March 13, 1928. 1,662,539

O. C. SCHMIDT

SUPPORTING MEANS FOR OVERHEAD TRACKS

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Fig. 1.

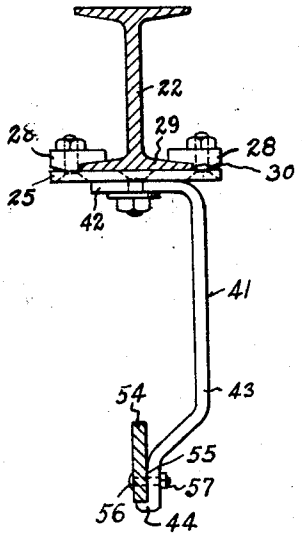


Fig. 2.

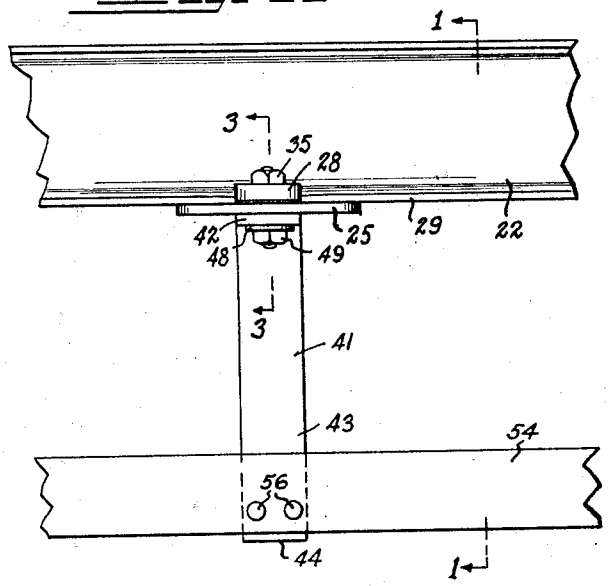


Fig. 3.

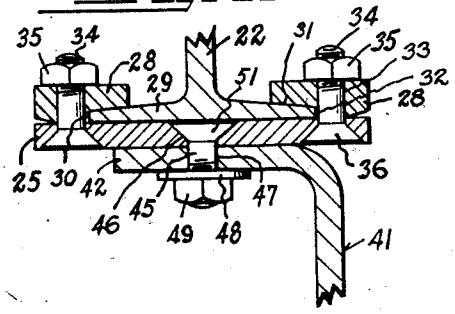


Fig. 4.

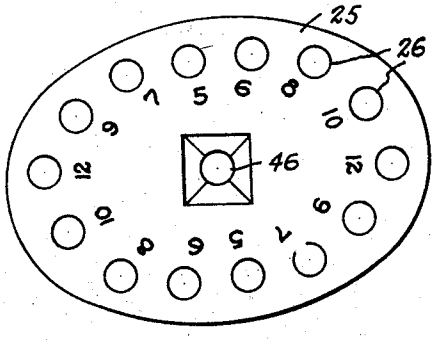
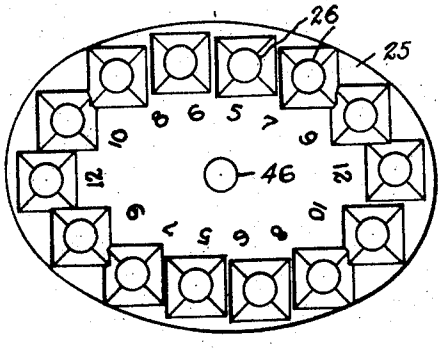


Fig. 5.



INVENTOR.

Oscar C. Schmidt,

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His Attorney.

