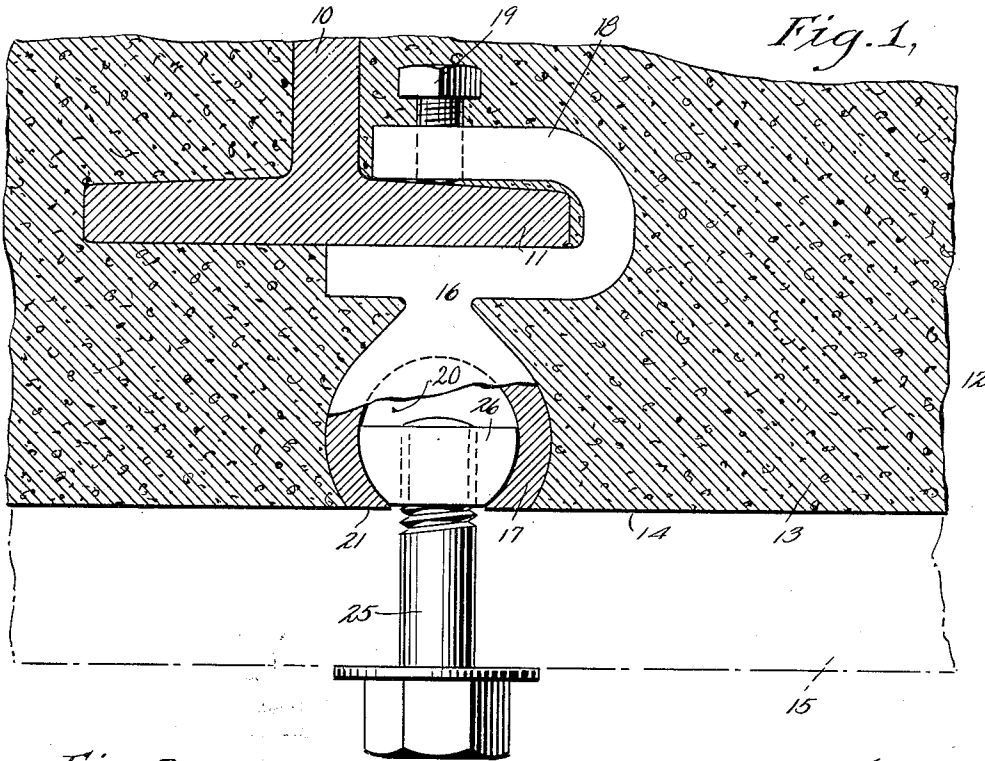
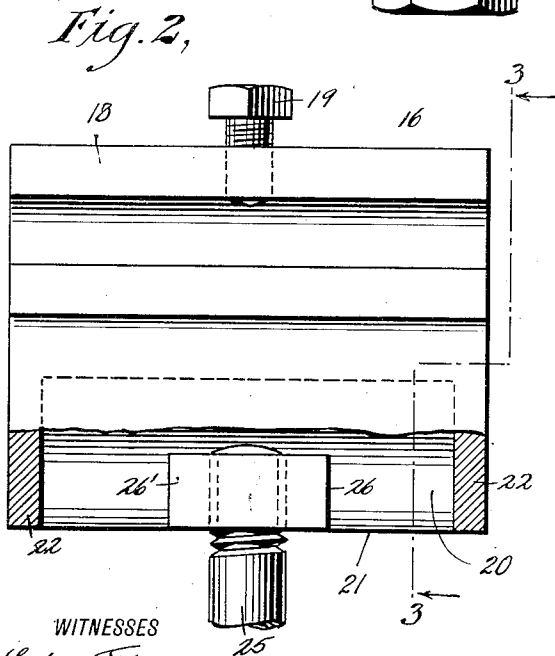
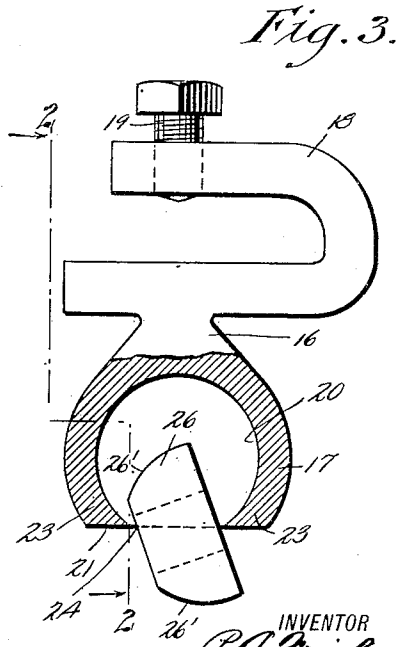


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HANGER BLOCK.
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1,350,964.

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HANGER-BLOCK.

1,350,964.

Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, PATRICK A. FRIEL, a citizen of the United States, and a resident of Bayonne, in the county of Hudson and State of New Jersey, have invented a new and Improved Hanger-Block, of which the following is a full, clear, and exact description.

