

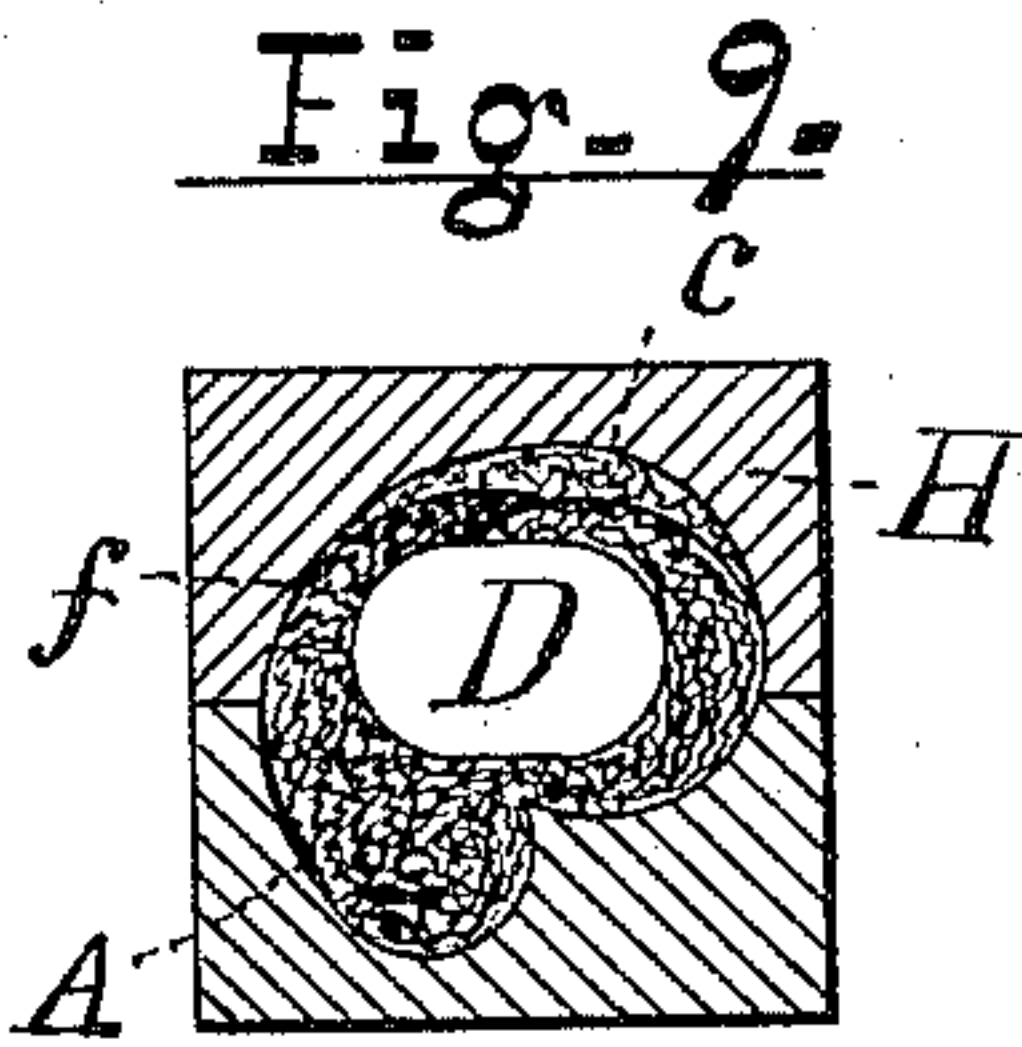
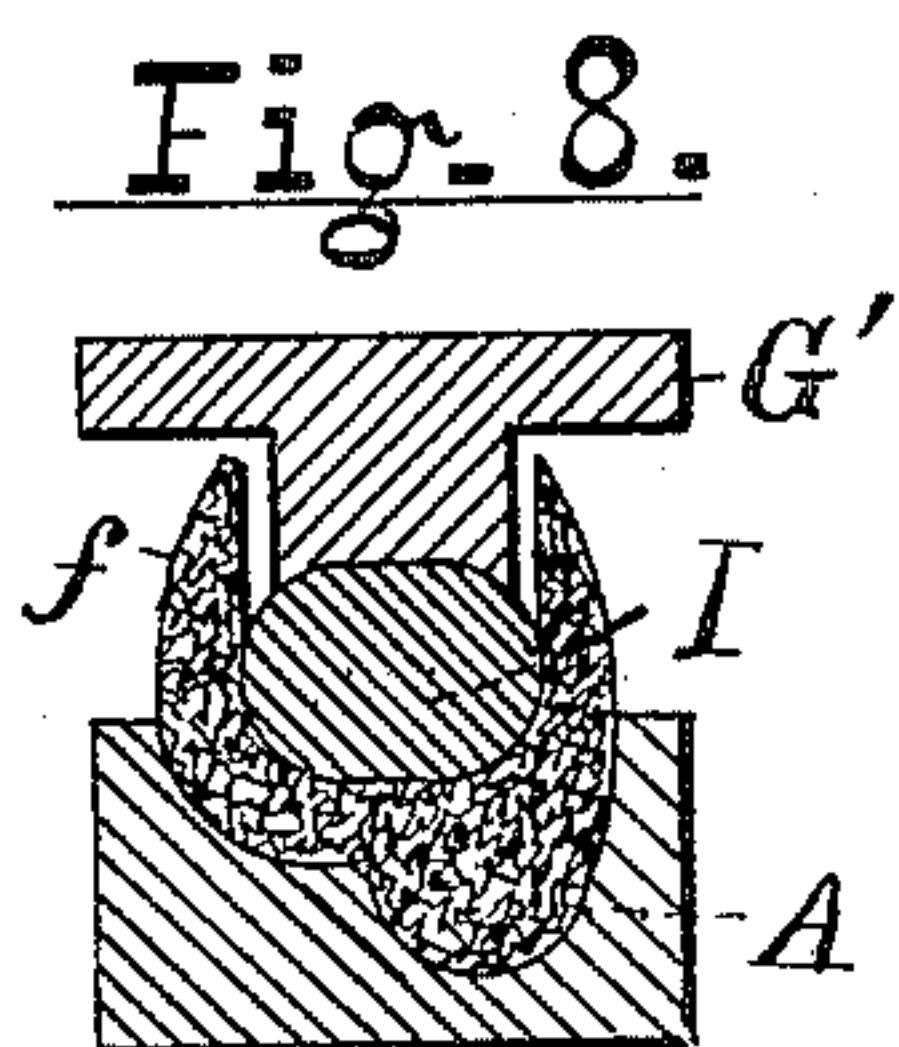
