(No Model.)

C. A. CASPERSSON.

APPARATUS FOR POURING AND CASTING METALS.

No. 324,918. Patented Aug. 25, 1885.

Fig: 1.

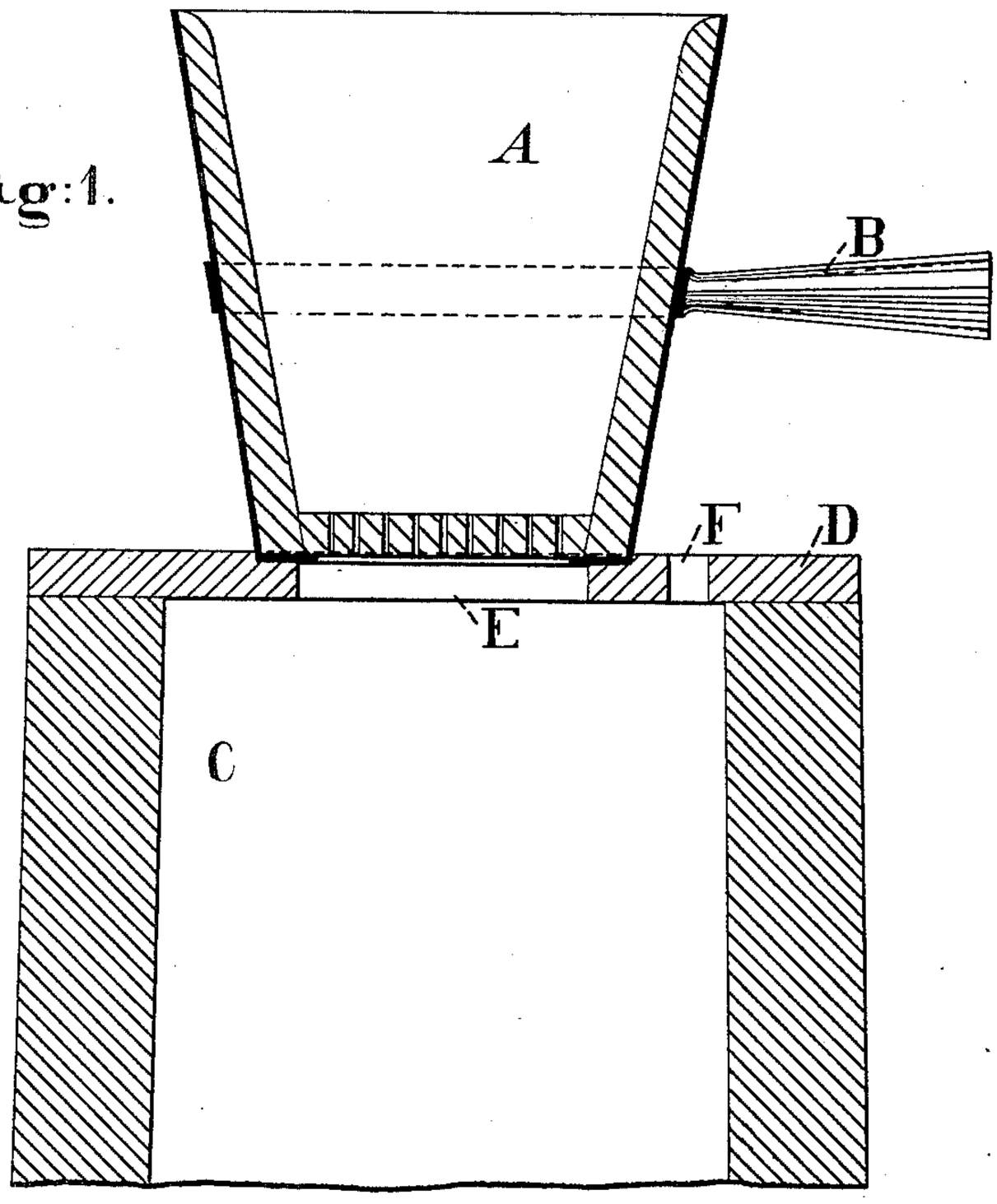
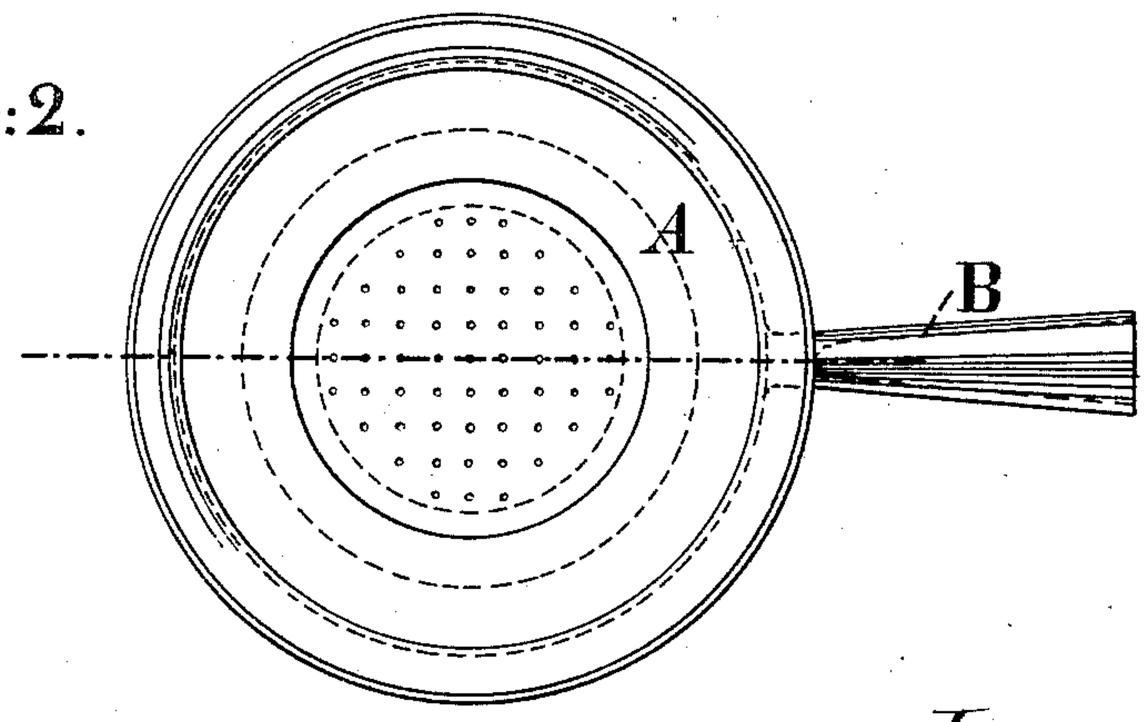


