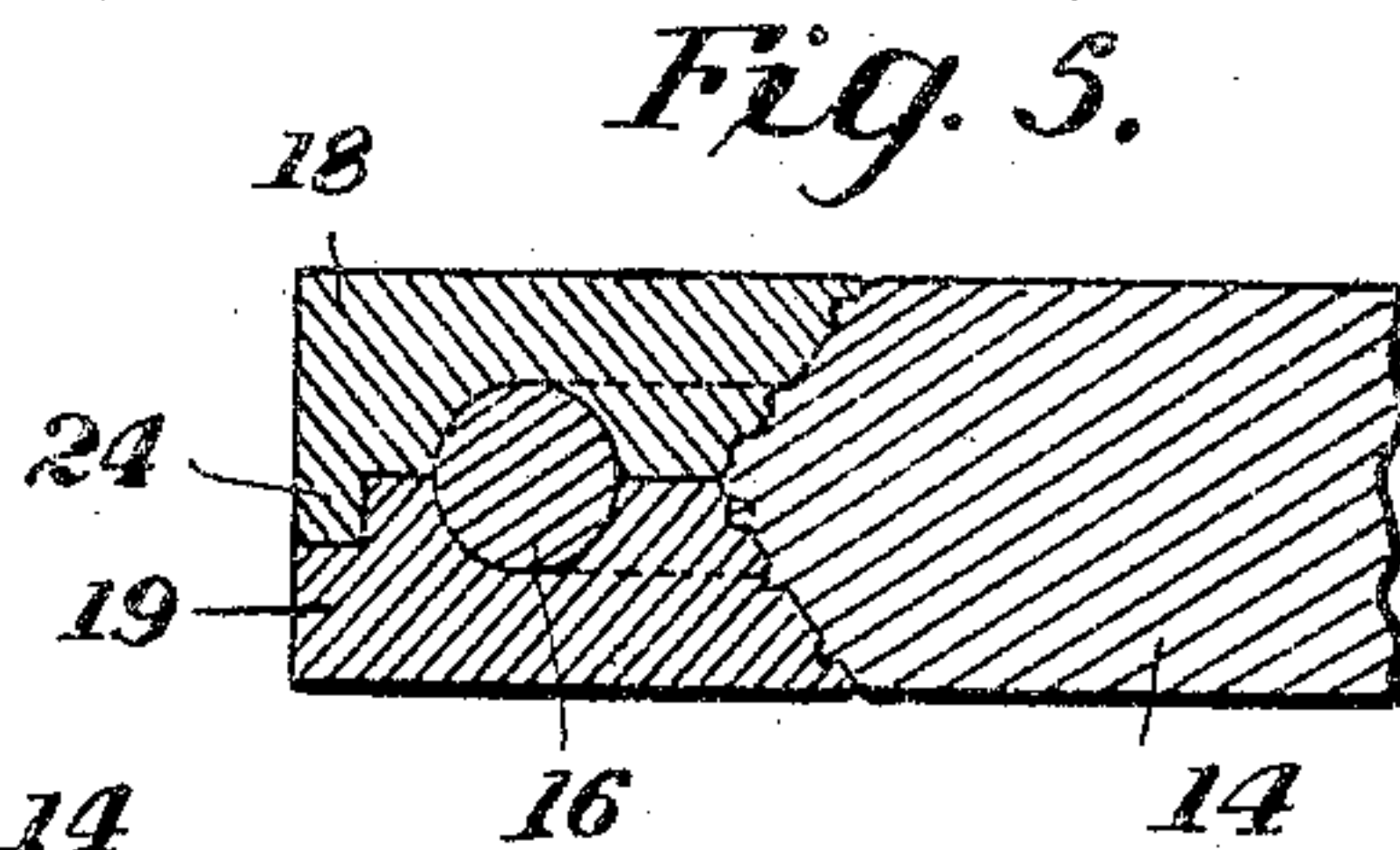
