

No. 730,999.

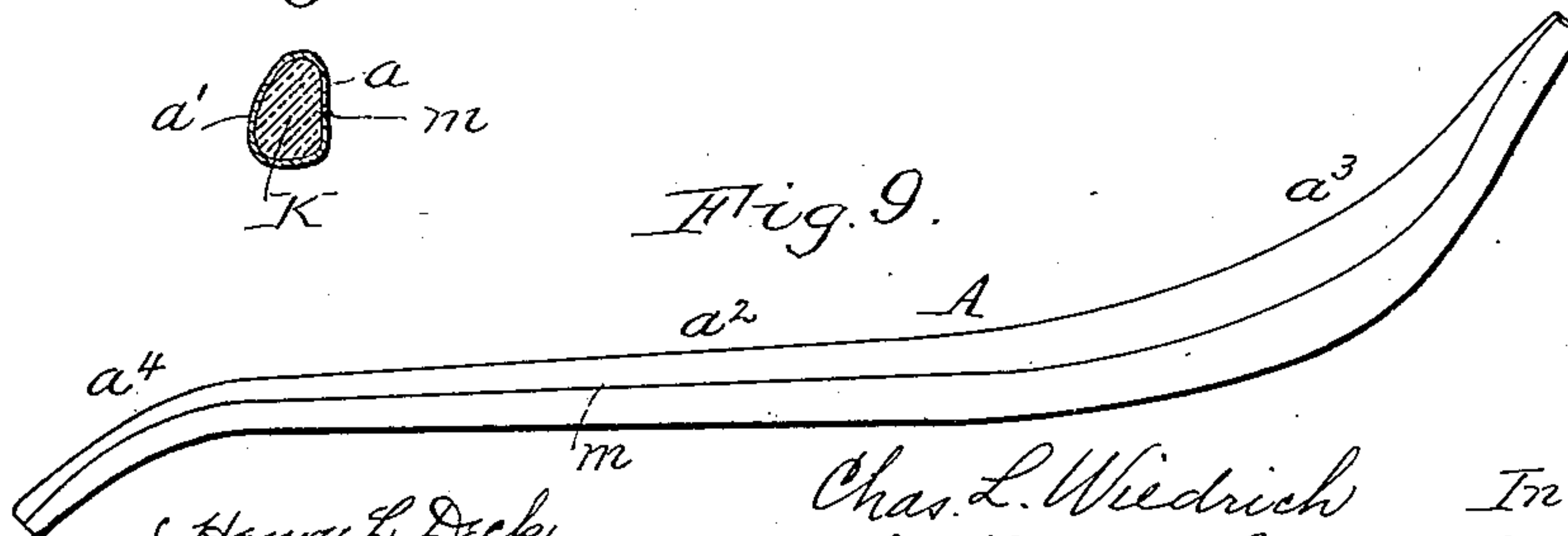
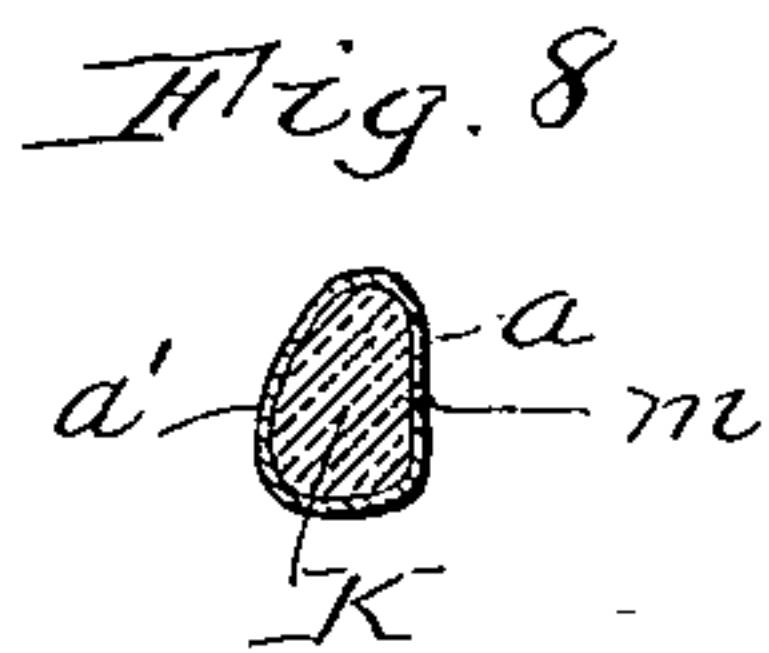
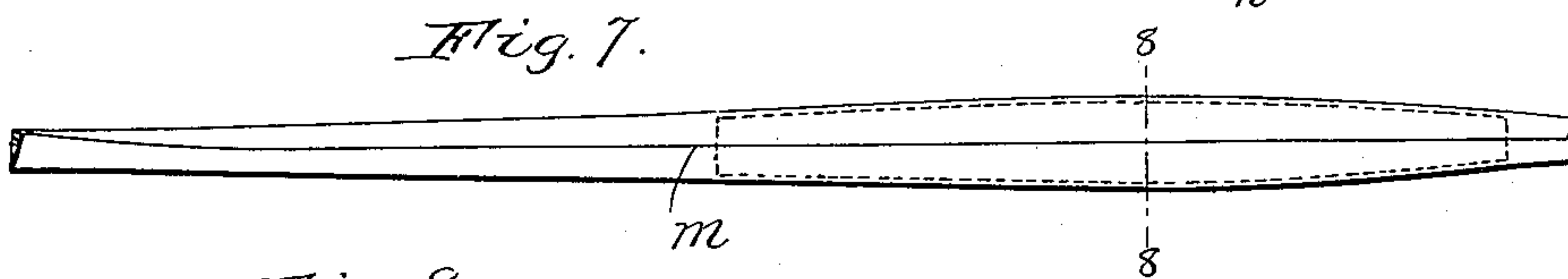
