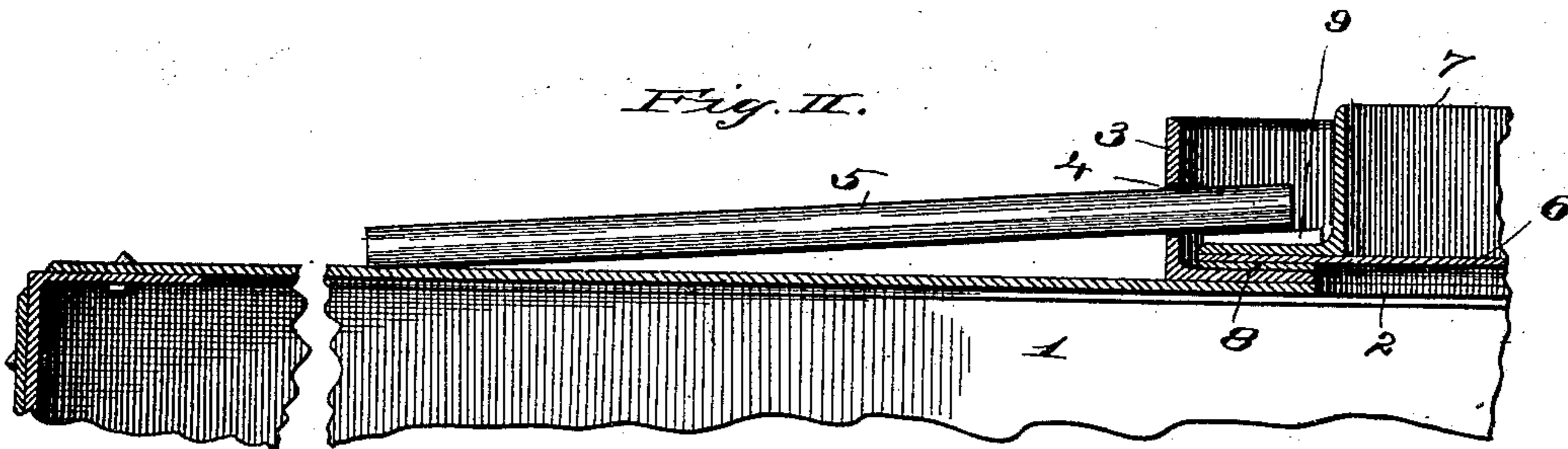


Fig. III.

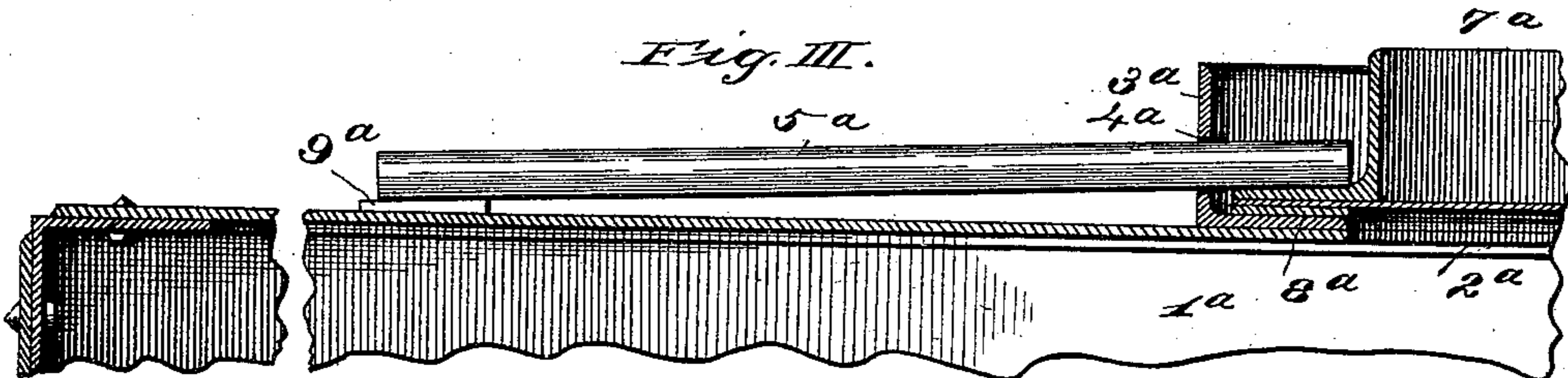
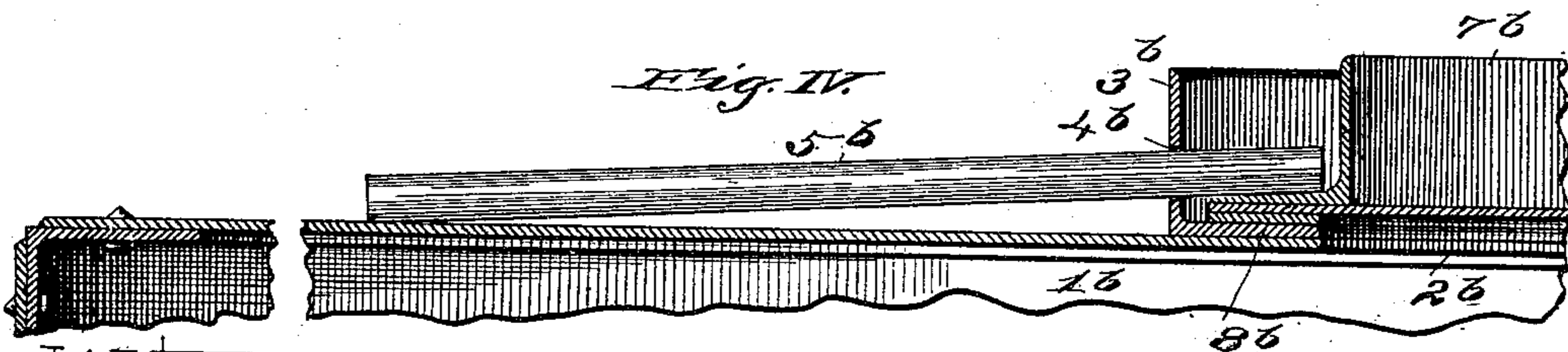


Fig. IV.