Fig: 2.



Witnesses;
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UNITED STATES PATENT OFFICE.

CARL AUGUST CASPERSSON, OF FORSBACKA, SWEDEN.

APPARATUS FOR POURING AND CASTING METALS.

SPECIFICATION forming part of Letters Patent No. 324,918, dated August 25, 1885.

Application filed March 26, 1884. (No model.) Patented in England March 10, 1884, No. 4,632; in Belgium March 31, 1884, No. 64,438; in Sweden April 5, 1884, No. 102; in France June 6, 1884, No. 160,833; in Germany November 21, 1884, No. 29,585, and in Austria-Hungary November 22, 1884, No. 40,305 and No. 53,923.

To all whom it may concern:

Be it known that I, CARL AUGUST CASPERSSON, a subject of the King of Sweden, residing at Forsbacka, in the Kingdom of Sweden, have invented new and useful Improvements in Apparatus for Pouring and Casting Iron, Steel, and other Metals, of which the following is a specification.

The object of this invention is to procure in the manufacture of iron and steel solid ingots and castings free from blow-holes; but the apparatus can also be applied in the casting of other metals which are liable to get blow-holes. In order to obtain this, I contrive that the stream of metal falling into the mold be divided into a great number of small streams, by which means the gases contained in the metal are enabled to escape, which gases otherwise originate unsound ingots and castings. I use for this purpose a vessel, furnished with openings in the bottom, which I call a "colander-funnel," into which the metal is gradually run, either from the furnace or crucible itself, or from a ladle, and from this colander-funnel the metal then runs down in fine streams into the mold, which is placed underneath. The finer the perforations in the colander-funnel the better will be the result obtained, provided always that the perforations are not so small that they become clogged up by the metal under treatment. The accompanying drawings represent the apparatus used in the case of ingot-molds which are filled from above.

Figure 1 shows a colander-funnel in vertical section placed over an ingot-mold. Fig. 2 shows the colander-funnel as seen from above.

A is the colander-funnel, which consists of a vessel of sheet-iron, lined inside with fire-brick or with a mass of some refractory substance, and perforated in the bottom with fine openings.

B is part of the handle for manipulating the colander-funnel.

C is a part of the ingot-mold, and D a plate which is laid on the top of the mold and fits close to the same. In this covering-plate are two openings—the one at E for the colander-funnel, and the other at F for letting out the air and gases set free during pouring.

A covering-plate, D, is first placed over the opening for the pouring in of the metal, and on this is placed a suitable colander-funnel, A, greater or less, according to the size and shape of the ingot-mold, and through this colander-funnel the melted metal is then allowed to run into the mold. By thus closing the mold the fine streams of metal are prevented from becoming oxidated, because the air in the mold is driven out by the gases set free from the metal during casting.

I claim as my invention—

A colander-funnel with perforated bottom for casting or pouring metals in fine streams in molds, in combination with a covering-plate provided with openings, placed over the opening of the mold and around the funnel, substantially as and for the purpose set forth.

In testimony whereof I affix my signature in presence of two witnesses.

CARL AUGUST CASPERSSON.

Witnesses:

F. V. ZETTERLUND,

E. A. WAXIN,

Both of Gefle.