

(No Model.)

J. PETTERSON.  
STEAM KETTLE.

No. 410,852.

Patented Sept. 10, 1889.

Fig. 1.

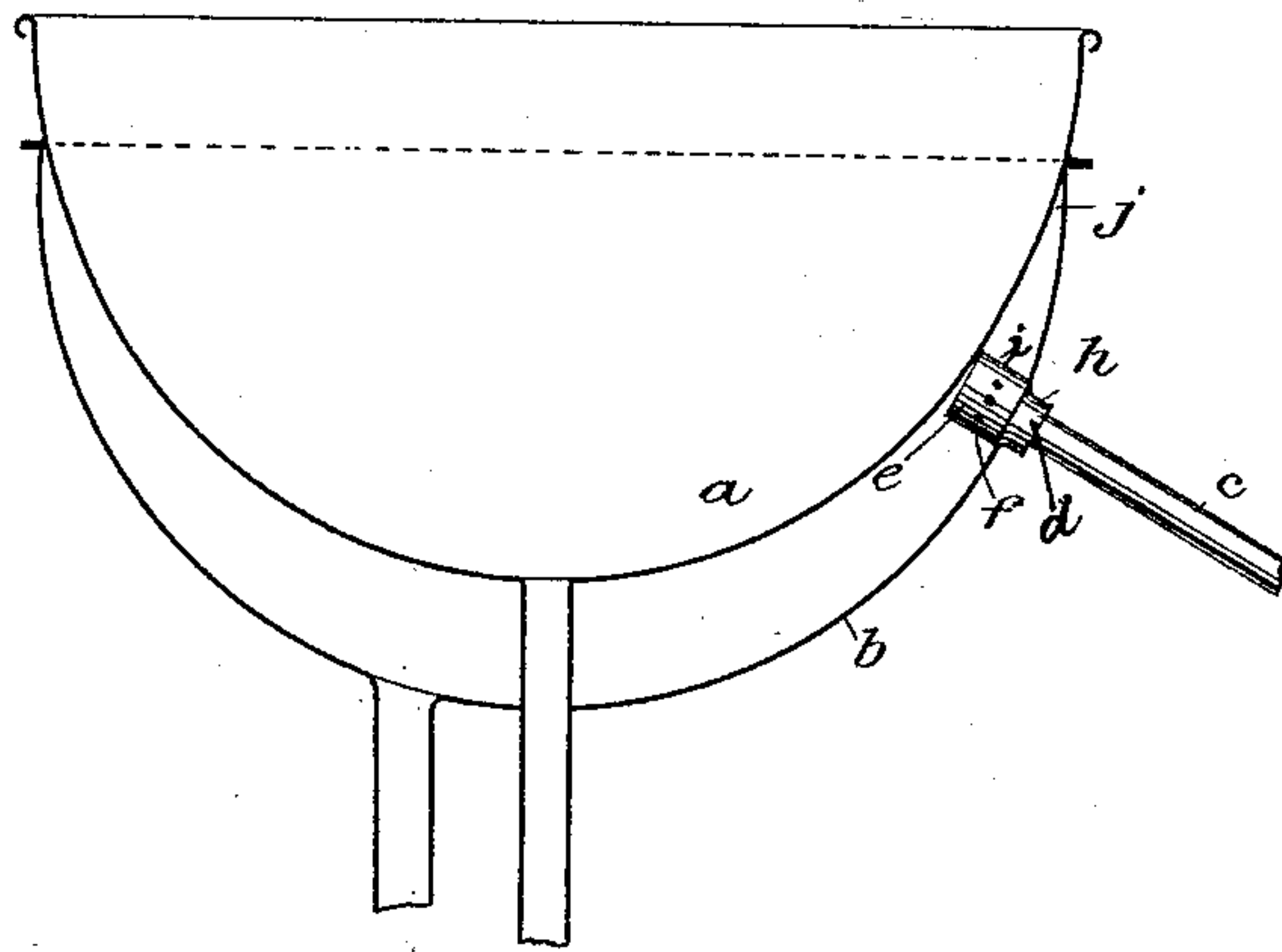


Fig. 2.

