

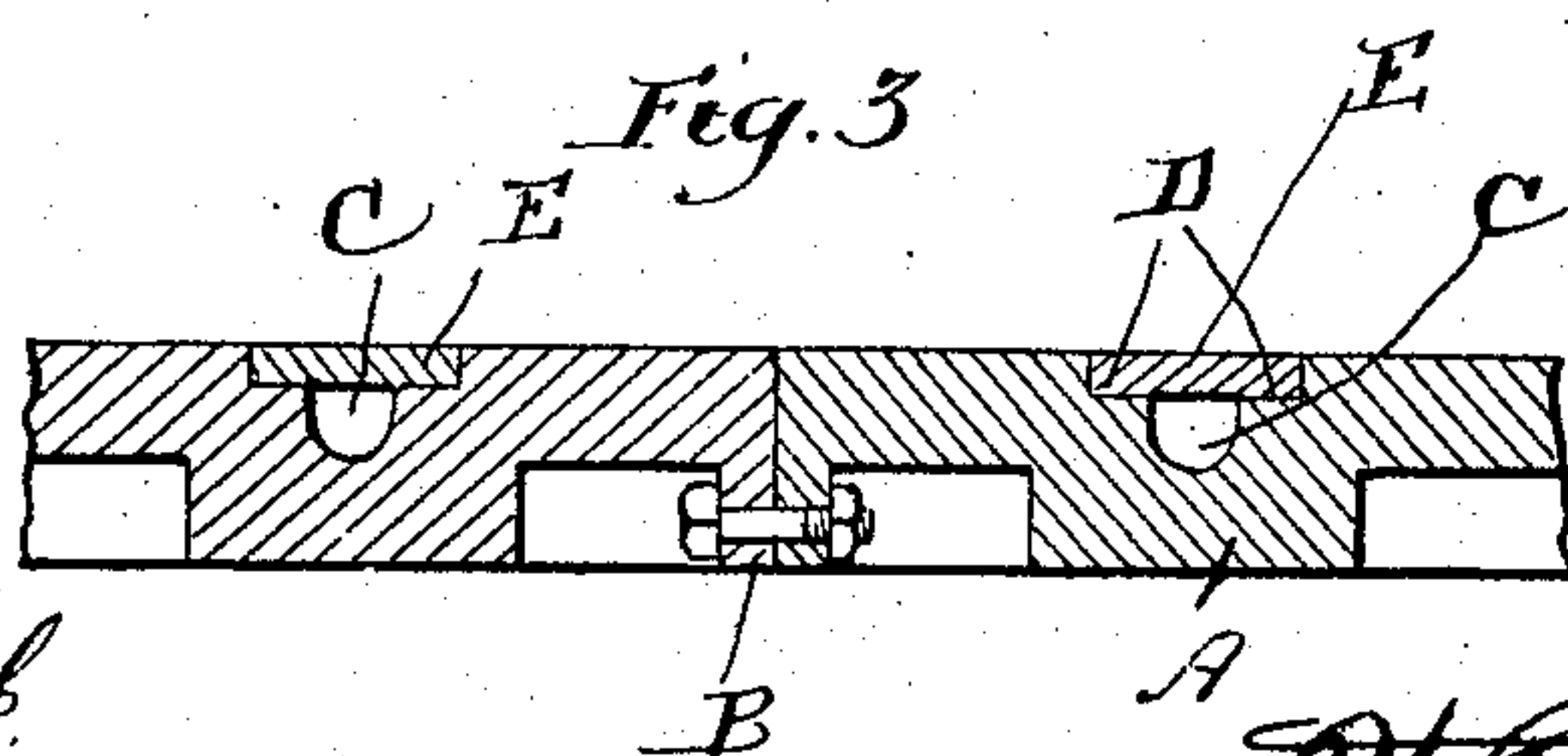
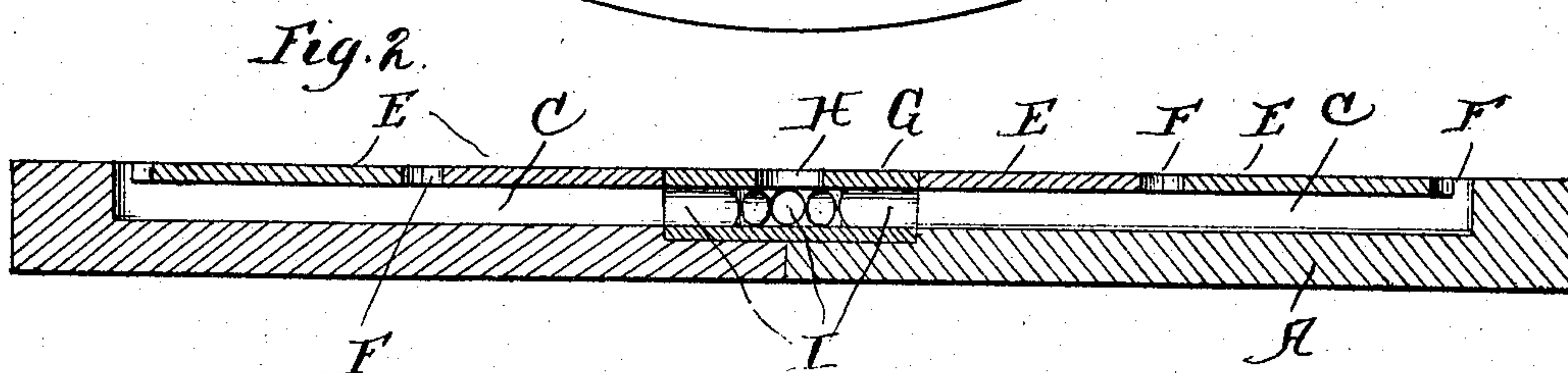
