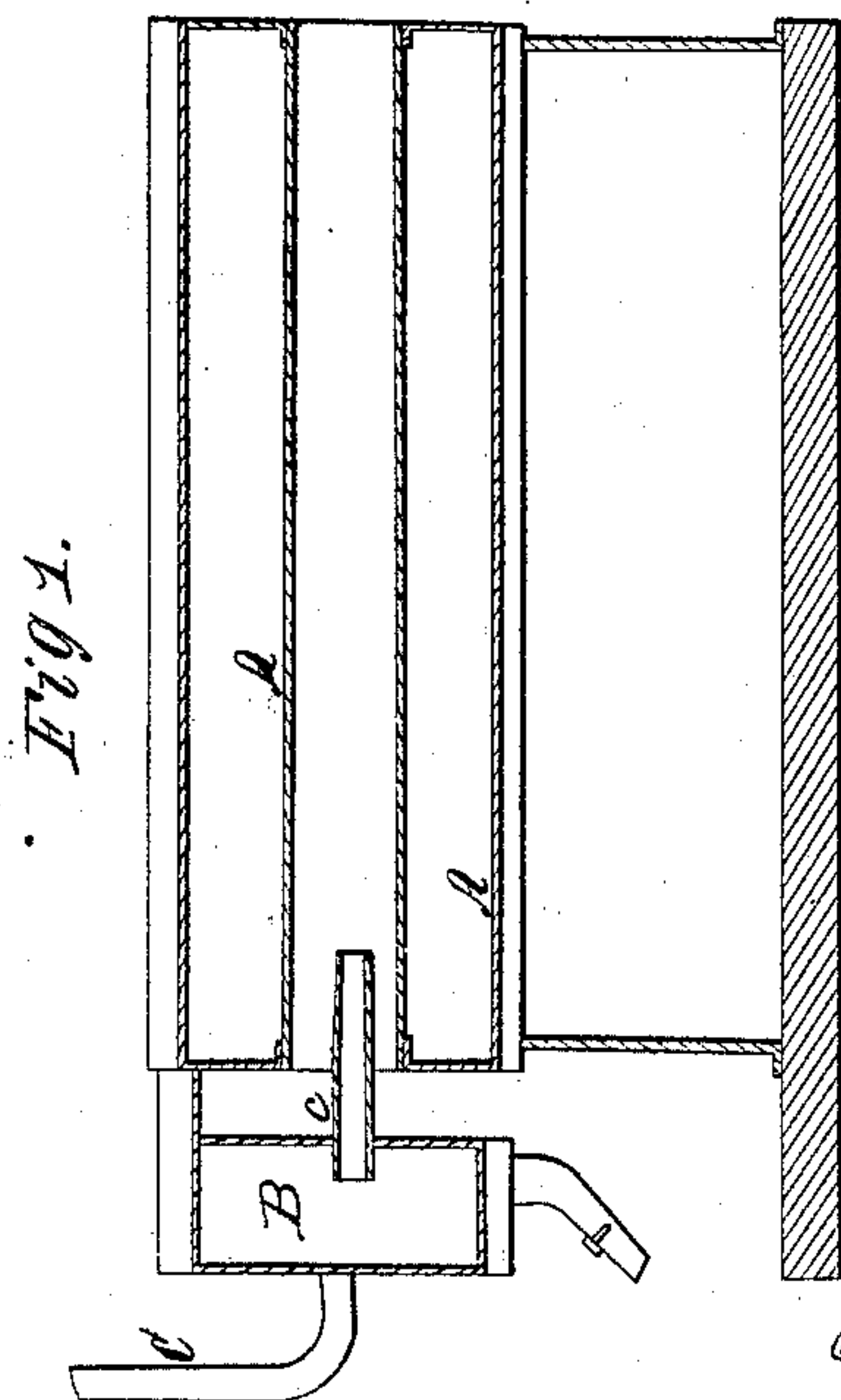
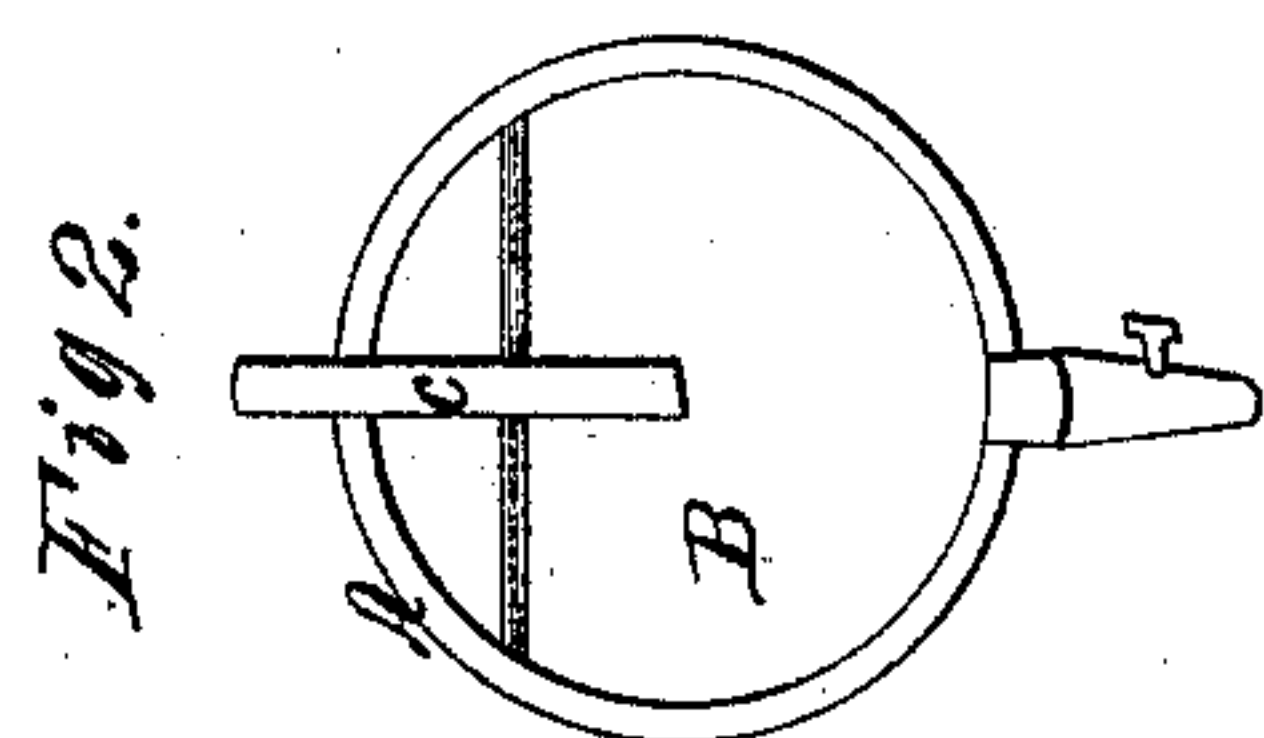