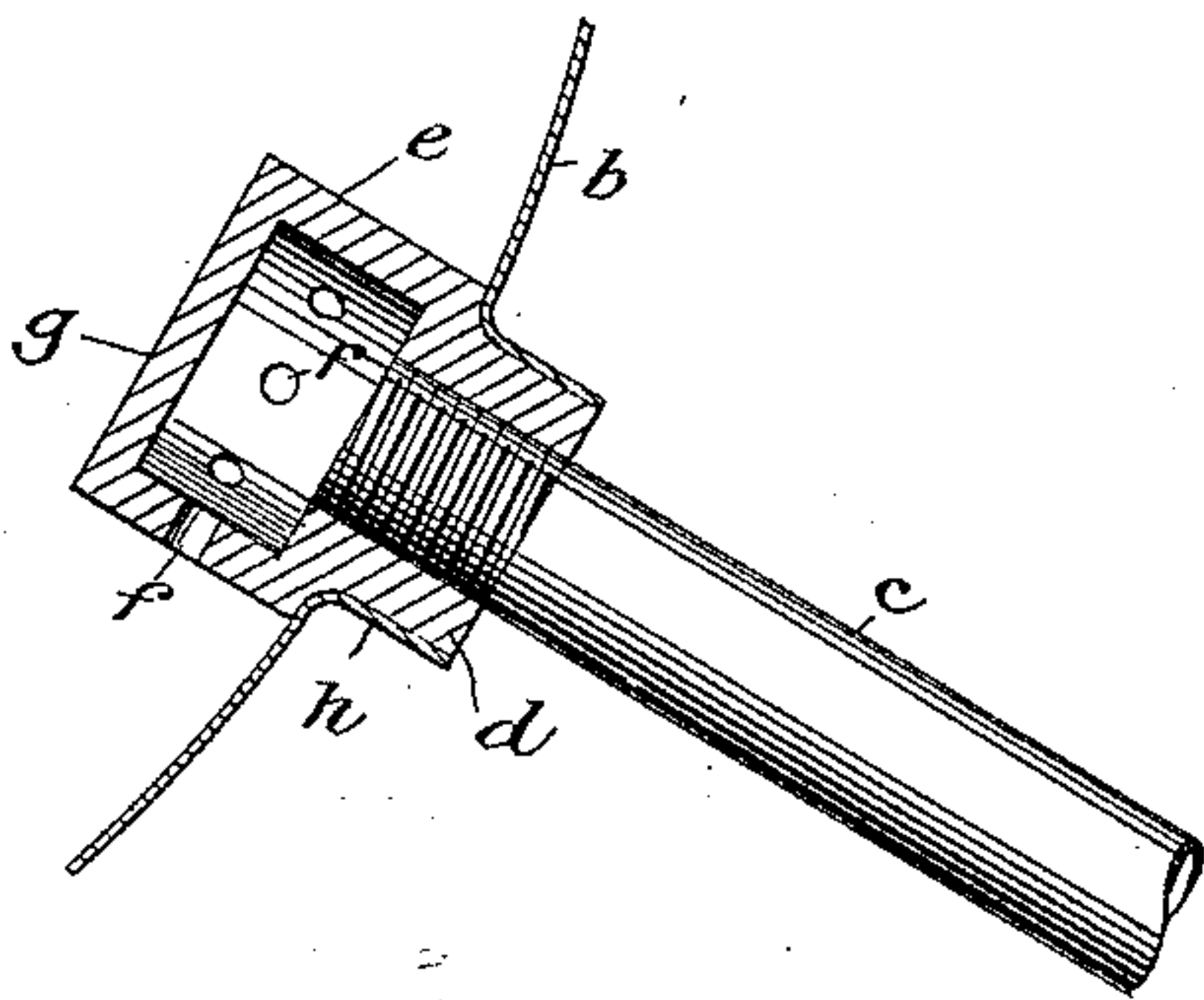


Fig. 3.

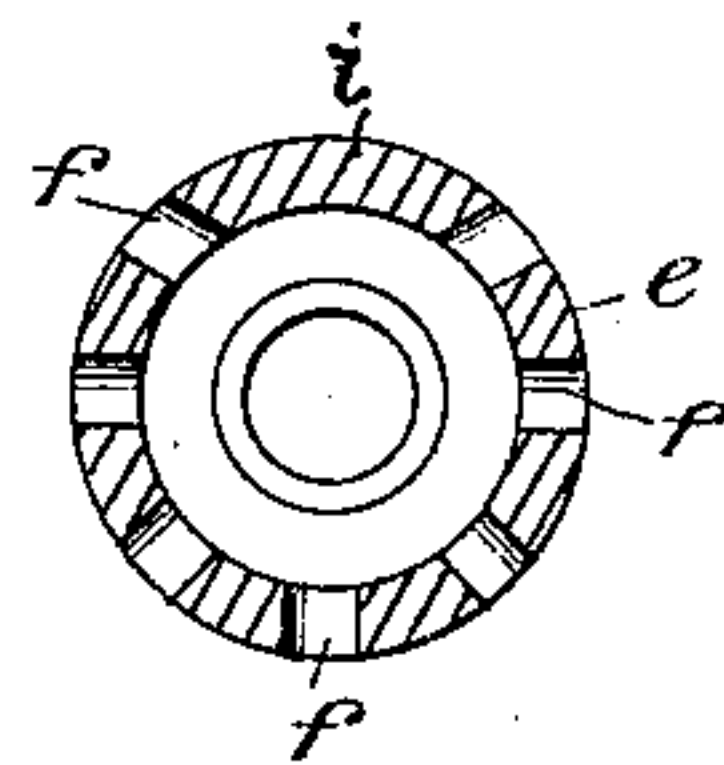
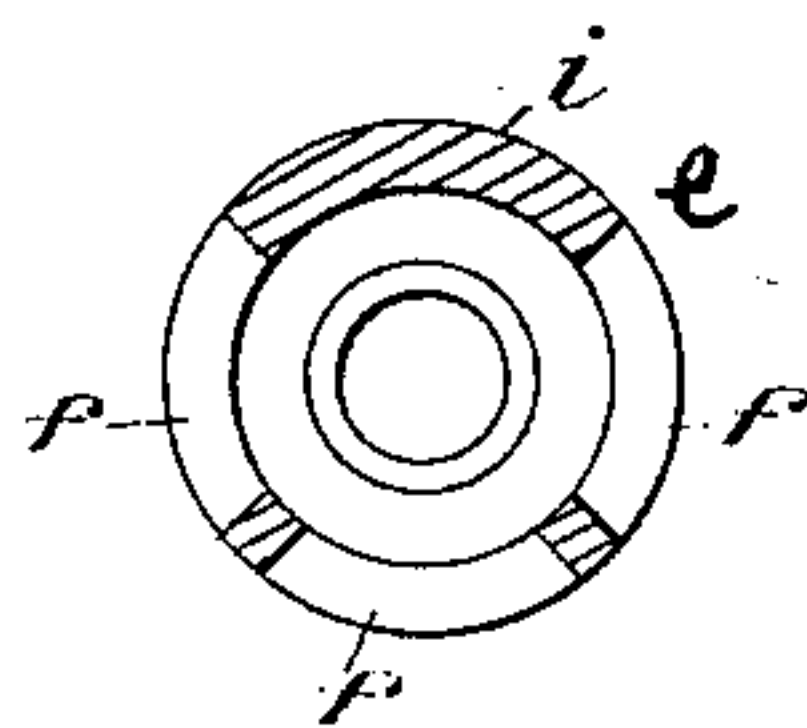