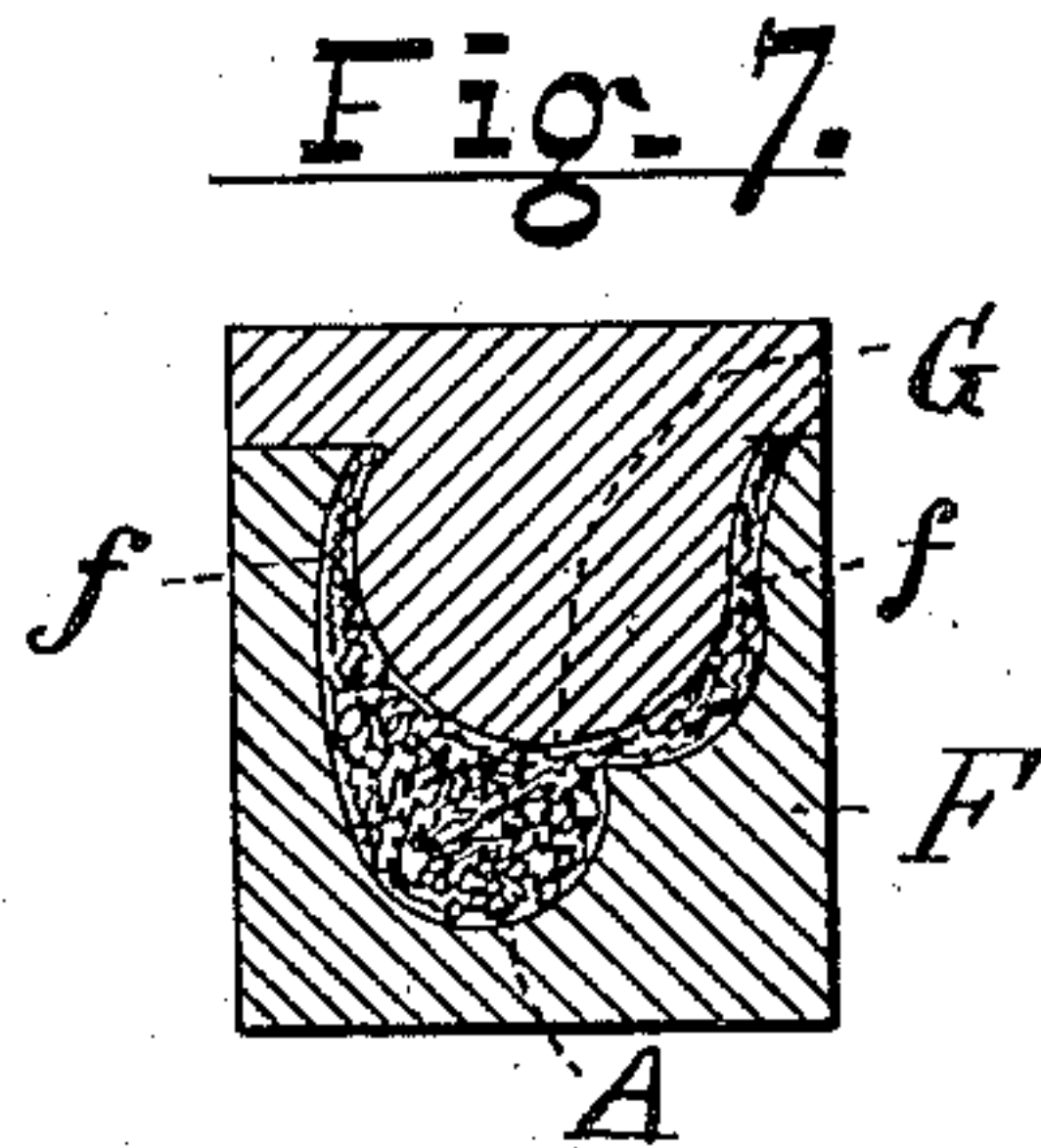
