

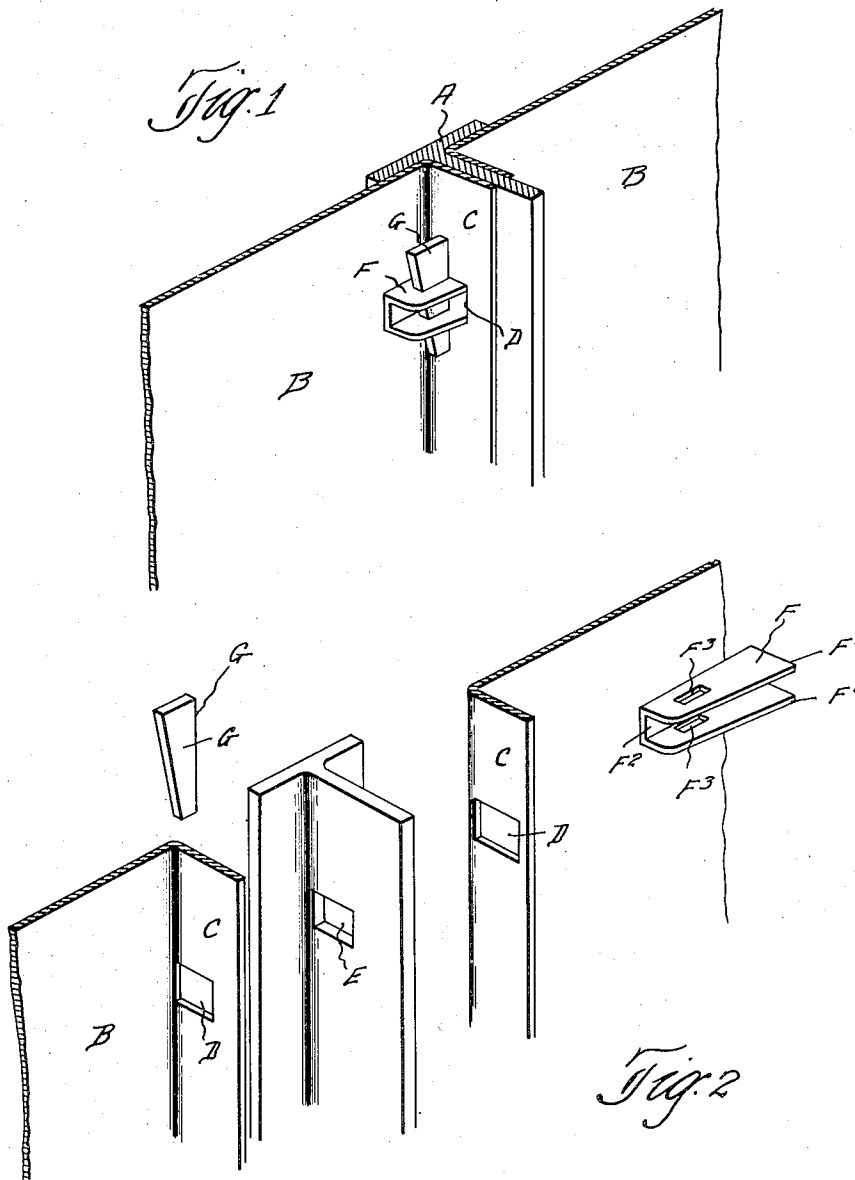
Aug. 26, 1924.

1,506,442

F. G. O'HARA

CONNECTION FOR METAL STRUCTURES

Filed March 26, 1921



Inventor
F. G. O'Hara.
By
Huel Brock & West
Attys.

UNITED STATES PATENT OFFICE.

FRANK G. O'HARA, OF CLEVELAND, OHIO, ASSIGNOR TO THE HYDRAULIC STEEL COMPANY, OF CLEVELAND, OHIO, A CORPORATION OF OHIO.

CONNECTION FOR METAL STRUCTURES.

Application filed March 26, 1921. Serial No. 456,029.

To all whom it may concern:

Be it known that I, FRANK G. O'HARA, a citizen of the United States, residing at Cleveland, in the county of Cuyahoga and State of Ohio, have invented a certain new and useful Improvement in Connections for Metal Structures, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings.

This invention relates generally to metal buildings and more particularly to a novel form of joint between the vertical wall plates attached to the framework of the building. It will also be understood that the invention can be applied to any structure wherein it is desired to connect flanged plates to T-shaped or I-shaped metallic forms.

One object of the invention is to provide an efficient means for connecting the sheet metal plates to the metallic framework of the building, said connecting means being of such a nature that the several parts can be quickly and easily assembled and disassembled when desired, and another object of the invention is to provide a connection of such a nature that the various operations can be accomplished by one man upon the inside whereas heretofore two or more men have been necessary to effect the connection herein contemplated. Another object is to provide a weather tight joint between the parts. With these objects in view the invention consists in the novel feature of the construction and in the manner of arranging them, all of which will be fully described hereinafter and set forth in the appended claims.

In the drawings forming part of this specification, Fig. 1 is sectional perspective view illustrating my invention and Fig. 2 is a view of the several parts detached.

In carrying out my invention I employ a T-bar A, but it will be understood that an I-shaped bar can be employed if desired.

In connection with the T-shaped bar A, I employ the sheet metal plates B, each plate being formed with a flange C and each flange is formed with a square or rectangular shaped opening D and the T-bar is also provided with a square or rectangular shaped opening E, and it will of course be understood that these openings are so positioned as to register when the bars and plates are placed in contact with one another and after

the bar and plates have been so arranged, a wedge F is passed through said openings in one direction and then a second wedge G is passed through the first named wedge in a direction at right angles to the line of passage of said first named wedge. The wedge F may be made of sheet metal, or it may be forged or cast if desired, and comprises the parallel members F' and the connecting wall F², the parallel members F' tapering as shown, and these parallel members F' are formed with aligning apertures F³ through which the wedge G is driven.

In assembling the parts the connecting wall F² of the wedge is placed against the plate B and inserted through the openings D and E and the straight side G of the wedge contacts with the flange C of the plate, B and draws the double wedge F through the openings D and E and securely locks the same thereby completing the connection between the bar A and plates B.

By the employment of the double wedge F, the openings D and E can be made sufficiently large to be brought easily into approximate register and the shape and construction of the double wedge facilitates the easy handling and manipulation of the same so that one man is ordinarily able to manipulate all of the parts in order to make the completed connection, it being obvious that after the double wedge has once been inserted through the openings D and E, the wedge G can be quickly and easily inserted and driven home thereby completing the connection.

Having thus described my invention, what I claim is:

1. In a device of the kind described, the combination with a flanged bar, of a flanged plate, said bar and plate having registering openings, a double wedge projected through the said openings of said plate and bar, said double wedge having openings and a single wedge projected through the openings in the double wedge in a direction transverse to the line of direction of the first named wedge.

2. The combination with a flanged bar of flanged plates, said plates and bar having registering openings, a wedge passing through said plates and bar, said wedge comprising a pair of parallel members and a connecting member, the parallel members

having registering openings, and a second wedge passed through the openings in the first named wedge.

3. The combination with a flanged bar and plates, said bar and plates having registering openings, of a wedge comprising a pair of tapered members and a connecting wall, said tapered members having regis-

tering openings, said wedge being projected through the registering openings in the bar and plates, and a second wedge passed through the registering openings in the tapering members of the first named wedge. 10

In testimony whereof, I hereunto affix my signature.

FRANK G. O'HARA.