

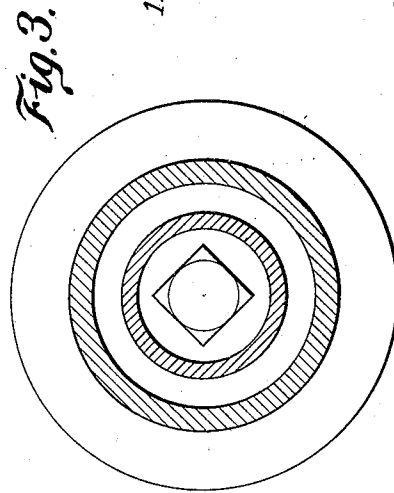
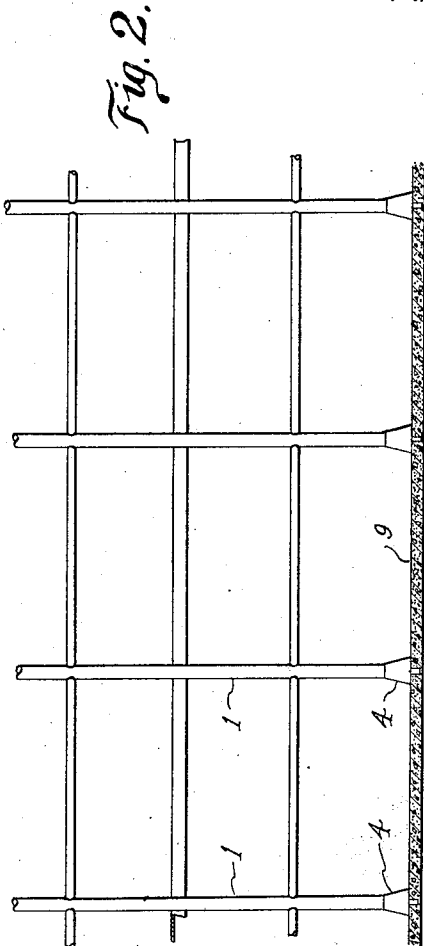
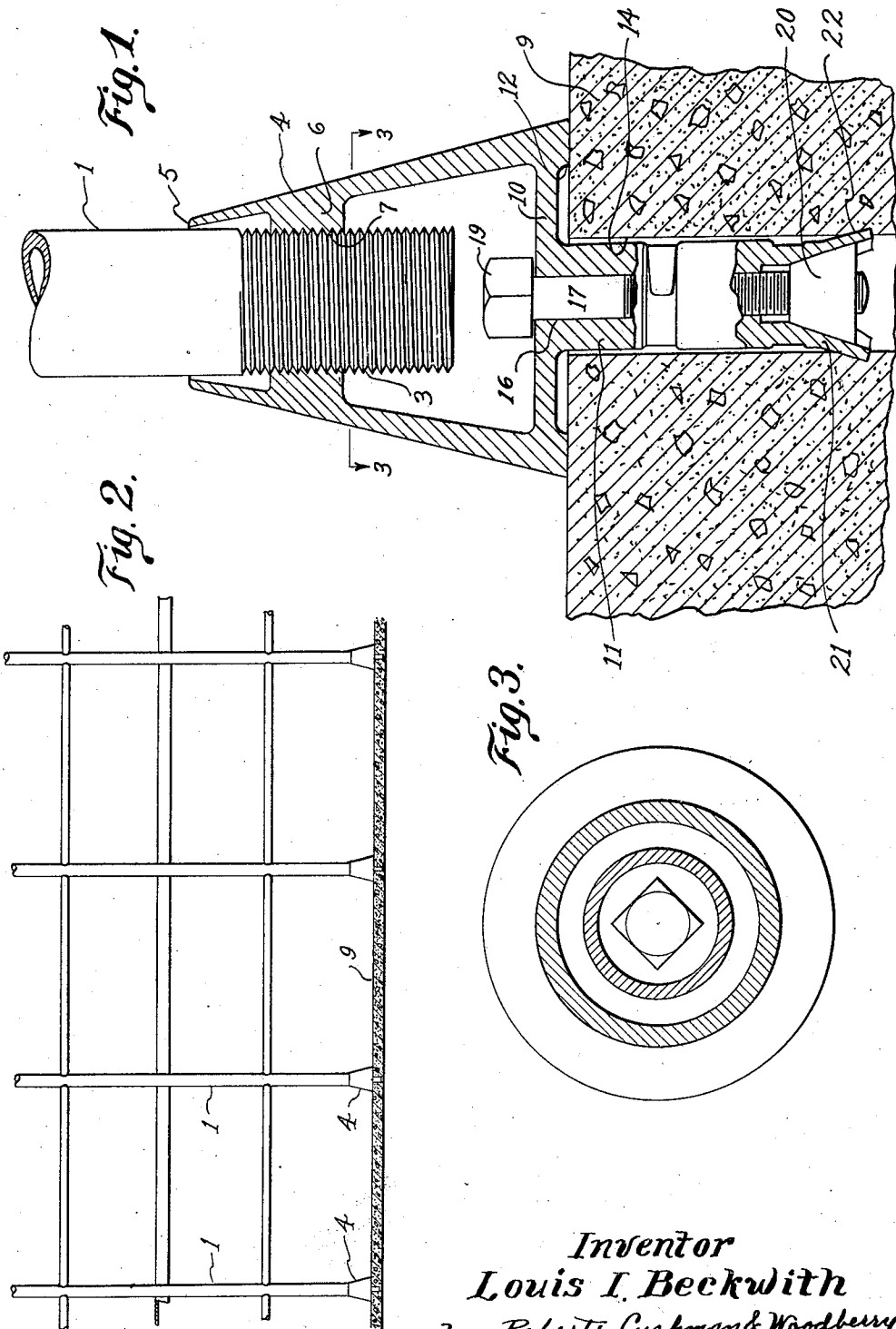
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UPRIGHT CONSTRUCTION

