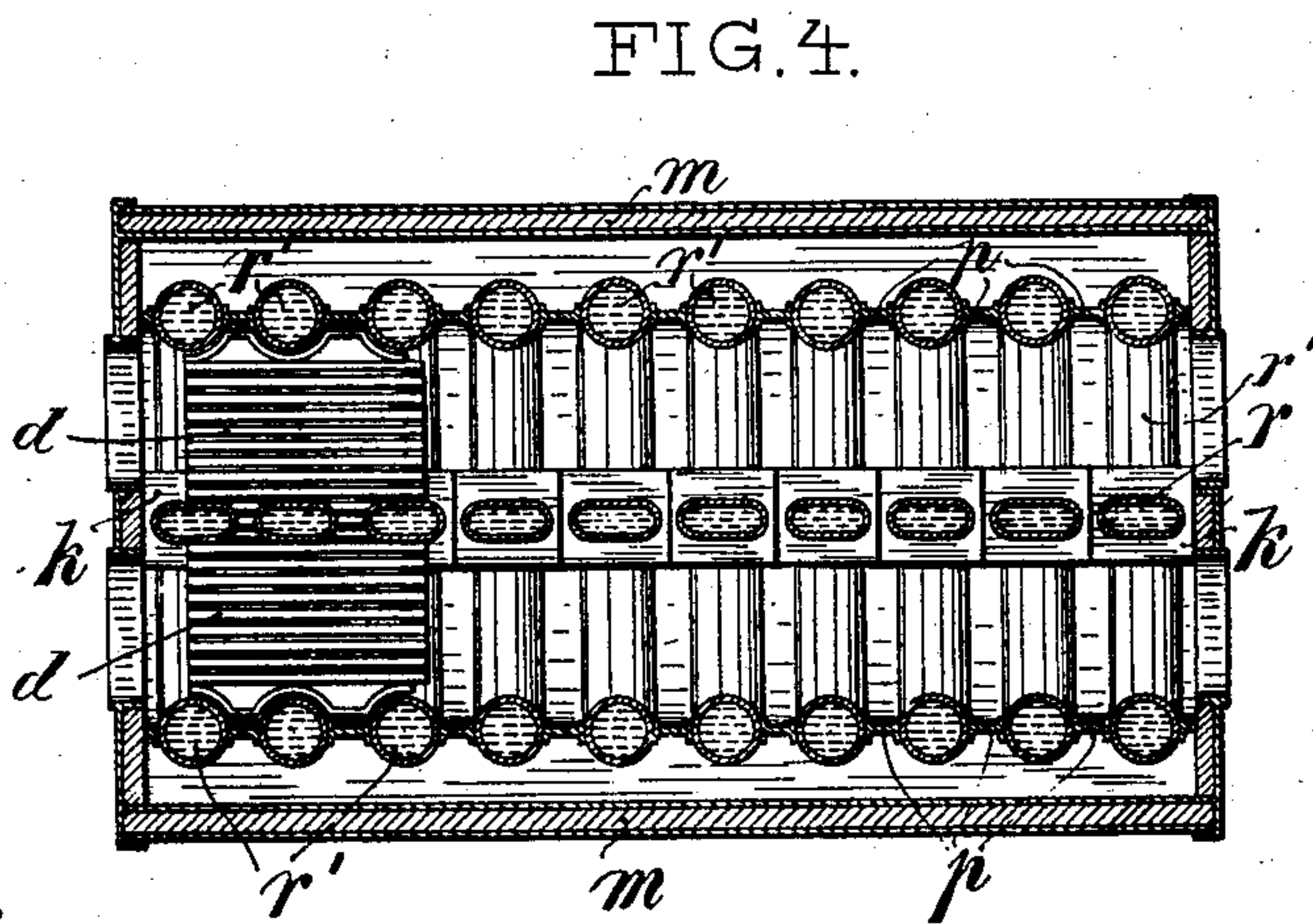
