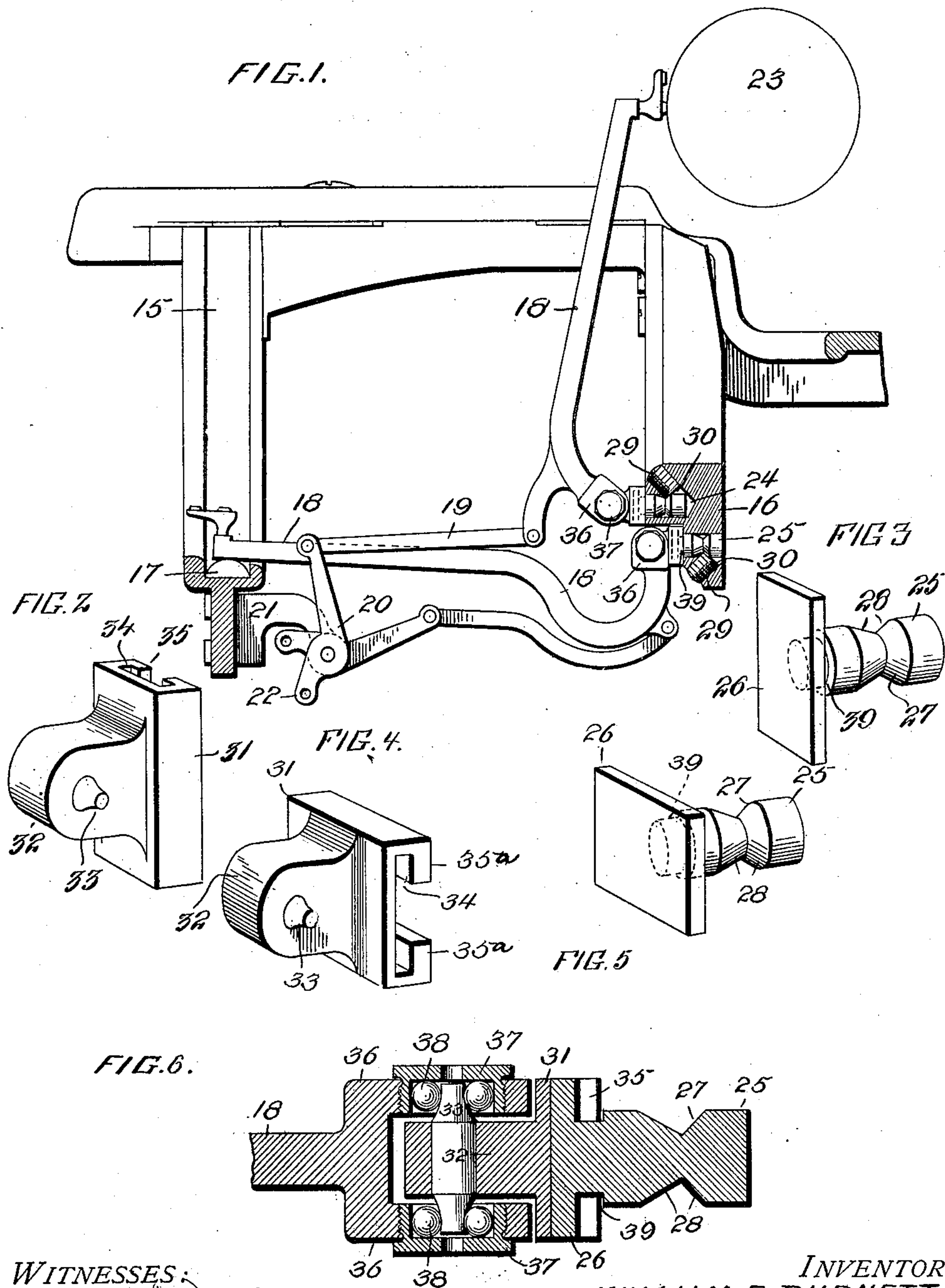


917,244.

W. E. BURNETT.
TYPE BAR AND HANGER.
APPLICATION FILED JULY 20, 1908.

Patented Apr. 6, 1909.
2 SHEETS—SHEET 1.



WITNESSES:

W. F. K. G.
Alfred I. Sage

INVENTOR

WILLIAM E. BURNETT.

BY

E. B. Stocking

Attorney

917,244.

W. E. BURNETT.
TYPE BAR AND HANGER.
APPLICATION FILED JULY 20, 1908.

Patented Apr. 6, 1909.

2 SHEETS—SHEET 2.

FIG. 7.

