No. 661,123. Patented Nov. 6, 1900.

W. W. GILLESPIE.

RAIL JOINT.

(Application filed May 23, 1900.)

(No Model.)

Fig. 1.

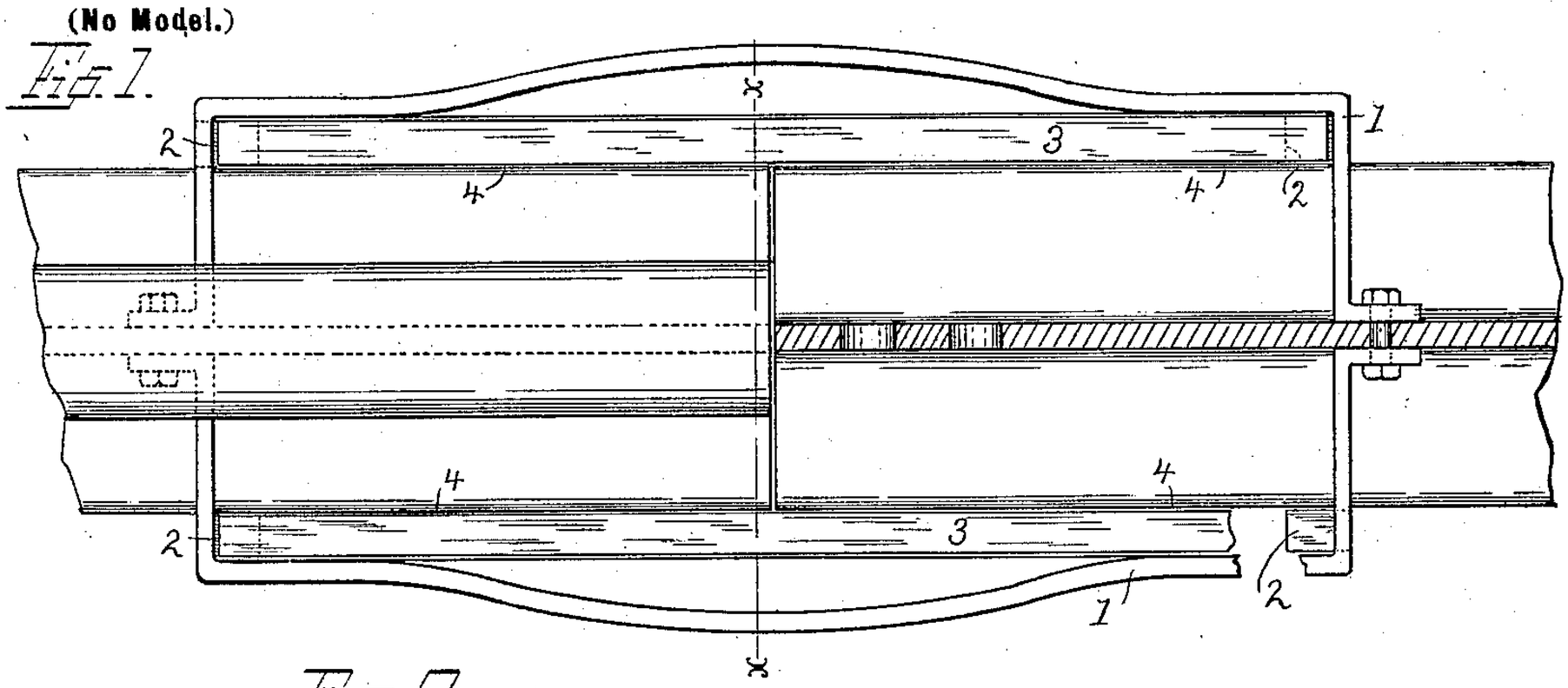

Fig. 2.

