

(No Model.)

L. D. CORTRIGHT.

METALLIC SHINGLE OR ROOFING PLATE.

Patented Mar. 22, 1887.

No. 359,959.

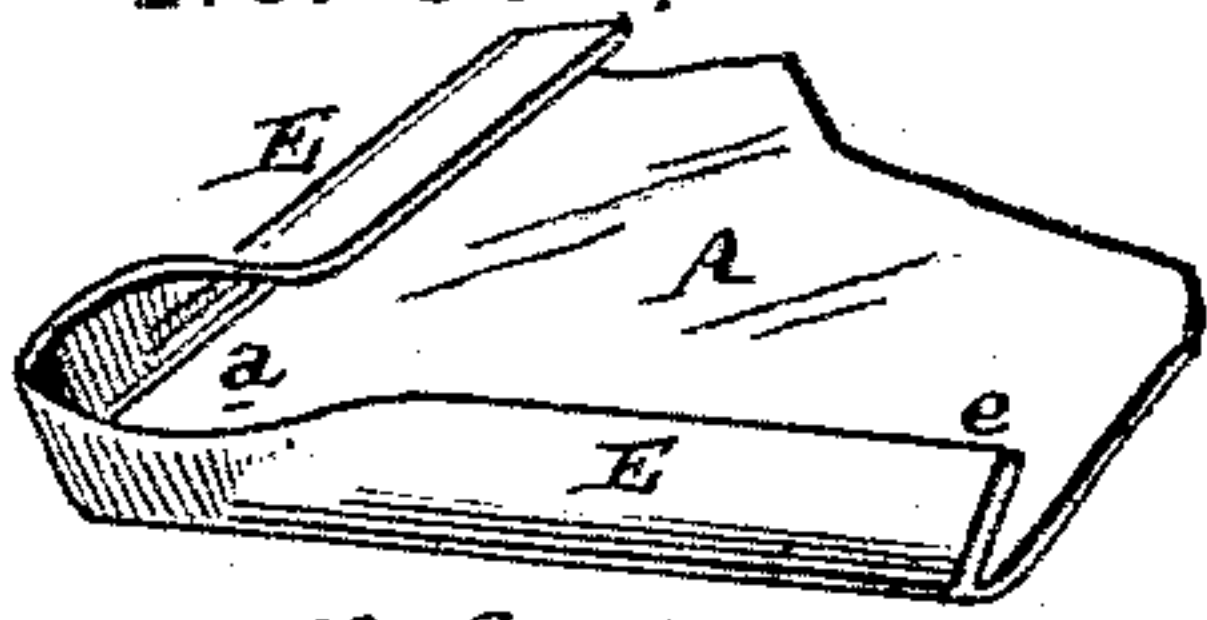


FIG. 6

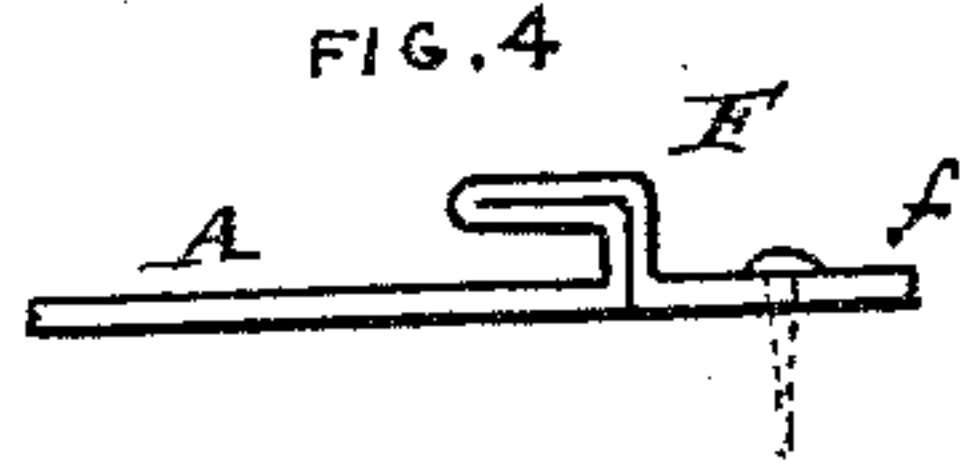