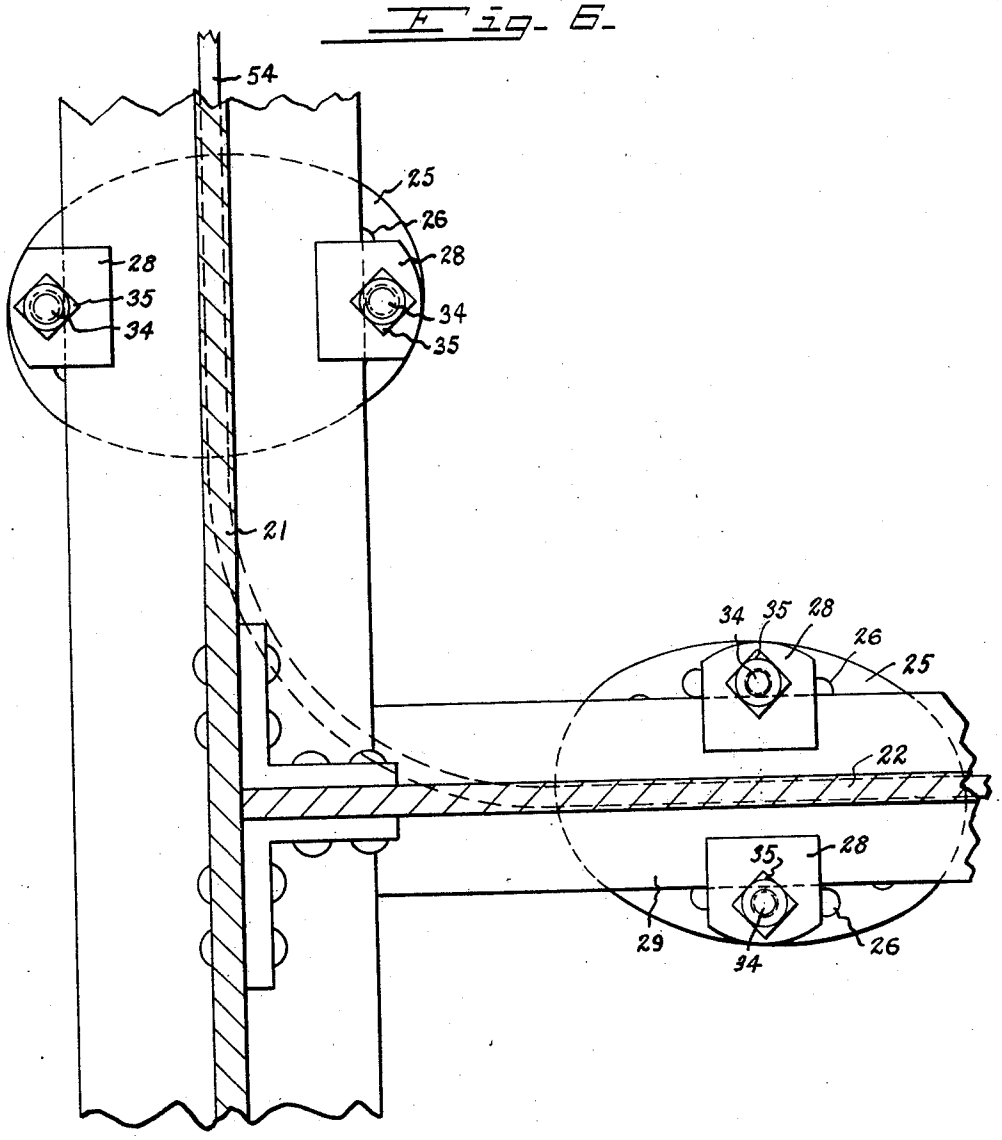
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SUPPORTING MEANS FOR OVERHEAD TRACKS

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Fig. 6.



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Patented Mar. 13, 1928. 1,662,539

UNITED STATES PATENT OFFICE.

OSCAR C. SCHMIDT, OF CINCINNATI, OHIO, ASSIGNOR TO THE CINCINNATI BUTCHERS SUPPLY COMPANY, OF CINCINNATI, OHIO, A CORPORATION OF OHIO.

SUPPORTING MEANS FOR OVERHEAD TRACKS.

Application filed August 15, 1927. Serial No. 213,159.

It is the object of my invention to provide new and improved means for supporting overhead tracks; and, further, to provide a hanger plate in such supporting means arranged to be conveniently attached to the flanges of I-beams of various sizes.

The invention will be further readily understood from the following description and claims, and from the drawings, in which latter:

Fig. 1 is an end view of my improved device, the I-beam and the track being shown in cross-section on the line 1—1 of Fig. 2.

Fig. 2 is a side elevation of the same, partly broken away.

Fig. 3 is a vertical cross-section of my improved device, taken on the line 3—3 of Fig. 2, and partly broken away.

Fig. 4 is a plan view of the hanger-plate of my improved device.

Fig. 5 is a bottom view of the same; and,

Fig. 6 is a horizontal cross-section of an exemplified track structure, partly broken away, showing an application of my improved device.

In practice I-beams of different heights have flanges of different widths, the related heights and widths having in practice become standardized. Instancing I-beams having heights respectively of five inches, six inches, seven inches, eight inches, nine inches, ten inches and twelve inches, I-beams of these respective heights in practice have flanges whose widths are respectively three inches, 3.33 inches, 3.66 inches, four inches, 4.33 inches, 4.66 inches and five inches.

I have provided a hanger-plate which is conveniently secured to a variety of sizes of I-beams, the above-mentioned sizes of I-beams being selected as an example, although my improved hanger-plate may be arranged for I-beams of different sizes or for different ranges of sizes. Thus in Fig. 6, the I-beam 21 may be instanced as a 12 inch I-beam, and the I-beam 22 as a 5 inch I-beam.