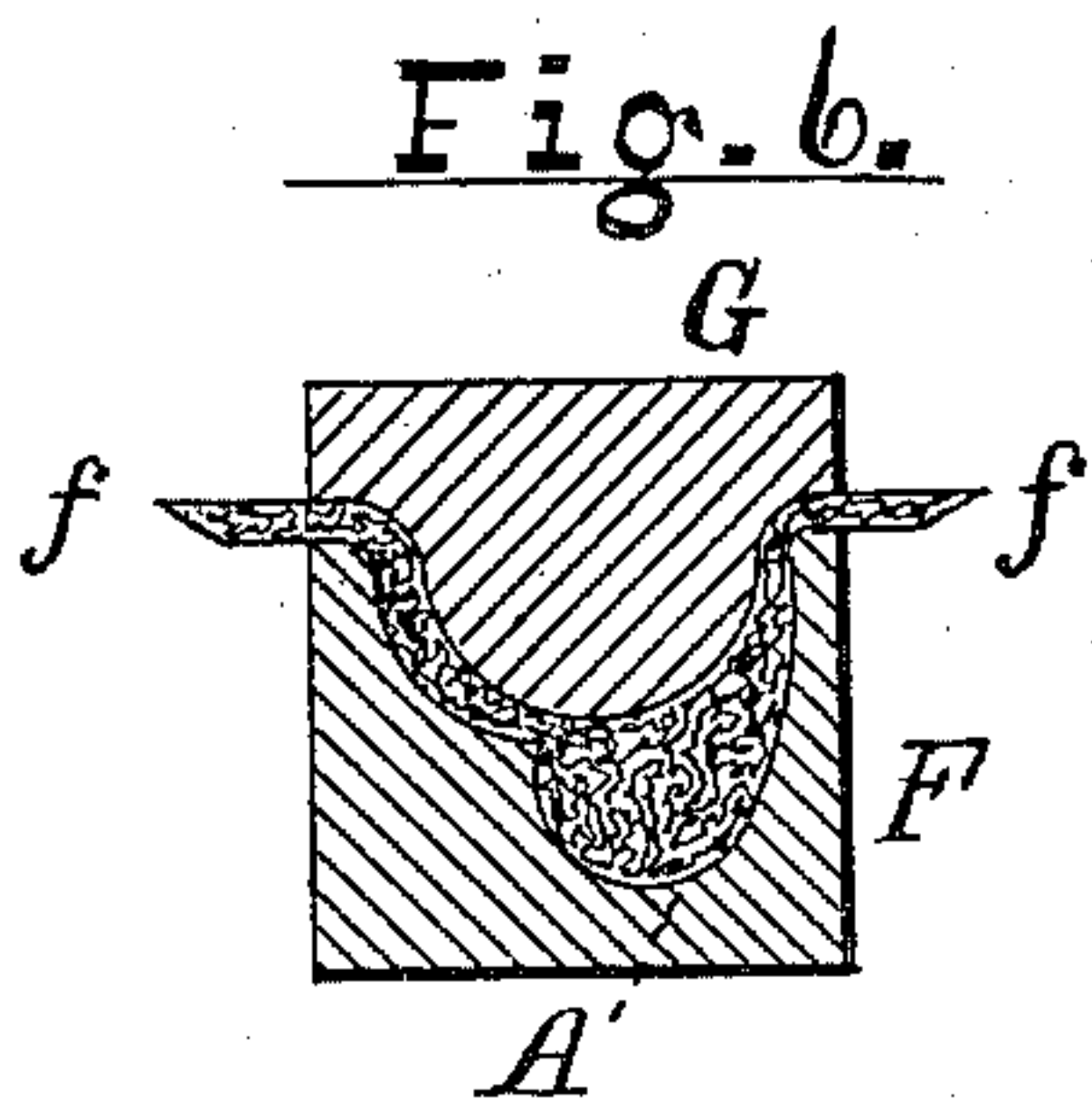
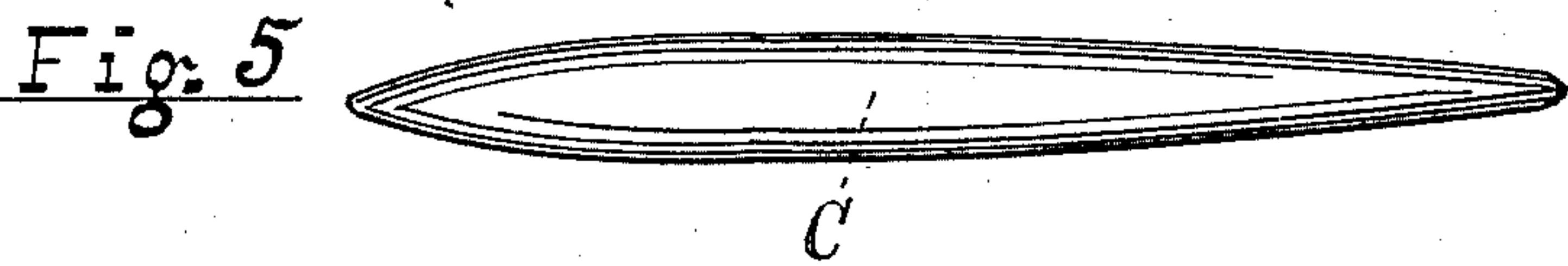