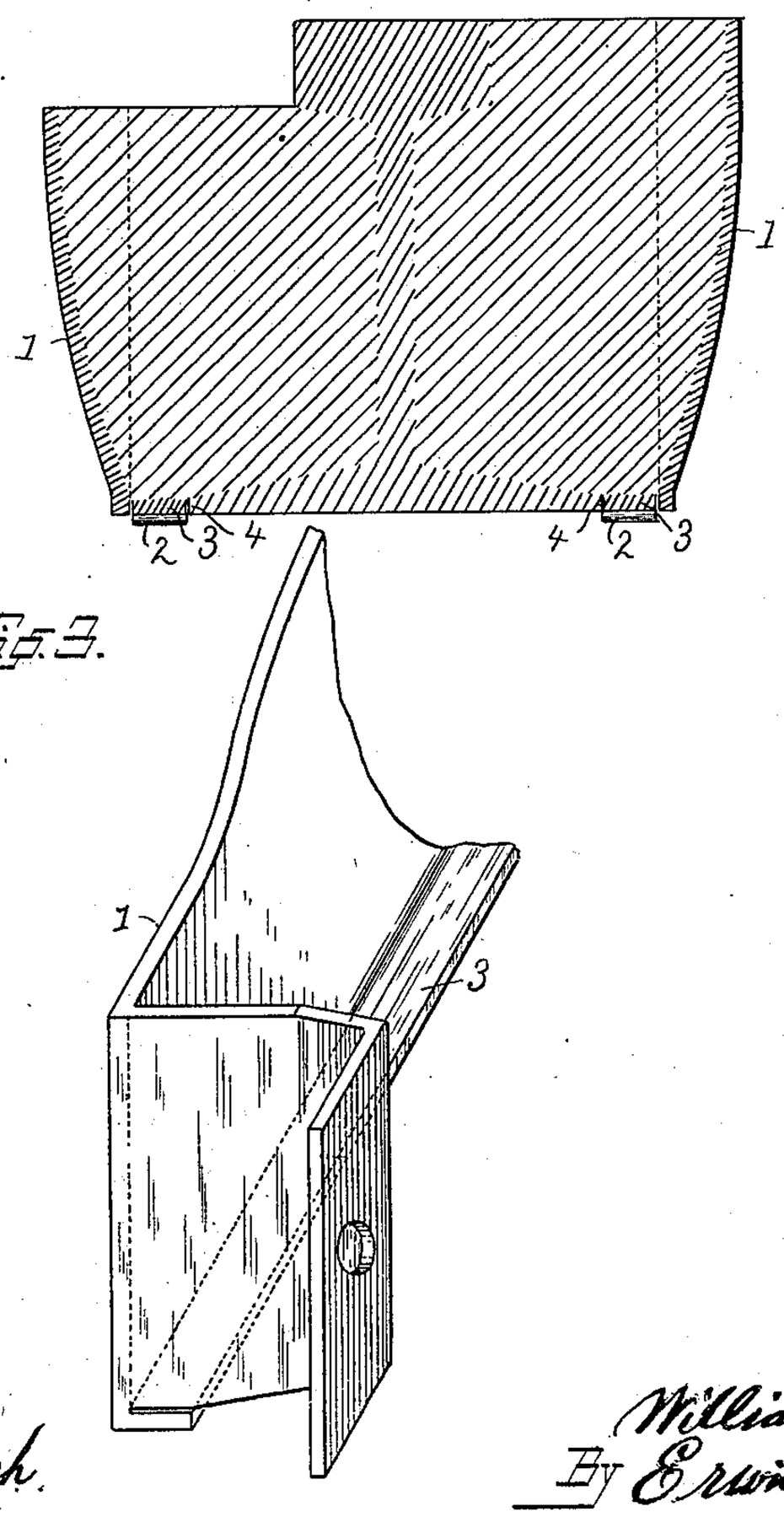

Fig. 3.

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UNITED STATES PATENT OFFICE.

WILLIAM W. GILLESPIE, OF MILWAUKEE, WISCONSIN.

RAIL-JOINT.

SPECIFICATION forming part of Letters Patent No. 661,123, dated November 6, 1900.

Application filed May 23, 1900. Serial No. 17,633. (No model.)

To all whom it may concern

Be it known that I, WILLIAM W. GILLESPIE, a citizen of the United States, residing at Milwaukee, county of Milwaukee, and State of Wisconsin, have invented a new and useful Improvement in Rail-Joints, of which the following is a specification.

My invention relates to improvements in that class of railway-rail joints in which the ends of the rails are united by means of sleeves or coupling members adapted for the reception of a body of cast metal, the metal being fused both to the coupling members and to the rail-surfaces.

The object of my invention is to simplify and cheapen the construction and expedite the operation of forming the joints, and particularly to provide a form of sleeve or coupling member which may be easily and quickly adjusted to the rail ends in a manner to effectually close the lower portions of the molten-metal cavities, whereby leakage is prevented and the blowing or explosive action due to the molten metal coming in contact with the damp soil is avoided.

In the following description reference is had to the accompanying drawings, in which—

Figure 1 is a plan view of my improved joint with the cast-metal filling omitted. Fig. 2 is a sectional view drawn on line *x x* of Fig. 1. Fig. 3 is a perspective view of one of the coupling members, showing a slightly-modified form of construction.

Like parts are identified by the same reference-figures throughout the several views.

The sleeve or coupling 1 is formed with two counterpart members, which are adjusted to the rails on opposite sides thereof to form cavities between the webs of the rails and the interior walls of the members. In order to provide for the reception of a sufficient body of molten metal, it is desirable that the cavity should be of a greater transverse diameter than the base-flange of the rail on that side, and in order to close the bottom opening thus formed I have provided the coupling members with shelves 2 (shown in dotted lines in Fig. 1) at the ends of the members. These shelves are preferably formed by extending the end walls of the coupling members downwardly below the lower edge of the side walls, with an inwardly-projecting elbow at the lower end of the extended portion substantially in the plane of the lower surface of the base-flange. When the members are adjusted to the rail ends, a bottom plate 3 is inserted into contact with the outer edges 4 of the base-flanges of the rails and fills the space between the shelves and the side walls and completely closes the space between the lower edges of the side walls and the base-flanges. If desired, the shelves may be omitted and the bottom plates supported directly by the ties or clamped between the base-flanges of the rails and the side walls of the coupling members. The metal surfaces of the walls of the cavities having been prepared for fusion in the usual manner, the molten-metal filling is inserted and unites the bottom plates, coupling members, and rail ends to form an integral structure.

In Fig. 3 I have illustrated a form of construction in which the side wall of the coupling member is extended and formed into an elbow, which reaches the base of the rails and closes the joint-cavities without requiring a separate plate. The form first described is, however, preferred, as it is more easily and cheaply constructed, and as the end shelves need not contact with the base-flanges of the rails they will under no circumstances interfere with a proper adjustment of the coupling members of the rail.

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

1. A rail-joint, comprising abutting rail ends; coupling members adjusted at the sides thereof with their central portions extended outwardly beyond the base-flanges, and with one or more edges of said central portions extended inwardly and adapted to form a shelf or shelves for the support of an independent metallic plate; an independent metallic plate

resting on said shelves; and a cast-metal filling intervening between said coupling members and the rails, and fused to both.

2. A rail-joint, comprising abutting rail ends; coupling members adjusted thereto, with their central portions extending laterally beyond the base-flanges, and inwardly along the lower edge; a metallic plate supported upon the inwardly-projecting portions of the coupling members; and an intervening metallic filling fused to the walls of the rails and coupling members.

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

WILLIAM W. GILLESPIE.

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