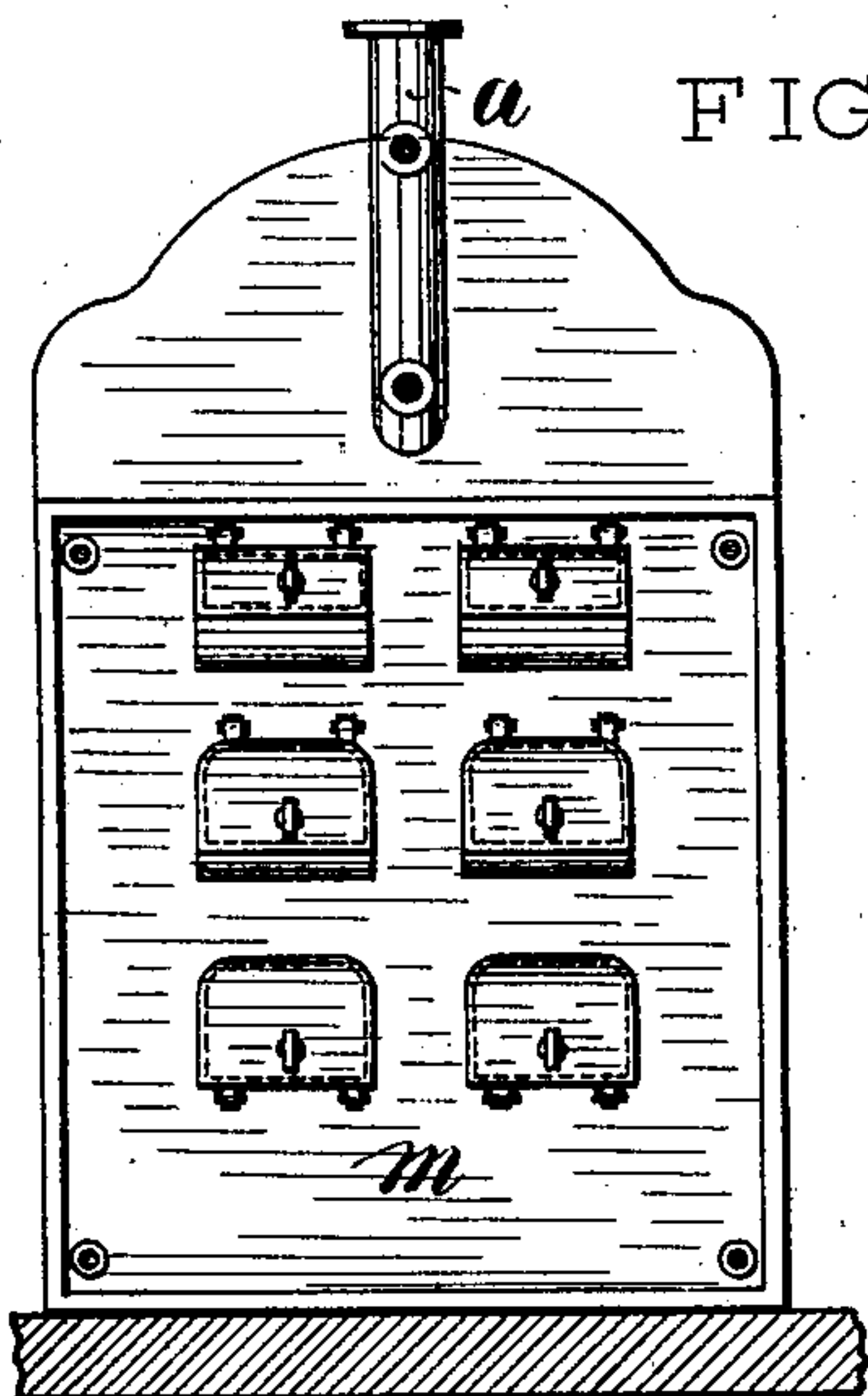
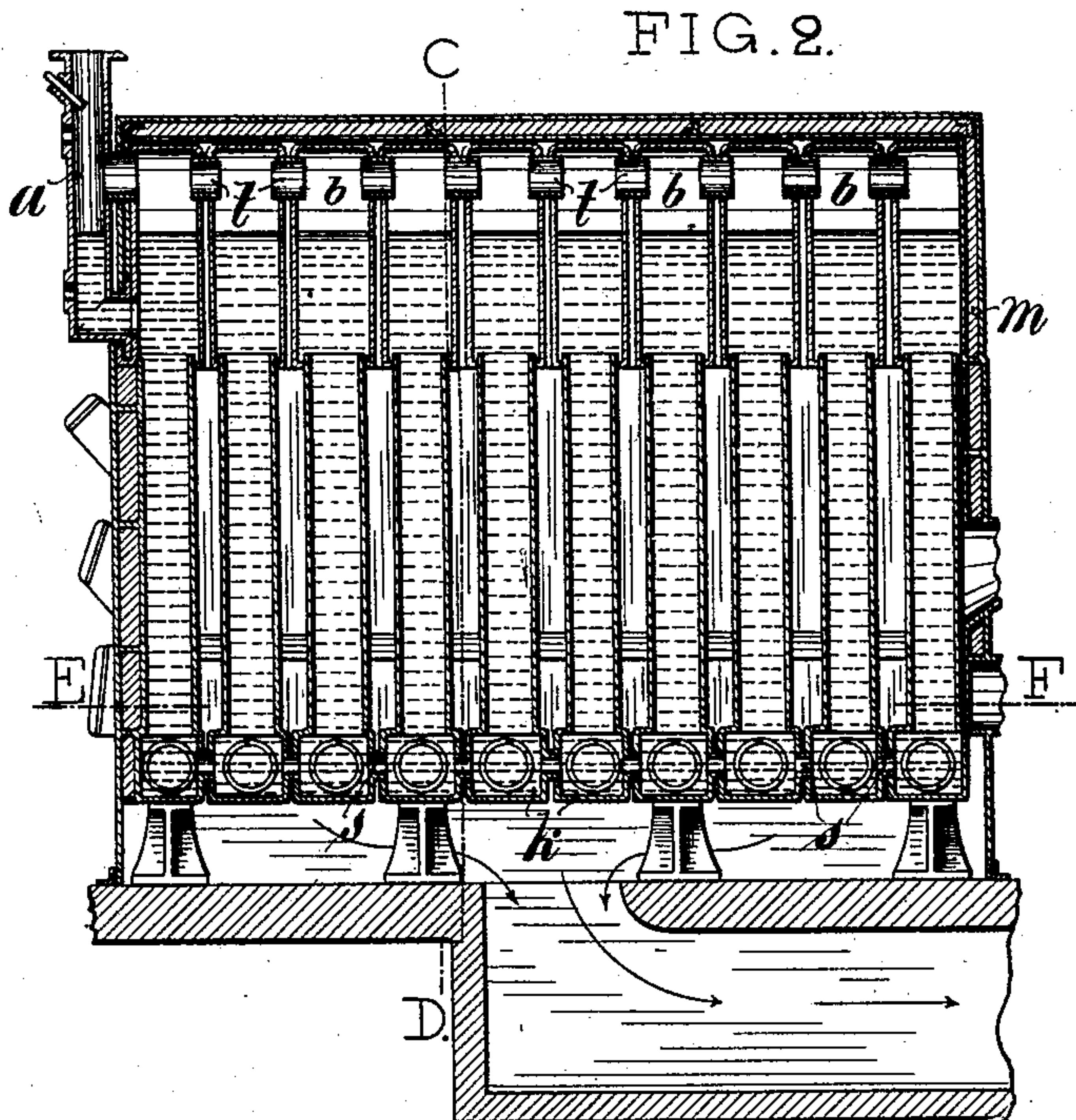
