

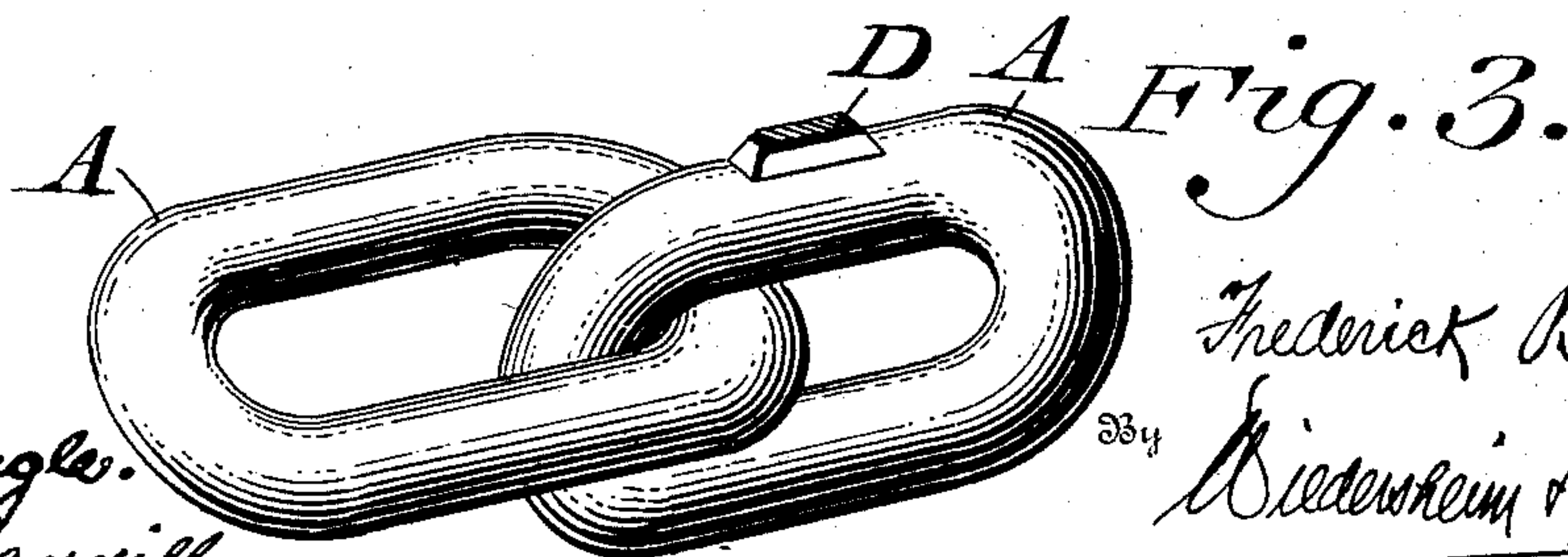
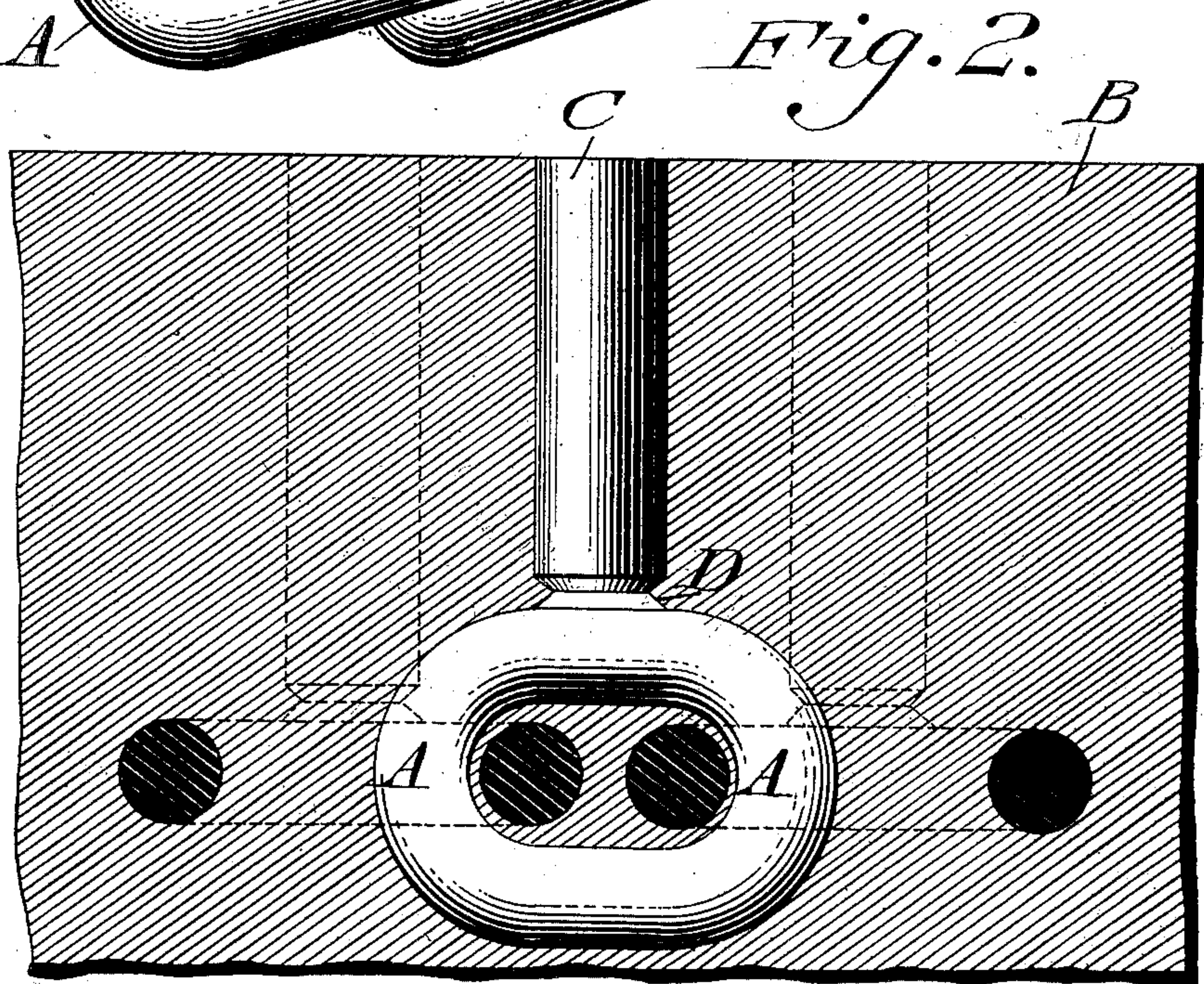