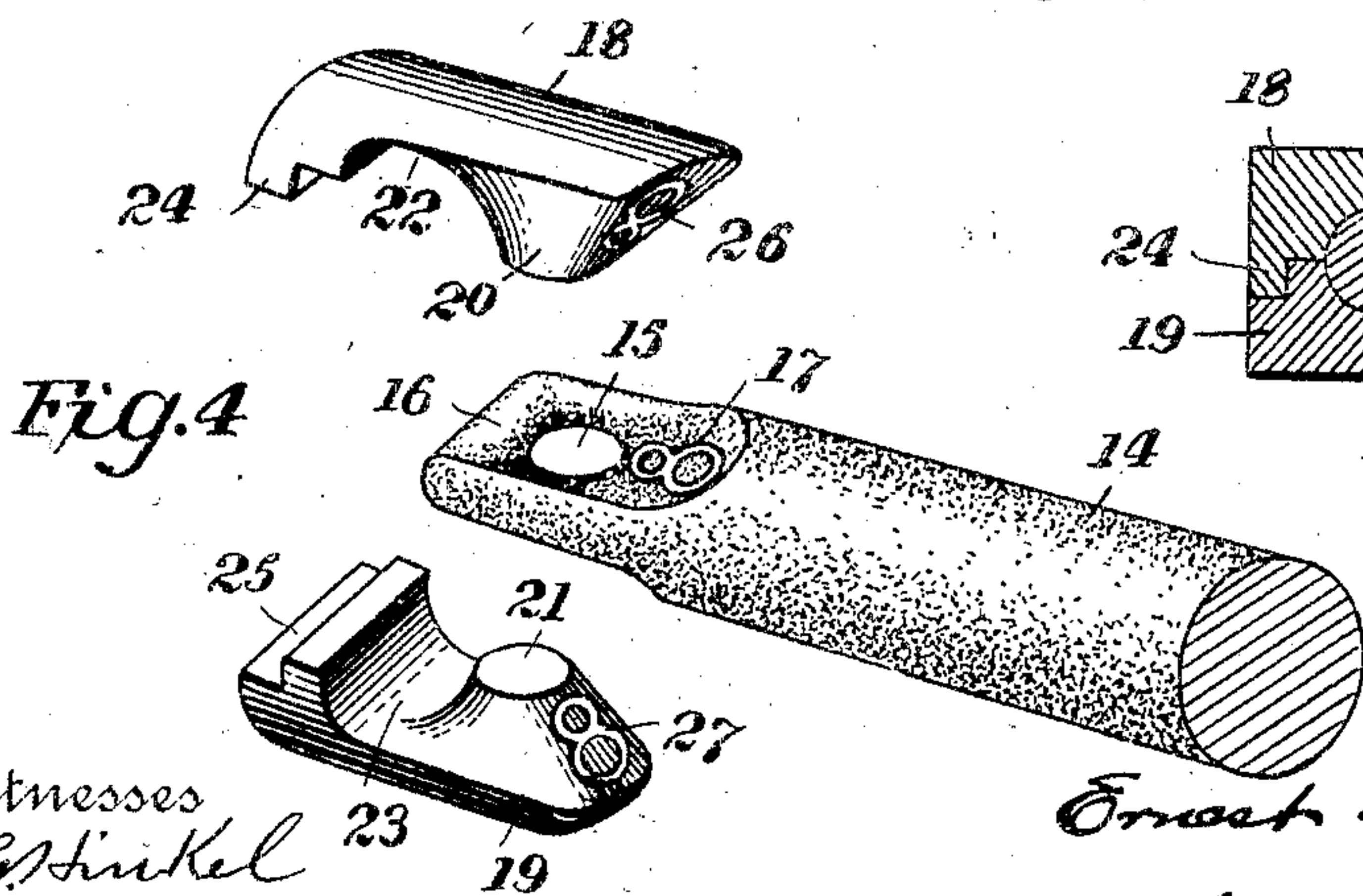
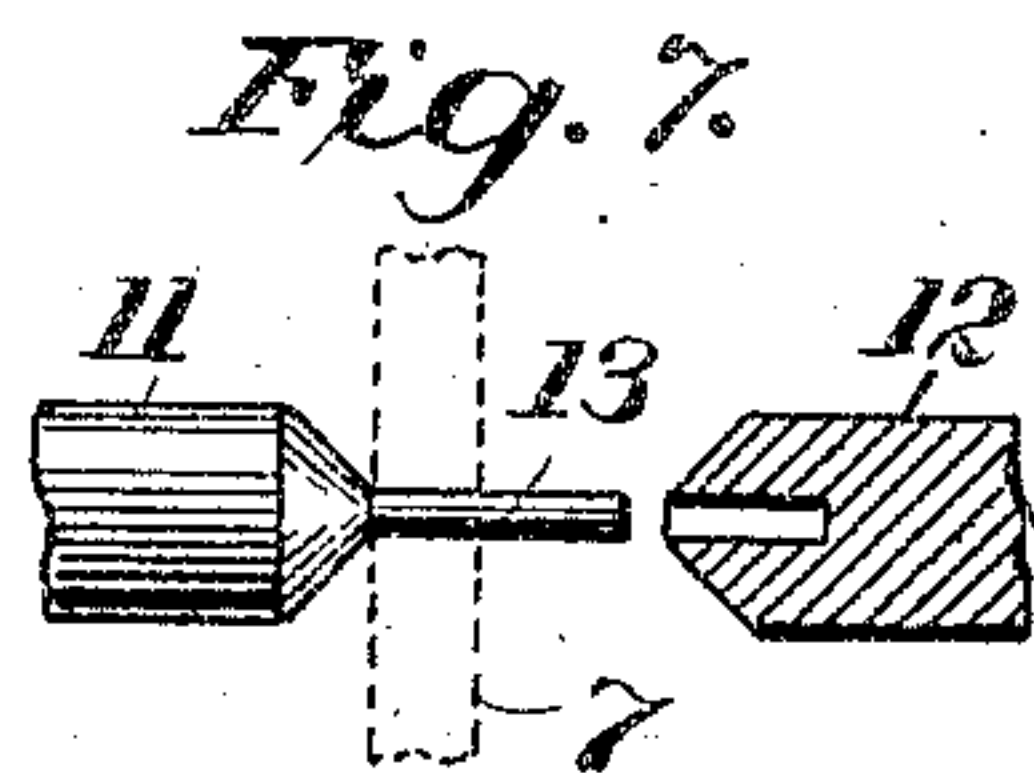