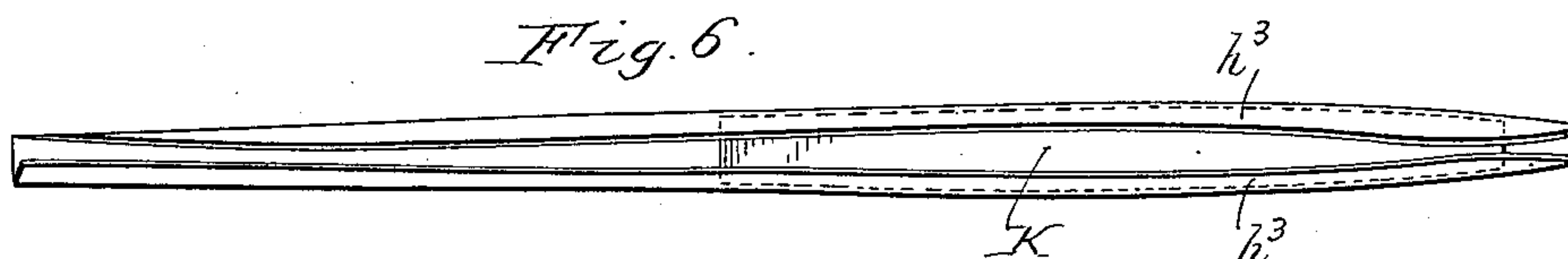
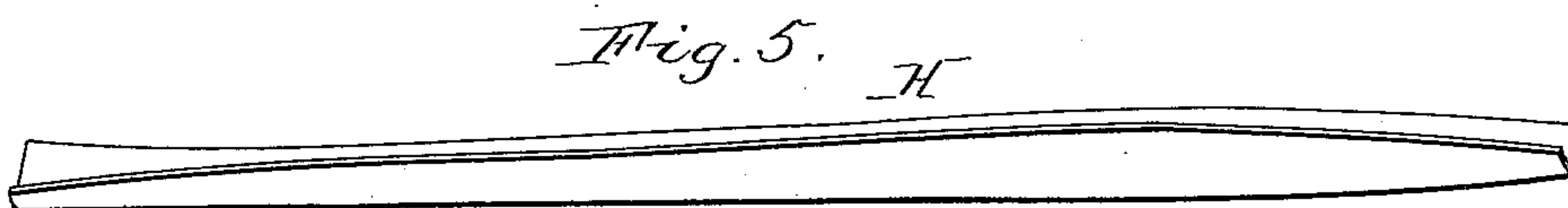
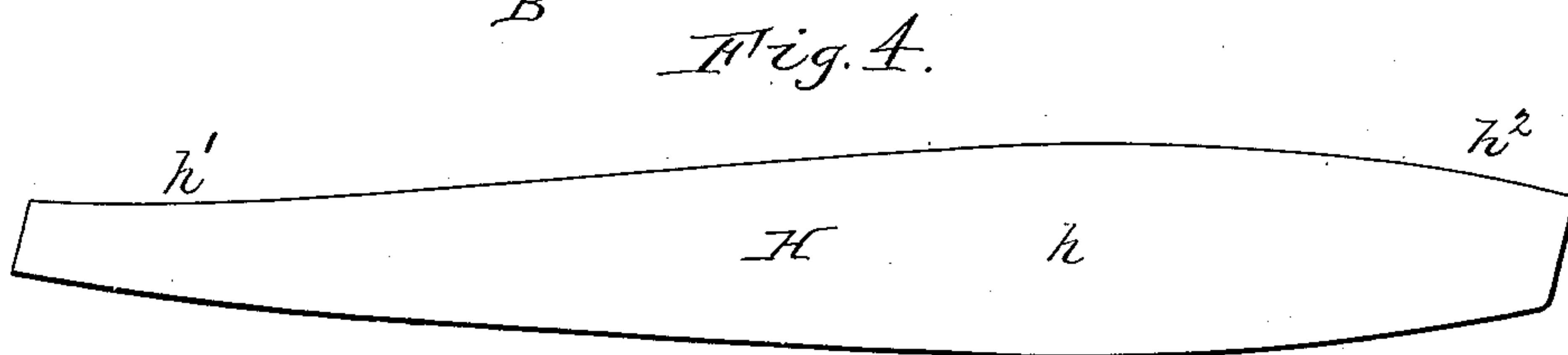
