

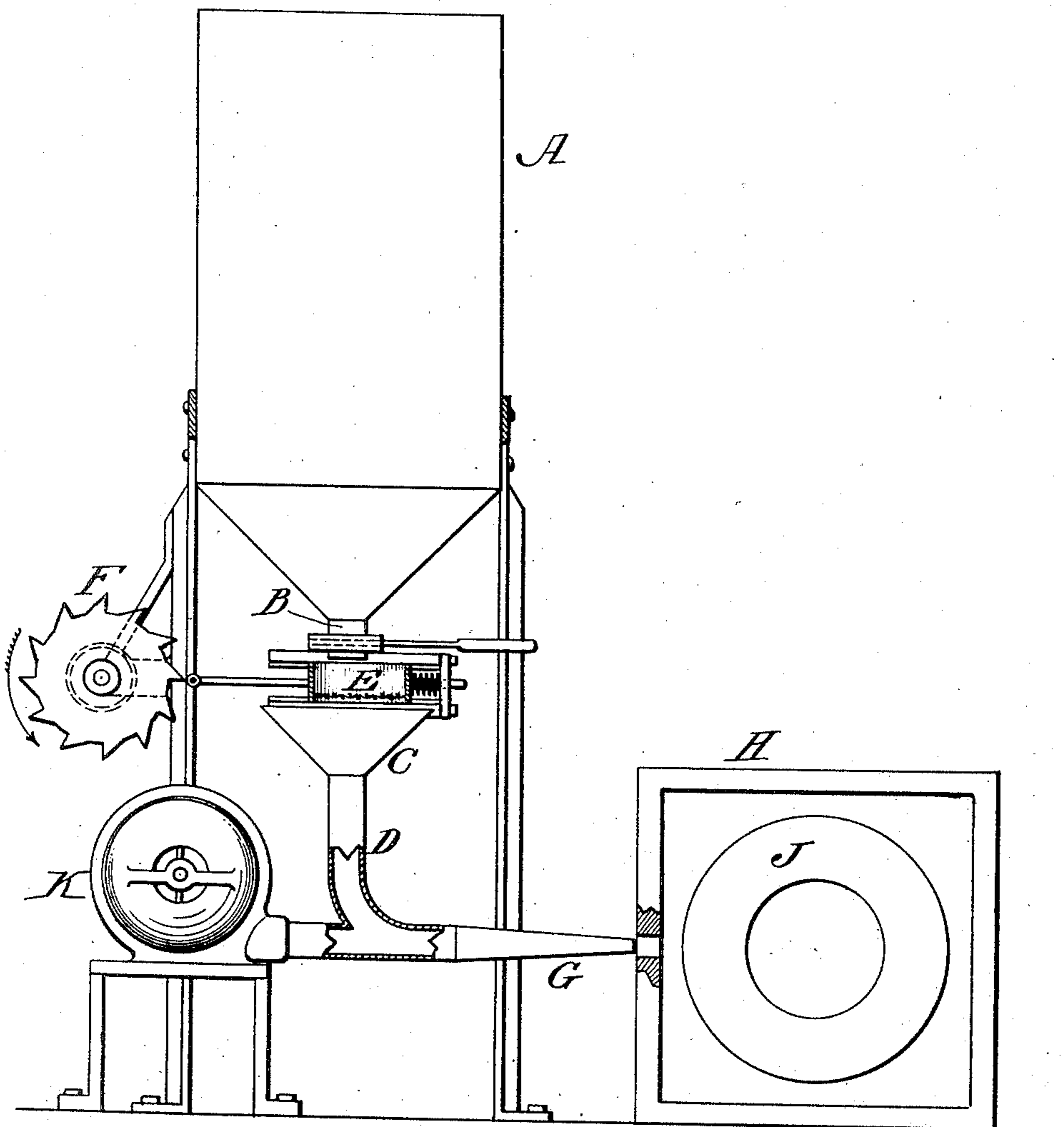
No. 703,171.

Patented June 24, 1902

F. BALDT, SR.
CASTING PROCESS.

(Application filed Jan. 23, 1902.)

(No Model.)



Witnesses

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CASTING PROCESS.

SPECIFICATION forming part of Letters Patent No. 703,171, dated June 24, 1902.

Application filed January 23, 1902. Serial No. 90,867. (No specimens.)

To all whom it may concern:

Be it known that I, FREDERICK BALDT, Sr., a citizen of the United States, residing at Chester, in the county of Delaware, State of Pennsylvania, have invented a new and useful Improvement in a Casting Process, of which the following is a specification.

My invention consists of a casting process, and relates more especially to the introduction of the molding material into a receptacle containing a fusible pattern or of packing molding material or sand around the said pattern.

In the art of casting when employing a fusible pattern said pattern is embedded in the molding material and is afterward heated to a molten state to allow it to run out from the mold that is formed through a suitable opening therein, after which the molten metal of which the article is to be cast is introduced into the space formerly occupied by the fusible pattern.

In casting by this process the fusible pattern is first placed within a box, flask, or casing, after which the sand is packed therearound; and my invention relates especially to the manner of introducing or packing the sand around the pattern, and the accompanying drawing illustrates one form of apparatus by means of which this process can be practiced.

In said drawing, A designates a tank or reservoir containing sand, which is provided with an outlet B, which may be valve-controlled, if desired. Below this outlet B is a pipe or passage D, the upper end C of which is funnel-shaped. Situated over the funnel C is a grate or sieve E, connected with the device F for vibrating the same. The lower end of the passage D communicates with the transverse pipe or nozzle G, one end of which communicates with suitable apparatus, such as a fan, for creating an air blast or current there-through, while the other end communicates with the flask or casing H, within which the pattern J or fusible material is to be supported and afterward embedded.

The following is a convenient way of practicing my process with the apparatus above

described. Sufficient sand is placed within the box or casing H to support a pattern J. Then the outlet B is opened, the sieve or grate E vibrated, and an air-blast directed into the nozzle or pipe G. The result is that the sand falls upon the vibratory grate E, is sifted therethrough, and falls through the funnel C and passage D into the nozzle or pipe G, wherein it is carried off by the air blast or current, being thereby introduced into the box or flask around the pattern and embeds the latter and is packed around the pattern. It is seen that in this manner I am enabled to pack the pattern in a highly-efficient manner, obviating the slow and tedious methods now employed. It is understood, of course, that after the pattern is embedded it is melted by the application of heat and removed through suitable openings made in the sand, thus producing a seamless mold, as will be obvious. The sand is in practice usually damp.

It is understood that my process can be carried out with other apparatus and that my invention is not therefore limited to the means I have illustrated and described for introducing the sand in the form of blast into the flask nor to the manner of supporting the pattern within the flask prior to the introduction of the blast of molding-sand, since the specific means I have set forth are merely to illustrate one practical way in which my process can be practiced. For instance, it may be that the sand can be projected into the flask by centrifugal force or, in fact, any other manner that would project it therein in a stream or blast.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. A process for casting, which consists in forming a fusible pattern, packing molding material therearound by projecting the same with sufficient force to pack the material and form the mold, heating said pattern to a molten state to remove the same, and lastly introducing molten metal into the space formerly occupied by the said pattern.

2. A process for casting which consists in forming a seamless mold by employing a fu-

sible pattern, supporting said pattern in a single receptacle out of contact with the walls thereof, packing the molding material around said pattern by projecting the said material
5 into said receptacle with sufficient force to pack the material and form the mold, heating said pattern to a molten state to remove the

same, and then introducing molten metal into the space formerly occupied by the said pattern.

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Witnesses:

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