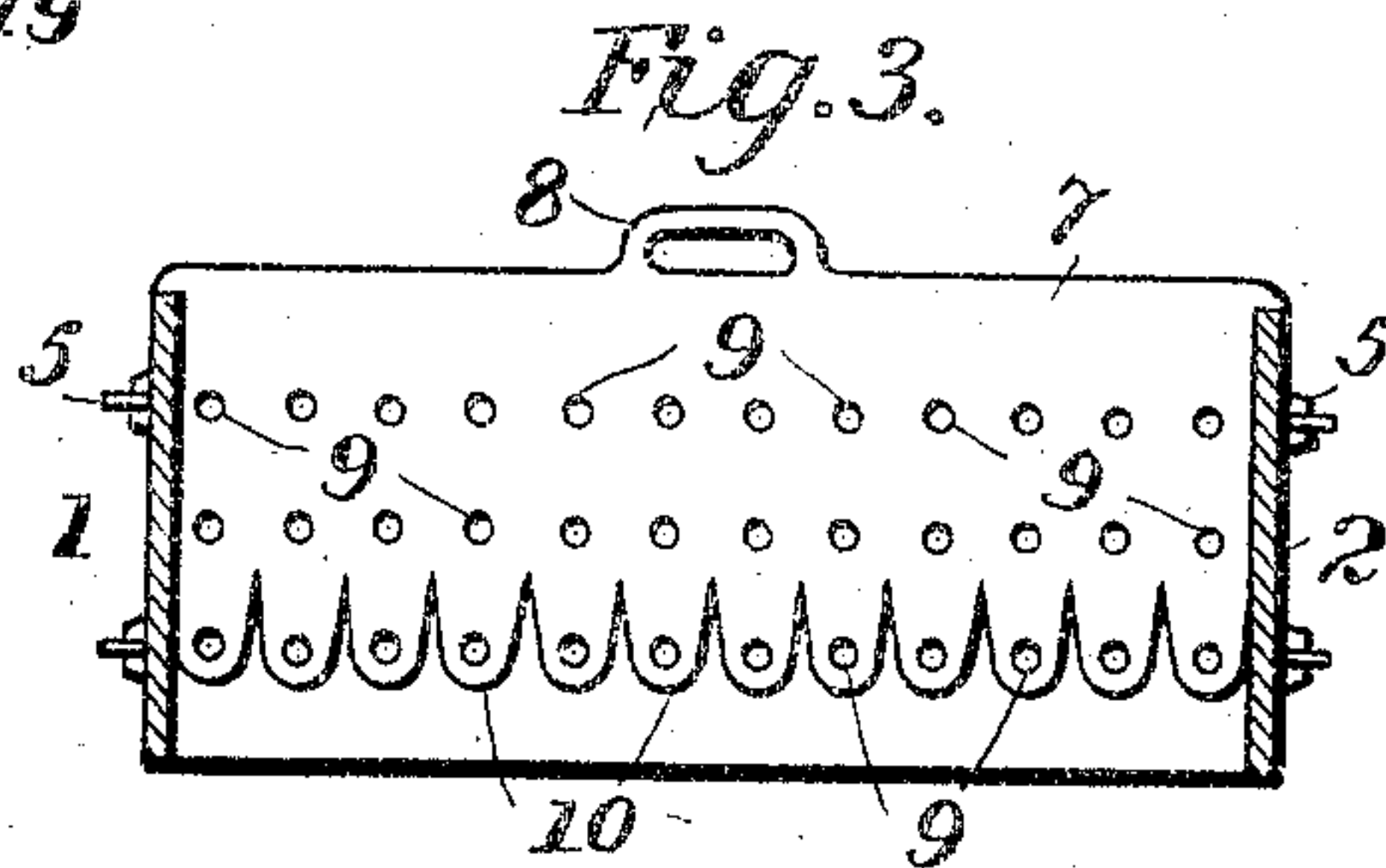