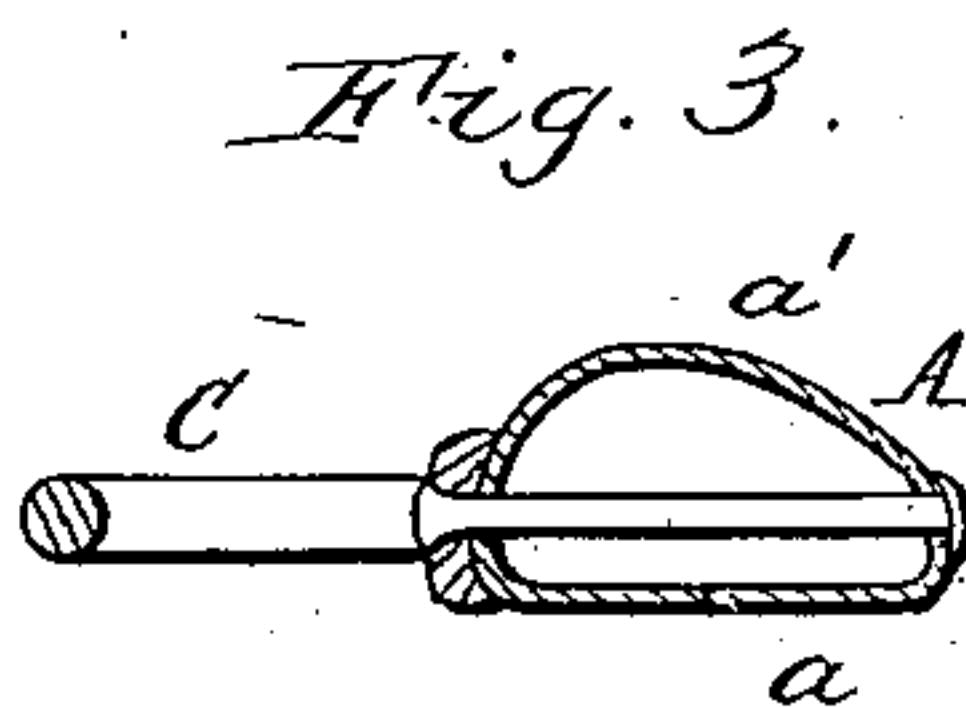
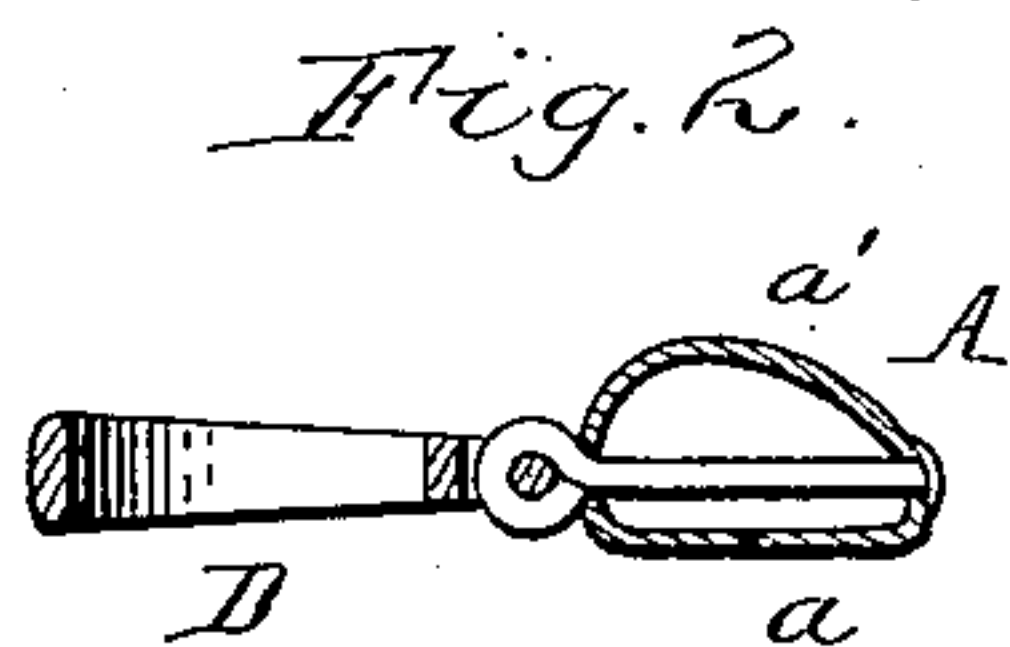
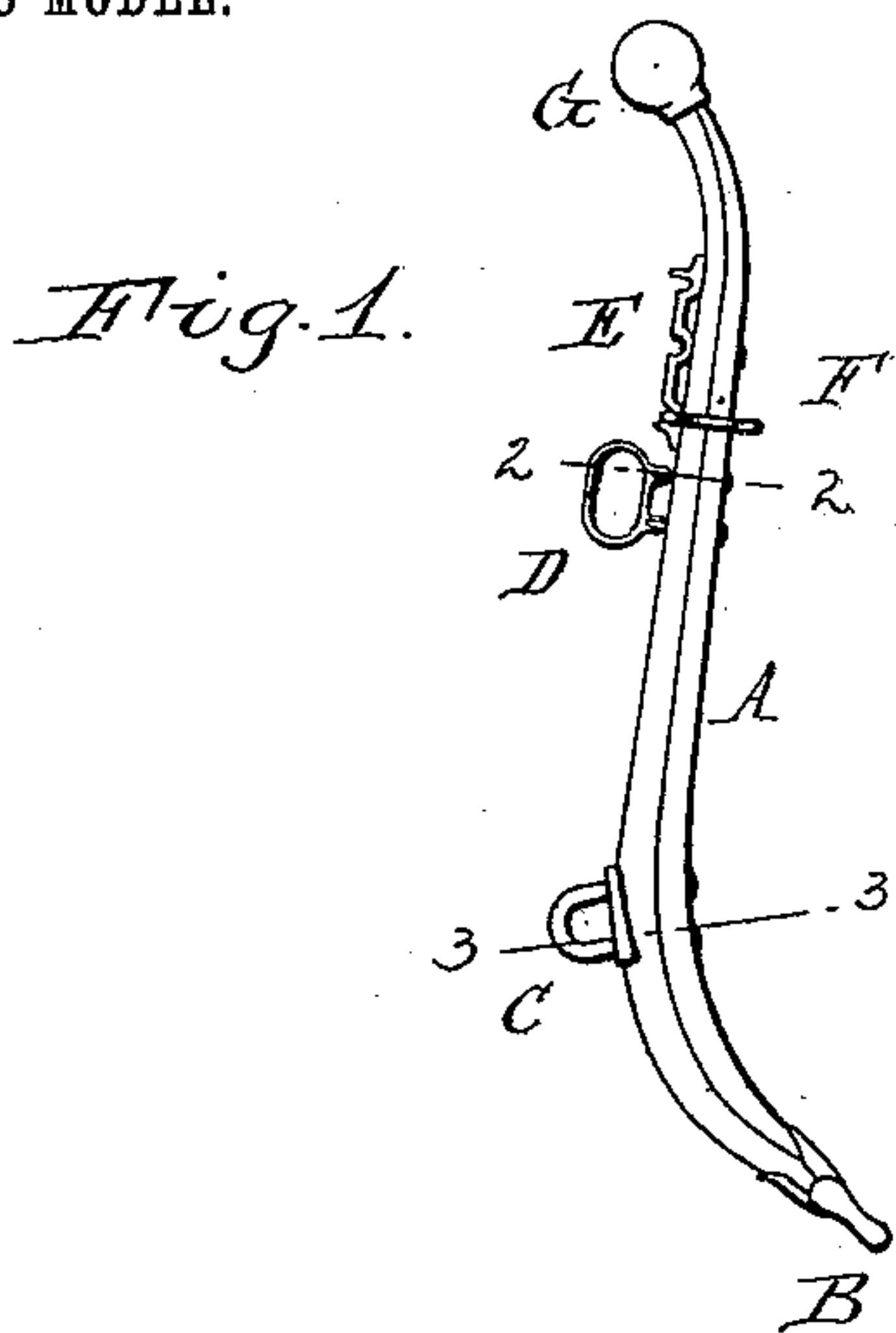
PATENTED JUNE 16, 1903.

