E. H. RICHTER.

CONDENSER FOR SPELTER-RETORTS.

No. 193,461. Patented July 24, 1877.

Fig: 1

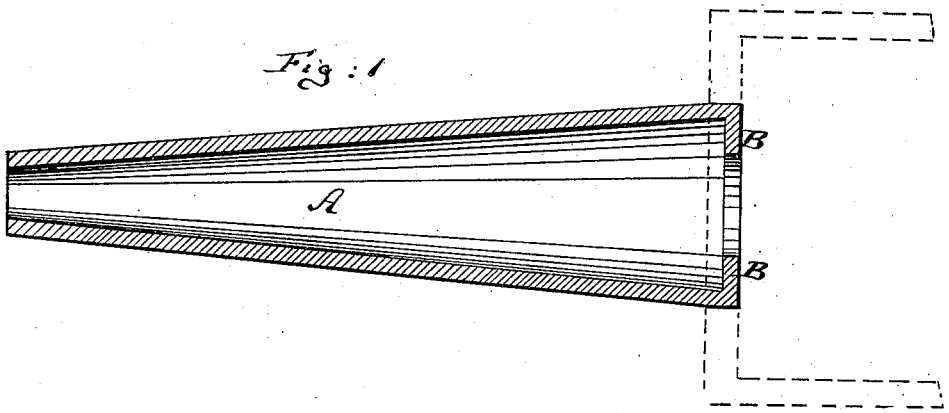
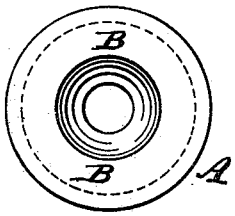


Fig: 2.



Witnesses

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Inventor:

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by his attorney

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UNITED STATES PATENT OFFICE.

ERNST H. RICHTER, OF JERSEY CITY, NEW JERSEY.

IMPROVEMENT IN CONDENSERS FOR SPELTER-RETORTS.

Specification forming part of Letters Patent No. **193,461**, dated July 24, 1877; application filed December 16, 1876.

To all whom it may concern:

Be it known that I, ERNST H. RICHTER, of Jersey City, in the county of Hudson and State of New Jersey, have invented a new and Improved Condenser for Spelter-Retorts, of which the following is a specification:

Figure 1 is a longitudinal central section of my improved condenser. Fig. 2 is an inner end view of the same.

Similar letters of reference indicate corresponding parts in all the figures.

This invention relates to an improvement of the truncated conical condensers that are applied to retorts of spelter-furnaces for condensing the vaporous products of sublimation, and has for its object to strengthen the inner end of the condenser, and also to prevent the entry into such condenser of matter foreign to the products of sublimation to be gathered therein.

The invention consists in supplying the inner larger end of the condenser with an annular bridge or bracing plate, through which the gases may enter the condenser, but which will prevent the fluid contents of the retort from flowing into the condenser.

The letter A in the drawing, represents the condenser. The same is made of the usual or suitable form, preferably of truncated conical shape, made of clay mixed with other ingredients, in the usual or in a suitable manner, and open at both ends. Its larger end is built into the retort in the usual manner, but is in this case strengthened by an inner annular bridge, B, which is made part of and in one piece with the condenser. Through the central opening in this bridge the vapors from the retort can enter the condenser, but the bridge prevents the liquid matter in the retort from flowing into the condenser, and prevents, also, the scraping by a poker or other tool usually employed of matter from the retort into the condenser. The bridge also serves to materially strengthen the inner end of the condenser, which is liable to breakage if not strengthened by such bridge or equivalent means.

By having the bridge of annular form the condenser is in condition to be secured within the retort, with either side up, or, in other words, no care need be taken to keep any particular part of the condenser at the top, bottom, or side.

I claim as my invention—

The condenser A, provided with the annular strengthening-bridge B, substantially as and for the purpose herein shown and described.

ERNST H. RICHTER.

Witnesses:

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