Aug. 11, 1931. T. G. SUTHERLAND 1,818,172

RAILING FITTING

Filed July 28, 1928 3 Sheets-Sheet 1

Fig. 1

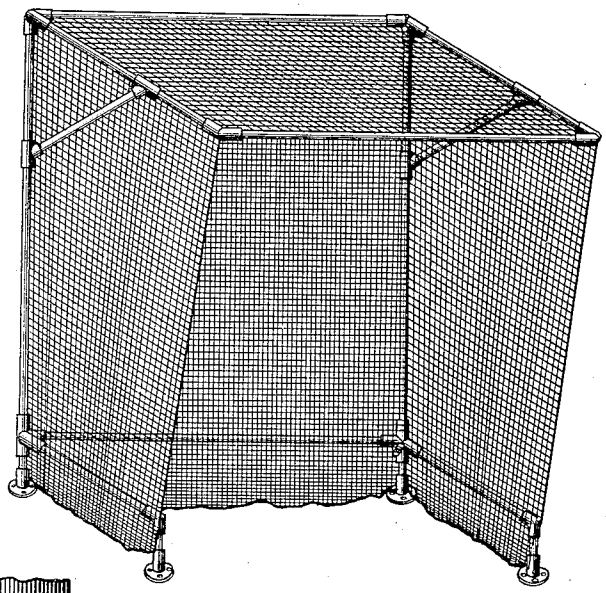


Fig. 2

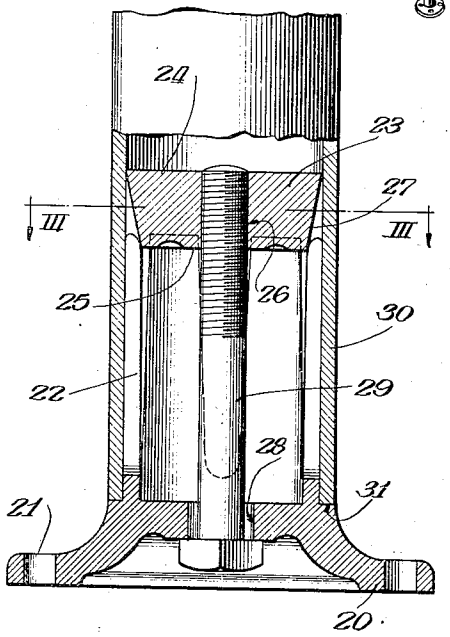
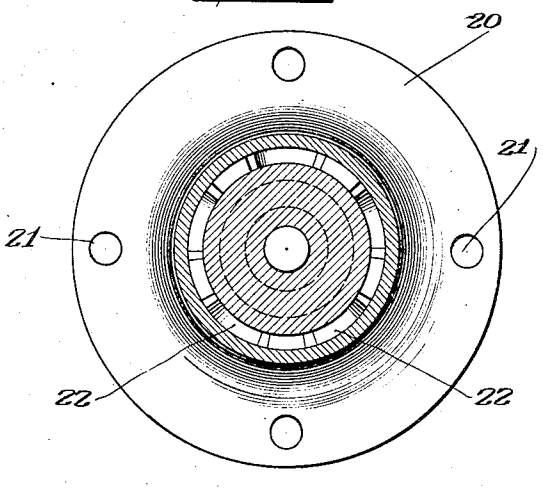


Fig. 3



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RAILING FITTING

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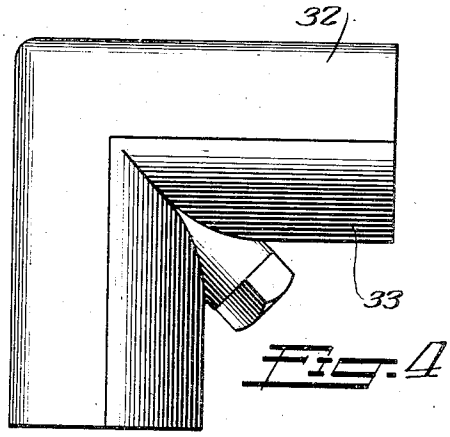