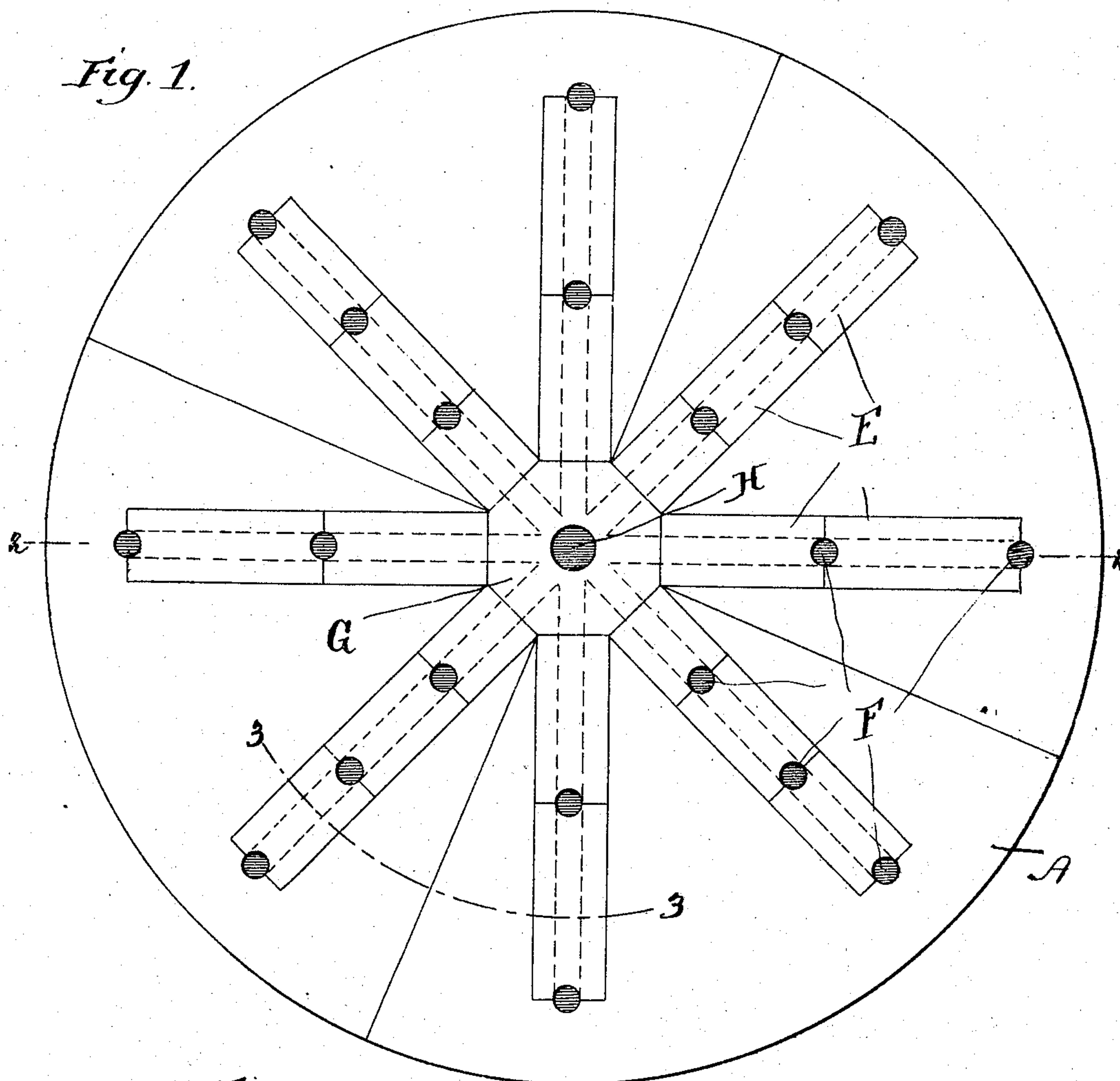
No. 782,452.