Fig. 4.



Witnesses:

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# UNITED STATES PATENT OFFICE.

JOHN PETTERSON, OF NEW YORK, N. Y.

## STEAM-KETTLE.

SPECIFICATION forming part of Letters Patent No. 410,852, dated September 10, 1889.

Application filed April 1, 1889. Serial No. 305,535. (No model.)

*To all whom it may concern:*

Be it known that I, JOHN PETTERSON, a citizen of the United States, residing at New York, in the county of New York and State of New York, have invented certain new and useful Improvements in Steam-Kettles; 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 consists of an improved construction of the distributing-nozzle attachment for the steam-pipe connecting with the jacket to prevent the kettle from overheating in the locality of the steam-inlet, as herein-after described, reference being made to the accompanying drawings, in which—

Figure 1 is a transverse section of a steam-kettle with my improvement applied. Fig. 2 is a longitudinal section of the distributing-nozzle and a part of the steam-jacket on an enlarged scale. Fig. 3 is a transverse section of the nozzle as represented in Figs. 1 and 2, and Fig. 4 is a similar section of the nozzle slightly modified as to the form of the issues.

*a* represents the kettle; *b*, the steam-jacket, and *c* the steam-pipe.

My purpose is to provide an improved construction of laterally-distributing nozzle and prevent the discharge of the steam directly through the jacket *b* against a locality of the kettle which would be thereby heated to a greater extent than elsewhere, which is injurious to the kettle and to the contents when used for some purposes, and it also discolors the kettle in the said locality, which it is highly desirable to avoid. I therefore provide the steam-jacket with the connecting-bush *d* for the steam-pipe, having the distributing-nozzle *e*, with orifices *f* for distributing the steam, and also for directing it laterally from the point of entry, and being closed by a head *g*, preventing the jet from striking the kettle. The bush *d* itself is practically the same as is usually employed, said bush being fitted into a drawn-up collar *h* of the plate-metal shell of the jacket and secured with hard

solder; but in my improvement of the same it is made with the chambered nozzle *e* on the inner end, having the said lateral orifices, so that when the jacket is fitted with the bush for the connection of the steam-pipe and prior to the connection of the jacket and kettle the nozzle is also attached thereby without other fitting or expense.

I prefer to construct the nozzle with an imperforate section *i* of one side of such length that said side being placed in the direction of the shortest distance between the nozzle and the junction of the kettle and jacket at *j* above no jets will be discharged in that direction, where by the convergence of the two, and owing to the short distance, (it being preferred to connect the nozzle well up the side,) the kettle might be overheated and the packing blown away.

The issues may consist of several openings of uniform size, as in Figs. 2 and 3, or of two or more long and narrow slots, as in Fig. 4.

I claim as my invention—

1. In a steam-kettle, the combination, with the jacket and steam-inlet pipe, of the combined pipe-connecting bush and laterally-distributing nozzle, consisting of an ordinary pipe-connecting bush having the chambered nozzle *e* on the inner end and the lateral issues *f* through the sides and being secured in the jacket, substantially as described.

2. The combination, with a steam-kettle, of a distributing-nozzle located within the steam-space connected with the steam-pipe, and having laterally-directed issues distributing the steam laterally to the contiguous portion of the kettle, except in the direction of the junction of the kettle and jacket above the pipe-connection, and said nozzle being located in one side of the jacket near said junction, substantially as described.

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

JOHN PETTERSON.

Witnesses:

A. W. ALMQVIST,  
JEAN A. JOHNSON.