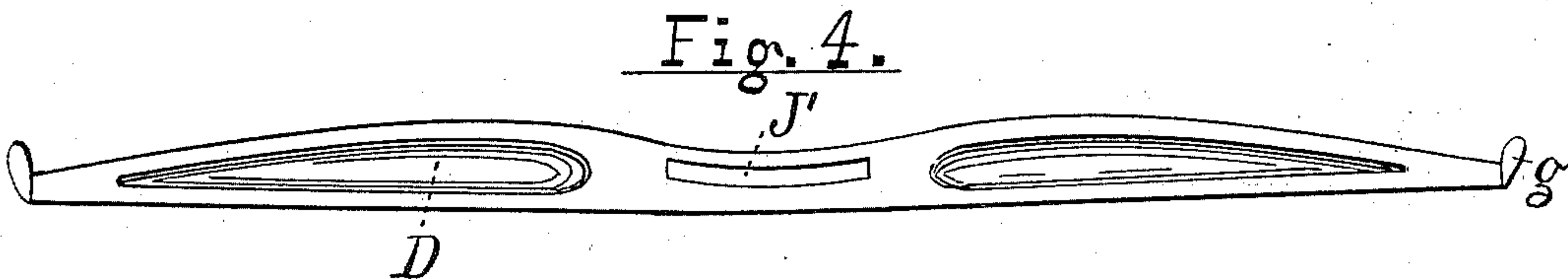
