

No. 713,872.

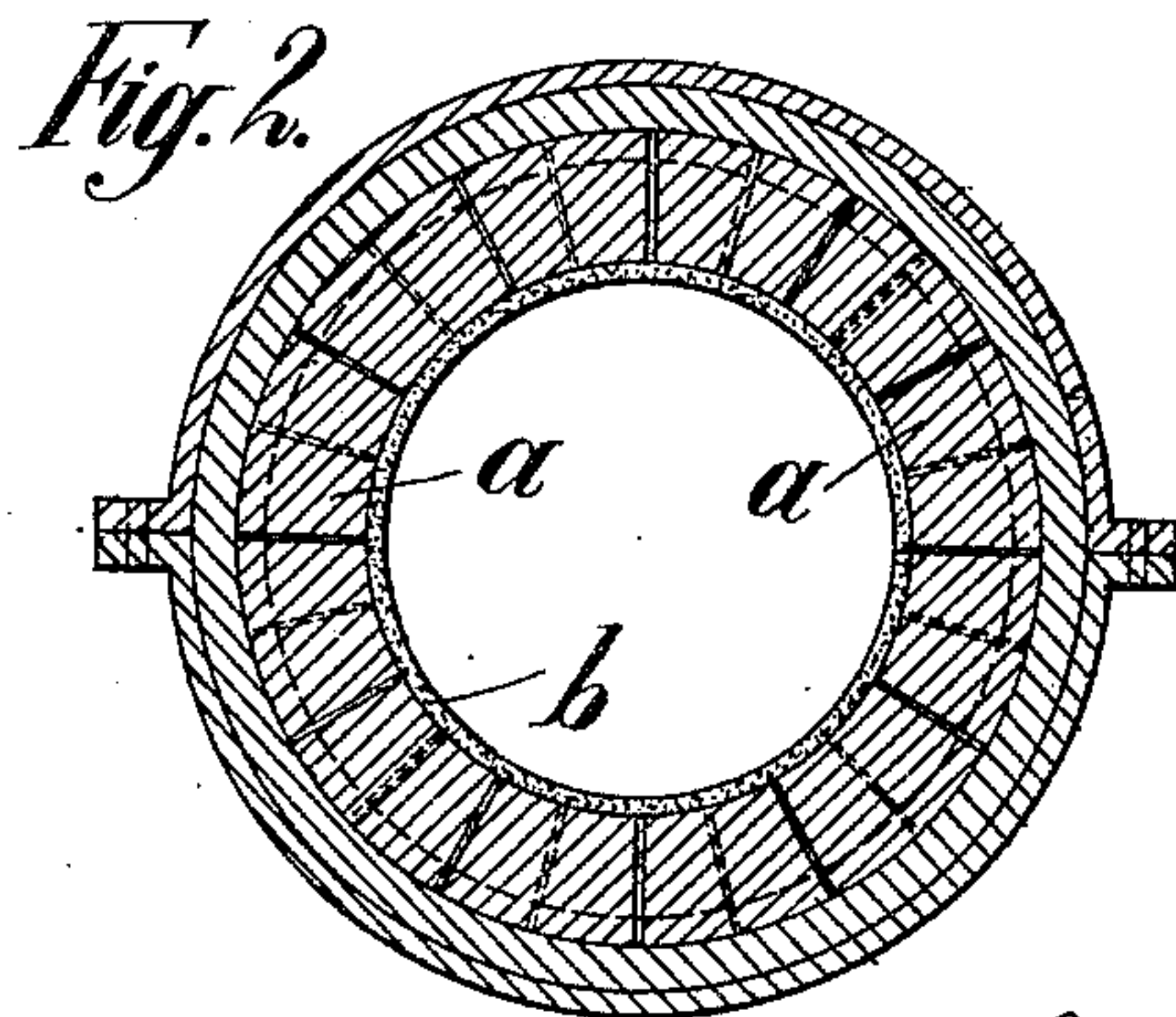
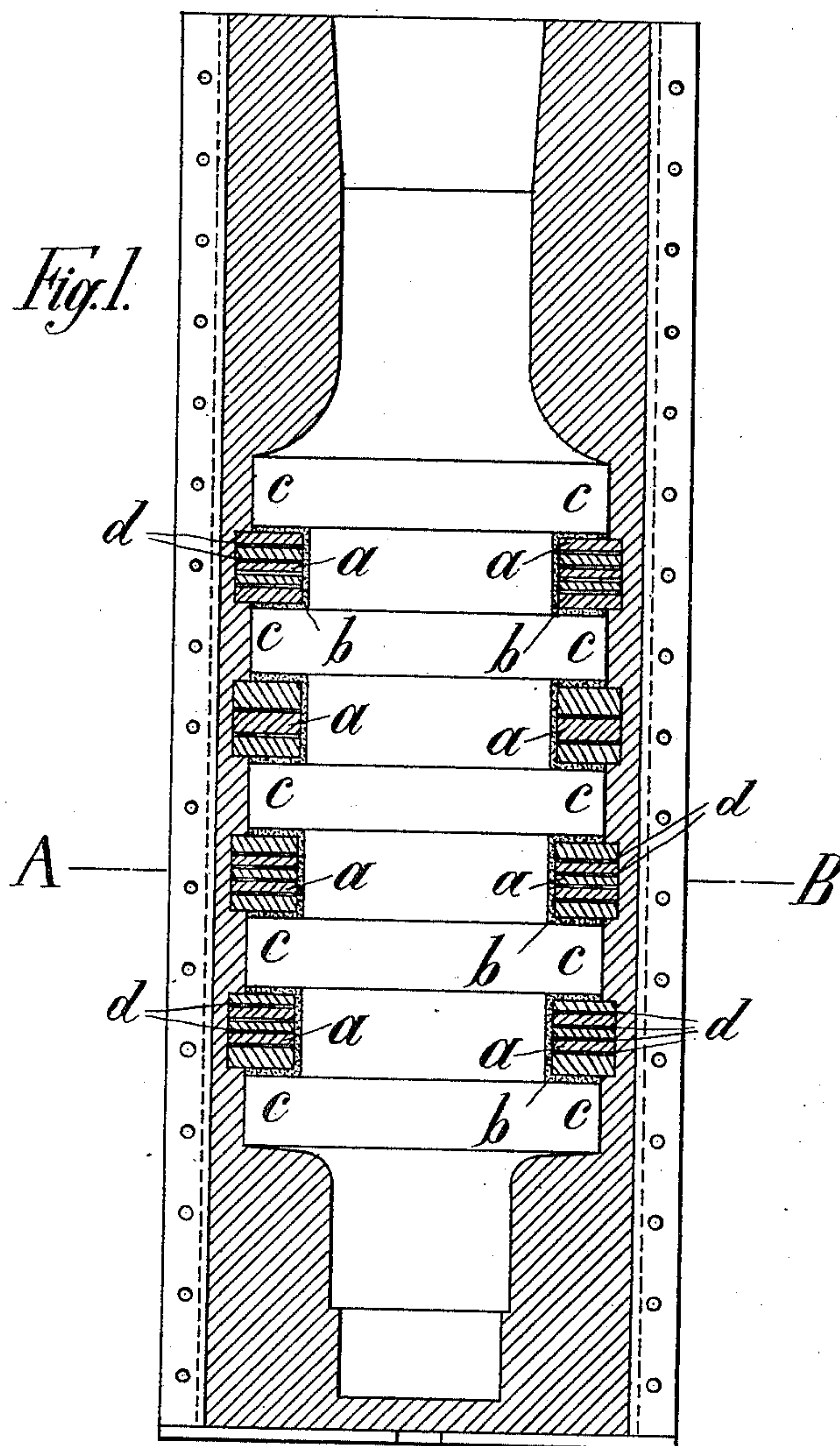
Patented Nov. 18, 1902.