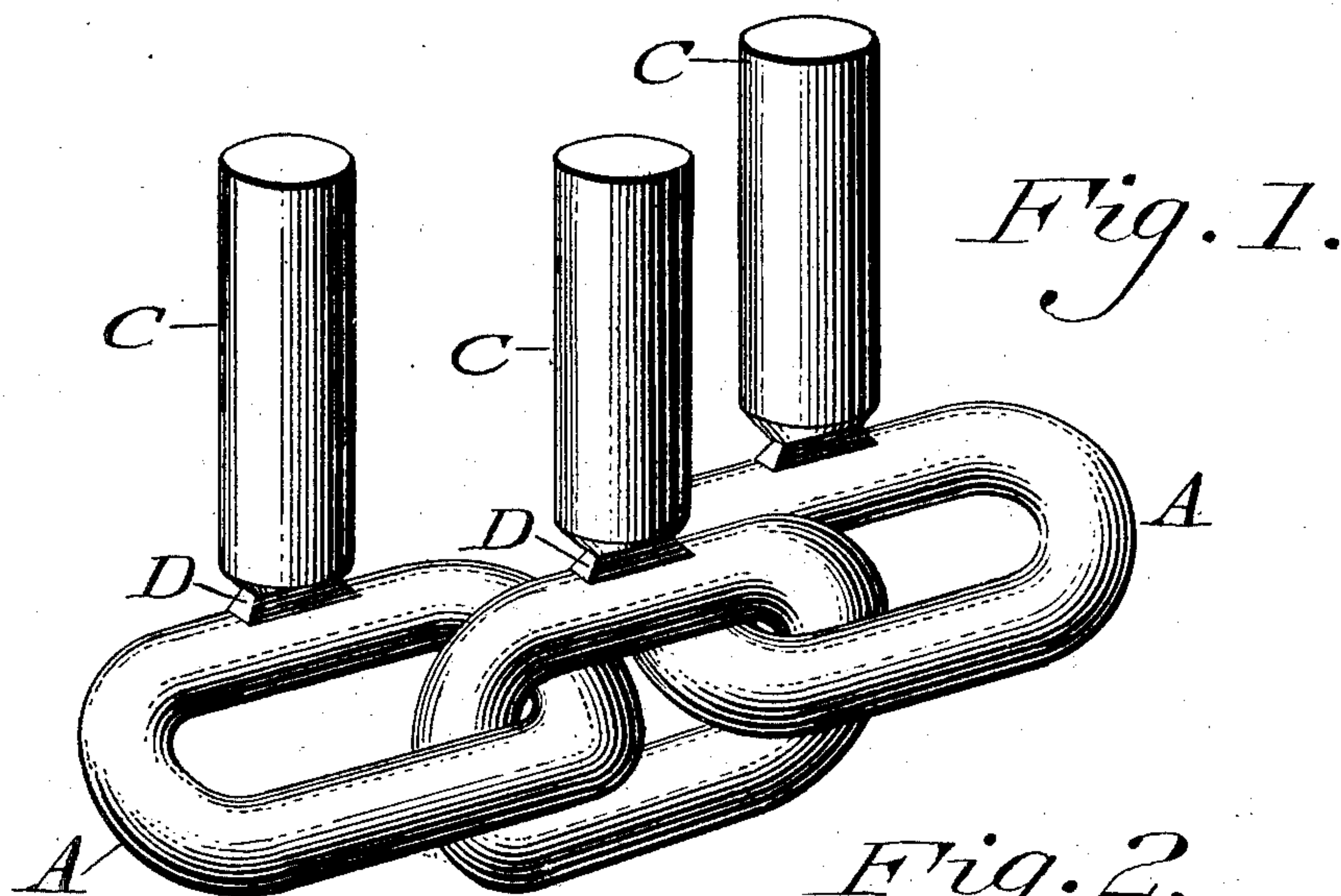
No. 703,170.

