

No. 748,514.

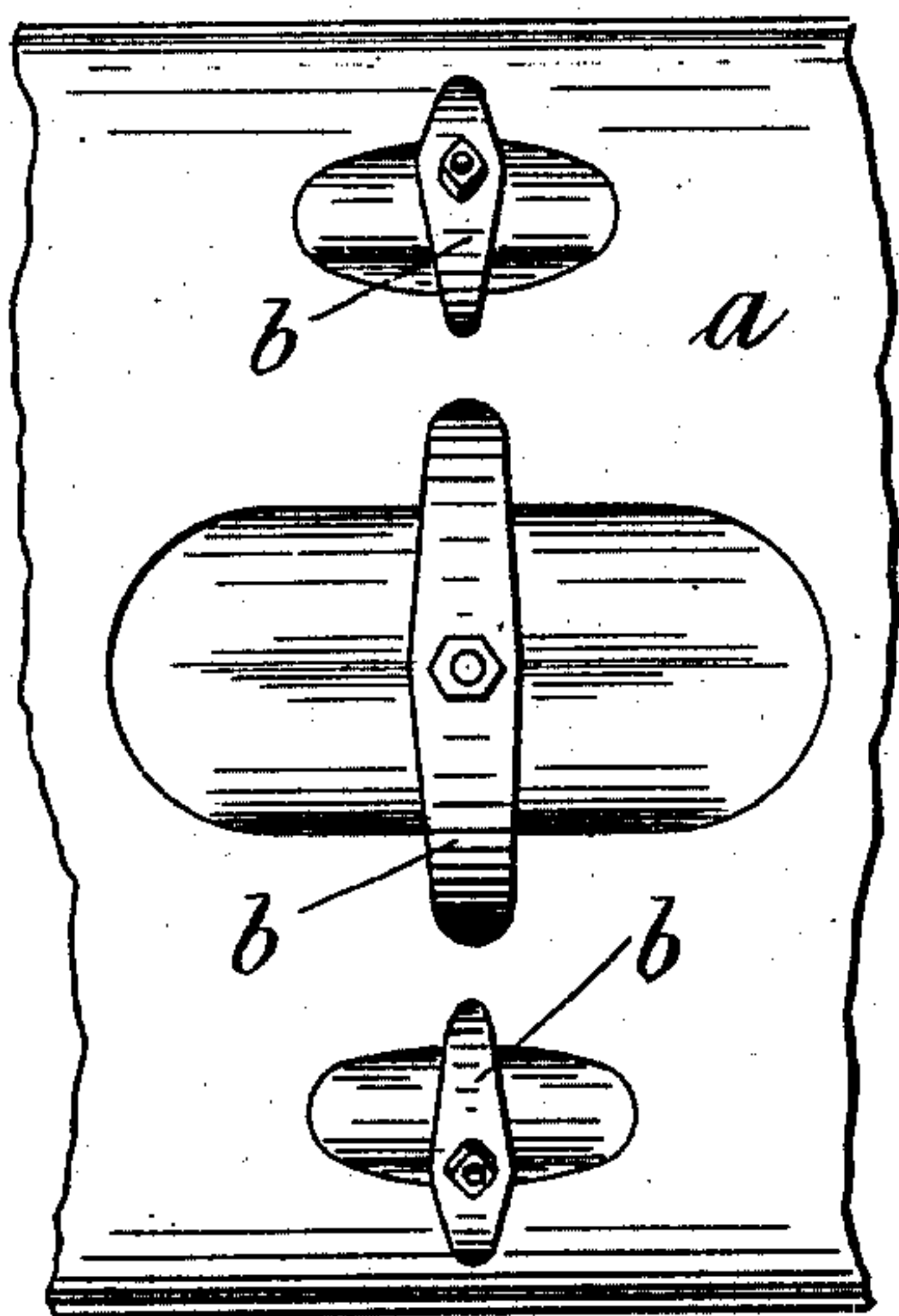
PATENTED DEC. 29, 1903.