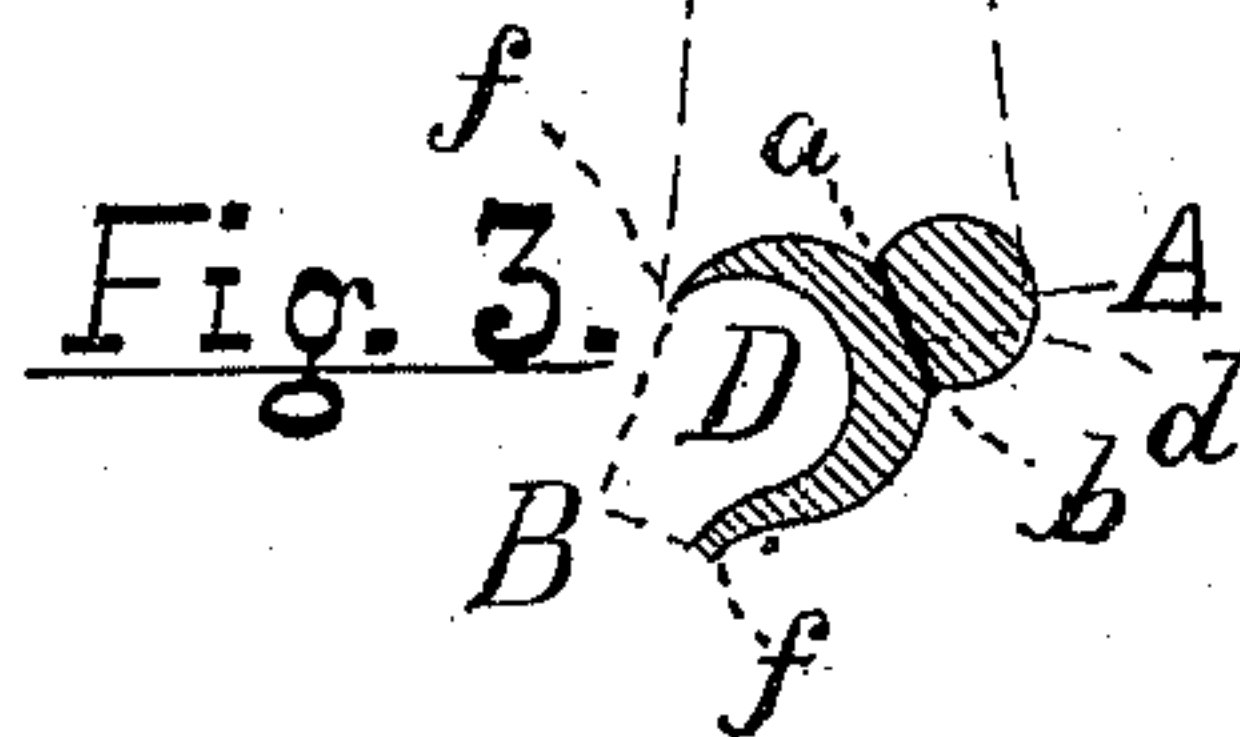
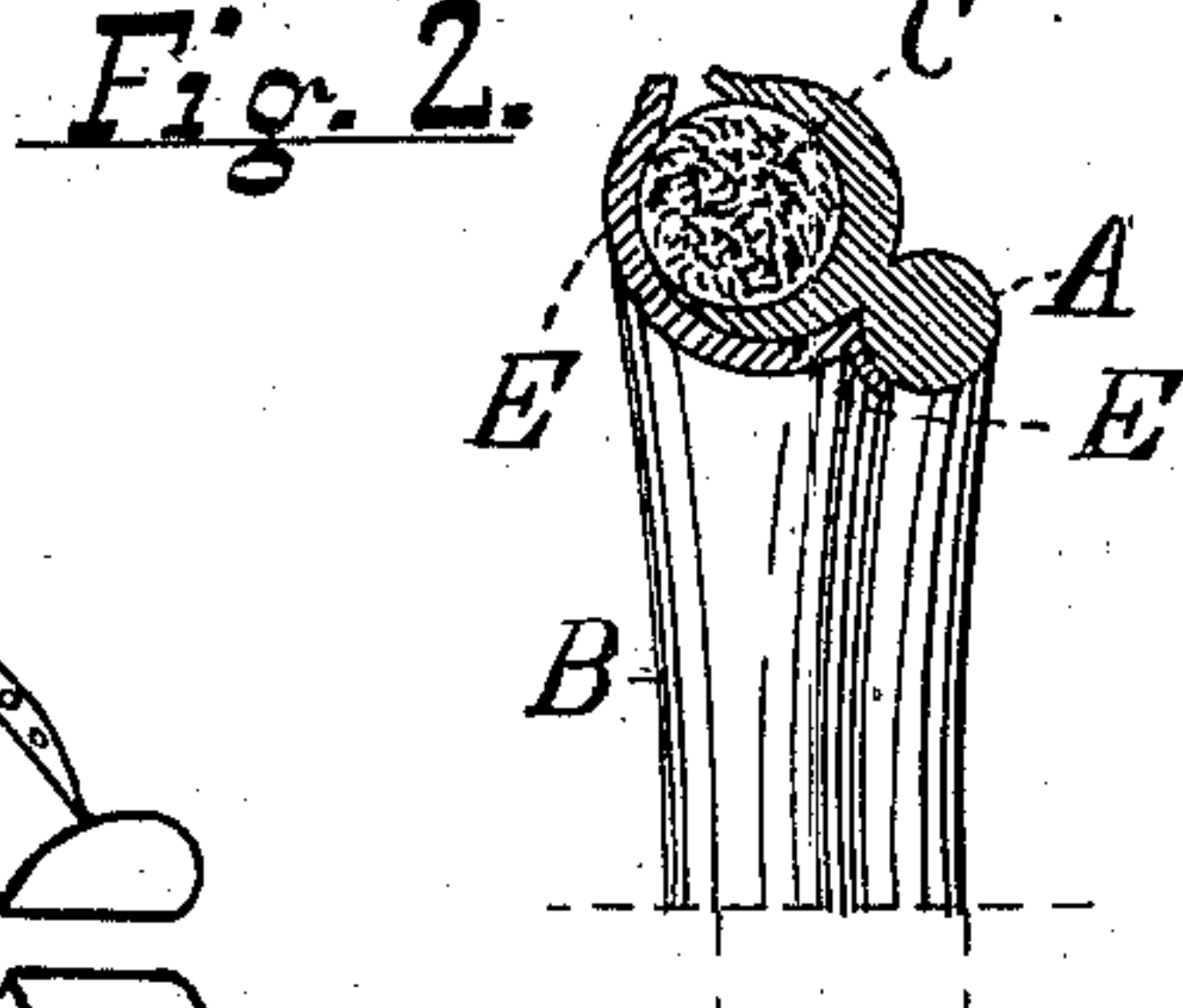