Fig. 4

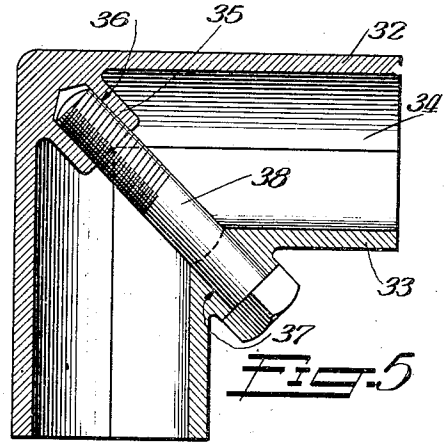


Fig. 5

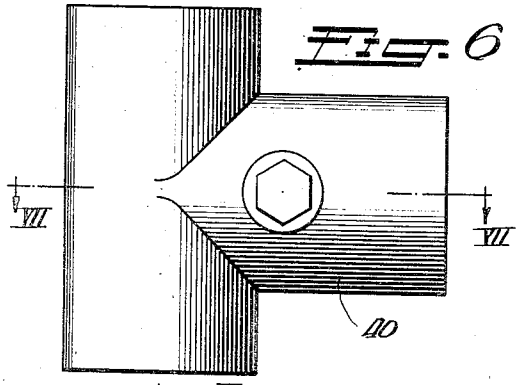


Fig. 6

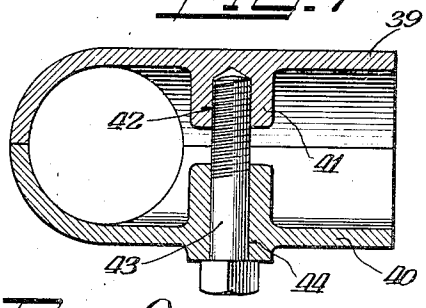


Fig. 7

Fig. 9

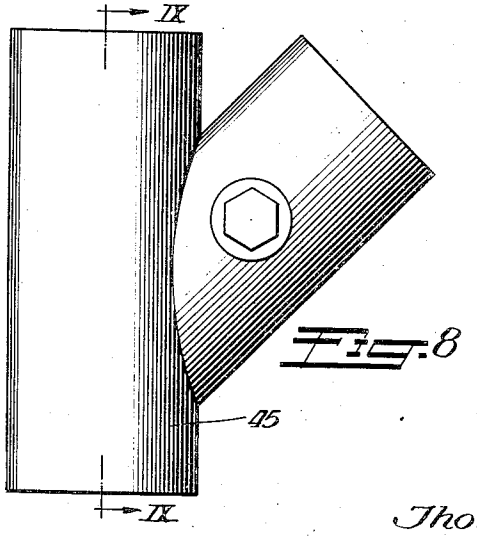
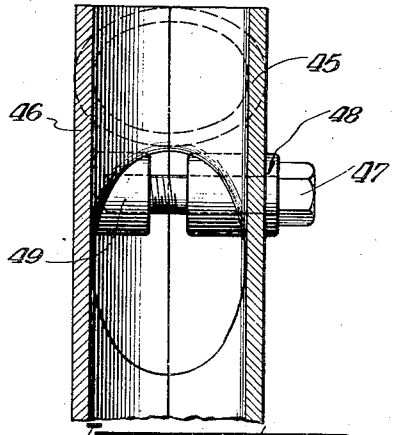


Fig. 8



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RAILING FITTING

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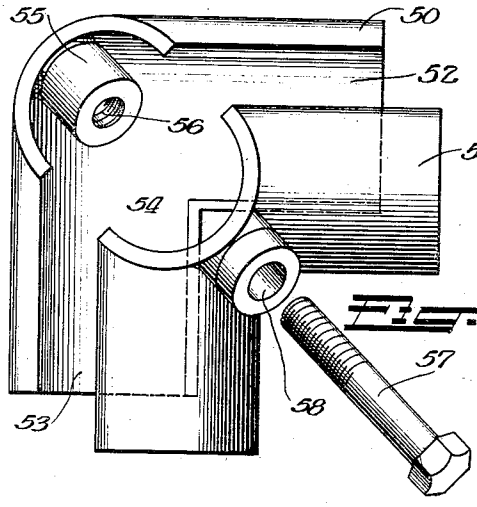


