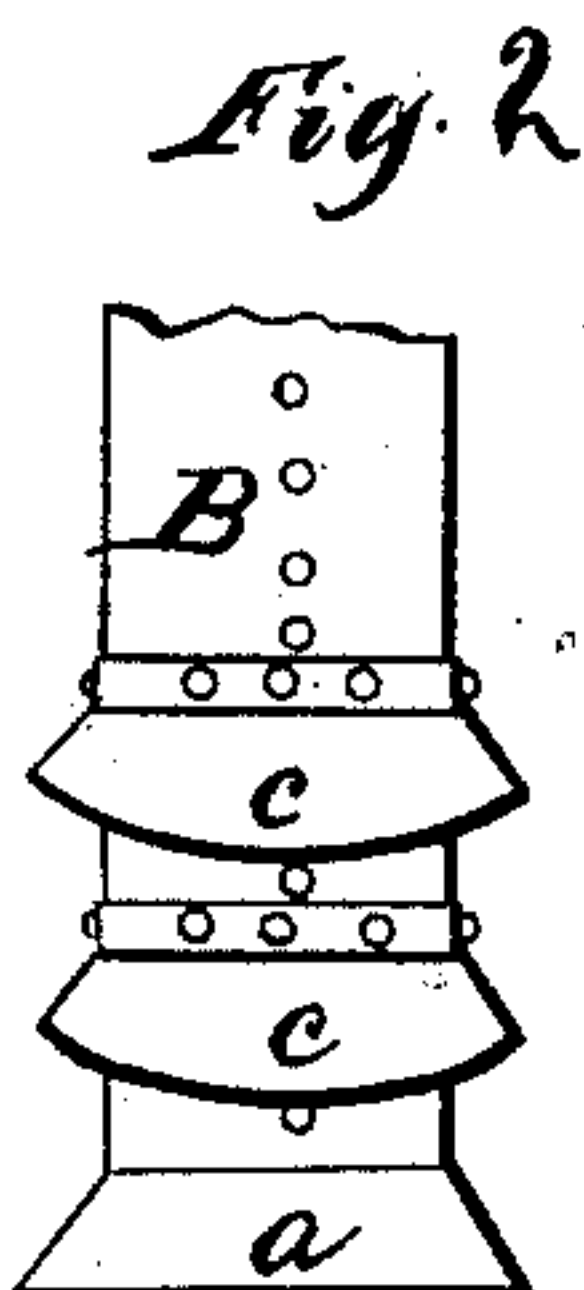
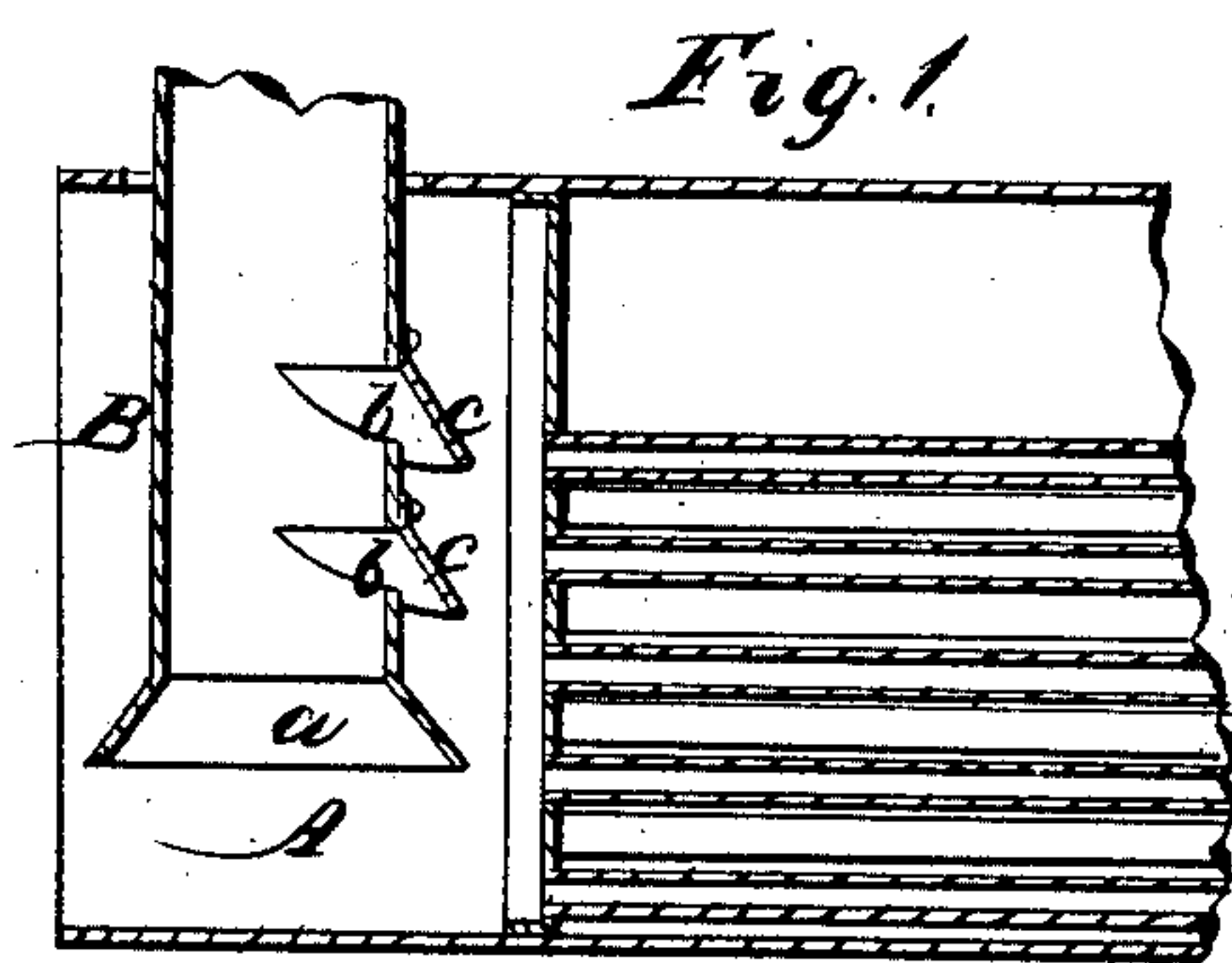


