A. FALK.

FITTING FOR RAILINGS AND THE LIKE.

APPLICATION FILED MAY 31, 1919.

1,423,927. Patented July 25, 1922.

2 SHEETS—SHEET 1.

Fig. 1.

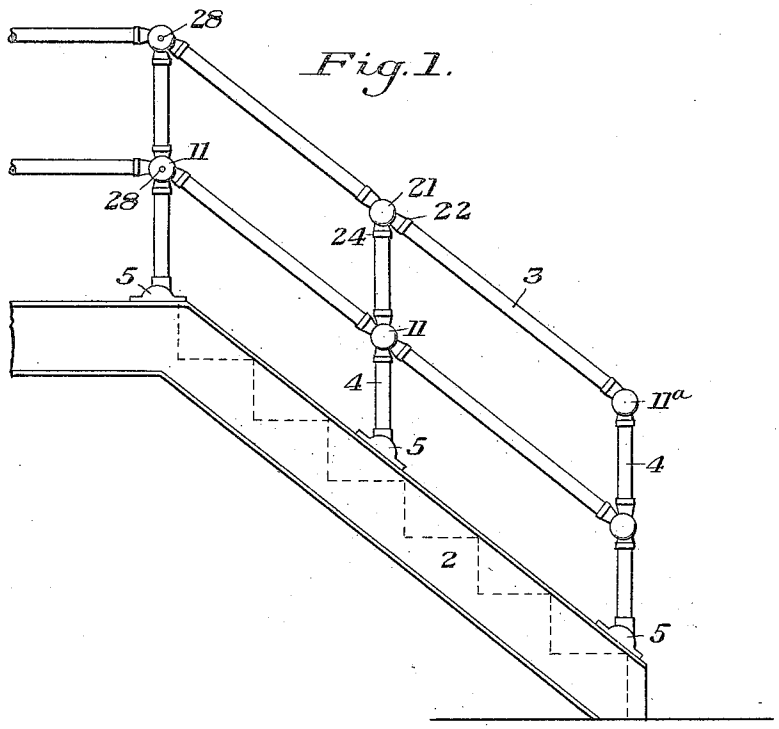


Fig. 2.

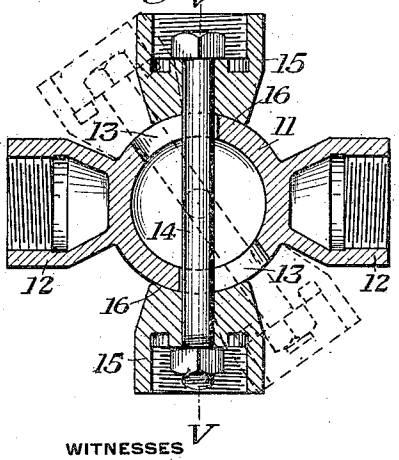


Fig. 3.

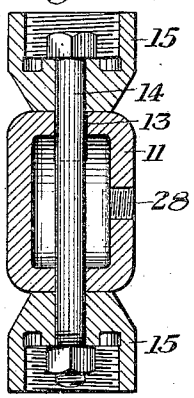
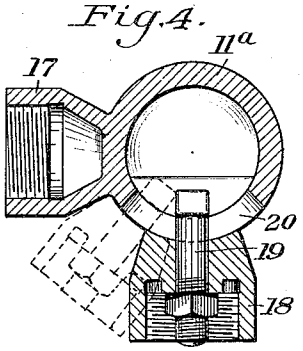


Fig. 4.



WITNESSES

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2 SHEETS—SHEET 2.

Fig. 5.

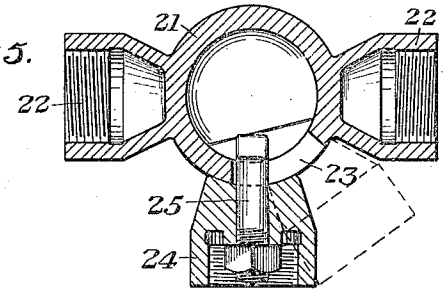


Fig. 6.

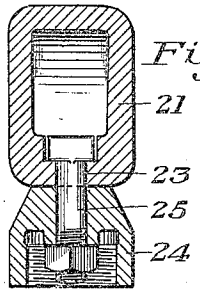


Fig. 7.