FIG. 4



FIG. 5

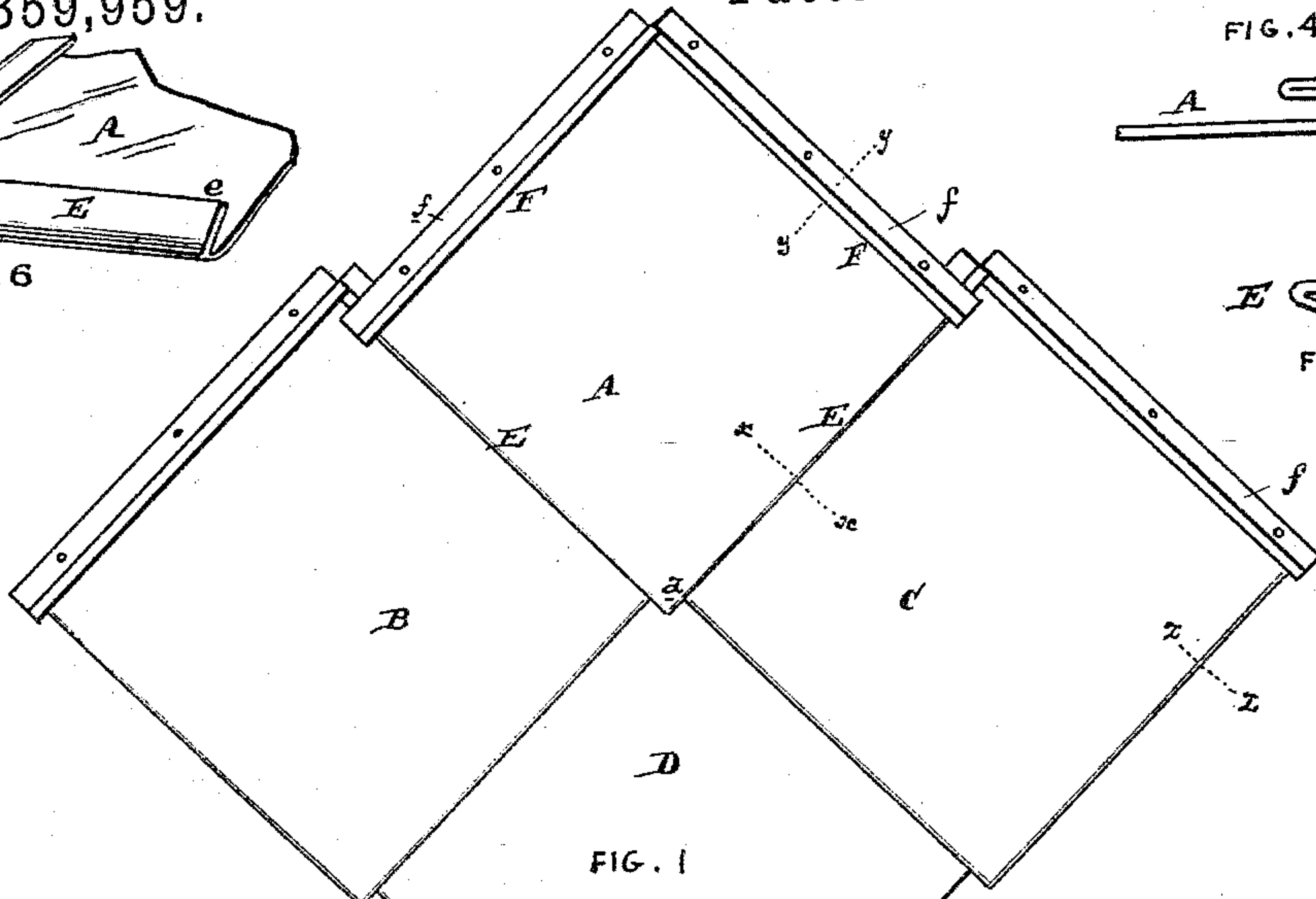


FIG. 1

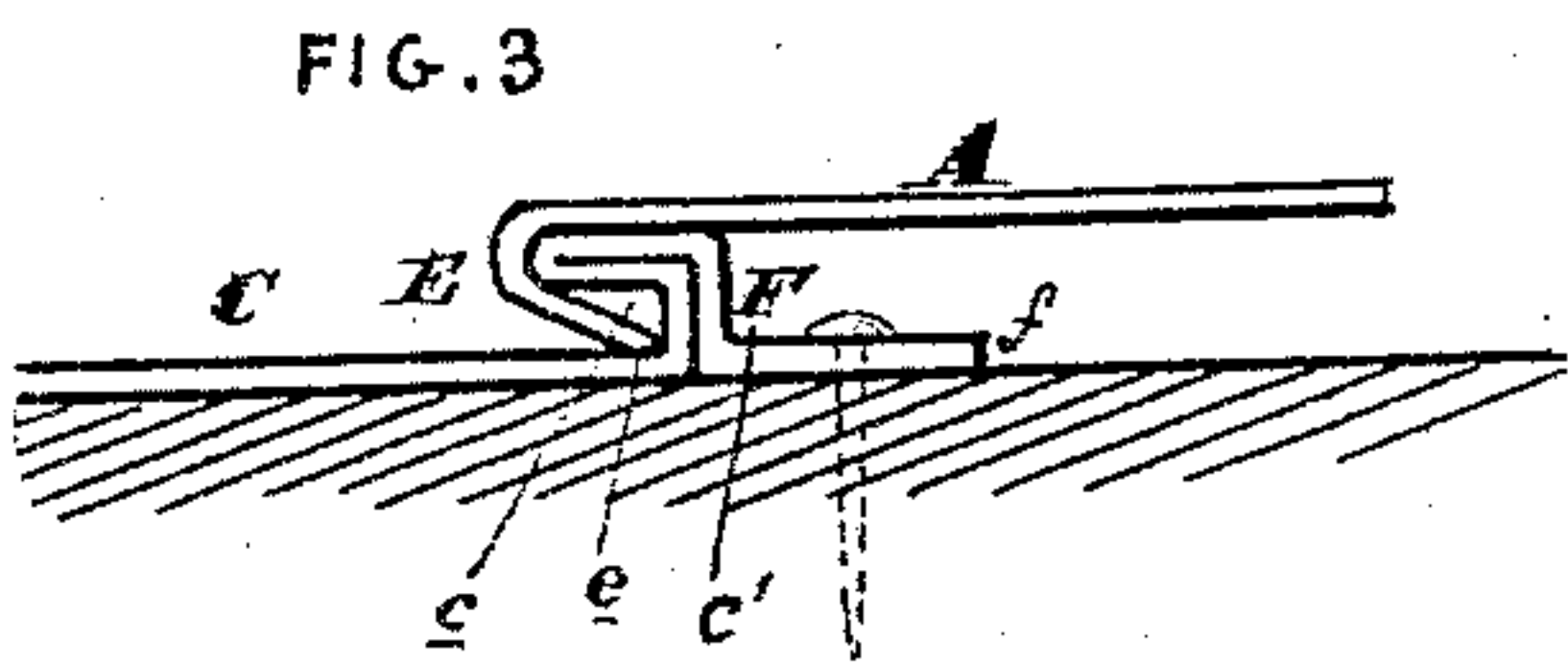