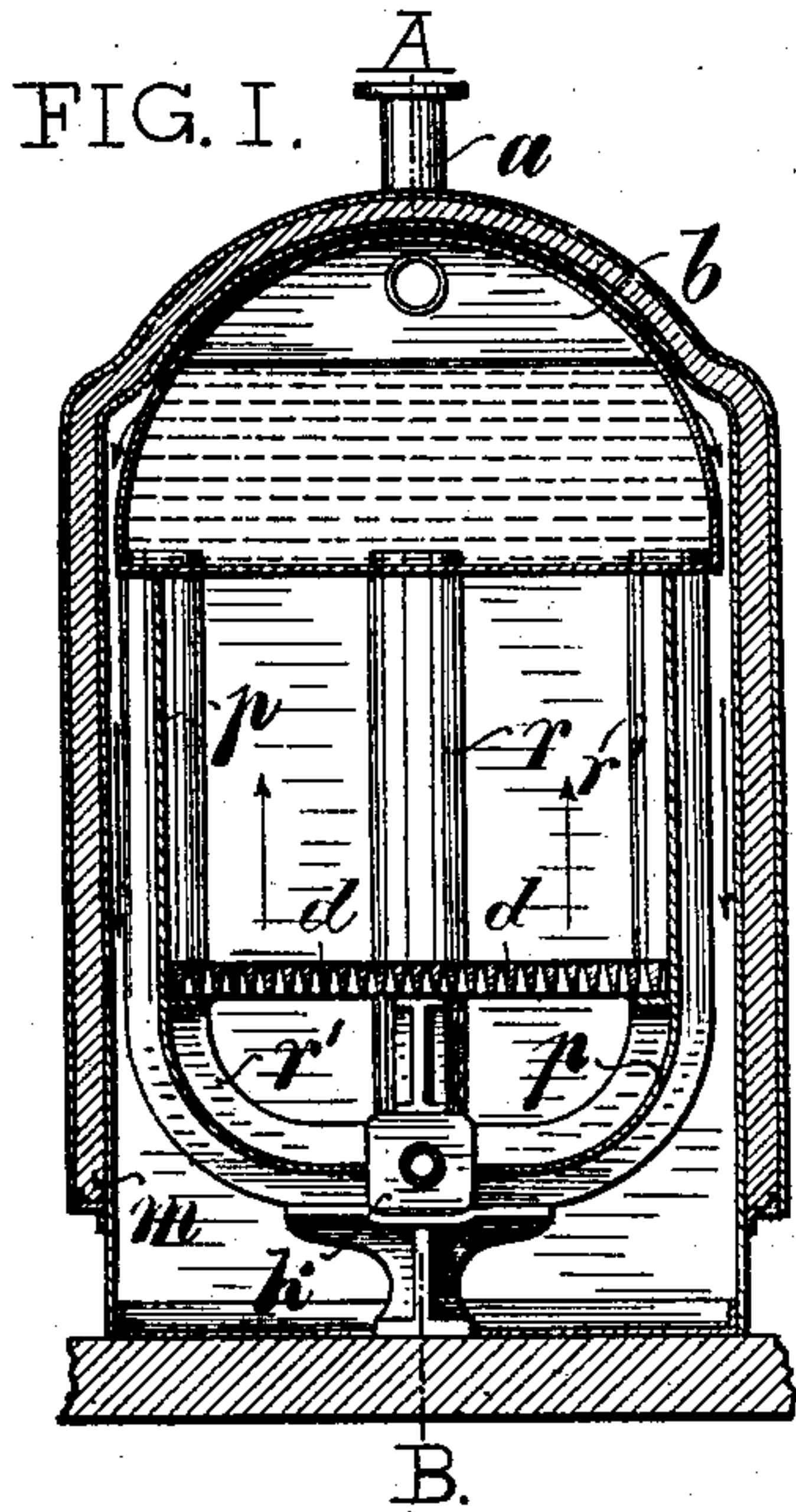