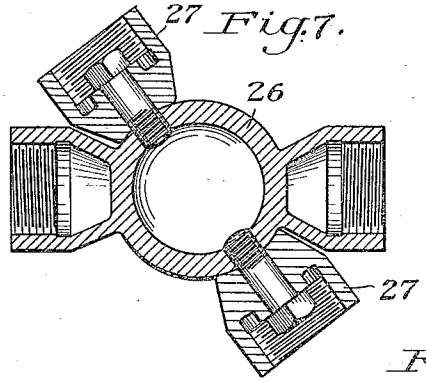


Fig. 8.

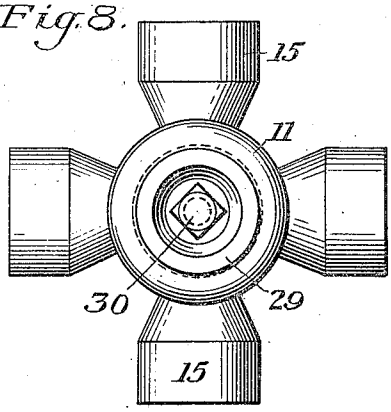
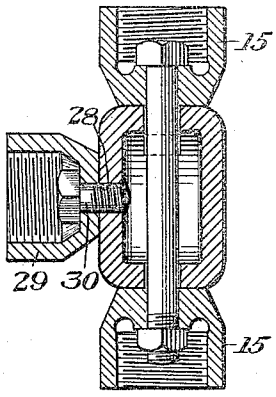


Fig. 9.



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UNITED STATES PATENT OFFICE.

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FITTING FOR RAILINGS AND THE LIKE.

1,423,927. Specification of Letters Patent. Patented July 25, 1922.

Application filed May 31, 1919. Serial No. 300,910.

To all whom it may concern:

Be it known that I, ANDREW FALK, a citizen of the former Empire of Austria-Hungary, residing at Pittsburgh, in the county of Allegheny and State of Pennsylvania, have invented a new and useful Improvement in Fittings for Railings and the like, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, forming part of this specification, in which—

Figure 1 is a side elevation showing a stairway railing embodying my invention and illustrative thereof.

Figure 2 is a vertical section of one of the intermediate cross fittings;

Figure 3 is a section on the line V—V of Figure 2;

Figure 4 is a vertical section of the corner fitting or L;

Figures 5 and 6 are sections on planes at right angles to each other of one of the T fittings;

Figure 7 is a section similar to Figure 2, but illustrating a modification;

Figure 8 is an elevation and Figure 9 is a sectional view illustrating a modification of one of the intermediate or cross fittings.

My invention has relation to fittings for use in the construction of pipe railings, such as stairway railings; and is designed to provide a set of fittings by means of which a pipe stairway can be constructed with its rails extending at any desired angle to its posts.

The nature of my invention will be best understood by reference to the accompanying drawings, in which I have illustrated the preferred form of the same, together with modifications of some of the parts, it being premised, however, that the invention is susceptible of further modifications within the scope of the appended claims.

Referring to the accompanying drawings, the numeral 2 designates a stairway having a railing embodying my invention. This railing is constructed of sections of pipe which constitute the rail members 3, and posts 4, of the railing, and which are connected by my improved fittings.

The fittings for connecting the rails and post are in the form of L's, T's, and crosses, provided with fixed sockets to receive the posts and with adjustable sockets to receive the rails. One of the crosses is shown in detail in Figures 2 and 3. It consists of a hollow approximately spherical body 11, formed with oppositely projecting internally threaded fixed sockets 12, and with opposite slots 13, to receive the through bolt 14, by which the adjustable sockets 15 are attached. These adjustable sockets have concave inner ends 16, which adapt themselves to the surface of the body 11, and it will be readily seen that by loosening the nuts of the bolt 14, said sockets may be adjusted to any desired angle within the limits of the construction as indicated by the dotted lines in Figure 2.

Figure 4 illustrates one of the L's consisting of a hollow approximately spherical body 11^a having the fixed socket 17 and the adjustable socket 18, secured by the short T-headed bolt 19, working through the slot 20 in the body 11^a.

Figures 5 and 6 illustrate one of the T's. This consists of a body 21, with opposite fixed sockets 22, and similar to the part 11 shown in Figure 3. The body, however, has but a single slot 23, to which an adjustable socket 24 is connected by the bolt 25.