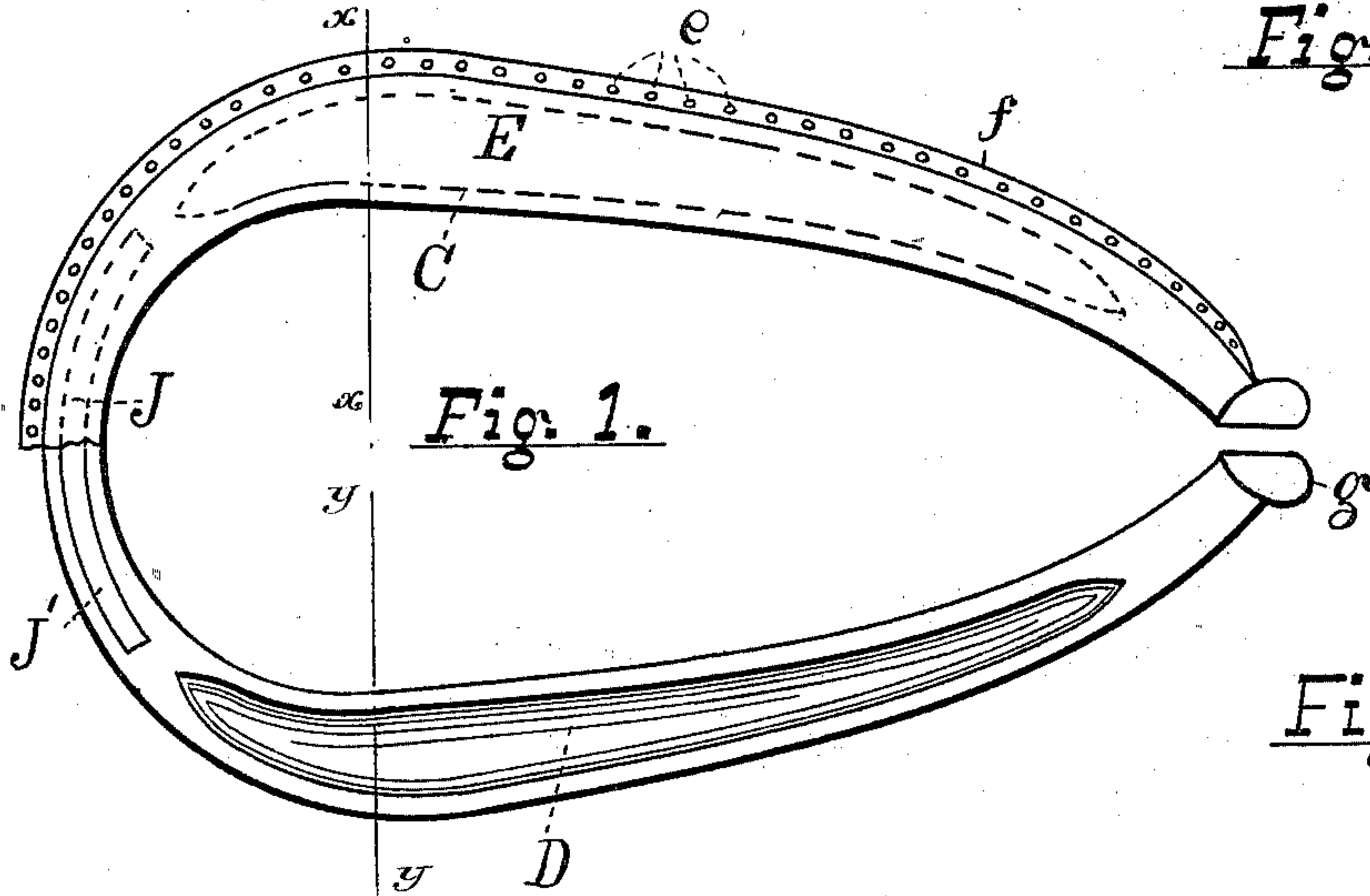
(No Model.)

