

J. E. WOOTTEN.
Locomotive Spark-Arresters.

No. 153,145.

Patented July 14, 1874.

FIG. 1

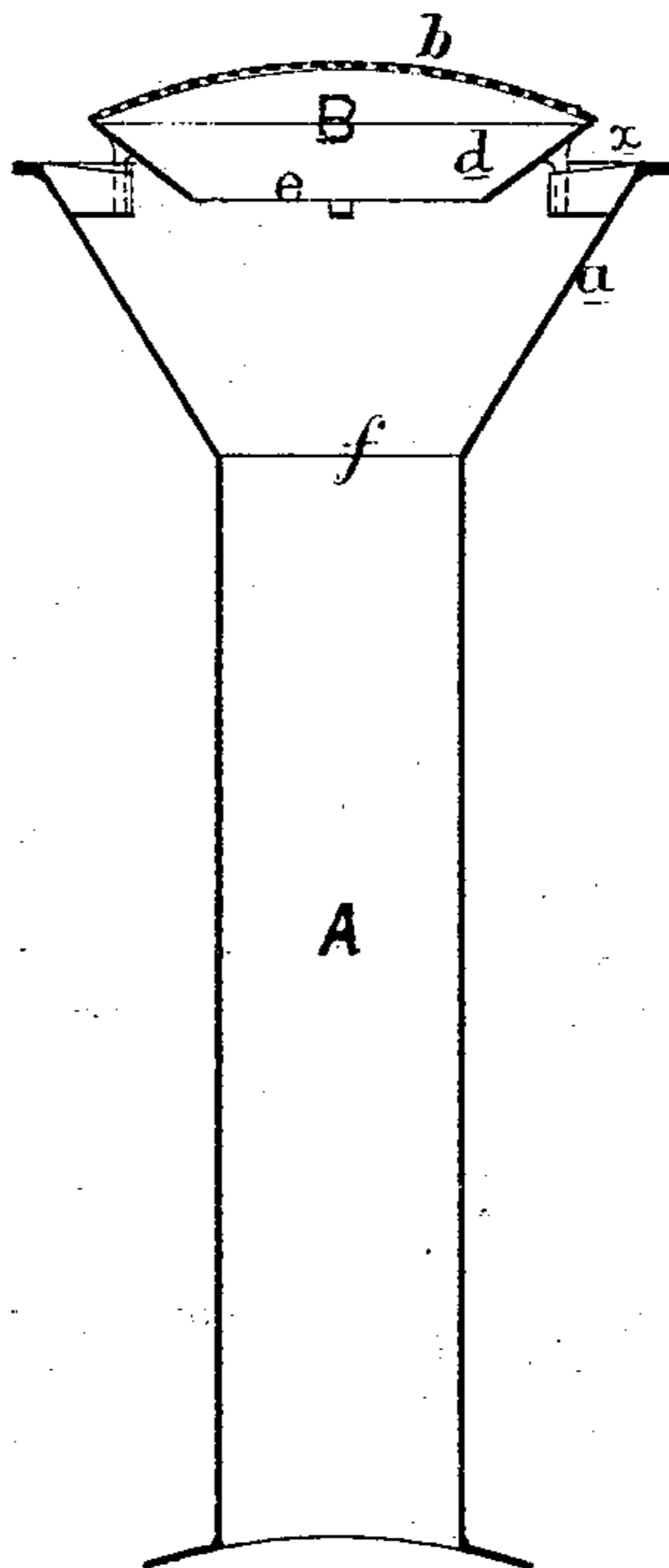
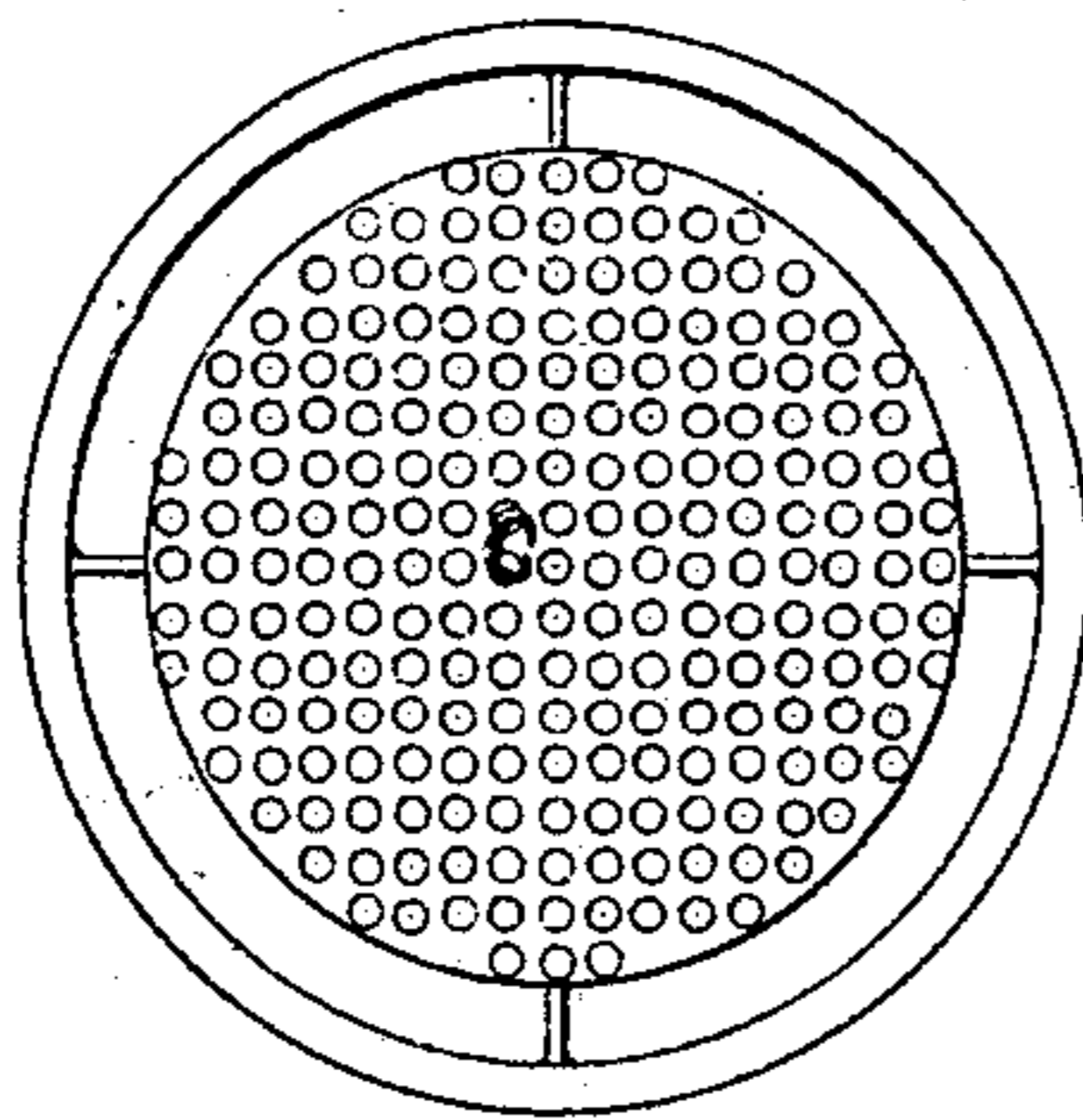