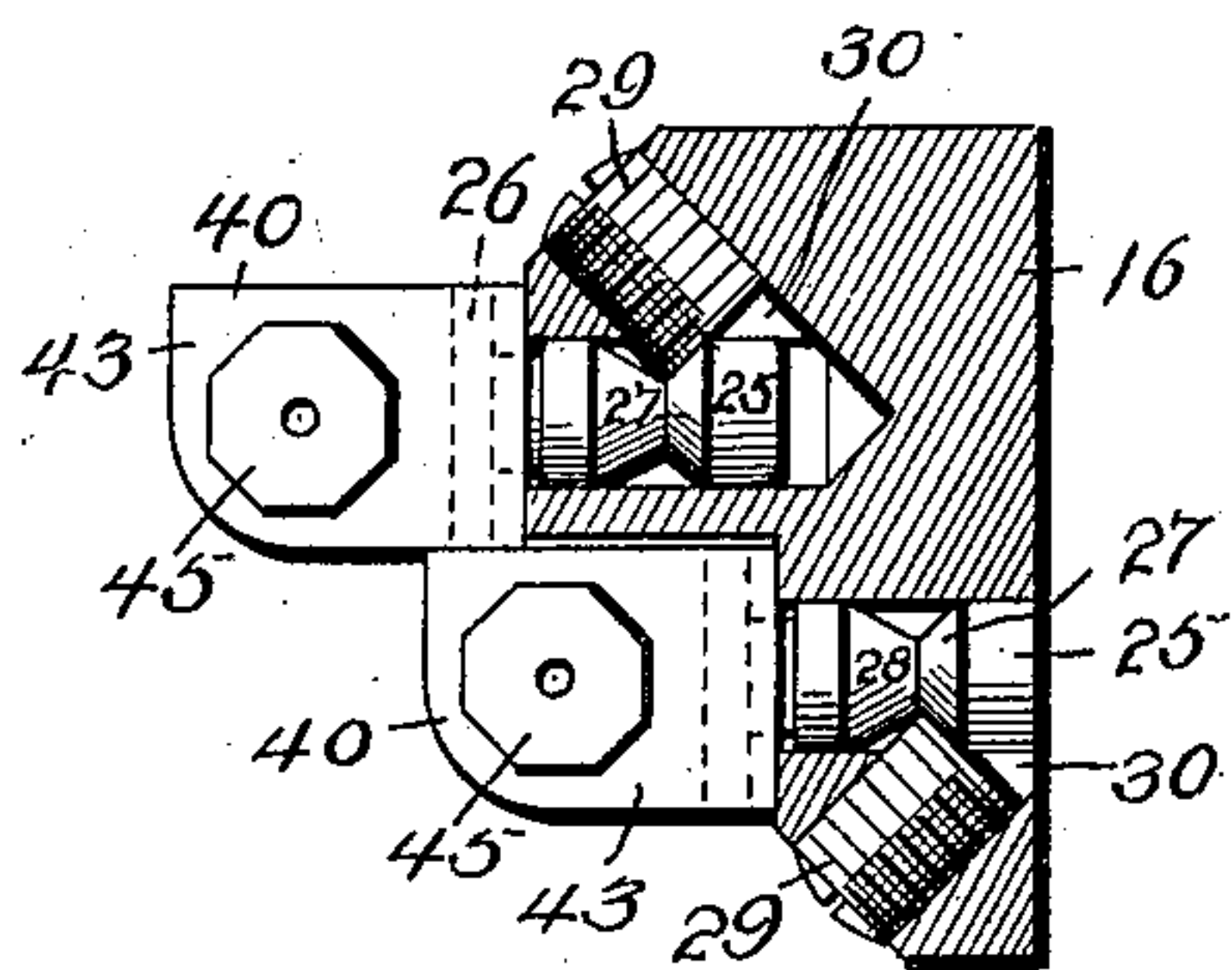


FIG. 8.