J. STANLEY & T. F. LEMASSENA.

HORSE COLLAR.

No. 299,286.

Patented May 27, 1884.



Attest.

H. J. Theberath.
L. Lee.

Inventor.

J. F. Lemassena & J. Stanley
per Thos. S. Crane, Atty.

UNITED STATES PATENT OFFICE.

JAMES STANLEY AND THEODORE F. LEMASSENA, OF NEWARK, NEW JERSEY, ASSIGNORS TO THE STANLEY HORSE COLLAR COMPANY, OF SAME PLACE.

HORSE-COLLAR.

SPECIFICATION forming part of Letters Patent No. 299,286, dated May 27, 1884.

Application filed February 18, 1884. (No model.)

To all whom it may concern:

Be it known that we, JAMES STANLEY and THEO. F. LEMASSENA, citizens of the United States, residing in Newark, Essex county, New Jersey, have invented certain new and useful Improvements in the Manufacture of Horse-Collars, fully described and represented in the following specification and the accompanying drawings, forming a part of the same.

10 This invention relates to a new article of manufacture adapted for use with hames or equivalent tug-fastenings; and it consists, essentially, in a collar formed of leather scraps with a recess constructed in the front side and 15 padded or covered to make the collar more yielding where it presses upon the horse's neck.

Figure 1 shows a front view of a collar having an open recess shown at the bottom side of the figure and a covered pad shown at the top; Fig. 2, a section of the latter construction on line *x x* in Fig. 1; Fig. 3, a section of the open recess on line *y y* in Fig. 1. Fig. 4 is a plan of a straight blank formed of leather scraps with open recesses. Fig. 5 is a side 25 view of a pad for filling such recesses. Fig. 6 is a section of a mold for forming a hollow collar of leather scraps with a recess for stuffing. Fig. 7 is a section of a mold for forming the open recesses shown at Figs. 1, 3, and 4. 30 Fig. 8 is a section of a mold for forming a hollow collar by a different method, and Fig. 9 is a section of a mold for finishing a hollow or stuffed collar.

The collars heretofore stuffed with straw 35 have been formed of leather casings which press both against the horse's neck upon the so-called "front" side and upon the hames at the "back." At the latter point great firmness and rigidity are desirable to sustain the heavy draft upon the narrow surface of the hames, while a soft front is equally necessary to bear elastically upon the horse's neck. The process of manufacture, however, being substantially the same for both sides of the collar, 40 such stuffed collars have often proved too hard upon the front side, and it has therefore been very common in practice to apply a pad or blanket facing of some kind to the front of the collar, as the structure was of uniform

density or hardness at both the front and the 50 back, and a consistency suitable for the latter side was unsuited to bear upon the horse's neck without a pad. To secure such a different constitution for the opposite sides, concave metallic frames have been made with 55 pads inserted in one side to bear against the horse's neck, such rigid frame avoiding the use of any hames, as the traces could be attached directly thereto. Such metallic frames are not, however, so much liked for fine harness as a collar of leather; and our invention is intended to furnish a collar of such material, and constructed so as to be materially softer at the front side than at the back.

Our invention furnishes several methods of 65 making a leather horse-collar much harder upon the back than has been common heretofore, to sustain the wear of the hames, while the front side is formed of an exceptionally yielding character, to press gently upon the animal's 70 neck. To effect these objects we form a collar adapted to use with any ordinary harness and capable of being finished externally like any ordinary patent-leather-covered collar. By pressing leather scraps into the desired 75 form in a mold and in the process of molding the same, we provide a recess in the front side suitable to receive a pad of any soft material—as wool, hair, tow, paper, or cut straw—or cover the recess with a facing of 80 yielding material strong enough to sustain the pressure over the internal hollow. In forming such collars we may use, preferably, the process patented to us on February 12, 1884, in Patent No. 293,535; but other methods may 85 be employed, if preferred. In such processes scraps of leather pasted together in a mold are used to form a horse-collar of solid or other texture; but in our present invention we may also use pulp made of leather scraps 90 ground up by any suitable means, and shall use the words "leather scraps" herein to designate either the pulp or small sheets of waste leather, which latter require to be placed in the mold with a certain regularity, while the 95 pulp does not.

In the drawings, A is the back of the collar, which we preferably harden by pressure

to a consistency like hard wood. B is the front of the collar, C a pad, D a recess for the same, and E a cover to hold the pad in place. Such cover may be formed integral with the back and folded over the recess after the pad is inserted, or may be stitched or laced to the collar at the inner crease, *a*, as shown in Fig. 2. In Fig. 1, the nearer side of the collar (at its front) is shown with an open recess, as produced by pressing a suitable former into the leather while in a plastic state. To perform such operation any suitable mold may be used, a section of one being shown in Fig. 7, in which section F is the bottom of the mold, shaped to receive the back A, and filled with a sufficient quantity of leather scraps to form the parts and shape desired. The scraps are preferably molded to such form first, and then dried until nearly free from moisture, so that the article will bear a heavy final pressure. When thus pressed, the former G consolidates the leather chiefly toward the bottom of the mold, thus greatly hardening the back and leaving the flaps *f* at each side of the recess comparatively soft. In such final pressure the flaps may have any shape given to them for securing a pad in the recess. Thus at the upper side of Figs. 1 and 2 the flap is shown turned outward rather more than in Fig. 7, and provided with eyelets *e*. By providing the flaps at both edges of a recess with such eyelets, the pad can be secured therein by a lacing without any kind of cover, or the flaps, if desired, be formed to draw close together over a stuffing inserted in the recess without any casing to first form a pad. At the upper side in Fig. 1 the recess D is shown closed, as in the section at Fig. 2, by a cover, E, represented as laced to the collar at the crease *a*, and to the outer flap *f*, thus covering the pad in the recess and protecting the same from wear. The pad may be made of any shape or material suited to fit the recess, but is preferably made by sewing a cover of soft material or woven fabric into the desired form and stuffing it with the proper substances. It is obvious that with the construction just described the pad may be removed and replaced at any time, and that the cover, when worn through, may be readily renewed by any person without sending the collar to a harness-maker at all. Eyelets *e* are shown formed in the flap *f*, and holes *d* would be formed through the back from the inner crease, *a*, to the outer lame-crease, *b*, through which stitches or a lacing-thong could be readily passed to secure the cover. It is obvious that in any method of uniting the flaps over the recess D an internal cavity will be formed, which will cause the front of the collar to possess the desired yielding character.