Fig. 10

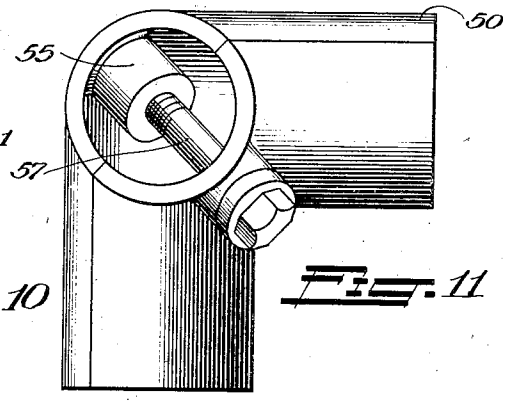


Fig. 11

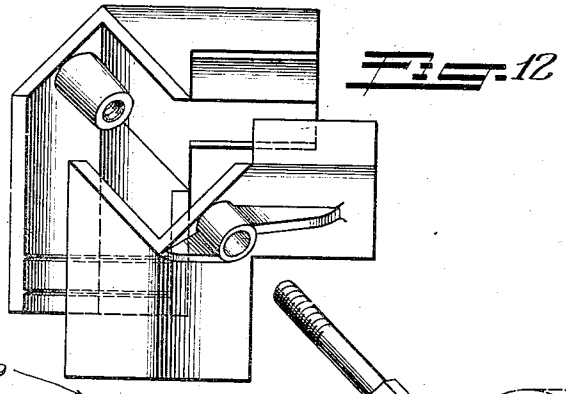


Fig. 12

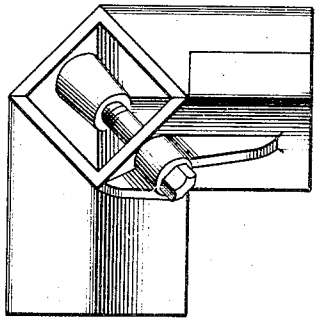


Fig. 13

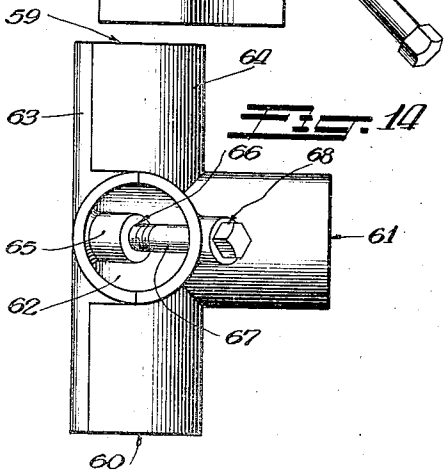


Fig. 14

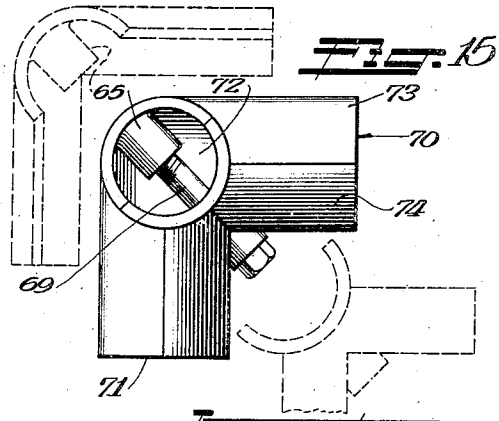


Fig. 15

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Patented Aug. 11, 1931

1,818,172

UNITED STATES PATENT OFFICE

THOMAS G. SUTHERLAND, OF CHICAGO, ILLINOIS

RAILING FITTING

Application filed July 28, 1928. Serial No. 295,872.

This invention relates to railing fittings, and more particularly to split two-part separable fittings which are clamped in engagement with railings by a single clamp or fastener.

The fittings of my invention are useful in connection with frames for golf nets, backstops, practice nets, also for fences, protective railings for machinery, pits, hatchways and similar purposes.

An object of the invention is to provide split railing fittings which may be clamped by a single element.

Another object is to provide separable railing fittings which are clamped by a single element which engages one of the separable parts inside the same.

A further object is to provide split railing fittings which are clamped by a single element which element is so disposed as to effectively clamp a fitting to a plurality of rails in such a manner that the fitting will tightly engage all of the rails entering the same.