C. L. WIEDRICH.
SHEET METAL HAME.

APPLICATION FILED JULY 2, 1901.

NO MODEL.

2 SHEETS—SHEET 1.



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Attorneys.

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2 SHEETS—SHEET 2.

Fig. 10.

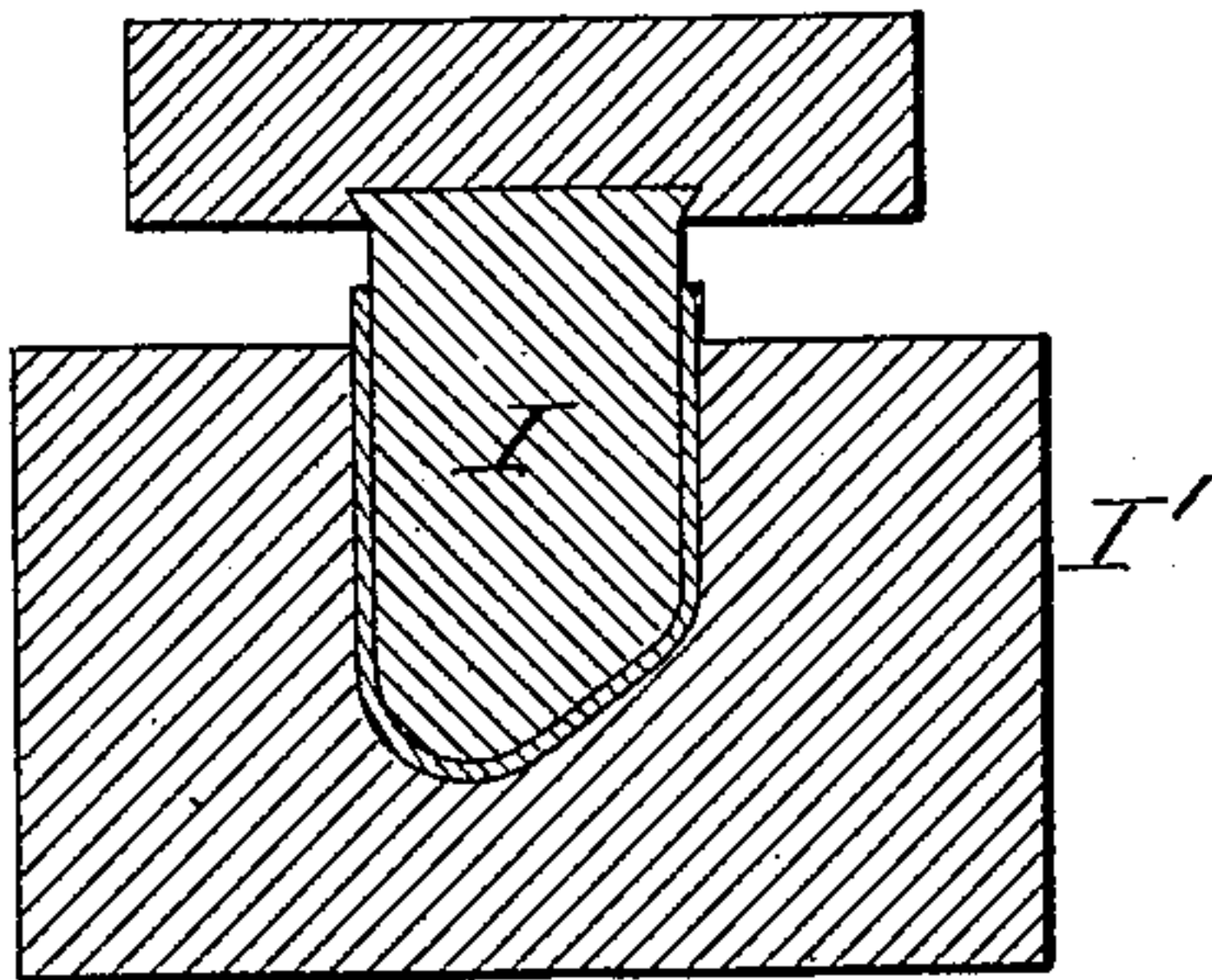


Fig. 11.

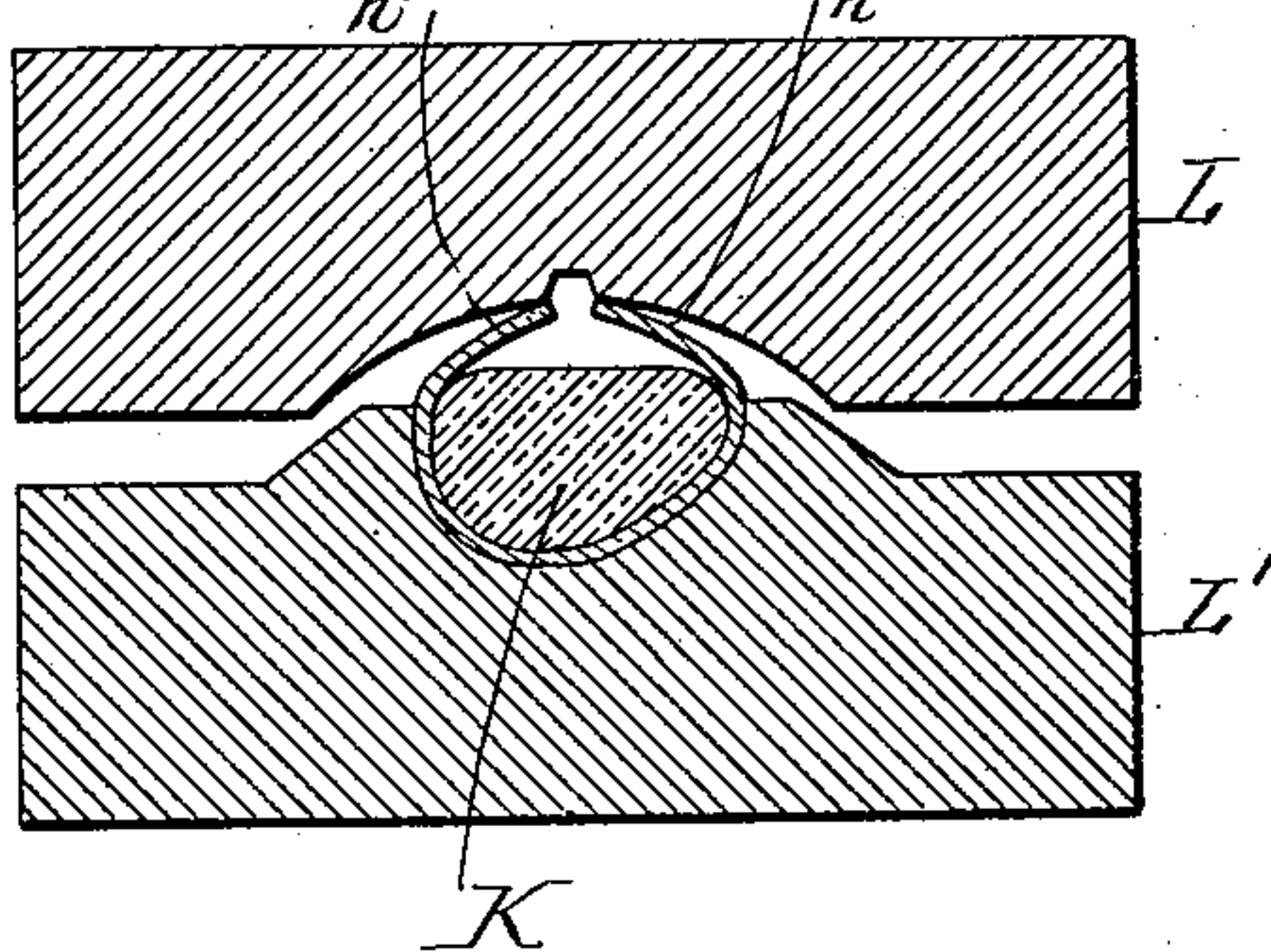


Fig. 12.