PATENTED FEB. 14, 1905.

W. J. LEVEY.
GUTTER PLATE FOR BOTTOM CAST INGOT MOLDS.

APPLICATION FILED MAR. 15, 1904.

2 SHEETS—SHEET 1.



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Fig. 4.

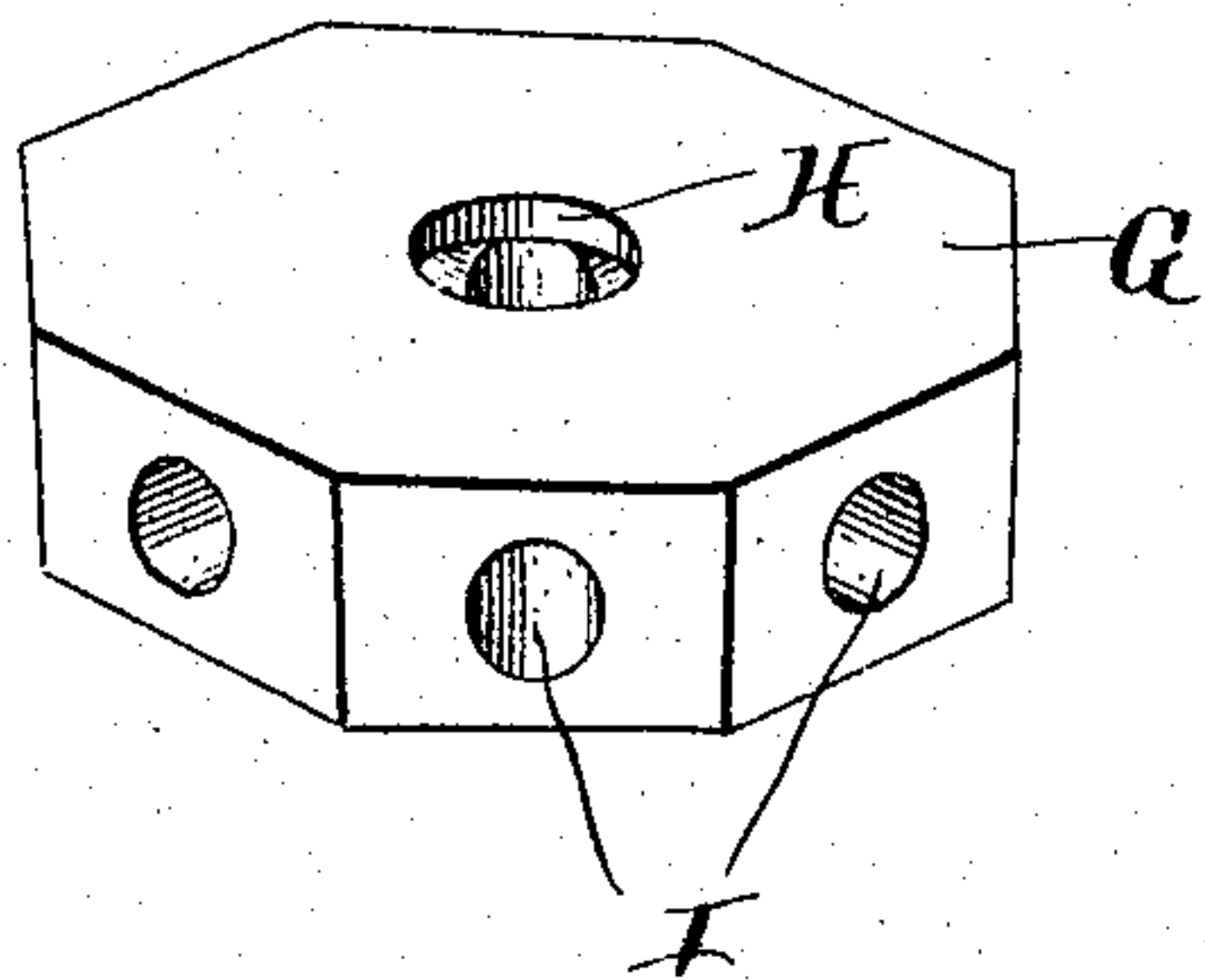


Fig. 5.

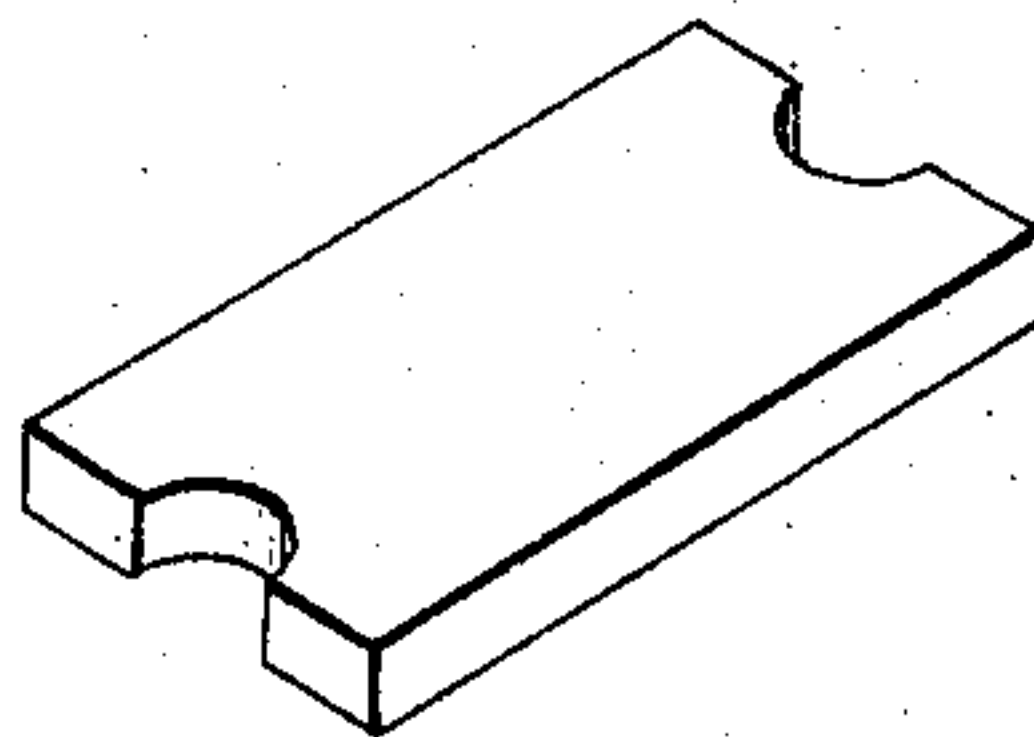


Fig. 6.