FIG. 2



WITNESSES

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JOHN E. WOOTTEN, OF READING, PENNSYLVANIA.

IMPROVEMENT IN LOCOMOTIVE SPARK-ARRESTERS.

Specification forming part of Letters Patent No. **153,145**, dated July 14, 1874; application filed June 3, 1874.

To all whom it may concern:

Be it known that I, JOHN E. WOOTTEN, of Reading, Berks county, Pennsylvania, have invented an Improved Locomotive Spark-Arrester, of which the following is a specification:

The object of my invention is to so construct a spark-arrester for coal-burning locomotives that, while it effectually prevents the escape of large sparks, it will afford a free outlet for the discharge of the exhaust steam.

This object I attain in the manner which I will now proceed to describe, reference being had to the accompanying drawing, in which Figure 1 is a vertical section of a chimney with the improved spark-arrester, and Fig. 2 a plan view. The body A of the chimney is of the usual dimensions and is surmounted with a flaring top, *a*, for receiving the spark-arrester B, which consists of a perforated circular deflecting plate, *b*, united at its edge to the outer edge of the beveled ring *d*, the central opening of which is about one-fourth larger in diameter than the chimney. The spark-arrester B is situated, in respect to the top of the chimney, as shown, so that there will be little or no obstruction to the rapid passage of steam and gases into the atmosphere through the annular space *x*, between the ring *d* and the flaring top *a* of the chimney, while the sparks, owing to the momentum which they have acquired, will pass through the

opening *e* and strike against the perforated plate *b*. Such sparks and cinders as are too large to pass through this plate will be either temporarily lodged on the ledge formed by the ring *d* or will return to the chimney, to be again impelled against the perforated plate until they are so far reduced in size that they will pass through the perforations of the plate or escape, in a pulverized and harmless condition, with the steam and gases through the space between the ring *d* and the flaring top of the chimney. A good proportionate distance from the lower edge of the spark-arrester to the point *f*, where the body of the chimney terminates, will be that equal to the diameter of the said body of the chimney.

I claim as my invention—

The combination, with the chimney A, enlarged at the top, of the spark-arrester B, consisting of the perforated plate *b* and beveled ring *d*, and arranged at the mouth of the chimney to form an intervening annular space, *x*, substantially as and for the purpose specified.

In testimony whereof, I have signed my name to this specification in the presence of two subscribing witnesses.

JOHN EASTHAM WOOTTEN.

Witnesses:

WM. A. STEEL,
HARRY SMITH.