FIG. 3

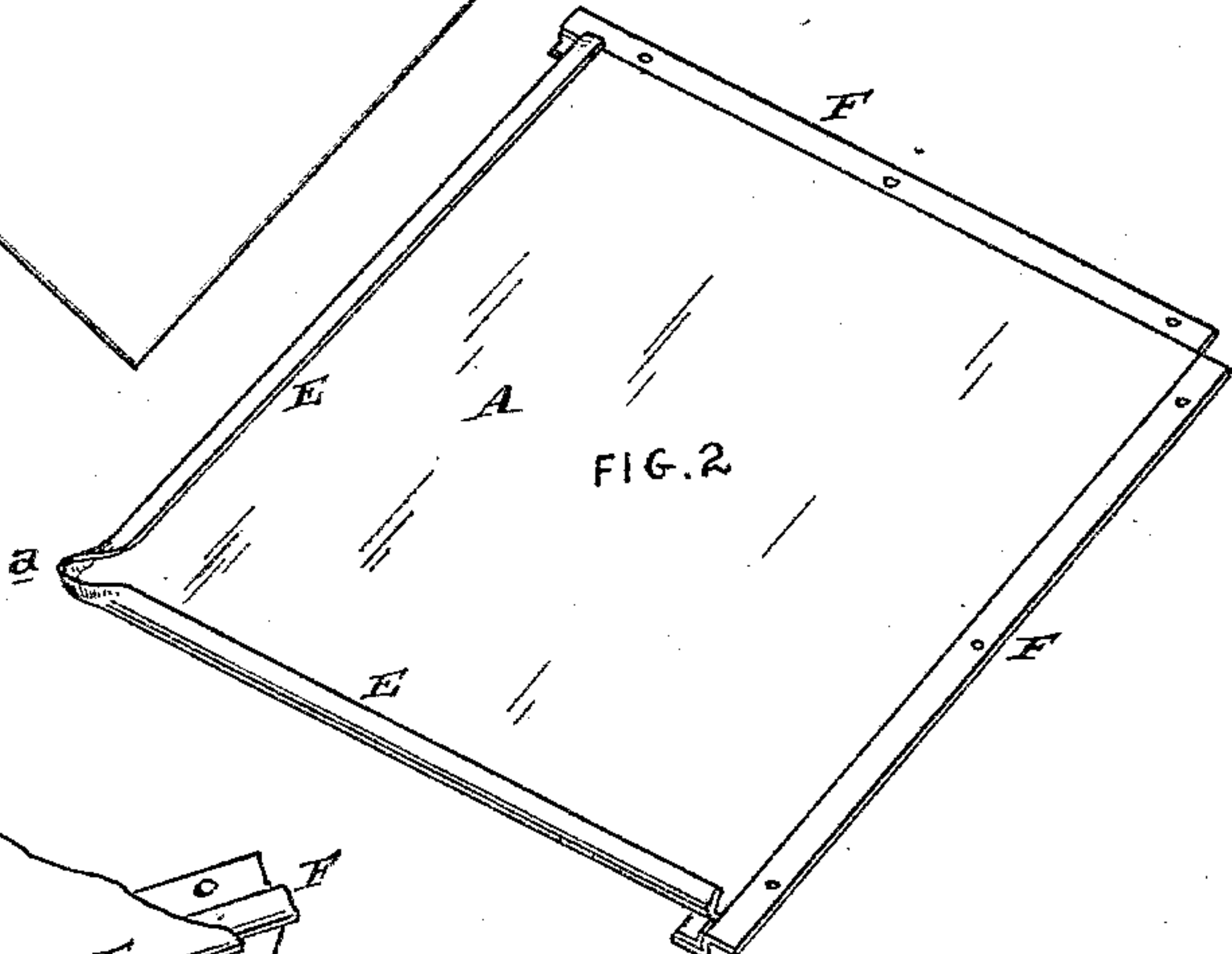


FIG. 2

FIG. 8

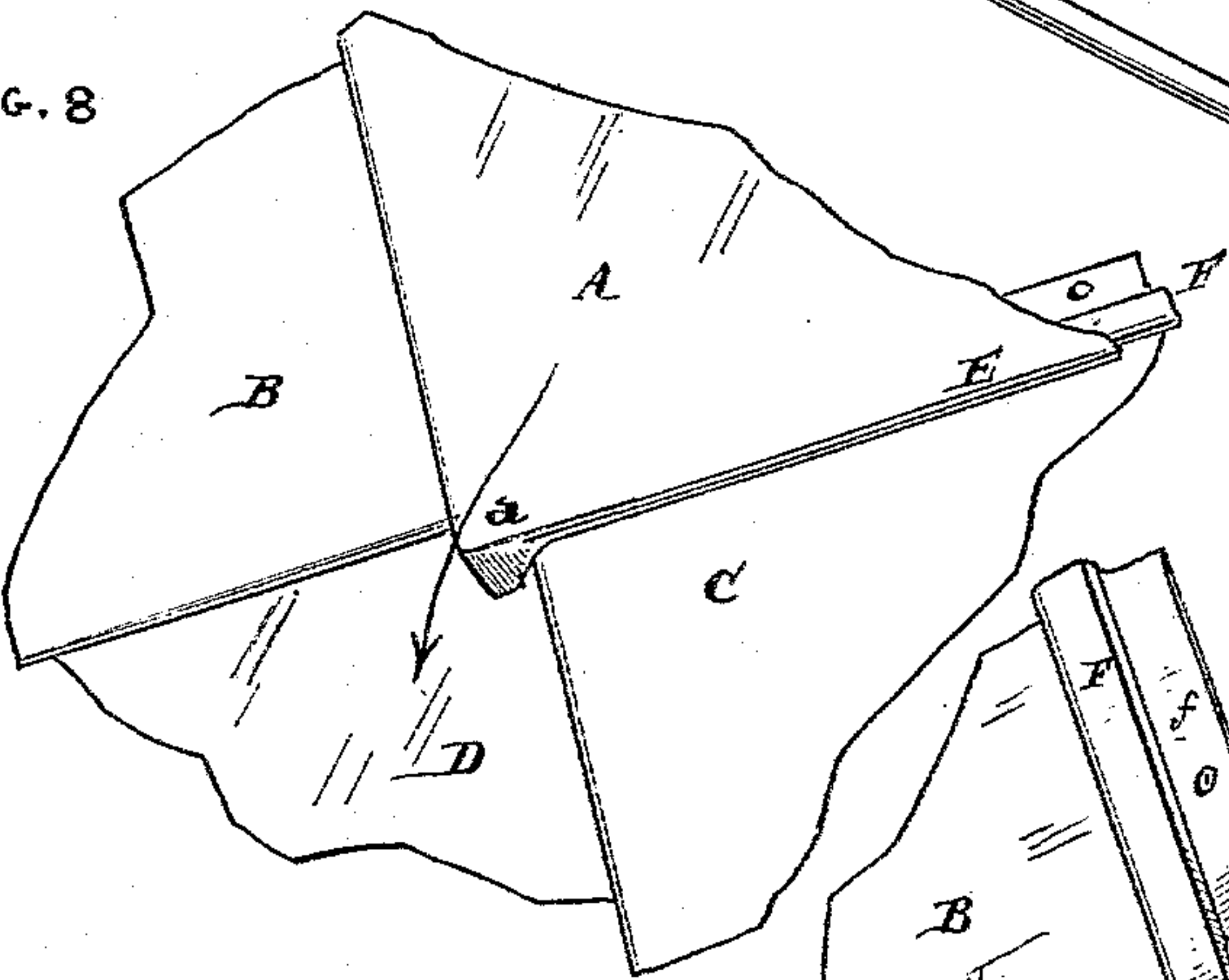