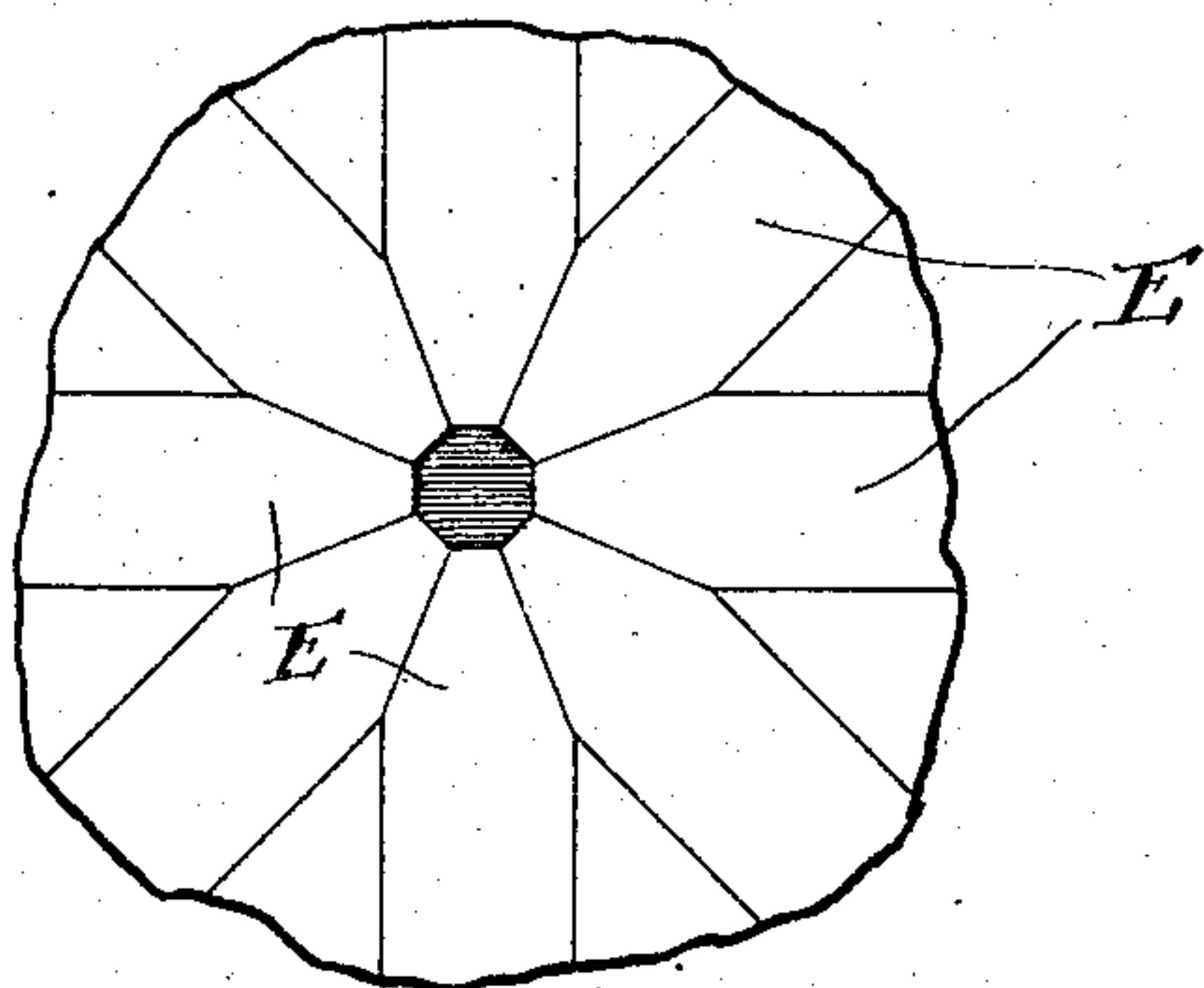