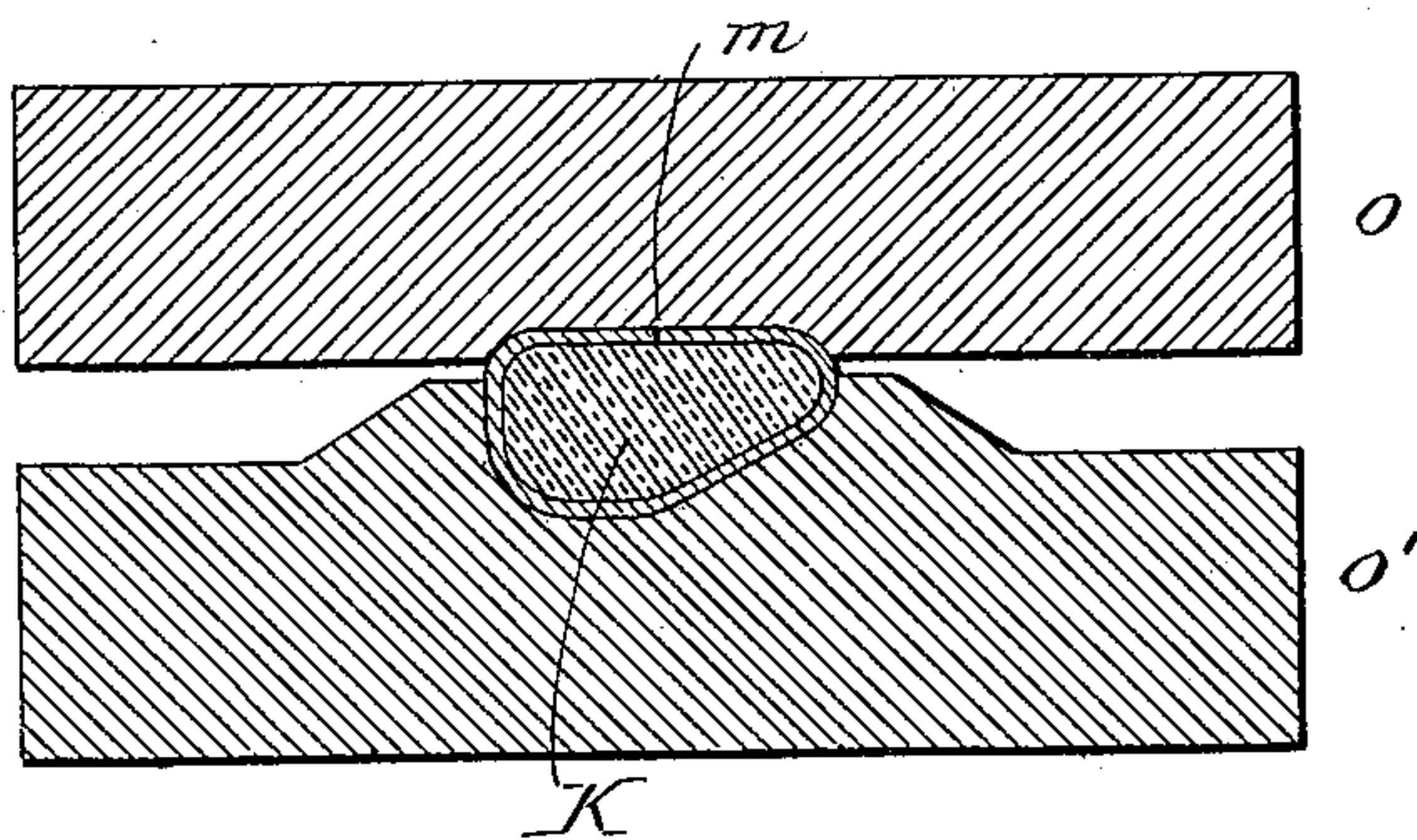


Fig. 13.