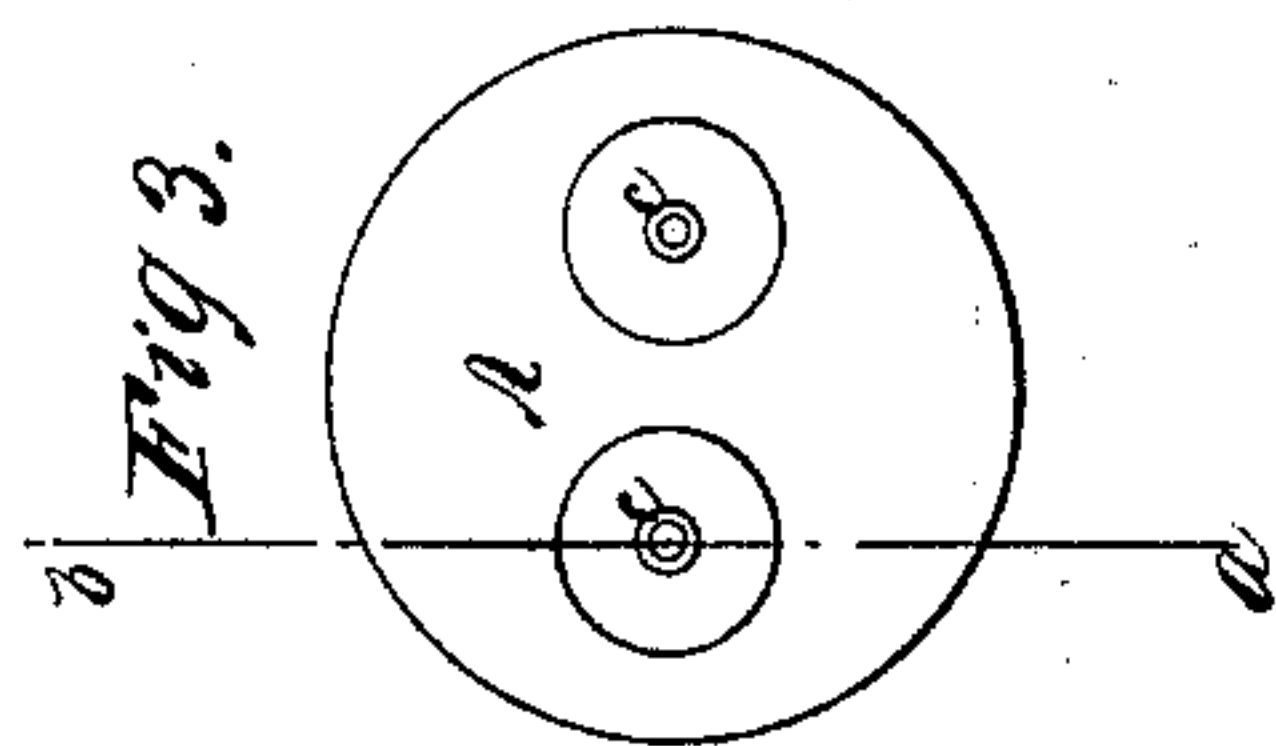


