

No. 704,968.

Patented July 15, 1902.

J. H. ROSENTHAL.
HEADER FOR SECTIONAL STEAM GENERATORS.

(Application filed Dec. 12, 1901.)

(No Model.)

Fig. 1.

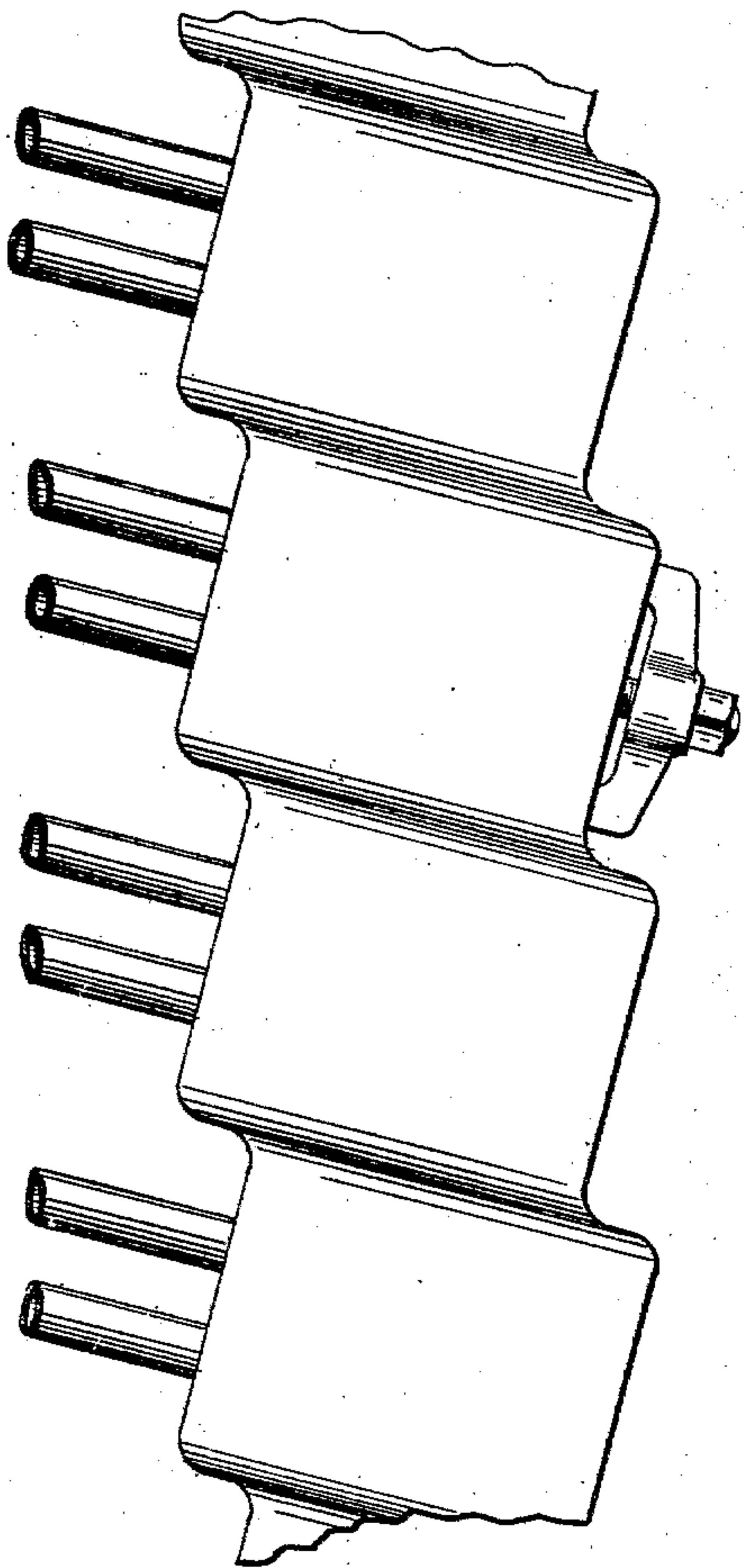
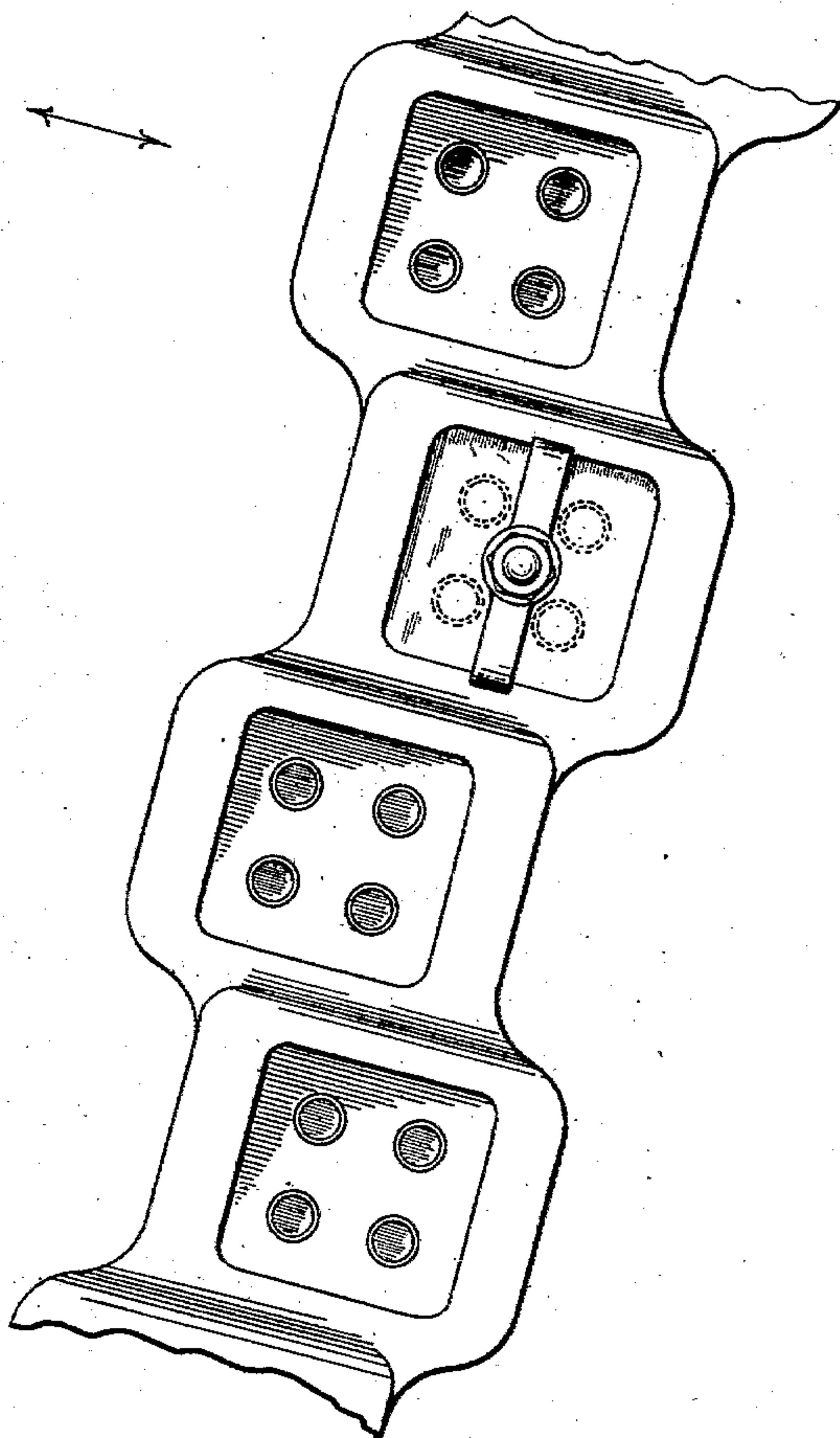


