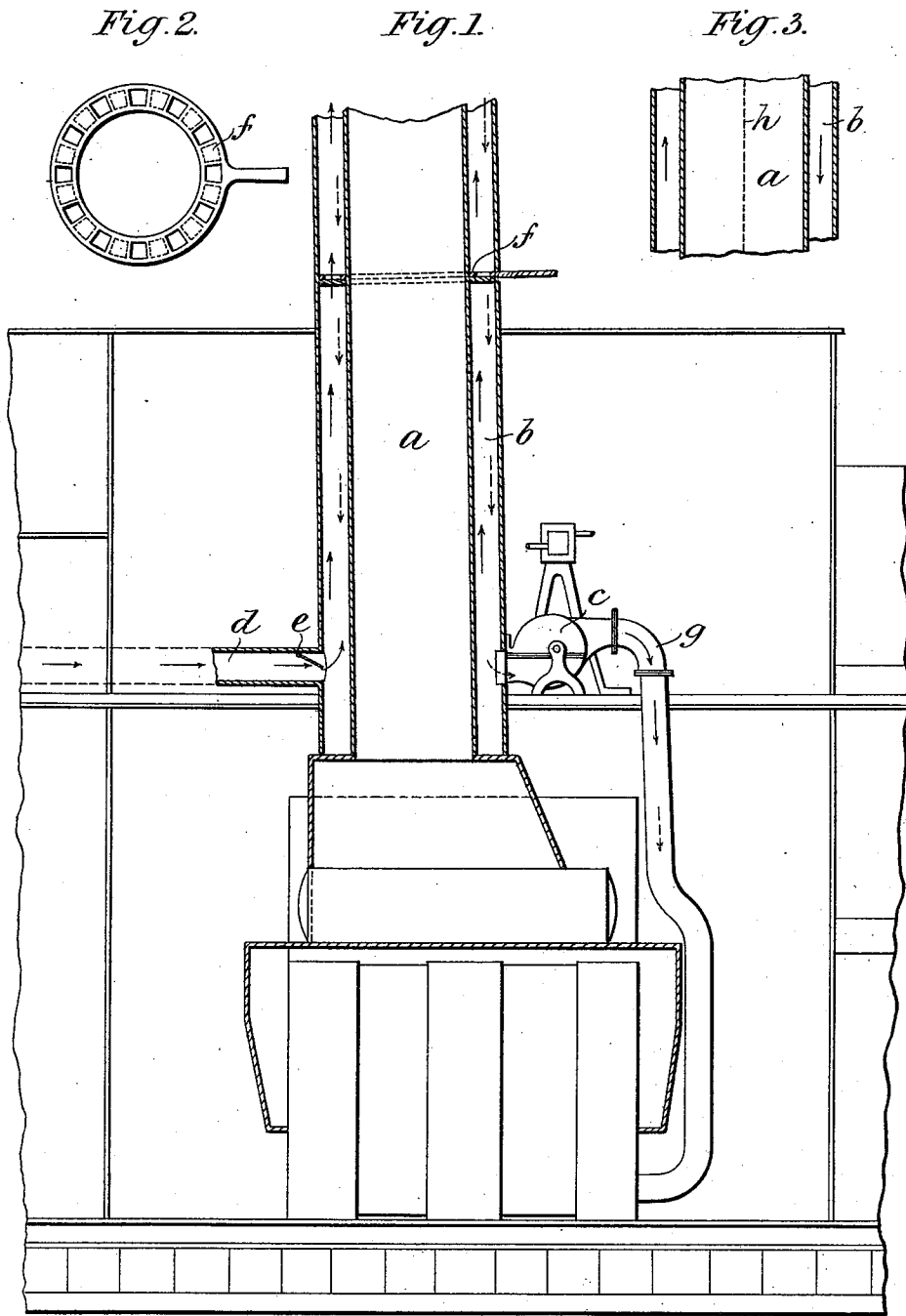


(No Model.)

T. M. RYMER-JONES.
HEATING FORCED DRAFT.

No. 523,598.

Patented July 24, 1894.



WITNESSES
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UNITED STATES PATENT OFFICE.

THOMAS MANSON RYMER-JONES, OF LONDON, ENGLAND.

HEATING FORCED DRAFT.

SPECIFICATION forming part of Letters Patent No. 523,598, dated July 24, 1894.

Application filed November 14, 1893. Serial No. 490,913. (No model.)

To all whom it may concern:

Be it known that I, THOMAS MANSON RYMER-JONES, a subject of Her Majesty the Queen of Great Britain, residing at London, England, have invented a certain new and useful Improvement in Heating Forced Drafts and Ventilating Steamships, of which the following is a specification.

My invention relates to an improvement in the heating of forced drafts and ventilating steamships and consists in utilizing the waste heat from the funnels of steamers by means of a jacket placed around the funnel with a fan for forcing the draft through the furnaces, and with pipes leading from the different parts of the vessel into said jacket for ventilating purposes.

To clearly explain my invention reference is made to the accompanying drawings, in which—

Figure 1 is longitudinal section of a portion of a steamship having my improvement applied thereto. Fig. 2 is a plan of the funnel valve and Fig. 3 is a longitudinal section of a portion of the funnel illustrating a modification.

Around the funnel *a* I arrange a casing *b* in connection with a fan *c* on one side, said fan being driven by an engine or in any other suitable way while on the other side of the casing is a pipe *d* connected therewith said pipe being provided with a flap valve *e*. At some convenient point in the funnel casing is arranged a hit and miss valve *f* consisting of two perforated rings or plates fitting into the annular space forming the casing. This valve may be operated from the outside by means of a handle to open or close the passage through the casing. The fan *c* connects with a pipe *g* which leads to the furnaces.

When a forced draft is required the fan *c* draws a downward current of air through the casing which passes over the heated surface of the funnel and at the same time draws the foul and heated air by means of the pipe

d from all parts of the ship the pipe *d* being in connection with branch ventilating pipes for this purpose, such heated air is delivered through the pipe *g* to the furnaces.

When in harbor and when forced draft through the furnaces is not required the fan can be stopped the heat from the funnel even with damped down fires being sufficient to cause an upward draft through the casing which exhausts the foul air from the pipe and connections and ventilates all the parts of the ship communicating therewith.

By bracing the jacket *i. e.* by dividing it vertically by a partition *h* as shown in dotted lines Fig. 3 and connecting the pipe *d* to the casing on one side of same and the fan *c* to the other side the two drafts may be made to work, the one downward and the other upward at the same time. The valve *e* in the pipe *d* prevents any down cast of heated air passing into said pipe.

It will be evident that the casing *b* may be arranged only as a ventilating casing when a forced draft is not required and in that case the fan *c* may be dispensed with or the forced draft connection may be used alone without the ventilating connection.

What I claim is—

In combination the funnel *a* provided with a casing *b*, a partition dividing the casing, a ventilating pipe *d* connected to the casing on one side of the partition and provided with a flap valve, and a fan connecting with the casing on the other side of the partition and adapted to draw heated air from one side of the casing and deliver it to the fire, substantially as described.

In testimony whereof I have hereunto set my hand in the presence of two subscribing witnesses.

THOMAS MANSON RYMER-JONES.

Witnesses:

PHILIP M. JUSTICE,
ALLEN PARRY JONES.