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## UNITED STATES PATENT OFFICE

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## UPRIGHT CONSTRUCTION

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This invention relates to an improved connection between an upright and a supporting surface, which is suitable for anchoring the legs of fixed tables, stands, racks, or the like to the supporting surface or floor, being particularly suitable where it is desirable to have a connection of this type that is adapted to use where sanitation is essential. For example, in hospitals, clinics, food-handling establishments, etc., it is desirable to provide racks for linen or the like, various tables, stands, sinks, bowls, sets of shelves etc., which are stationary and which are supported by suitable legs or uprights. Under these conditions it is desirable to provide a connection which firmly anchors the uprights to the floor and yet which permits the ready cleaning of the floor, upright, and connection therebetween and which will be free from dirt or dust collecting irregularities, corners, or crevices.

Thus, in accordance with the present invention a base member is provided to surround the lower portion of the upright and firmly to anchor the same to the floor, this base member being provided with a smooth exterior surface which substantially merges into the surface of the upright and which preferably meets the surface of the floor at an obtuse angle; for example, this member preferably may be substantially frusto conical. The base member preferably is provided with a suitable depending portion which may be in the form of a central boss that is adapted to have an interfitting engagement with the floor. In order to preclude accidental movement of the base member under unusual conditions and to ensure its more firm anchorage to the floor, an expansion bolt preferably extends through this central depending boss, so that the expandible lower end thereof may be forced into intimate engagement with the material of the floor at a distance substantially below its surface. Preferably the base member is provided with internal threads located between its upper and lower portions which are adapted to be screwed into firm engagement with the threaded lower end of the

upright, without necessitating the exposure of dust-collecting threads.

Since the upright ordinarily may compose a substantially fixed part of a preformed assembly, such as a table, stand, or rack, it is desirable to permit the rotation of the base member in order to permit this interengagement of its threaded flange and the lower end of the upright. Accordingly the expansion bolt preferably may be slightly loosened, so that rotation of the base member may be effected.

In the accompanying drawings which illustrate one exemplification of the invention:

Fig. 1 is a central vertical section through a connection between an upright and floor;

Fig. 2 is an elevational view of a portion of a rack provided with connections of the character disclosed in Fig. 1, the supporting floor being shown in section; and

Fig. 3 is a section on line 3—3 of Fig. 1.

In the accompanying drawings, numeral 1 designates a metal upright which preferably may be in the form of a hollow tube and which is provided with a threaded lower end 3. The base member 4 is hollow and preferably has a body portion of substantially frusto conical form. The annular upper edge 5 of member 4 affords an opening of a diameter adapted to provide a sliding fit with the cylindrical surface of the upright. Below this upper portion, the member 4 is provided with an inwardly extending annular flange 6 which carries internal threads 7 that are screwed into engagement with the threads 3 at the lower end of upright 1; accordingly the threads upon the upright may be entirely concealed.

The body portion of member 4 ordinarily rests in engagement with the surface of floor 9, and, if desired, a suitable annular bearing flange 12 may be provided at the bottom of this frusto conical body portion to engage the supporting surface. Adjoining this flange is a horizontal annular wall 10 which is provided with an integral depending boss 11 which preferably is concentrically arranged in relation to the member 4.

A suitable opening 14 with a diameter readily to receive the boss 11 preferably is formed in the floor 9. A central opening 16 is provided in the boss and receives an expansion bolt 17, the head 19 of which is disposed above the horizontal wall 10. This bolt may be provided with a tapered nut portion 20 and with the expansible member 21 having ductile fingers 22. Tightening of the bolt results in the drawing of the tapered nut portion 20 toward the head 19, thus causing the expansion of the ductile portions 22 of the member 21 into firm engagement with the sides of the opening 14, and ensuring the firm anchoring of the assembly to the floor. After the bolt has thus been tightened it preferably is slightly loosened, as shown in Fig. 1, so that the member 4 may be rotated to permit its being threaded into engagement with the lower end of upright 1.