My improved hanger-plate is exemplified at 25. It is provided with apertures 26, which are arranged in substantially elliptical form about a common center. The centers of the apertures may be on a line which is substantially elliptical. The hanger-plate may be of elliptical form. The apertures are arranged in pairs, the apertures of the respective pairs being at opposite sides of the common center, and the pairs of apertures being located for accommodating I-beams of different sizes. Thus I have designated opposite apertures by the numerals 5, 6, 7, 8, 9, 10 and 12, corresponding to the sizes of I-beams hereinbefore mentioned. The flanges of I-beams of the respective sizes are accommodated between the apertures so designated respectively by the respective sizes of the I-beams specifically mentioned. The apertures for the smaller sizes of I-beams are adjacent to the minor axis of the ellipse and the apertures for the larger sizes of I-beams are adjacent to the major axis of the ellipse, the apertures for intermediate sizes being arranged therebetween.

The hanger-plate is arranged to be received across the bottom of the I-beam to which it is attached. Clamping shoes 28 are received above the opposite edges of the lower flange 29 of the I-beam. These clamping shoes are provided with rabbets 30, having an upper wall 31 corresponding in form to the form of the upper surfaces at the respective edges of the flange 29, and an outer wall 32, corresponding in form to the form of the outer edges of said flange. The shoes are respectively provided with apertures 33.

Bolts 34 are received through the complemental apertures 26, corresponding to the size of I-beam to which the hanger-plate is secured, and through the apertures 33 in the clamping shoes, nuts 35 being received about the bolts for clamping the hanger-plate and the shoes to the I-beam. The bolts have heads 36 of polygonal cross-section, and the lower ends of the walls of the apertures 26 in the plate are correspondingly formed, so as to prevent rotation of the bolt in the plate. The heads of the bolts are shown square and are provided with inner ends, the walls of which slope toward the threaded shanks of the bolts, the apertures 26 being complementally formed.

If the hanger-plate is to be secured to a five inch I-beam, the bolts are received in the holes marked 5 on the hanger-plate. If the hanger-plate is to be secured to a six inch I-beam, the bolts are received through the apertures marked 6 in the hanger-plate, and if the hanger-plates are to be secured to I-beams of other sizes, the bolts are received in apertures marked correspondingly

on the hanger-plates. The outer ends of the heads of the bolts are preferably received wholly within the apertures in the plate, so that there are no projections beyond the plane of the lower face of the hanger-plate, in order that the hanger may be secured to said lower face so as to extend in any direction desired. Such a hanger is shown at 41, and comprises an attaching flange 42, a shank 43, and a track-lug 44.

A bolt 45 is received through a central aperture 46 in the hanger-plate and through an aperture 47 in the flange 42. A lock-washer 48 and a nut 49 are received about the threaded shank of the bolt, for clamping the flange rigidly to the hanger-plate, in order to properly locate the hanger.

The head 51 of the bolt 45 is countersunk in the upper surface of the hanger-plate, so that the upper face of the hanger-plate may rest against the lower face of the I-beam. The head 51 is preferably polygonal in cross-section, the wall of the aperture 46 being correspondingly shaped, to prevent rotation of the bolt in its aperture. The inner end of the head slopes toward the shank of the bolt 45, the upper end of the wall of the aperture 46 being complementally formed.

A track 54 is secured to the track-lug, the track-lug having a vertical face 55 against which the track is clamped, as by means of bolts 56, received through apertures in the track and in the track-lug, and nuts 57.

The track is a flat strip of metal, and is arranged either straight or along various curvatures, according to the directions in which it is desired to convey the goods suspended from the track. These goods may be carcasses and animal parts in a slaughter house or meat packing plant, or other goods, and the goods may be supported by a frame mounted on rollers traveling on the track, these not being shown as they are well-known.

The center of the aperture 46 is substantially coincident with the center about which the apertures 26 are arranged in the hanger-plate. When so arranged, the aperture 46 is central with relation to the I-beam, regardless of the size of I-beam to which the hanger-plate is secured.

The track-lug of the hanger is so placed with relation to the aperture 47 in the attaching flange 42 of the hanger, that when the track is fixed to said track-lug, the center of the track and said aperture 47 are in line with each other, so that, when the hanger is attached to the hanger-plate, the center of the track is in line with the center of the I-beam, whereby maximum rigidity is secured and tilting strains are avoided.

Hanger-plates and hangers are selectively placed along the straight portions and the curved portions of the track so as to properly support the track, the portions of the track at the hangers and hanger-plates being centrally located below the hanger-plates.