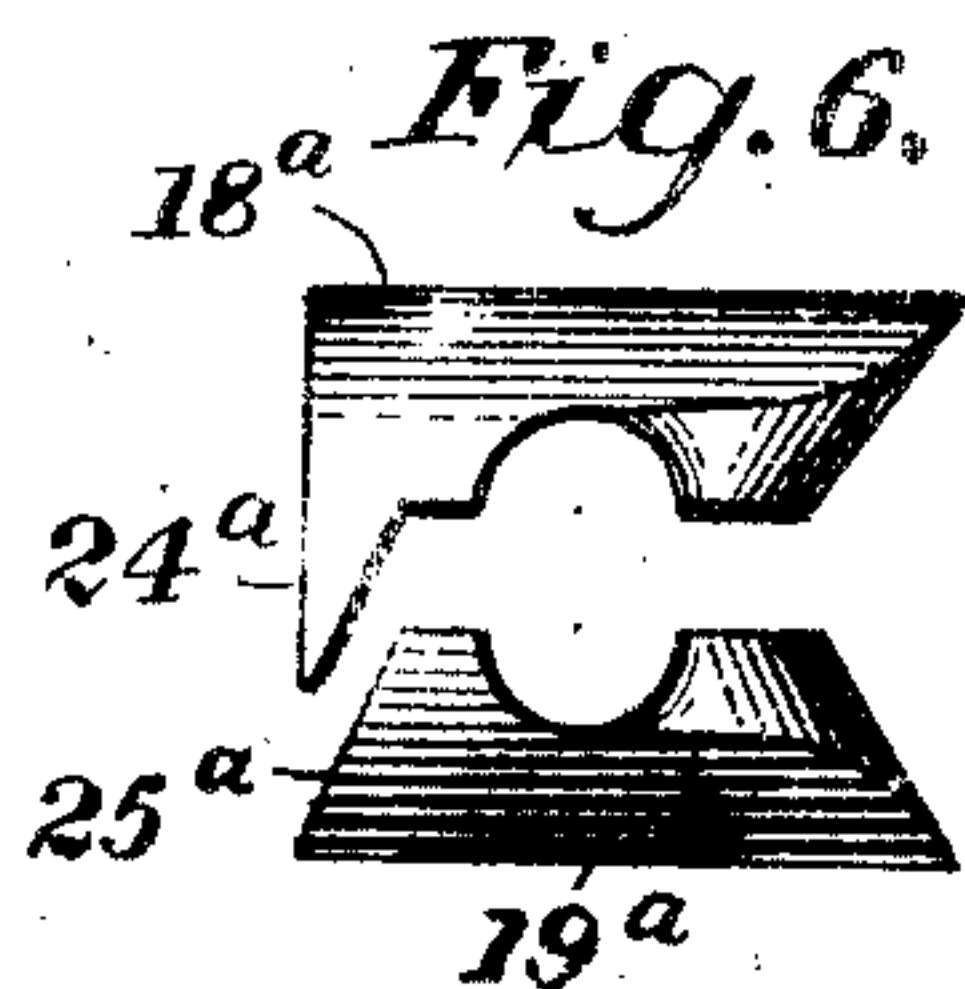
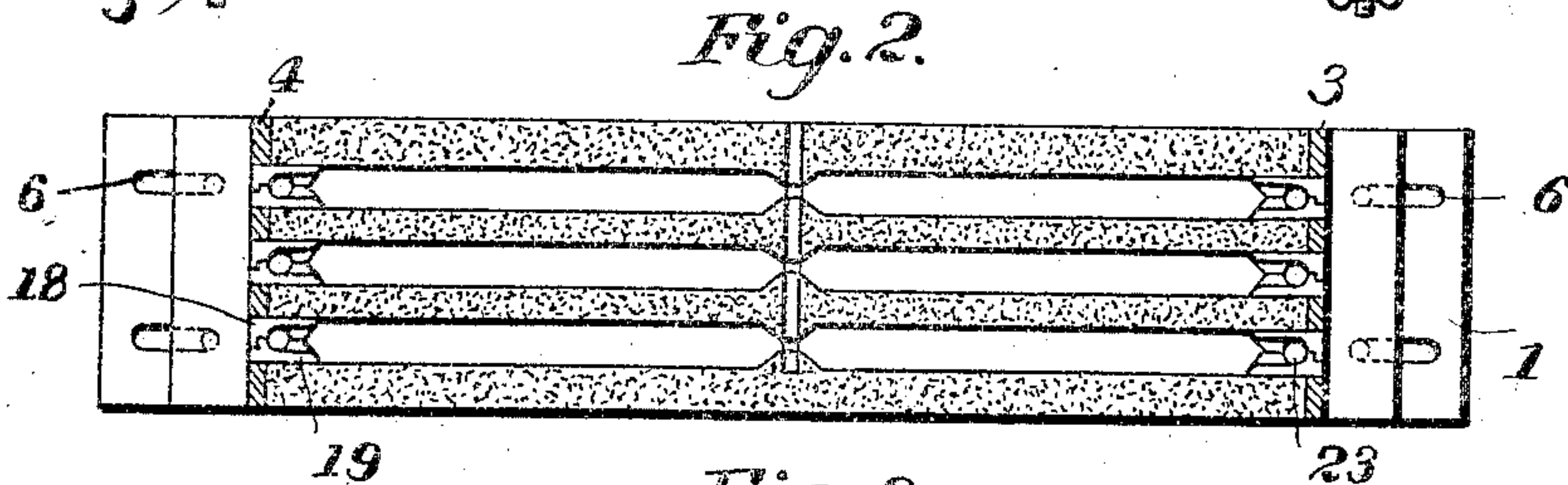