Fig. 6 shows a method of forming the recess D with flaps adapted to paste over the same, and cover it permanently. With such a construction the recess may be used hollow, as shown in Fig. 9, or be filled with stuffing of

any desired character. In Fig. 6 the flaps are shown projected between the joints of the mold F and former G, so as to be afterward bent over the recess, as shown in Fig. 9, in which section a shaping-die, H, is indicated, applied to the top of the collar after the flaps are folded down to give it the final form and finish. In this figure a plating-piece, *c*, is shown pasted over the flaps to conceal and strengthen their joint.

Fig. 8 shows a means of forming the recess and hardening the back without an expensive cast-iron former, consisting in forcing a wooden bar, I, into the leather to operate exclusively upon the leather in the bottom of the mold, where the greatest consolidation is desired. Such bar is shown shaped like the recess D in the hollow collar represented in Fig. 9, and is forced into its place by a suitable presser, G', the pressure being applied to the molds or formers shown by any suitable means. Such bar, being made of wood, can be cheaply formed to fit the size of recess required, and thus avoids the expense of numerous iron formers.

It is obvious that the wooden bar I or a pad of any required hardness may be inserted in the recess and covered by the flaps in the manner shown in Fig. 9, the process affording a means of forming a hollow collar when desired, by first drying the fabric to such a point that it will bear a suitable shaping-pressure; second, removing the internal support before pasting the flaps together over the hollow or over a yielding pad, if one be used; and, third, applying the shaping-die H.

At J' in Figs. 1 and 4 is shown a recess for receiving a piece or pieces of rawhide, J, inserted in the curved bottom of the collar to give it elasticity and strength. Such hide is cut into suitable strips, and may be pressed into the leather scraps while soft without forming any previous recess, the scraps being then covered in the finishing operations of the manufacture.

As the back bead, A, is of uniform size all the way around the collar, the desired pressure and shaping may be effected by rollers instead of molds by forming the surface of one roller to receive the inner side of the bead A and front B, and grooving the opposite roller eccentrically to produce the variations in width shown in the collar in Fig. 1.

To facilitate the pressing of the collar by either molds or rollers, the blank therefor may be formed straight, as shown in Fig. 4, and afterward bent into the desired oval form. The blank may be formed with the desired recesses, as in the figure, and is also shown with the usual knobs, *g*, at the ends, by which the ends are tied together at the top of the collar.

When the collar is properly molded and dried, we preferably coat it with japan and bake the same upon the surface, so as to produce a perfect imitation of a patent-leather

covering, but secure by our peculiar process of manufacture a very different article from any made by stuffing a leather casing—namely, a solid leather collar having any needful degree of hardness at the back and softness at the front.

Having referred above to the metallic collars heretofore used we entirely disclaim the formation of a collar of such material, our invention consisting in the leather collar herein described, and the processes by which we produce it, none of which processes could be used to produce the metallic collars referred to.

Having thus distinguished our invention from others, we claim the same as follows:

1. As an improved article of manufacture, a horse-collar formed of scraps of leather united by suitable cement and having a recess formed in the front side, and provided with means, substantially as described, for securing a pad in such recess, as and for the purpose set forth.

2. As an improved article of manufacture, a horse-collar formed of scraps of leather united

by suitable cement, and having a recess formed in the front side and covered by flaps integral with the back of the collar. 25

3. The process of forming a hollow collar, consisting in first pressing or molding the collar with flaps at the sides of the intended hollow, then pasting down the flaps to cover the hollow, and then drying and finally pressing the pasted flaps to the finished or desired form. 30

4. The combination, with a collar molded of scraps of leather, as described, of a strip or strips of rawhide inserted in the bottom of the collar, substantially as and for the purpose set forth. 35

In testimony whereof we have hereunto set our hands in the presence of two subscribing witnesses.

JAMES STANLEY.
T. F. LEMASSEN.

Witnesses:

THOS. S. CRANE,
C. C. HERRICK.