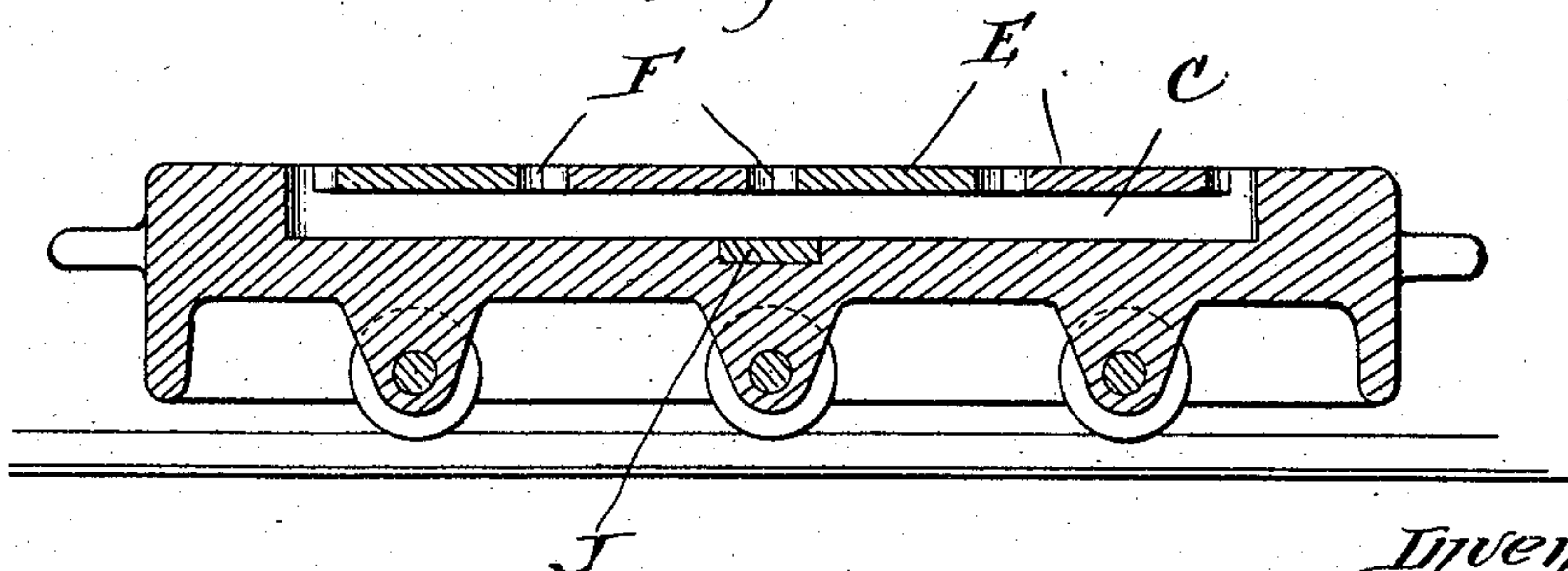