*J. H. Johnson,*  
*Steam-Boiler Attachment.*  
*N<sup>o</sup> 58,264.                      Patented Sep. 25, 1866.*



*Witnesses.*

*J. H. Keenel*  
*A. Wagner*

*Inventor.*  
*J. H. Johnson*  
*By his Attorney*  
*M. Pendolph*

# UNITED STATES PATENT OFFICE.

J. H. JOHNSON, OF PADUCAH, KENTUCKY.

## IMPROVEMENT IN STEAM-BLOWERS.

Specification forming part of Letters Patent No. **58,264**, dated September 25, 1866; antedated September 10, 1866.

*To all whom it may concern:*

Be it known that I, J. H. JOHNSON, of the city of Paducah, in the county of McCracken and State of Kentucky, have invented a new Exhaust Steam-Blower for the purpose of increasing the draft in furnaces used for heating steam-boilers; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawings, and to the letters of reference marked thereon.

Figure 1 of the annexed drawings is a vertical longitudinal section of a boiler to which one of the improved blowers is attached. This section is taken on the line *a b*, shown in Fig. 3. Fig. 2 is an end elevation of the end of the boiler to which the blower is attached. Fig. 3 is a front-end elevation of the boiler, showing the nozzle of the blower-pipes in the back end of the flues.

The nature of this invention consists in discharging the escape-steam from the engines into a suitable receiving-chamber located conveniently contiguous to the rear end of the boilers. From this receiving-chamber there are suitable small pipes or tubes through which the steam is discharged into the flues of the boilers, the current of the steam so discharged into the flues being in the same direction as the current of the hot air and smoke passing from the fire-box to the chimneys. It is especially adapted to use on steam-vessels, but may be employed equally advantageously in all places where exhaust-steam can be used to assist the draft of an otherwise imperfect chimney.

The boiler A is provided with a receiving-chamber, B, attached to its rear end. The exhaust-steam pipe C leading from the engines is connected with the chamber B. From the

steam-receiving chamber B there are conical tubes *c* through which the steam is discharged into each of the several flues of the whole of the series of boilers. These tubes *c* should extend a sufficient distance into the chamber B to prevent the condensed steam running into them and through them into the flues of the boilers in the shape of water. There should be a suitable pipe, with a stop-cock in it, for the purpose of drawing off the condensed steam from the chamber B.

The exhaust-steam from the engines will escape through the pipe C into the chamber B, whence it will be forced with equal velocity through each of the tubes *c* into the several flues of the boilers. The result of this will be that the flues will be kept constantly clean of soot, the hot steam passing through the flues will have a tendency to raise the temperature in them, and, at the same time, the steam being discharged into the flues with considerable velocity, and in the same direction as the draft from the furnace, will have a tendency to increase the draft.

I am aware that the exhaust-steam from the engines has before now been turned into the smoke-chimneys for the purpose of increasing the draft, also that direct steam from the boilers has been discharged into the flues of boilers for the same purpose; but

What I do claim, and desire to secure by Letters Patent, is—

The exhaust-pipe C, the receiving-chamber B, and the conical tubes *c*, when combined and operated as herein described and set forth.

J. H. JOHNSON.

Witnesses:

M. RANDOLPH,  
A. WAGNER.