J. M. Foss,
Spark Arrester,
No 55,479, Patented June 12, 1866



Witnesses.
Samuel N. Peppin
J. Curtis.

Inventor
J. M. Foss
by his attorney.
N. H. Eddy

UNITED STATES PATENT OFFICE.

JAMES M. FOSS, OF CONCORD, NEW HAMPSHIRE.

IMPROVEMENT IN DRAFT-PIPES FOR LOCOMOTIVES.

Specification forming part of Letters Patent No. 55,479, dated June 12, 1866.

To all whom it may concern:

Be it known that I, JAMES M. FOSS, of Concord, in the county of Merrimack and State of New Hampshire, have invented a new and useful Improvement in Draft-Pipes for Locomotive-Engines; and I do hereby declare the same to be fully described in the following specification, and represented in the accompanying drawings, of which—

Figure 1 is a vertical section of a smoke-box or chamber and the draft-pipe thereof as provided with my improvement. Fig. 2 is a rear view of the draft-pipe.

The draft-pipe in question is a conduit extending down into the smoke-chamber A, as shown at B, and terminates in a trumpet-mouth, *a*, the said pipe at its top being made to open into the chimney of the boiler. The exhaust-pipes of the steam-cylinder generally discharge their steam into the mouth of the draft-pipe in order to increase the draft of the furnace.

In the rear half of the draft-pipe, and just above its mouth, I form two holes or passages,

b b, of a segmental form, and cap each hole by a visor, *c*, to extend from the external surface of the pipe, in manner as exhibited in the drawings.

The draft being usually sluggish in the lower tubes of the stack which leads from the furnace into the smoke-chamber, the holes *b b* and their visors *c c* serve to quicken the draft in the lower half of the stack. This has been found to result in practice, and its useful effect in the increased power of the boiler to generate steam has been clearly demonstrated.

I claim—

The draft-pipe as made with two or any other suitable number of holes, *b b*, arranged in its rear and having a visor, *c*, to each, and with the front of the pipe closed and its lower end open, substantially as described.

JAMES M. FOSS.

Witnesses:

JOHN KIMBALL,
ISAAC N. FARLEY.