T. F. MORRIN.  
MANHOLE CLOSURE.

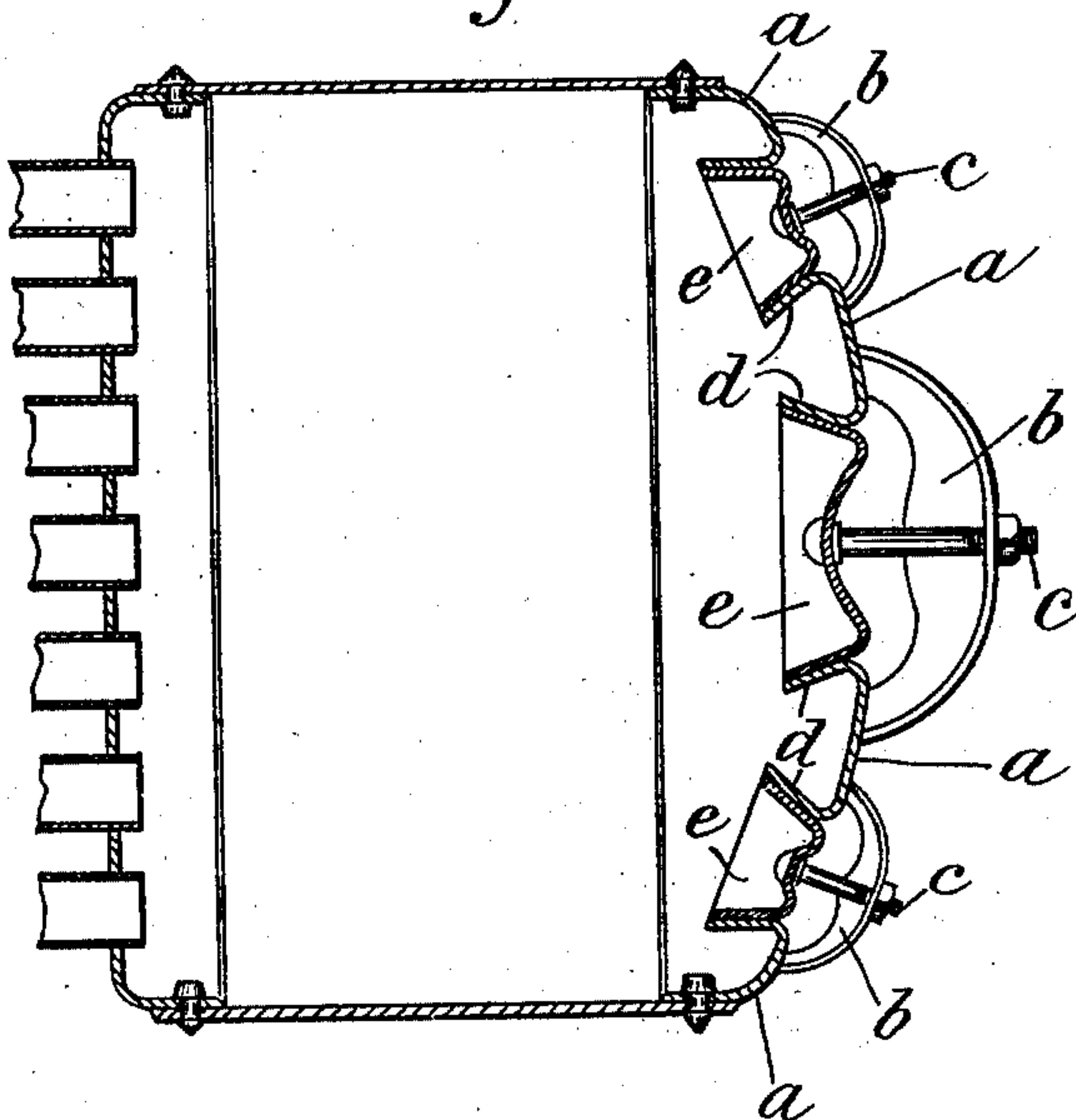
APPLICATION FILED FEB. 25, 1903.

NO MODEL.

*Fig. I*



*Fig. II*



Witnesses  
*Ivan Honigsberg*  
*Conrad Hump*

*Thomas F. Morrin* Inventor  
By *his* Attorneys  
*Kennison Crain Emory & Perkins*

## UNITED STATES PATENT OFFICE.

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## MANHOLE-CLOSURE.

SPECIFICATION forming part of Letters Patent No. 748,514, dated December 29, 1903.

Application filed February 25, 1903. Serial No. 145,013. (No model.)

*To all whom it may concern:*

Be it known that I, THOMAS F. MORRIN, a citizen of the United States, residing at Jersey City, county of Hudson, and State of New Jersey, have invented certain new and useful Improvements in Manhole-Closures, of which the following is a specification.

My invention relates in general to manhole-closures, and has for its particular object to improve manhole and hand-hole plates employed in steam-boilers and analogous structures.

In the accompanying drawings I have shown several forms of such structures.

In Figure I, I have shown the face view of manhole or hand-hole plates constructed in accordance with my invention. In Fig. II, I have shown a section of a header in which several plates are located.

In the drawings, *a* indicates a boiler or other shell, *b* the bridges, and *c* the bolts for maintaining the hand-hole or manhole plates in place. Hereinafter for brevity's sake these plates will be uniformly referred to as "manhole-covers."

In Fig. II the boiler-shell is apertured for the reception of the plates and is provided with inwardly-projecting flaring annular seats *d*, providing a tapered aperture for the reception of the hand-hole covers. The hand-hole covers are shown in Fig. II as made of dished-shaped sheet metal and are indicated by the letter *e*.

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

1. The combination of a boiler head or shell having integral therewith inwardly-projecting flaring annular seats providing tapering apertures for the reception of covers, the said apertures having their largest diameter at the inner side of the plate or shell, covers for the said apertures and cover-securing means on the outside of the shell or plate for securing the covers in place.

2. The combination of a boiler or other shell having integral therewith inwardly-projecting flaring annular seats formed from the material of the boiler-shell and covers for the said seats formed of dished sheet metal, and suitable means for anchoring the covers in place in the shell.

3. The combination of a boiler or other shell having integral therewith inwardly-projecting flaring seats, the said seats being wider at the inside of the shell than at the outer surface of the said shell, dished-shaped sheet metal covers *e* fitted to the said seats and cover-retaining means substantially as described.

THOMAS F. MORRIN.

Witnesses:

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