Fig. 7.



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UNITED STATES PATENT OFFICE.

WILLIAM J. LEVEY, OF FRANKFORD, PENNSYLVANIA.

GUTTER-PLATE FOR BOTTOM-CAST INGOT-MOLDS.

SPECIFICATION forming part of Letters Patent No. 782,452, dated February 14, 1905.

Application filed March 15, 1904. Serial No. 198,292.

To all whom it may concern:

Be it known that I, WILLIAM J. LEVEY, a citizen of the United States, residing at Frankford, county of Philadelphia, and State of Pennsylvania, have invented a certain new and useful Improvement in Gutter-Plates for Bottom-Cast Ingot-Molds, of which the following is a specification.

My invention relates to a new and useful improvement in gutter-plates for bottom-cast ingot-molds, and has for its object to provide a gutter-plate of cast-iron, the gutters being formed in the iron and the top of the gutters being closed by sectional removable plates of brick or cast-iron.

With these ends in view this invention consists in the details of construction and combination of elements hereinafter set forth and then specifically designated by the claims.

In order that those skilled in the art to which this invention appertains may understand how to make and use the same, the construction and operation will now be described in detail, referring to the accompanying drawings, forming a part of this specification, in which—

Figure 1 is a plan view of my improved gutter-plate; Fig. 2, a section taken on the line 2 2 of Fig. 1; Fig. 3, a section taken on the line 3 3 of Fig. 1; Fig. 4, a perspective view of the central brick into which the metal is teemed; Fig. 5, a perspective view of one section of the sectional plates covering the gutters; Fig. 6, a plan view of the center of a gutter-plate, showing a modified form of construction; Fig. 7, a longitudinal section through a buggy having my improvement incorporated therein.

As is well known to people skilled in the art, gutter-plates used for distributing the molten metal to the different molds are so constructed that the gutters are formed by longitudinal openings formed through brick. Thus the metal in flowing along the gutters flows over a brick surface, and this construction possesses certain disadvantages well known to people skilled in this art. My invention is for the purpose of providing a gut-

ter-plate in which the bottoms of the gutters are of cast-iron.

In the drawings, A represents the plate, made of cast-iron, and is preferably made in sections, (shown in the drawings as four in number,) these sections being folded together underneath through flanges, as represented at B in Fig. 3. The purpose of making the plate in sections is to cause the same to be more easily transported and for the purpose of repairing the plate if any part of the same should become damaged, thus doing away with the necessity of destroying the whole plate.