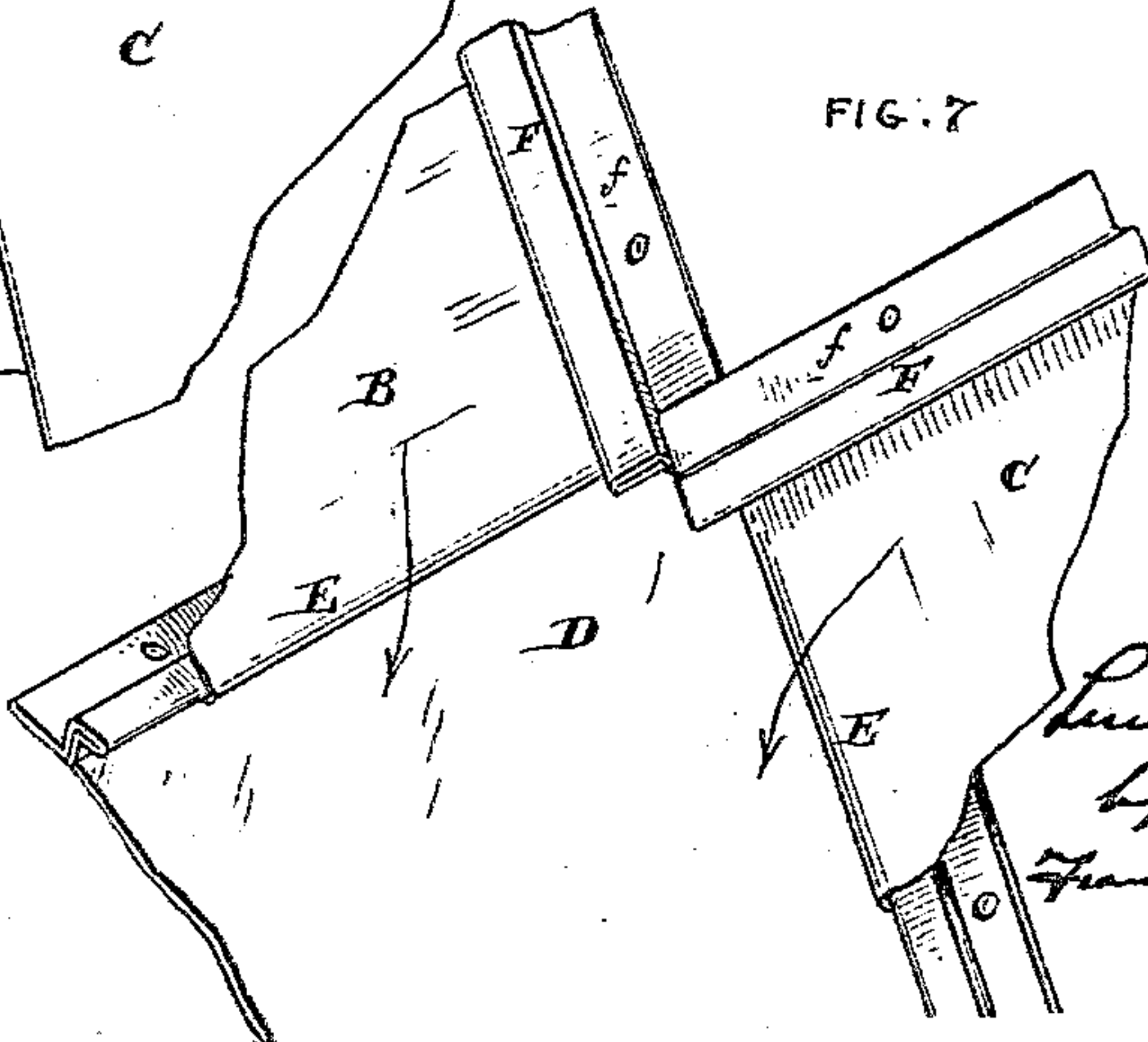


FIG. 7



Attest

L. J. Harding
Joshua M. Hallack, Jr.

Inventor

Louis D. Cortright
by his attorney
Francis T. Chambers

UNITED STATES PATENT OFFICE.