Having thus fully described my invention, what I claim as new, and desire to secure by Letters Patent, is:

1. A hanger-plate of the character described, provided with apertures in substantially elliptical arrangement about a common center, opposite apertures arranged in pairs, the opposite apertures of each pair being at a different distance from said common center than the opposite apertures of an adjacent pair to correspond with the different widths of flanges of I-beams of different heights.

2. A hanger-plate of the character described, provided with apertures in substantially elliptical arrangement about a common center, opposite apertures arranged in pairs, the opposite apertures of each pair being at a different distance from said common center than the opposite apertures of an adjacent pair to correspond with the different widths of flanges of I-beams of different heights, and a hanger support about which said apertures are arranged.

3. A hanger-plate of the character described provided with apertures whose centers are on a substantially elliptical line described from a common center, mating apertures being at opposite sides of said common center and progressively increasing distances apart to correspond with the progressively increasing widths of the flanges of I-beams of progressively increasing sizes.

4. A hanger-plate of the character described provided with apertures whose centers are on a substantially elliptical line described from a common center, mating apertures being at opposite sides of said common center and progressively increasing distances apart to correspond with the progressively increasing widths of the flanges of I-beams of progressively increasing heights, and a central hanger support about which said apertures are arranged.

5. A hanger-plate of the character described provided with apertures whose centers are on a substantially elliptical line described from a common center, mating apertures being at opposite sides of said common center and increasing distances apart to correspond with the increasing widths of the flanges of I-beams of increasing heights, and a central aperture about which said first-named apertures are arranged, said first-named apertures and said central aperture arranged for receiving bolts in opposite directions.

6. A hanger-plate of the character described provided with apertures whose centers are on a substantially elliptical line described from a common center, mating apertures being at opposite sides of said common center and increasing distances apart to

correspond with the increasing widths of the flanges of I-beams of increasing heights, and a central aperture about which said first-named apertures are arranged, said first-named apertures and said central apertures arranged for receiving bolts in opposite directions, and bolts received in opposite directions in said apertures respectively, the heads of said bolts located within the plane of said hanger-plate, and the walls of said apertures and said heads of said bolts complementally formed to prevent turning of said bolts in said apertures.

7. A hanger-plate of the character described provided with apertures in substantially elliptical arrangement about a common center, mating apertures being at opposite sides of said common center and being increasing distances apart to correspond with the increasing widths of the flanges of I-beams of increasing sizes, bolts received through selected mating apertures, and clamping shoes in which said bolts are received, said hanger-plate and said clamping shoes arranged to coact with opposite sides of opposite edges of the flange of an I-beam of correspondingly selected size to which said hanger-plate is attached for clamping said hanger-plate to said I-beam.

8. In supporting means for overhead tracks, the combination of a hanger-plate provided with apertures in substantially elliptical arrangement about a common center, mating apertures being at opposite sides of said common center and being increased distances apart to correspond with the increasing widths of the flanges of I-beams of increasing heights, clamping shoes, clamping means therefor in selected meeting apertures for clamping said hanger-plate to the lower flange of a correspondingly sized I-beam, a hanger, a track secured thereto, and clamping means between said hanger-plate and said hanger having an axis in line with said common center and with the middle of said track, for locating the middle of said track under the middle of said I-beam.

9. In supporting means for overhead tracks, the combination of a hanger-plate provided with apertures in substantially elliptical arrangement about a common center, mating apertures being at opposite sides of said common center and being increasing distances apart to correspond with the increasing widths of the flanges of I-beams of increasing heights, bolts received through selected mating apertures, clamping shoes in which said bolts are received, said hanger-plate and said clamping shoes clamped about the opposite edges of the lower flange of an I-beam of correspondingly selected size, said hanger-plate provided with a depending threaded shank whose axis is substantially coincident with said common center, a hanger comprising an attaching flange, and a track secured to said hanger, said attaching flange provided with an aperture in which said depending threaded shank is received for locating the middle of said track under the middle of said I-beam.

10. In supporting means for overhead tracks, the combination of a hanger-plate provided with apertures in substantially elliptical arrangement about a common center, mating apertures being at opposite sides of said common center and being increasing distances apart to correspond with the increasing widths of the flanges of I-beams of increasing heights, bolts received in selected mating apertures, clamping shoes in which said bolts are received, said hanger-plate provided with an aperture whose center is substantially coincident with said common center, a bolt in said last-named aperture and depending therefrom, a hanger comprising an attaching flange and a track-lug provided with a track-attaching face, and a track attached to said track-attaching face, said attaching flange provided with an aperture in such relation to said track-attaching face that when said last-named bolt is fixed in said last-named aperture and the parts are assembled, the portion of the track fixed to said track-attaching face is in central position under said I-beam.

In testimony whereof, I have hereunto signed my name.

OSCAR C. SCHMIDT.