A still further object is to provide split railing fittings which are pleasing in appearance, economical to manufacture, readily applied and efficient in service.

The above, other and further objects of the invention will be apparent from the following description, accompanying drawings and appended claims.

According to the invention, the fitting comprises two parts which are brought together in operative relation by a single element passing through one of said parts and engaging the other part for effectively clamping the fitting to a railing.

One embodiment of the invention is shown in the accompanying drawings and the views thereof are as follows:

Figure 1 is a perspective view of a golf net supported by a frame made of railings connected by fittings embodying my invention.

Figure 2 is an enlarged vertical section through a floor flange or base.

Figure 3 is a section taken on line III—III of Figure 2.

Figure 4 is a side elevation of an elbow for round railings.

Figure 5 is a vertical section through the elbow of Figure 4.

Figure 6 is a view of a T.

Figure 7 is a section on line VII—VII of Figure 6.

Figure 8 is an elevational view of a Y bend.

Figure 9 is a section on line IX—IX of Figure 8.

Figure 10 is a side elevation of an elbow with a side outlet, parts being shown as separated.

Figure 11 is a view of an elbow with a side outlet in assembled position.

Figure 12 is a view similar to Figure 10 showing an elbow with a side outlet arranged to receive a square railing.

Figure 13 is an elbow with a side outlet with the parts assembled.

Figure 14 is a T with a side outlet or four-way T for round railings.

Figure 15 is a view similar to Figure 11 showing the attaching bolt in a slightly different angular position than that shown in Figure 11 and showing in dotted lines the split parts separated.

Figure 1 discloses a golf net supported by a frame which is connected by the fittings embodying my invention. This view is illustrative of one arrangement of frame or railing which may be made by the use of the fittings of my invention.

Figure 2 discloses a floor flange or base comprising two parts. One part consists of a circular base 20 having screw holes 21 therein through which pass screws, not shown, for attaching the base to a floor.

Integrally formed with the part 20 are upstanding fingers 22 spaced about the base

20. These fingers are flexible to some extent.

The second part comprises a plug 23 having a flat top surface 24 and a bottom surface 25 with a central aperture 26 which is threaded. The side wall 27 of the plug is conical and when in operative relation the plug is arranged as shown in Figure 1, that is with the side wall 27 converging downwardly.

The base 20 has a central aperture 28 through which freely passes a bolt 29, the threaded end of which engages a threaded aperture 26 in the second part 23. When the bolt is turned in one direction the part 23 is moved downwardly, thus spreading the fingers 22 and when the bolt is moved in the opposite direction the plug 23 is moved upwardly permitting inward movement of the fingers which movement is due to the inherent resiliency of the fingers.

Figure 2 is arranged to receive a circular or round railing such as a pipe 30 which pipe is applied over the base flange with the fingers 22 extending within the pipe. The base 20 is provided with a shelf 31 on which the end of the pipe 30 rests. The floor flange is clamped to the pipe 30 by turning the bolt 28 to move the plug 23 downwardly thus clamping the fingers 22 against the inner surface of the pipe.

Figure 4 shows a 90° elbow comprising two parts 32 and 33 which are split centrally of the pockets 34 formed when the two parts are fastened together.

Within the part 32 and in the angle formed by the two portions thereof is a projection such as a boss 35 which in the present instance has a threaded aperture 36. The other part 33 has an opening 37 arranged at the inner angle of the pocket sides for the reception of a single attaching element such as a bolt 38. The bolt 38 extends through the opening 37 and is threaded into the aperture 36 of the boss 35. The bolt is turned to clamp the two parts 32 and 33 tightly against round railings inserted in the pockets formed by the split fittings.

Figure 6 shows a T comprising parts 39 and 40 shaped to provide the usual pockets present in such a fitting. One of the parts such as 39 has a projection or boss 41 formed on the inside of the same near the intersection of the axes through the pockets. This boss has a threaded aperture 42 for the reception of a bolt 43 which passes through an aperture 44 in the other part 40 clamping the parts 39 and 40 together about the rail sections inserted in the three pockets of the T.

