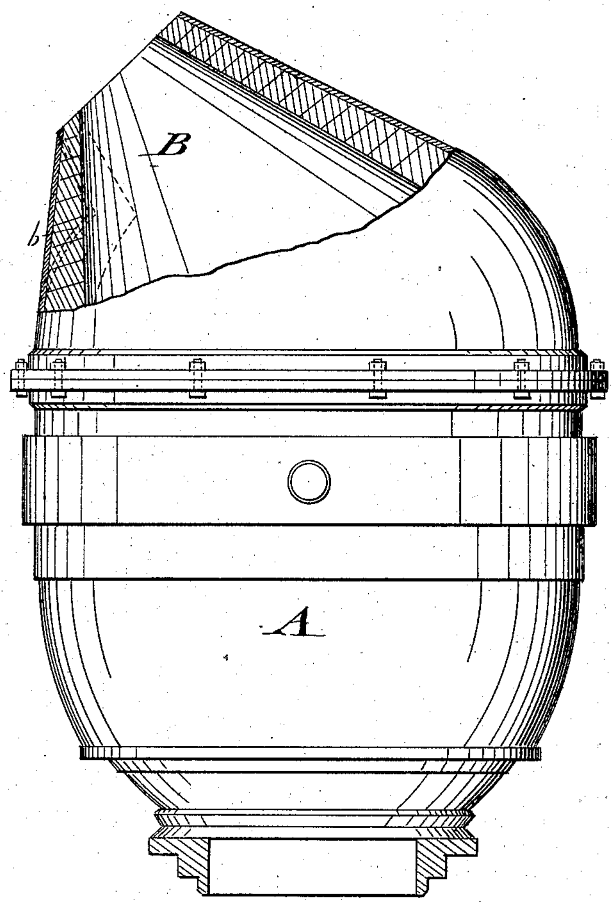
A. S. DUNNING.

Bessemer Converter.

No. 164,982. Patented June 29, 1875.



WITNESSES:

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UNITED STATES PATENT OFFICE.

ALMON S. DUNNING, OF JOLIET, ILLINOIS.

IMPROVEMENT IN BESSEMER CONVERTERS.

Specification forming part of Letters Patent No. **164,982**, dated June 29, 1875; application filed May 8, 1875.

To all whom it may concern:

Be it known that I, ALMON S. DUNNING, of Joliet, Will county, Illinois, have invented a new and Improved Converter, of which the following is a specification:

The accompanying drawing represents a side elevation of my improved converter, partly in section.

My invention relates to an improved converter, used in the Bessemer process, so that the wear of the same is diminished, the interior inspected and repaired with greater facility, and the loss of metal by boiling over decreased.

The invention consists of a converter, the nose of which is constructed at the front part in straight or flattened shape.

In the drawing, A represents a converter as used in the Bessemer process for making cast-steel, which is shown in section at the nose part B for illustrating my improvement. The converters at present in use are of spherical shape, with an inclined cone or nose intersecting therewith at the top. The nose forms an inwardly-projecting angle, curve, or corner, that is exposed to the strong current of flame issuing by the blast of the heated metal. The lining is thereby worn off very fast, so that constant repairs are needed. The corner also prevents the inspecting and repairing of the interior, and causes the more violent forcing up of the boiling metal, so as to produce slopping or boiling over. All these defects are substantially and satisfactorily remedied by changing the front side *b* of the nose B from the curved angular shape, indicated in the drawing in dotted lines, to a straight or nearly straight line.

By the removal of the projecting angle or curved convexity the sectional area of outlet is greatly increased, and consequently the force and velocity of the blast diminished. Thus, any metal rolling up will fall back. I have made about twenty thousand tons of steel under this improvement, and with not one-fourth the usual overflow. On the other hand, the perpendicular inside face allows all the lining to be inspected and readily repaired through the nose B; hence,

What I claim as new and of my invention is—

A converter provided with the perpendicular inside face *b*, as and for the purpose specified.

ALMON S. DUNNING.

Witnesses:

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PRESTON M. BONNER.