No. 720,205.

PATENTED FEB. 10, 1903.

P. WIEDENFELD.  
SECTIONAL STEAM BOILER.  
APPLICATION FILED SEPT. 9, 1902.

NO MODEL.



Witnesses:  
William Schuck  
Edward Ray

Inventor:  
Peter Wiedenfeld  
by his attorneys  
Roeder & Briener

# UNITED STATES PATENT OFFICE.

PETER WIEDENFELD, OF DUISBURG, GERMANY.

## SECTIONAL STEAM-BOILER.

SPECIFICATION forming part of Letters Patent No. 720,205, dated February 10, 1903.

Application filed September 9, 1902. Serial No. 122,643. (No model.)

*To all whom it may concern:*

Be it known that I, PETER WIEDENFELD, a citizen of Germany, and a resident of Duisburg, Germany, have invented certain new and useful Improvements in Sectional Steam-Boilers, of which the following is a specification.

This invention relates to a sectional boiler of novel construction and in which a superior generation of steam is obtained.

In the accompanying drawings, Figure 1 is a cross-section of my improved boiler on line C-D, Fig. 2; Fig. 2, a longitudinal section thereof on line A-B, Fig. 1; Fig. 3, a front view, and Fig. 4 a horizontal section on line E-F, Fig. 2.

The boiler is composed of a suitable number of sections arranged side by side and each consisting of a chamber *b* and three tubes *r r' r'*, depending from and communicating with said chamber. The central tube *r* is preferably of oval cross-section and communicates with the side tubes *r'* by means of a box *k*. The chambers *b*, as well as the boxes *k*, communicate with each other by pipes *t* and *s*, respectively. Through the pipes *t* the steam contained in the several chambers *b* escapes to the take-off pipe *a*. The latter is also connected to the lower end of the foremost chamber *b* below the water-level and

may be provided with a water-gage. The two spaces intermediate the center tubes *r* and the outer tubes *r'* contain each a grate *d*. In this way two separate fire-boxes are formed, which may be alternately charged, so that a uniform production of steam is effected. The outer tubes *r'* are connected with each other by means of partitions *p* in order to close the openings between the tubes. The heating-gases rise in the spaces between the tubes *r* and *r'* and escape laterally between the several chambers *b*, from where they descend between tubes *r'* and jacket *m* to the chimney.

By my invention the durability of the boiler is increased, and its several parts may be easily replaced when necessary.

What I claim is—

A sectional steam-boiler composed of a series of communicating chambers, a pair of outer tubes and an inner tube depending from each chamber, boxes for connecting the tubes, means for connecting the boxes, and grates arranged between the inner tubes and the outer tubes, substantially as specified.

Signed by me at Dusseldorf, Germany, this 28th day of August, 1902.

PETER WIEDENFELD.

Witnesses:

WILLIAM ESSENWEIN,  
PETER LIEBER.