WITNESSES

G. A. Pauerschmidt,
E. J. Knight.

INVENTOR

Byron E. Chollar
By Wright, Bro
Attorneys

UNITED STATES PATENT OFFICE.

BYRON E. CHOLLAR, OF ST. LOUIS, MISSOURI.

MANHOLE-COVER FOR GAS-PURIFIERS.

SPECIFICATION forming part of Letters Patent No. 632,398, dated September 5, 1899.

Application filed March 11, 1899. Serial No. 708,681. (No model.)

To all whom it may concern:

Be it known that I, BYRON E. CHOLLAR, a citizen of the United States, residing at the city of St. Louis, in the State of Missouri, have

5 invented certain new and useful Improvements in Manhole-Covers, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, forming part of this specification.
10 My invention relates to a simple and efficient construction of manhole-covers and means for confining the same, the article being of such construction as to be particularly well adapted for use in connection with tanks
15 of gas-purifiers.

My invention consists in features of novelty hereinafter fully described, and pointed out in the claims.

Figure I is a perspective view of my improved manhole-cover shown in connection with a fragment of a tank. Fig. II is an enlarged sectional view showing a portion of a tank equipped with the manhole-cover. Fig. III is a similar view to Fig. II, showing a key
25 inserted beneath the outer end of one of the clamping slip-rods instead of beneath the inner end of such slip-rod, as it is shown in Fig. II. Fig. IV is a similar view to Figs. II and III, from which the key is omitted.

30 1 designates a tank of any description, to which the manhole-cover is applied. In the tank 1 is a manhole 2, that is surrounded by a ring 3, secured to the wall of the tank 1. The ring 3 is of angle shape in cross-section,
35 (see Figs. II, III, and IV,) its base-flange being connected by suitable means, such as rivets, to the wall of the tank. The vertical flange of the ring 3 is provided at intervals with openings 4, that receive clamping slip-
40 rods 5.

6 designates the plate or cover, the dimensions of which are such that it will readily fit within the space interior of the vertical flange of the ring 3. On the plate 6 is a ring 7, preferably of angle shape in cross-section, the base-flange of which is attached to the plate 6 by bolts or other suitable means of fasten-
45 ing, while the vertical flange extends upwardly and is approximately concentric with relation to the vertical flange of the ring 3.
50

The edge of the plate 6 lies over the base-flange of the ring 3 and is only removed from such flange by a suitable packing 8, interposed between such parts. This packing may be of earth, so as to form a mud joint, or may
55 be of any other desirable material.

The manhole-cover is held in place by the clamping slip-rods 5, the outer ends of which bear against the top wall of the tank, while the inner ends are inserted through the open-
60 ings 4 in the vertical flange of the ring 3 and exert a downward pressure upon the edge of the manhole-cover by seating upon the base-flange of the ring 7 or upon a key 9, interposed between the clamping slip-rod and the
65 ring 7.

I prefer to utilize the key 9 in the position shown in Fig. II, interposed between the cover-ring and the clamping slip-rods; but the introduction of such keys is not necessa-
70 rily essential, as they may be entirely dispensed with, as shown in Fig. IV, or instead they may be inserted beneath the outer ends of the clamping slip-rods, as shown in Fig. III, so as to elevate the outer ends and more
75 firmly depress the inner ends of said slip-rods. Furthermore, I do not desire to limit myself to any particular form of key, such as those of wedge shape shown in the drawings, as it is evident that the slip-rods might be
80 effectually depressed at their inner ends by the introduction of a key or lifting device of any other suitable form.

In securing the manhole-cover in place I prefer employing a suitable lever, which I
85 insert in one of the openings 4, so that its inner end will be presented against the ring of the cover-plate, and by raising upon said lever effect a downward pressure upon the cover, and while the cover is held in depressed
90 position insert the clamping slip-rods into holes adjacent to the one occupied by the pressure-lever, subsequent to which the said lever is removed and a clamping slip-rod inserted in its place, and the pressure-lever is
95 inserted in a new location and the same performance takes place as before to press the cover downwardly, so as to receive the clamping slip-rods.

While I have shown the manhole as of cir- 100

cular form, it is evident that manholes of any shape may be as effectually closed by the use of my cover.

I claim as my invention—

5 1. In a manhole-cover, the combination of a ring provided with openings therein, a cover seated within said ring, and separate clamping slip-rods capable of independent operation and having their inner ends inserted through
10 the openings in said ring adapted to bear upon said cover to hold it depressed, substantially as described.

2. In a manhole-cover, the combination of a ring having openings therein, a cover adapted to seat within said ring, clamping slip-rods
15 inserted through the openings in said ring so that their inner ends are arranged above the

edge of said cover, and keys arranged to effect an increased degree of depression of said cover by said clamping slip-rods, substantially as described. 20

3. In a manhole-cover, a ring provided with a series of openings, clamping slip-rods having their inner ends inserted through said openings, a cover-plate adapted to seat within
25 said ring, a ring carried by said cover-plate above which the inner ends of said clamping slip-rods are arranged, and keys interposed between said cover-carried ring and said clamping slip-rods, substantially as described.

BYRON E. CHOLLAR

In presence of—

E. S. KNIGHT,

G. A. TAUBERSCHMIDT.