This invention relates to mechanical connectors and has particular reference to means for attaching planks, beams, stud-
ding, or the like, to concrete or composite girders, posts, walls, etc.

Among the objects of the invention is to provide a connector or hanger block adapted to be secured or snubbed to the flange of an I-channel, or T-beam during the construction of a composite building element such as a girder, the block being adapted to project from the beam and either flush with or beyond the outer surface of the concrete or other composition of which the composite girder or the like is constructed, means being provided to attach a plate or the like against the face of the girder by cooperation with the hanger block.

The term "beam" as used hereinafter will be understood as being applicable to any metal structure having a flange and embodied in the composite construction which will be referred to hereinafter broadly as a girder. Also, the member to be applied against or suspended from the girder will be referred to as the plate. I wish it to be distinctly understood however that these terms are used only for convenience of description and are to be given the broadest possible interpretation.

With the foregoing and other objects in view the invention consists in the arrangement and combination of parts hereinafter described and claimed, and while the invention is not restricted to the exact details of construction disclosed or suggested herein, still for the purpose of illustrating a practical embodiment thereof reference is had to the accompanying drawings, in which like reference characters designate the same parts in the several views, and in which—

Figure 1 is a sectional detail view of a beam and girder in which my hanger block is embodied.

Fig. 2 is a side elevation of the hanger block detached from the beam with a part in section on the line 2—2 of Fig. 3.

Fig. 3 is an end elevation of the same with a part in section on the line 3—3 of Fig. 2.

Referring now more specifically to the drawings I indicate a beam 10 having a flange 11 embedded in a girder 12 including a composition such as concrete 13 against the face 14 of which a plate 15, indicated in broken lines, is adapted to be secured.

The hanger block 16 comprises a socket member 17 and a clamp 18 formed integral therewith. The clamp is adapted to slip over and embrace the flange 11 and is adapted to be secured initially to the flange as by means of a set screw 19 tapped through the portion of the clamp remote from the socket member and adapted to impinge against one face of the flange. The main point of contact or bearing between the hanger and the flange therefore is the end of the screw, and this lies in the vertical plane of the socket member connection with the clamp. Consequently the load carried by the socket member is borne in a direct line from the point of suspension of the clamp.

The socket member is shown provided with an undercut recess 22 of any suitable cross sectional size or form. The structure is indicated however as being in the nature of a segment of a hollow cylinder. This segment may be described as being formed by the cutting of a slice from the cylinder along a plane 21 lying below the axis or center of the cylinder or remote from the clamp, said plane intersecting the cavity 20. The cavity furthermore is bounded at its ends by walls 22 integral with the other portion of the hanger. The lip portions 23 constituting the lateral boundaries of the mouth 24 leading to the cavity project toward each other and lie parallel to each other from one wall 22 to the other. The elongation of the cavity 20 provides for a considerable degree of variation in the location of the connecting means which cooperates with the structure forming the cavity. The plane 21 at the face of the socket member may have any suitable disposition with respect to the surface 14 of the girder, but as shown in Fig. 1 these planes coincide or the socket member may be said to be flush with the surface 14.

The connector means for securing the plate 15 to the girder includes a bolt 25 having a polygonal head. The opposite end

of the bolt is screw threaded for projection into the cavity 20 and for coöperation with a nut 26. This nut is so constructed as to pass edgewise through the mouth 24 as indicated in Fig. 3 and after it is passed thus through the mouth into the cavity it may be turned so as to span the mouth, the edges of the nut at 26' being rounded to conform to the inner wall of the socket member as shown in Fig. 1. If desired the socket may be only long enough to accommodate the nut and thus the connector will be held from endwise movement in the socket, but with the cavity made longer than the nut the connector may be adjusted lengthwise thereof to facilitate the attachment of the plate at various positions. While the nut may be passed freely through the mouth as above stated, into or out of the socket, when the bolt is projected into the cavity the bolt will prevent the rotation of the nut around the axis of the cavity except to a limited degree, and hence it is impossible for the nut to lose out of the socket member when in operation. The application of the connector to or through the plate may be effected in an obvious manner by passing the bolt through a hole formed in the plate and when the bolt is tightened in the nut the plate will be secured firmly in the place indicated.

The nut being of segmental cylindrical form and fitted transversely in the cylindrical cavity it is held from rotation with respect to the axis of the bolt and consequently no difficulty can be experienced in either tightening or loosening the latter.

The device is of a relatively simple construction and its application to a girder structure may be effected with facility, and when fixed in place as shown is exceedingly rigid, strong and serviceable.

I claim:

The combination with a flanged beam and plastic material in which the beam is embedded, of a hanger block comprising a socket member and a U-shaped clamp integral therewith, said clamp being adapted to embrace a flange of the beam, a set screw tapped through one leg of the clamp for engagement with the flange and with the axis of the screw in direct alinement with the socket member, said socket member being disposed adjacent to the surface of the plastic material and having a restricted mouth, a nut projectable edgewise inward through said mouth and adapted to be retained within the socket member, and a clamping bolt coöperating with the nut.

PATRICK A. FRIEL.