LEWIS D. CORTRIGHT, OF HYDE PARK, ILLINOIS, ASSIGNOR TO THE CORT-
RIGHT METAL ROOFING COMPANY, OF PENNSYLVANIA.

METALLIC SHINGLE OR ROOFING-PLATE.

SPECIFICATION forming part of Letters Patent No. 359,959, dated March 22, 1887.

Application filed January 3, 1887. Serial No. 223,224. (No model.)

To all whom it may concern:

Be it known that I, LEWIS D. CORTRIGHT, of Hyde Park, Cook county, State of Illinois, have invented a new and useful Improvement in Metallic Shingles or Roofing-Plates, of which the following is a true and exact description, due reference being had to the accompanying drawings, which form a part hereof.

My invention relates to roofing-plates of the class which are laid in successive rows from the eaves to the comb of the roof, and has for its object to provide a seam or joint for the plates which shall be at the same time simple and tight, providing especially against the action of the capillary tendency, which is the most troublesome cause of leakage in roofing-plates of this kind.

Reference being had to the drawings which illustrate my invention, Figure 1 shows four of my improved shingles interlocked together as they are laid upon a roof. Fig. 2 is a view of the under side of one of my shingles; Fig. 3, a section of the joint between two shingles, taken on the line xx , Fig. 1; Fig. 4, a section through one of the upper edges of my shingle, as on the line yy , Fig. 1; Fig. 5, a section through one of the lower edges of my shingles, as on the line zz , Fig. 1; Fig. 6, an enlarged view of the lower point of my shingle from the under side; Fig. 7, a perspective view of the central point of the three lower shingles shown in Fig. 1, the upper one being removed; and Fig. 8, an enlarged view of this same point with the upper shingle in place.

A, B, C, and D are four of my shingles, which I prefer to make square, as shown, though other symmetrical equilateral figures may be used, and my improved joint may even be used with advantage on metallic shingles the seams of which run in vertical lines.

The two upper edges of my improved shingles are bent so as to form an elevated and backwardly-pointing flange, F, the extreme edge of the sheet forming the nailing-flanges f . The flanges F are preferably formed, as shown in the drawings, so that they rise at a right angle from the plate, and when at some distance—say from one-eighth to one-fourth of an inch—above the plate turn abruptly backward and run parallel to the sheet. The two lower edges of my sheets are bent downward and

inward in the reverse direction to the flange F, forming hooks E, the points e of which are adapted to rest against or near to the bottom of the flange F, the bent portion being substantially equal to the direct distance between the point and the base of said flange F. (See Fig. 3.) At the lower points, a , of my shingles I prefer to bend the flange E at nearly a right angle, and round it out, as shown, by which construction the point a of the upper shingle comes in contact, or nearly so, with the surface of the shingle below it, and the joints are better protected at the corners against water being driven into them by the wind.

I consider it a great advantage to set my improved shingles in the slightly-staggered manner shown, as the water flowing down the seams is thus thrown onto the surface of the sheet below, and there is not the same tendency for it to follow the seams as there is when they run in unbroken lines across the roof.

The union of the high abrupt flange F and the oblique flange E leaves a clear open space, c , within the seam, and the surfaces of the two flanges do not run parallel to each other on the side of the seam exposed to the weather. As will be readily understood, this form of seam has no capillary tendency, there being nothing to attract the water into the seam or lead it through the seam, as in cases where the interlocked flanges of the joint lie parallel and close together. While I prefer to make the flange F with right-angle bends, it may be bent at a somewhat different angle, or even curved, the main point being that the chamber c should be preserved in all cases.