Fig. 2.



Witnesses
Charles Hanimann
W. A. Talbot

James H. Rosenthal
Inventor

By *his* Attorney
Geo. W. Corlies

UNITED STATES PATENT OFFICE.

JAMES H. ROSENTHAL, OF LONDON, ENGLAND, ASSIGNOR TO THE BABCOCK
& WILCOX COMPANY, OF NEW YORK, N. Y.

HEADER FOR SECTIONAL STEAM-GENERATORS.

SPECIFICATION forming part of Letters Patent No. 704,968, dated July 15, 1902.

Application filed December 12, 1901. Serial No. 85,575. (No model.)

To all whom it may concern:

Be it known that I, JAMES H. ROSENTHAL, a subject of the King of Great Britain, residing at London, England, have invented certain new and useful Improvements in Headers for Sectional Steam-Generators, of which the following is a specification, reference being had therein to the accompanying drawings.

This invention relates to sectional steam-boilers in which a series of water-tubes are connected at their opposite ends to headers of serpentine or corrugated shape, which are arranged in line to form a group. The water-tubes are generally used in an inclined position and the connected headers either placed vertically or at right angles with the inclined tubes.

The invention consists in forming the opposite faces of such headers at each corrugation of zigzag shape to obtain surfaces in the line of the axis of the water-tubes at right angle thereto to facilitate access to the tubes for purpose of inspection, insertion, removal, or repairs to all or any individual tube, which are usually arranged in clusters at each corrugation in the header.

In the accompanying drawings, forming a part of this specification, Figure 1 represents a side elevation of a portion of a header, showing zigzag or stepped faces provided at right angles to the axis of the clusters of connected

tubes; and Fig. 2, a face view showing the corrugated or sinuous form of the header with an end view of the connected clusters of tubes.

The outer face at each step in the header is constructed with an opening, as shown in Fig. 2, through which the tubes A may be removed, replaced, or repaired, and provided with a cover or plate B. This zigzag or stepped construction upon the opposite faces of the header and the arrangement in line with the axis of the water-tube provides for the more convenient removal, insertion, or clearing of the tubes and the manipulation of the tools designed for such purposes than in the straight form of the faces, as usually made.

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

A corrugated header for sectional water-tube steam-generators having its opposite faces constructed in zigzag or stepped form at each corrugation with surfaces at right angle with the line of the axis of the connected water-tubes, as set forth.

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

JAMES H. ROSENTHAL.

Witnesses:

PERCY E. MATTOCKS,
EDMUND S. SNEWIN.