In the installation of connections of this character, it is evident that the openings 14 are first provided at properly spaced intervals in the floor and that the expansion bolts 17 are assembled in loose engagement with the members 4 and the expansible portion at the lower end of the bolt and the boss 11 of the member 4 is disposed in one of the suitable cylindrical recesses 14 in the floor. A wrench may then be extended through the opening provided by the annular upper edge 5 of member 4 and engaged with the head 19 of bolt 17, the latter being rotated to tighten the tapered nut 20 and to force the ductile elements 22 into firm engagement with the floor material. Bolt 17 is then turned in the opposite direction sufficiently to loosen the engagement of its head with the horizontal wall 10 of the base member 4 so that the latter may be turned. After all of the connections have been located in this manner, the stand, rack, or the like may be brought into position, the uprights 1 of the same being dropped through the openings in the upper ends of the frusto conical base members and brought into engagement with the annular flanges 6. Thereupon the base members are rotated to ensure the firm interengagement of the base members and the uprights and the proper adjustment in height of the rack or the like.

It is thus evident that a connection has been provided permitting the firm anchoring of uprights forming portions of a stand, rack, or the like, so that longitudinal movement of the same in relation to the floor is prevented, the weight of the assembly co-operating with this anchorage to prevent even a slight vertical movement. Furthermore, a connection of this character provides a smooth outer surface and is free from irregularities or corners that are adapted to collect dirt. Accordingly a par-

ticularly satisfactory and sanitary connection is provided for locations where such a feature is essential as, for example, in hospitals, clinics, food-producing or handling establishments, and the like.

I claim:

1. A connection between the lower end of an upright and a floor, comprising a base member receiving and substantially enclosing the lower end of the upright, the upper portion of the base member having a part of small diameter in juxtaposition to the upright and having a lower portion of larger diameter in engagement with the surface of the floor, a central depending projection of the base member being received in an opening in the floor and held against longitudinal movement in relation to the same, said base member being hollow and having an internally threaded annular flange intermediate its upper and lower portions, the upright being threaded into engagement with said flange.

2. A connection between the lower end of an upright and a floor, comprising a base member receiving and substantially enclosing the lower end of the upright, the upper portion of the base member having an opening through which the upright extends and having an a lower portion of larger diameter resting upon the floor, an intermediate depending projection of the base member being received in an opening in the floor, and expansible means disposed in the depending portion of the base member that is received in the opening in the floor and expanded into firm engagement with a portion of this opening that is spaced below the surface of the floor.

3. A connection between the lower end of an upright and a floor, comprising a base member receiving and substantially enclosing the lower end of the upright, the upper portion of the base member having an opening through which the upright extends and having a lower portion of larger diameter resting in engagement with the surface of the floor, an intermediate depending projection of the base member being received in an opening in the floor and held against longitudinal movement in relation to the same, said base member being hollow and having an internally threaded annular flange intermediate its upper and lower portions, the upright being threaded into engagement with said flange, expansible means disposed in the depending portion of the base member that is received in the opening in the floor and expanded into firm engagement with a portion of this opening spaced below the surface of the floor.

4. A connection to secure an upright to a floor, comprising a base member having an upper portion of restricted diameter adapted to receive the upright with a slid-

ing fit and having a lower portion of larger diameter adapted to rest upon the floor, and a depending central extension of this lower portion providing an opening to extend into the floor, a central opening being provided in said depending portion to permit insertion of an expansion bolt through the base member.

5. A connection to secure an upright to a floor, comprising a base member having an upper portion of restricted diameter adapted to receive the upright with a sliding fit and having a lower portion of larger diameter adapted to rest upon the floor, and a depending central extension of this lower portion providing an opening to extend into the floor, a central opening being provided in said depending portion to permit insertion of an expansion bolt through the base member, an inwardly directed flange intermediate the upper and lower portions of the base member provided with internal threads adapted to be engaged with external threads upon the upright.

6. In combination, a substantially cylindrical upright having a threaded lower end, a hollow frusto conical base member having an annular upper edge in juxtaposition to the cylindrical surface of the upright and having an annular internal flange in threaded engagement with the threaded end of the upright below said annular upper edge, a central depending extension of the base member received in an opening in the floor, a central opening in said extension and an expansion bolt extending through said opening and having its expansible portion in engagement with the opening in the floor below said depending extension.

7. In combination a substantially cylindrical upright having a threaded lower end, a hollow frusto conical base member having an annular upper edge in juxtaposition to the cylindrical surface of the upright and having an annular internal flange in threaded engagement with the threaded end of the upright, a central depending extension of the base member received in an opening in the floor, a central opening in said extension and an expansion bolt extending through said opening and having its expansible portion in engagement with the opening in the floor below said depending portion, said bolt being loosened after it has been expanded into engagement with the floor whereby the base member may be turned to be threaded into engagement with the lower portion of the upright.

Signed by me at Everett, Mass., this 11th day of July, 1929.

LOUIS I. BECKWITH.