C represents the gutters formed in the upper surface of the plate A, and in the form shown in Fig. 1 these gutters radiate from a common center and may be of any number desired. The plate A is cut away upon each side of the gutter a portion of the distance downward, so as to form shoulders D upon each side, upon which are adapted to rest the sectional plates E for the purpose of closing the upper end of the gutters. These plates E are preferably made of brick; but in some cases cast-iron plates may be used. These plates E have openings F therethrough communicating with the gutters underneath, there being one opening for each mold adapted to set over the same. These openings may be made through the plate, but are preferably formed in between two sections—that is, one-half of the hole is formed in the end of each section—and when the sections are placed in position a round opening will be left in between each two sections, and at the end of the gutter one-half of the hole may be formed in the plate itself.

G is a block, preferably made of brick, and this block is formed with as many sides as there are radiating gutters and is adapted to fit within a correspondingly-shaped opening in the center of the plate A, and this block G has an opening H extending downward from above into the block, but not through the same, and from this central opening H passages I radiate, connecting with each of the gutters C. The molten metal is teemed into this central opening H, and thus impinges

first upon a brick surface and then distributes itself through the various gutters, passing upward through the openings F into the molds located above each of the openings. Thus it
 5 will be seen that by this construction I have provided a gutter-plate in which the molten metal only comes in contact with a brick surface at the center and then passes along gutters formed in cast-iron, and as the gut-
 10 ters are only closed by the removable sectional plates E said plates can be easily removed at any time for any purpose whatsoever. As a matter of fact, the central block G could also be made of cast-iron, if desired,
 15 and have a brick set in the same directly below the opening H, so that the metal would first impinge upon the brick surface before distributing itself.

In Fig. 6 I have shown a modified form of
 20 construction, in which the block G could be done away with by forming the inner ends of the plate E tapering, so that they will meet near the center and only leave a small opening through which the metal would be teemed,
 25 and in this case I would insert a small piece of brick in the plate A directly below the central opening.

In Fig. 7 I have shown my improved gutter as applied to a buggy, and in this case the
 30 gutter would be in one straight line and be covered by the sectional plates E, the same as in the stationary device, there being a mold placed over each of the openings F; but in this device the middle mold would be top cast
 35 and the other molds upon each side would be bottom cast, and a block of brick J would be inserted in the body of the buggy directly below the middle opening.

Of course I do not wish to be limited to
 40 the exact construction here shown, as slight modifications could be made without departing from the spirit of my invention.

Having thus fully described my invention, what I claim as new and useful is—

45 1. In a device of the character described, a bed-plate having a series of gutters, and covers for said gutters formed in sections, the ends of the sections abutting, each section

having a recess in its ends, said recesses forming openings in the covers when the sections 50 thereof are applied.

2. In a device of the character described, a bed-plate divided vertically in sections, means for securing said sections together, gutters in the form of grooves formed in the upper sur- 55 face of said plate, said gutters radiating from a common center, a block of fire-brick fitted in a recess in the center of the plate, said block provided with an opening in the center extending from above part way downward 60 through the same, passages formed in the block radiating from the central opening and connecting with the gutters, cut-away portions formed upon each side of the gutters longitudinal with the same so as to form 65 shoulders, and sectional removable plates adapted to rest upon said shoulders and cover the gutters, the inner end of the inner plates coming in close contact with the central block, the upper surface of the sectional plates and 70 central block being flush with the upper surface of the bed-plate, said sectional plates provided with openings formed at the dividing-line between each two plates and the dividing-line between the outer section and the 75 bed-plate, as and for the purpose specified.

3. In a device of the character described, a bed-plate, a gutter in the form of a groove formed in the upper surface of said plate, a plate made in sections adapted to cover said 80 groove, the upper surface of the sectional plate being flush with the bed-plate, said sectional plates provided with openings formed at each end and at the dividing-line between the plates, a brick block inserted in the bed- 85 plate flush with the lower surface of the gutter below one of the openings through which the metal is teemed, as and for the purpose specified.

In testimony whereof I have hereunto affixed 90 my signature in the presence of two subscribing witnesses.

WILLIAM J. LEVEY.

Witnesses:

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 L. W. MORRISON.