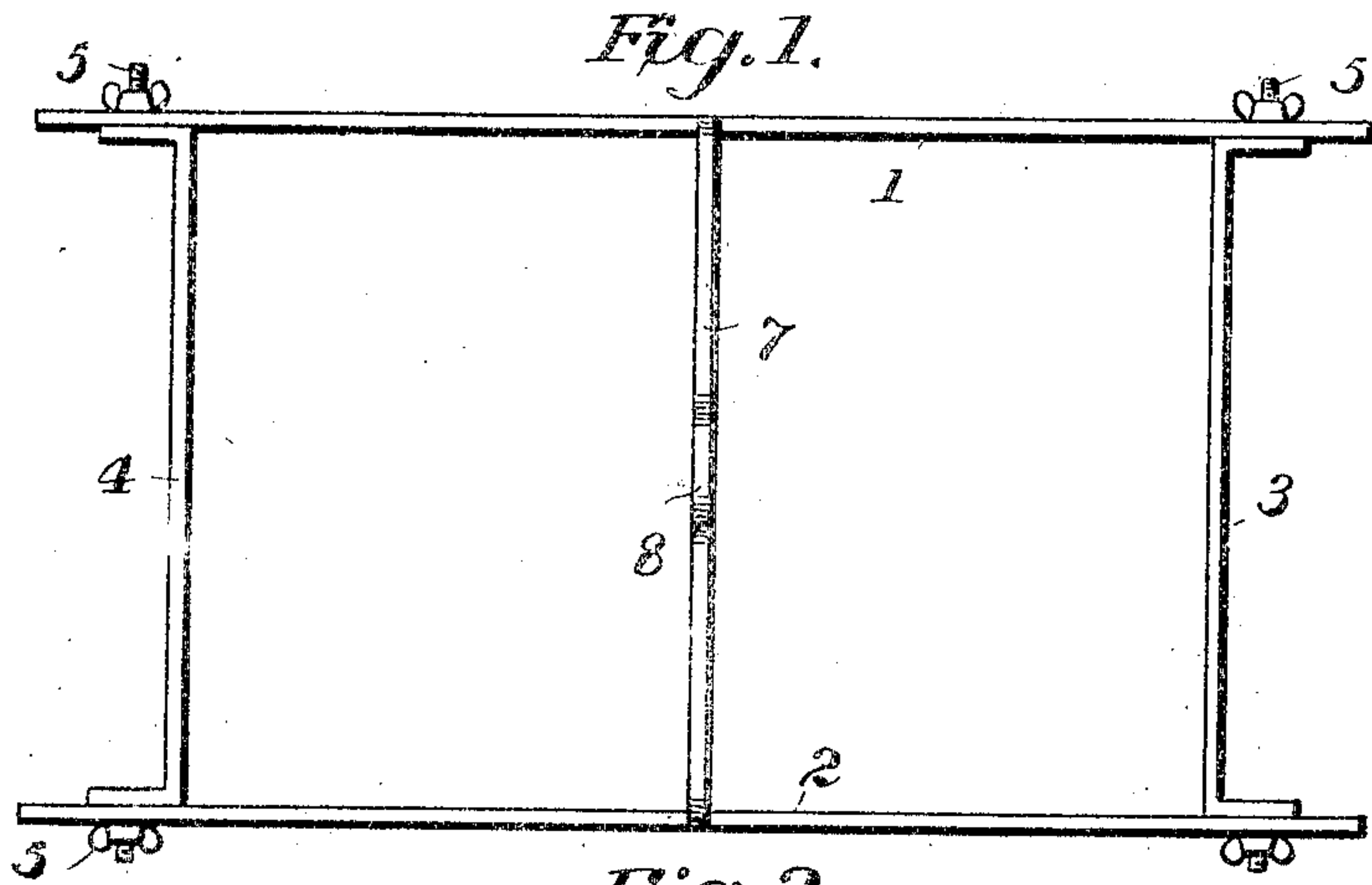