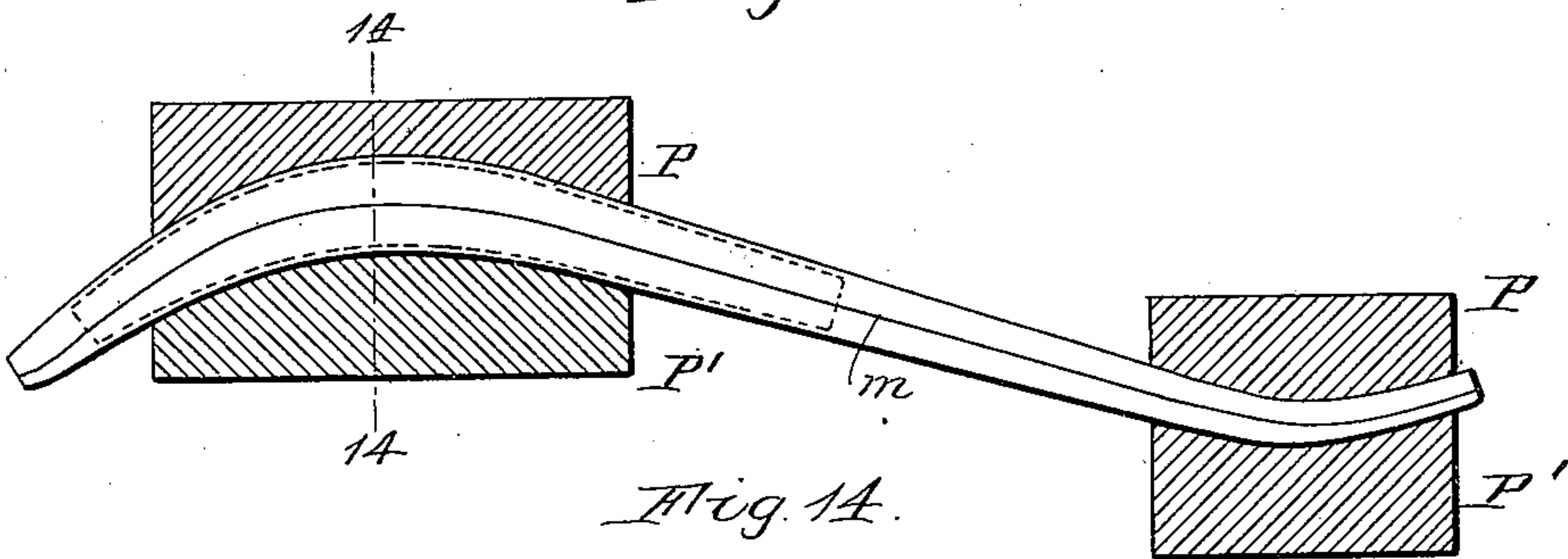
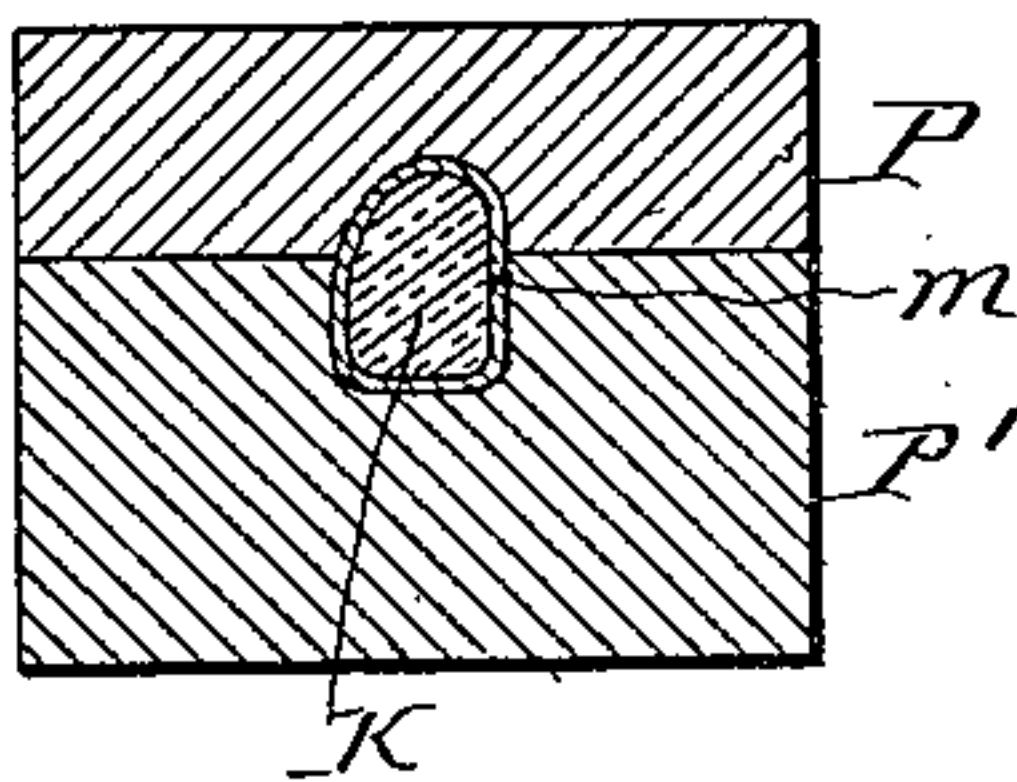


Fig. 14.



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UNITED STATES PATENT OFFICE.

CHARLES L. WIEDRICH, OF BUFFALO, NEW YORK, ASSIGNOR TO UNITED HAME COMPANY, OF BUFFALO, NEW YORK.

SHEET-METAL HAME.

SPECIFICATION forming part of Letters Patent No. 730,999, dated June 16, 1903.

Application filed July 2, 1901. Serial No. 66,847. (No model)

To all whom it may concern:

Be it known that I, CHARLES L. WIEDRICH, a citizen of the United States, and a resident of Buffalo, in the county of Erie and State of New York, have invented a new and useful Improvement in Sheet-Metal Hames, of which the following is a specification.

This invention relates to that class of hames which are made entirely of metal, and has for its object to produce a hame having the form which is usual in wooden hames, but in which the body is bent up of a single blank of sheet metal, preferably sheet-steel, so that the hame has a hollow sheet-metal body which is light, strong, durable, and attractive, which properly fits the ordinary style of horse-collars, and which can be produced at small cost.