The manner in which several fittings are used in making a railing or similar structure will be clearly apparent by Figure 1. The adjustable sockets can be quickly set and secured at the desired angles.

In Figure 7, I have illustrated a modification of one of the cross fittings in which the body portion 26 is similar to that shown in Figure 2, except that instead of the slots, it is adapted to be tapped at any desired points between the fixed sockets for the attachment of oblique sockets 27 at the desired angles. While this form of this fitting is less convenient than that shown in Figure 2, it may, nevertheless be used to advantage.

The sockets are tapered downward toward the body member 11. This permits the socket members to be brought closely together with a smaller angle between them than would be the case if they were untapered. As shown in Figures 2, 4, 5, and 7, the adjacent sockets may be swung so that the angle between them is only about 45°. This provides an adjustment whereby the angles between posts and rails may be varied from 90 to 45°, thus permitting the fittings to be used on steep stairways.

When it is desired to turn a corner with the railing, this can be readily done by pro-

viding cross fittings having threaded apertures 28, in one or both sides, and to which may be attached a socket 29 at right angles by means of a screw bolt 30, as shown in Figures 8 and 9. By providing the cross fittings with such threaded apertures, these fittings may be readily adapted for use in turning a corner in either direction.

The advantages of my invention will be readily apparent, since it provides a simple set of fittings by means of which a pipe railing or similar structure can be cheaply and quickly made at the desired angle.

I claim:

1. An adjustable fitting device for inclined railings and the like, comprising a hollow body portion having a socket member integral therewith and having a slot for the attachment of an adjustable socket member, an adjustable socket member, and a T-shaped bolt extending from the adjustable socket member through the slot and having its head received in the hollow body portion, the head of the bolt being oblong and longer than the width of the slot, and the inside of the body portion at the sides of the slot being formed to engage the ends of the bolt head and prevent it being turned, substantially as described.

2. An adjustable fitting device for inclined railings and the like, comprising a flattened cylindrical body portion provided with a fixed socket member projecting from its cylindrical surface and having on its cylindrical surface a slot for the attachment of an adjustable socket member at different angles, an adjustable socket member and a T-shaped bolt extending from the adjustable socket member through the slot for securing it to the body member, the inside of the body member having a cylindrical cavity, the ends of which fit against the ends of the bolt head and hold it from turning, substantially as described.

3. A fitting device for inclined railings and the like, comprising a flattened cylindrical body portion provided with two fixed socket members projecting from its cylindrical surface in opposite directions and lying in the same plane and tapered conically toward the body portion so that the arc along the cylindrical surface of the body portion subtended by a socket member is not greater than about two-thirds the thickness of the outer end portion of the socket member, another and separate socket member having a cylindrically concaved surface of contact with the cylindrically convex surface of the body portion between the fixed sockets and similarly tapered conically toward the body portion so that its arc of contact is not greater than about two-thirds of the thickness of its outer end portion, and bolting means for removably securing said separate socket member to the body portion, the conical tapers of the fixed and separate socket members allowing the separate socket member to be positioned in the same plane as said fixed sockets and close enough to a fixed socket member for use with railings for steep stairways and also giving a symmetrical appearance to the fitting when installed, substantially as described.

4. A fitting device for inclined railings and the like, comprising a flattened cylindrical body portion provided with two fixed socket members projecting from its cylindrical surface in opposite directions and tapered conically toward the body portion so that the arc along the cylindrical surface of the body portion subtended by a socket member is not greater than about two-thirds the thickness of the outer end portion of the socket member, another and separate socket member having a cylindrically concaved surface of contact with the cylindrically convex surface of the body portion between the fixed sockets and similarly tapered conically toward the body portion so that its arc of contact is not greater than about two-thirds of the thickness of its outer end portion, and bolting means for removably securing said separate socket member to the body portion, the conical tapers of the fixed and separate socket members allowing the separate socket member to be positioned in the same plane as the fixed sockets and close enough to a fixed socket member for use with railings for steep stairways and also giving a symmetrical appearance to the fitting when installed, said body portion having flat ends which permit the attachment, if desired, of another socket member extending at right angles to the other socket members, substantially as described.

In testimony whereof, I have hereunto set my hand.

ANDREW FALK.