E. D. LEVERING.
MOLD FOR SASH WEIGHTS.
APPLICATION FILED DEC. 14, 1909.

953,999.

Patented Apr. 5, 1910.



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UNITED STATES PATENT OFFICE.

ERNEST D. LEVERING, OF BALTIMORE, MARYLAND.

MOLD FOR SASH-WEIGHTS.

953,999.

Specification of Letters Patent.

Patented Apr. 5, 1910.

Application filed December 14, 1909. Serial No. 532,033.

To all whom it may concern:

Be it known that I, ERNEST D. LEVERING, a citizen of the United States, residing at Baltimore, in the State of Maryland, have invented certain new and useful Improvements in Molds for Sash-Weights, of which the following is a specification.

My invention relates to molding apparatus, and more particularly to apparatus for molding sash weights.

In the manufacture and sale of sash weights, it is of course necessary that some means be employed for marking such weights so as to indicate their value, usually, as expressed in pounds. The common method of doing this is by means of a piece of chalk, but this has its obvious objections. It has also been proposed to insert into the mold a plate bearing a figure pattern, so that the desired figure will be formed directly in the metal at the time of casting. Although several attempts have been made to produce this desirable result, they have for the most part, necessitated the employment of apparatus too complicated to meet with practical success.

It is the object of the present invention, therefore, to provide a simple, efficient and practical method of forming any desired figure on a sash weight by the casting operation, and to this end my invention comprises a novel construction of chill for forming the head of the weight, such chill bearing a figure pattern adapted to form the desired figure on the head of the weight adjacent the eye.

With the above and other objects in view, my invention consists in the construction and arrangements of parts hereinafter described, and illustrated in the accompanying drawings, in which:—

Figure 1 is a plan view of my improved flask; Fig. 2 is a longitudinal section thereof showing the apparatus in condition to receive the molten iron; Fig. 3 is a transverse section thereof; Fig. 4 is a perspective view on an enlarged scale, showing my improved chill and the head of a sash weight; Fig. 5 is a longitudinal section showing my improved chill in position on a sash weight; Fig. 6 is a side elevation showing a slightly modified construction of chill; Fig. 7 is a detailed view showing the method of joining and supporting the patterns.