It will be remarked that in the construction shown and described the surface of the overlapping shingle does not approach the nailing-flange f , which, together with the side of the flange F, forms an inclined gutter, c' , inside the seam, this gutter leading any water which may get into it onto the surface of the plate below in the same way as does the gutter c . The distance between the nailing-flange and the overlapping plate is so great that there is no capillary tendency to draw the water toward the edge of the flange f and onto the supporting structure. This feature of my invention is capable of use even when the seam itself is quite different from that hereinbefore

described, and will be found useful in connection with any seam which permits of the use of an upwardly-projecting flange inside the nailing-flange.

5 It is evident that the benefit of the inner gutter, *c'*, can only be fully obtained when the flange *F* and nailing-flange *f* are continued downward far enough to extend over upon the surface of the plate below, so that any water
10 getting inside the flange *F* will be thrown not upon the sheathing, but upon the surface of the roof-plates. Even when the seam is vertical the small quantity of water in gutter *c'* will be drawn by capillarity toward the upwardly-
15 extending flange *F*, and will not overflow the edge of the nailing-flange *f*, if the overlying plate is kept far enough away from said nailing-flange to prevent its exercising a capillary influence.

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

1. In a metallic shingle or roofing-plate, one or more edges bent to form an upwardly-extending flange and continued to form a nailing-flange, said flanges being extended downward, so as to overlie the surface of the plate below, in combination with corresponding
25 edges adapted to extend over the upwardly-extending flanges and form a seam on the inside thereof, but not come in contact with or approach the nailing-flange at all, substantially as and for the purpose specified.

2. In a metallic shingle or roofing-plate having four equilateral sides, the combination of
35 an upwardly-extending flange formed on two adjacent upper edges of the shingle and continued to form nailing-flanges, said flanges being extended downward, so as to overlie the surface of the shingle or plate below, with the two adjacent lower edges of the shingle adapted to extend over the upper-edge flanges of adjoining shingles and form seams on the inside thereof, substantially as and for the purpose
40 specified.

3. In a metallic shingle or roofing-plate, one or more edges bent into a flange, *F*, extending

up and backward over the plate and continued to form a nailing-flange, *f*, in combination with corresponding downward and inwardly-bent edges *E*, adapted to engage with the flanges *F* of similar sheets, substantially as and for the purpose specified. 50

4. In a metallic shingle or roofing-plate, one or more edges bent into a flange, *F*, extending up and backward over the plate and continued to form a nailing-flange, *f*, said flange being continued downward, so as to overlie the surfaces of the shingle or plate below, in combination with downward and inwardly-bent edges *E*, adapted to engage with the flanges *F* of similar sheets, substantially as and for the purpose specified. 60

5. In a metallic shingle or roofing-plate having four equilateral sides, the combination of flanges *F*, extending up and backward over the plate and continued to form the nailing-flanges *f* on the two upper adjacent sides, with the flanges *E*, extending inward and downward in the two lower adjacent sides, all substantially as and for the purpose specified. 70

6. A metallic shingle or roofing-plate having four equilateral sides, the combination of flanges *F*, extending up and backward over the plate and continued to form the nailing-flanges *f* on the two upper adjacent sides, said flanges being continued downward, so as to overlie the surface of the shingle or plate below, with the flanges *E*, extending inward and downward in the two lower adjacent sides, all substantially as and for the purpose specified. 80

7. A metallic shingle or roofing-plate having the hooked flanges *F* and nailing-flanges *f* in its two adjacent upper edges, the corresponding hooked flanges *E* in its adjacent lower edges, and having its point *a* formed by bending the flange *E* to or nearly to a right angle with the plate, substantially as and for the purpose specified. 85

LEWIS D. CORTRIGHT.

Witnesses:

S. P. DARLINGTON,
ANDREW ZANE, Jr.