W. GONTERMANN.

MOLD FOR CASTING ROLLED IRON FINISHING ROLLERS.

(Application filed July 2, 1901.)

(No Model.)



Witnesses:
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UNITED STATES PATENT OFFICE.

WALTHER GONTERMANN, OF SIEGEN, GERMANY.

MOLD FOR CASTING ROLLED-IRON FINISHING-ROLLERS.

SPECIFICATION forming part of Letters Patent No. 713,872, dated November 18, 1902.

Application filed July 2, 1901. Serial No. 66,850. (No model.)

To all whom it may concern:

Be it known that I, WALTHER GONTERMANN, a subject of the King of Prussia, residing at 80 Sandstrasse, in the city of Siegen, Kingdom of Prussia, German Empire, have invented a certain new and Improved Mold for Casting Rolled-Iron Finishing-Rollers, of which the following is a specification.

The rolled-iron finishing-rollers as heretofore manufactured in clay or concrete molds frequently showed the inconvenience of irregular graphite formations separating off in the recesses and grooves of the rollers, which appeared as dark spots on the surface upon the rotation of the rollers. These pieces of graphite drop out of the surface, and thereby spoil the rollers when they are in constant use, necessitating a frequent smoothing and turning off of the same. It is even of frequent occurrence that these irregular formations of graphite are so abundant that the rollers become unfit for use. These drawbacks are avoided in my invention, which is intended to provide a mold by which these irregular formations of graphite are avoided. This is effected in my invention by filling the recessed and grooved parts of the shaping-rollers with iron bricks or small fragments or segments of iron. These are then covered by a thin coating of a mixture of filings or turnings mixed with the necessary binding material, such as graphite, clay, or the like. This coating has the effect of lessening the rapid cooling action of the iron bricks, so as to prevent the formation of a white iron exterior layer in contradistinction to the well-known method of making hard castings. By the action of this peculiar form of molds the characteristics of the natural

hard iron are retained and the separation of graphite is avoided, which results in the surface of the rollers becoming smoother and denser than has been the case with the rollers manufactured in concrete or clay molds. By this invention the brittleness of hard castings is also avoided.

In the accompanying drawings, Figure 1 is a longitudinal section of my improved mold. Fig. 2 is a cross-section on line A B, Fig. 1.

The grooves of the mold of the roller are filled with iron bricks *a* or with small segments of iron, which are then covered with a thin coating *b*, made from a mixture of iron filings or turnings with a suitable binding agent. After the mold has been thus prepared the rollers are cast, with the result that a perfectly uniform surface is produced upon the roller obtained according to this invention.

In order to allow of contraction of the projecting parts *c* in relation to each other, empty joints *d*, corresponding to the size of the grooves, are left between the iron bricks.

What I claim, and desire to secure by Letters Patent of the United States, is—

A mold for casting rolled-iron finishing-rollers, said mold having a grooved body, iron bricks within the grooves, and a coating of iron filings and a binding agent covering the bricks, substantially as specified.

In witness whereof I have hereunto signed my name in the presence of two subscribing witnesses.

WALTHER GONTERMANN.

Witnesses:

CHARLES LE SIMPLE,
KARL SCHMITT.