Referring to the drawings in detail, my improved flask comprises the side plates 1

and 2, between which fit the end plates 3 and 4. The side plates are preferably formed with slots 6 near their ends, and through these slots pass clamping bolts 5 carried by the end plates. In this manner the end may be adjusted and clamped in any desired position, so as to vary the length of the weights being cast. Extending across the flask between the end plates is a gate pattern 7 having a handle 8, which gate pattern may be placed at any desired position between the end plates.

The end plates 3 and 4 are provided with a plurality of perforations or openings the same diameter as the weights to be formed, and the gate pattern 7 is provided with an equal number of openings, similarly arranged. In the drawings, thirty-six of such openings have been shown, although any other suitable number may be employed. These openings are designated by the reference character 9. The bottom edge of the gate pattern is preferably serrated or scalloped as indicated at 10, in order to facilitate the flow of the metal into the lower molds.

11 and 12 designate the sash weight patterns which are employed to form the molds. These are preferably cylinders, and may be formed of either wood or metal. The sash weight patterns on one side of the gate pattern 7 are provided with pins 13 which project through the holes 9 in the gate pattern, while the other sash weight patterns such as 12 are provided with sockets into which the ends of the pins 13 fit.

Referring to Fig. 4 my improved sash weight is indicated by the reference numeral 14. It is provided with the usual flattened head having the eye 15 surrounded by a yoke 16 of rounded cross section. 17 designates the numeral or figure which it is the object of the present invention to form on the weight adjacent the eye, at the time of casting.

The head above described is formed by means of a divided chill. As shown in Figs. 4, and 5, this chill comprises two sections 18 and 19, adapted to be fitted together so as to embrace the head of the weight. The sections 18 and 19 are provided on their inner faces with cooperating conical projections 20 and 21 which constitute the core for forming the eye in the weight. The concave surfaces 22 and 23 serve to form the yoke 16. In order to prevent leakage of the

metal and also for the purpose of maintaining the sections of the chill in their proper relative position, I provide one of the sections such as 18 with a shoulder 24, adapted to over-hang a corresponding shoulder 25 formed on the section 19. These interlocking shoulders are clearly shown in Fig. 5. Instead of the square shoulders shown in this figure, I may, as illustrated in Fig. 6, employ a beveled face construction. That is, I may provide a portion 24^a on the section 18^a adapted to over-hang the face 25^a formed on the section 19^a.

In order to form the casting with a numeral indicating its weight, as indicated at 17, Fig. 4, I provide upon the conical surface of one or both of the parts of the chill a numeral pattern, as indicated at 26, 27, which pattern may be either in relief, or in intaglio, the latter being shown in the drawing, to form a numeral in relief upon the casting. When the weight is cast the conical core portions of the chill form an eye with inclined walls and the numerals are cast upon these inclined walls. The numerals are thus in a sort of depression in the casting, at a point where they may be easily seen and will not interfere with the operation of the weight, and, being cast against the smooth surface of the chill the numerals stand out more clearly than if cast in a sand mold.

The method of forming the weights will be apparent. The gate pattern 7 is first placed in position as shown in Fig. 1 and the sash weight patterns, such as 11 and 12, are inserted through the openings in the end

plates and placed in position in the flask. The entire flask is then filled with sand and the sash weight patterns and gate pattern withdrawn. The chills are then fitted into the openings in the end plates as shown in Fig. 2. When, therefore, the metal is poured into the gutter which was formed in the sand by the gate pattern, it will flow to either side and fill the molds, the chills serving both to form the cores for the eyes of the weights and also to produce the desired numeral on such weights adjacent the eyes. After the metal has hardened the weights may be removed, and the sectional chills may be readily disengaged from the weights.

It will thus be seen that I have provided a very simple and efficient method of applying numerals or other characters to sash weights and the like, and it is believed that the numerous advantages of my invention will be readily appreciated by those skilled in the art.

What I claim is,—

In a device for casting sash weights, a chill made in two parts, said parts having cooperating conical portions constituting a core for forming an eye with converging walls in the casting, and a numeral pattern adapted to form a numeral upon one of said converging walls.

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

ERNEST D. LEVERING.

Witnesses:

HIRAM L. MASON,
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