Figure 8 shows a Y bend constructed of two parts 45 and 46 with a bolt 47 passing through an aperture 48 in the part 45 and threaded into a projection or boss 49 on the inside of the part 46. Here, too, the bolt passes through the parts near the intersection of the axes through the several pockets.

Figure 10 shows an elbow having two parts 50 and 51 providing pockets 52 and 53 at right angles to each other, the axes of which are in the same plane and a side opening 54 the axis of which is perpendicular to the axes of the pockets 52 and 53. The part 50 has a projection or boss 55 which is arranged near the intersection of the three axes of the three pockets. The boss is provided with a threaded aperture 56 for the reception of a bolt 57 passing through an aperture 58 in the part 51 to clamp the parts 50 and 51 together about the three railings inserted in the pockets 52, 53 and 54.

Figure 11 shows the elbow with side outlet as the same appears when the two parts are clamped together. The angular position of the bolt 57 is such as to draw the two parts 50 and 51 together to effectively clamp the three railings held in the three pockets of the fitting.

Figure 12 is an elbow with side outlet for the reception of square railings. The parts are arranged in the same manner as described with respect to Figure 10 and the parts are clamped in the same way.

Figure 14 shows a T having pockets 59 and 60, the axes of which are in the same straight line, and a pocket 61 the axis of which is in the same plane with the axes of the other pockets but perpendicular to said common axes. A side outlet provides a pocket 62 the axis of which is perpendicular to the plane including the axes of the pockets 59, 60 and 61. The two parts comprising this fitting 63 and 64 are split as shown in Figure 14. The part 63 has a projection or boss 65 which is disposed with its axis at 45° to the plane including the axes of the pockets 59, 60 and 61 and with the plane of its axis including the axis of the pocket 61. This boss has a threaded aperture 66 for the reception of a bolt 67 passing through a suitably arranged opening 68 in the part 64, the bolt clamping the two parts together as shown in Figure 14.

Figure 15 shows an elbow with a side outlet similar to that shown in Figure 11 but with the axis of the bolt 69 lying in the plane of the axes of the pockets 70 and 71 and perpendicular to the axis of the pocket 72.

The dotted line portions of Figure 15 show the preferred manner of splitting the parts 73 and 74 comprising this fitting.

I have not shown a cross as it is presumed that the construction of a split cross will be apparent to those skilled in the art. However, a cross may be made with two split portions connected by a bolt passing

through the intersection of the axes of the pockets, which bolt is perpendicular to the plane including these axes.

The fittings of my invention are preferably malleable castings and are made to receive round railings such as pipe, square railings such as wooden railings or the like. The fittings are made to accommodate standard sizes of pipes and wooden railings so as to make possible speedy and efficient erection of any kind of frame or fencing desired.

The word "railing" as used herein and as used in the claims, is used generically and not by way of limitation, and this invention is not to be construed as being restricted to fittings for railings per se, as the fittings are susceptible of use in fencing, clothing fixtures, and other arrangements other than as illustrated in the drawings.

While I have described more or less precisely the details of my invention, yet I do not wish to be understood as limiting myself thereto as I am aware that changes may be made in the arrangement and proportion of parts and that equivalents may be substituted, all without departing from the spirit and scope of my invention.

I claim as my invention:

1. A coupling for rails, rods, or the like, said coupling comprising two separable complementary parts, each part having angularly disposed half-socket portions, said half-socket portions of one part cooperating with the half-socket portions of the other part when the parts are in assembled relation, to form complete sockets adapted to receive a plurality of rails, means to hold said parts in assembled relation, said coupling being so divided that the contacting edges of one of the half-socket portions of each part are in a different plane than that of the contacting edges of another portion of the same part, said means to hold the parts comprising a bolt entered through one of the parts and engaging the other part, said bolt being positioned in a plane bisecting the angle between at least two angularly disposed sockets at their junction.

2. A coupling for rails, rods, or the like, said coupling comprising two separable complementary parts, each having three half-socket portions normal to each other cooperating to form complete sockets to receive the ends of a plurality of rails when the parts are in assembled relation, means to clamp the parts comprising a member entered through one part and engaging the other part, said member being positioned in a line forming equal angles with the three sockets at their junction.

In testimony whereof I have hereunto subscribed my name at Chicago, Cook county, Illinois.

THOMAS G. SUTHERLAND.