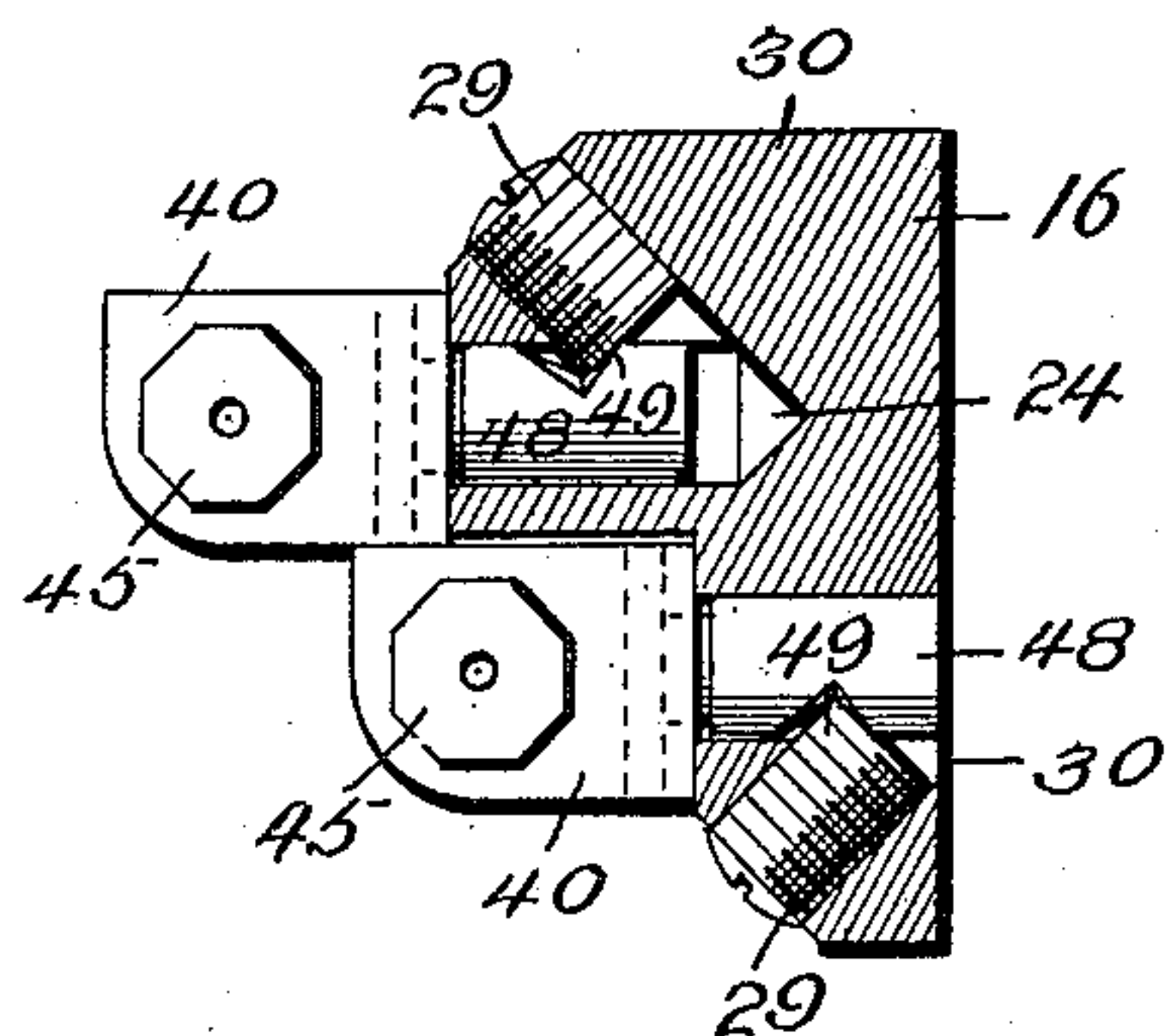


FIG. 9.

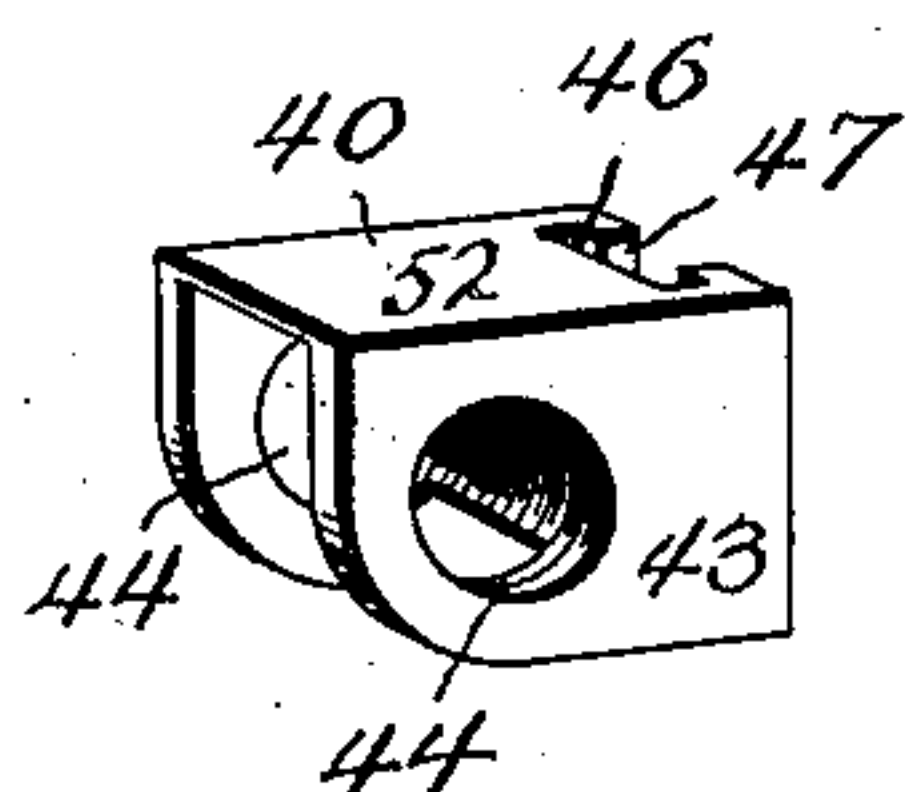


FIG. 10.