In the accompanying drawings, consisting of two sheets, Figure 1 is a rear elevation of a complete hame embodying my invention. Figs. 2 and 3 are transverse sectional views on lines 2-2 and 3-3, Fig. 1, on an enlarged scale. Fig. 4 is a plane view of the sheet-metal blank from which the hame-body is formed. Fig. 5 is a perspective view of the blank bent into U form in cross-section by the first step in the forming operation. Fig. 6 is a rear view showing the edges of the blank bent partially over the inclosed core by the second step in the forming operation. Fig. 7 is a rear view showing the edges of the blank closed upon the core by the third step of the forming operation. Fig. 8 is a cross-section on the line 8-8, Fig. 7. Fig. 9 is a rear view of the completely-formed body after the end portions have been bent lengthwise by the fourth step in the forming operation. Fig. 10 is a transverse sectional view through the forming-dies and blank, illustrating the first step in the forming operation. Fig. 11 is a similar view through the dies, blank, and temporary core, illustrating the second step. Fig. 12 is a similar view through the dies, blank, and temporary core, illustrating the third step. Fig. 13 is a longitudinal sectional view through the dies for bending the hame-body lengthwise, showing the latter in rear elevation. Fig. 14 is a cross-section on the line 14-14, Fig. 13.

Like letters of reference refer to like parts in the several figures.

A represents the hollow sheet-metal hame-body, which, as will be seen in Figs. 1, 2, 3, and 9, has the form usual in wooden hames—that is to say, it has a flat back a and convex front a' and is composed of a practically straight main portion a^2 , which tapers slightly upwardly, a lower portion a^3 , which tapers to the lower end of the body and is curved inwardly, and a tapering top portion a^4 , which is bent outwardly. The cross-section of the body is largest near the lower end of the main portion a^2 , as usual. This body is provided with the usual trimmings or attachments, such as the loop B, which is attached to the lower end of the body, the tug-staple C, which is attached to the largest portion of the body, the line-ring D, which is attached near the upper end of the main portion of the body, the plate E for holding the hame-strap loop F, which plate is secured to the body above the line-ring, and the ball G or other ornament which is secured to the upper end of the body.

The above-described hame-body is formed from a blank H of substantially the configuration shown in Fig. 4, from which it will be seen that the elongated blank has the wide or bulged portion h intermediate its ends and that the sides of the blank are curved and taper in opposite directions from the wide portion h to the narrow end h' , which forms the upper end of the body, and the somewhat wider end h^2 , which forms the lower end. The first step in the operation of forming this blank into a hollow hame-body consists in bending the blank into a U-shaped or trough form. (Indicated in Figs. 5 and 10.) This is conveniently done by means of suitably-shaped male and female dies, such as indicated at I and I' in Fig. 10. A temporary core K, of fusible material—for instance, lead—and having the cross-section and taper which it is desired to give to the hame-body, is then placed in the trough-shaped blank. This core is of such length, as indicated in Fig. 6, that it extends only through the large parts of the main and lower portions of the hame-body, which are most liable to collapse in bending. The next step in the operation consists in bending the longitudinal edge portions h^3 of the blank toward each other, so that they partially inclose the temporary core, as

indicated in Fig. 6, this being done conveniently by means of a second set of dies L and L'. (Indicated in Fig. 11.) The next step in the operation consists in bending the edge portions $\frac{1}{2}$ down and completely closing the same over the temporary core to form the flat back of the body. The edges meet on a longitudinal line *m*, which runs nearly central through the flat back of the hame. This may be done by means of dies O O', Fig. 12. The blank has now the form of a straight tube, having a large intermediate portion and tapering end portions, as indicated in Fig. 7, and having in cross-section the shape of the completed body, as indicated in Figs. 2, 3, and 12. This straight tube, containing the temporary core of soft metal, is then curved lengthwise, inwardly at the bulged portion and the lower end and outwardly at the upper end, into the final form. (Indicated in Figs. 9 and 13.) This may be done by means of curving-dies P and P', such as shown in Figs. 13 and 14. The body is now completely bent, and it only remains to remove the temporary core, which is done by melting the same and pouring the metal out of one end of the body. The holes for the trimmings are now drilled through the body, and the latter is finished in any desired manner—for instance, by japanning or enameling. The trimmings are then riveted to the body.

The legs of the staples or rivets by which the trimmings are secured to the body are arranged across the flat back of the body, as shown in Figs. 2 and 3, so that these legs or rivets extend from the curved outer edge of the hame to the curved inner edge across the butt-joint of the edges of the blank. While

the bent body itself possesses great strength and rigidity, the legs or rivets extending across the joint add to this strength and rigidity, so that the hame when finished is exceedingly strong and durable, although very light and attractive in appearance. The body is in shape like the wooden hames in common use and fits properly upon horse-collars of the usual form. If desired, the upper bend of the body may be omitted and the top portion be formed as a straight continuation of the body.

I claim as my invention—

1. A closed hollow hame-body having a flat back and convex front and tapering toward both ends, said body consisting of a single bent blank of sheet metal having the joint formed by its longitudinal abutting edges arranged in the flat back, substantially as set forth.

2. A metallic hame which comprises a closed hollow hame-body having a flat back and convex front and tapering toward both ends, said body consisting of a single bent blank of sheet metal having the joint formed by its longitudinal abutting edges arranged in the flat back, and a trimming extending with its attaching member through the body from the outer to the inner side thereof across the joint in the back of the body, substantially as set forth.

Witness my hand this 26th day of June, 1901.

CHARLES L. WIEDRICH.

Witnesses:

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JNO. J. BONNER.