Patented June 24, 1902.

F. BALDT, SR.
PROCESS OF CASTING CHAINS.

(Application filed Aug. 1, 1901.)

(No Model.)



Witnesses
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UNITED STATES PATENT OFFICE.

FREDERICK BALDT, SR., OF CHESTER, PENNSYLVANIA.

PROCESS OF CASTING CHAINS.

SPECIFICATION forming part of Letters Patent No. 703,170, dated June 24, 1902.

Application filed August 1, 1901. Serial No. 70,444. (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 Processes of Casting Chains, of which the following is a specification.

My invention consists of a process for casting chains, as will be hereinafter fully described and claimed.

In the accompanying drawings, which illustrate one way in which my process can be carried out, Figure 1 is a perspective view of the pattern employed in practicing this process and consisting of three links of a chain. Fig. 2 is a perspective view showing the pattern embedded in a mold. Fig. 3 is a perspective view showing two links of the chain after the headers or feeders have been removed.

My process consists, first, in making the pattern of the chain of some material that is fusible at low temperature—for instance, rosin—although any other material suitable for the purpose can be employed, the lines, of course, being separated, as shown. This pattern is shown in Fig. 1, and it is then placed in a flask of ordinary construction that is provided with the proper heads and gates and has sand rammed around it—for instance, in the manner shown in Fig. 2—the pattern being indicated by A and the sand by B, it being noted that sufficient sand separates the links to hold them apart. The pattern or different portions thereof are provided with headers or feeders C, which extend to the outside of the flask, as shown in Fig. 2. After the sand has been rammed sufficiently tight the flask, with the inclosed pattern, is placed in an oven with the headers or feeders C projecting downwardly, and then the heat fuses the material of which the pattern and the headers are made, so that the molten material runs out of the flask, leaving the sand and a space the shape of the article required. The flask is then placed with the feeder-openings upright and the molten metal poured separately into each of the feeder-openings.

My process is especially adapted for casting articles of steel, and owing to the shrink-

age of the steel as it cools these feeder-openings C are filled with molten metal and are of greater size than the article to be cast, so as to supply additional molten steel to the mold and produce a perfectly-molded article. It will be understood that at the base of these feeders or headers C there is a reduced neck D, which permits the feeder or header to be easily broken after the casting is removed from the flask. It is of course understood that the casting when removed is the same in shape as Fig. 1 and also that Fig. 2 can represent either the flask with the embedded pattern or with a casting therein, although in the latter case the upper ends of the headers C could not be flush with the top of the flask, as shown in Fig. 2. Furthermore, when the casting is removed from the mold each link thereof is separated and the chain is complete, except for the removal of the headers from each link.

Fig. 3 represents two links of the chain after the headers have been removed at the reduced neck B, the neck portions D being afterward removed in any suitable manner.

By the use of this process castings can be procured that do not show the shifts of the flask nor the joints or parting-lines, and articles cast therein of steel are suitable for taking the place of forgings.

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

The herein-described process for casting chains, which consists in embedding a fusible pattern, for links and headers extending therefrom in a mold with the links interlocked and separated, next fusing said pattern of the links and headers and removing the fused material from the mold, whereby the links and headers are removed, and next pouring molten metal separately into the spaces formerly occupied by the fusible links and headers, whereby the links of the chain are disconnected when removed from the mold.

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Witnesses:

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