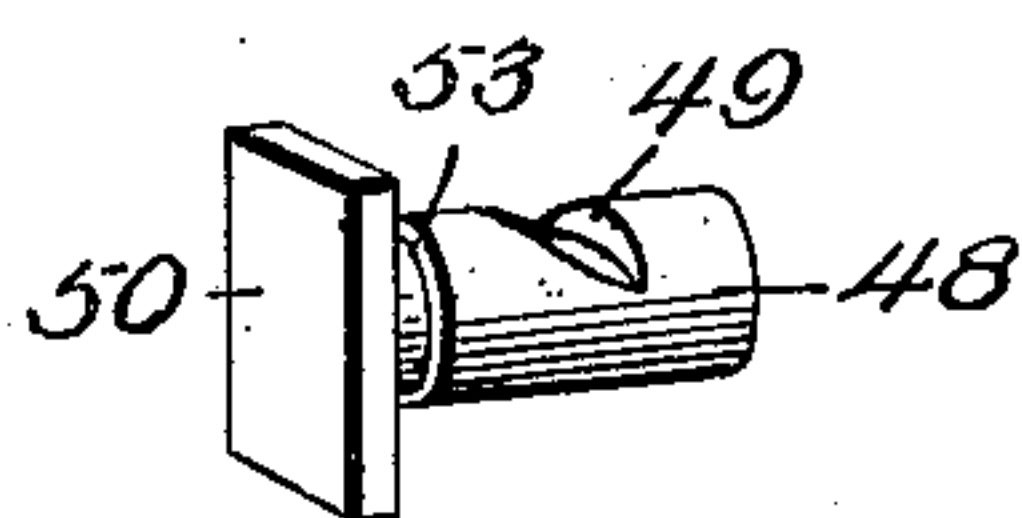


FIG. 11.

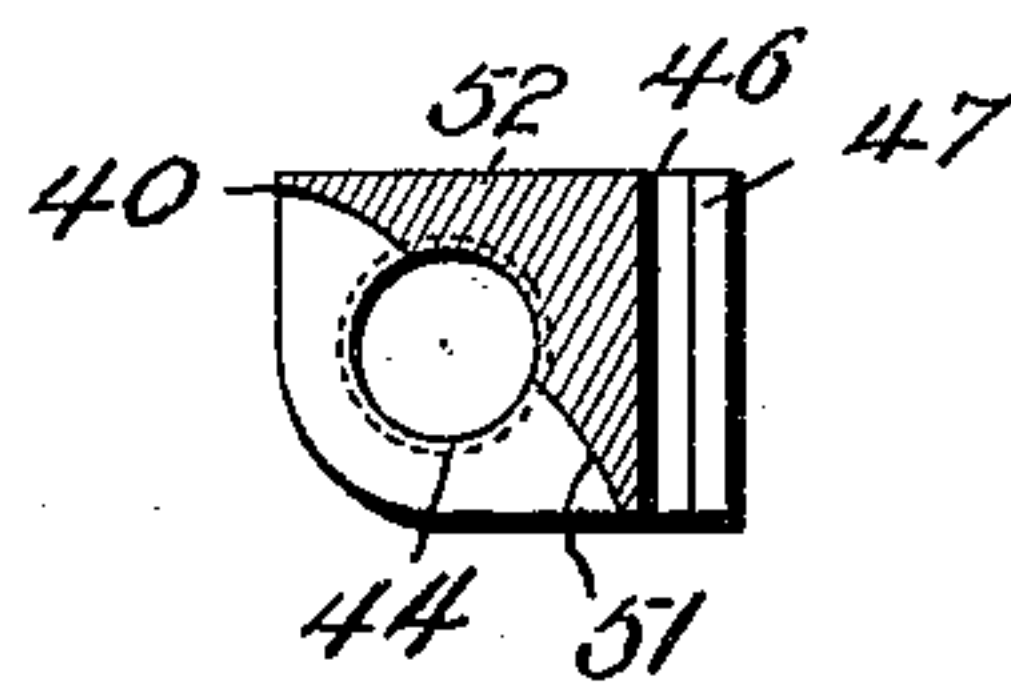


FIG. 13.

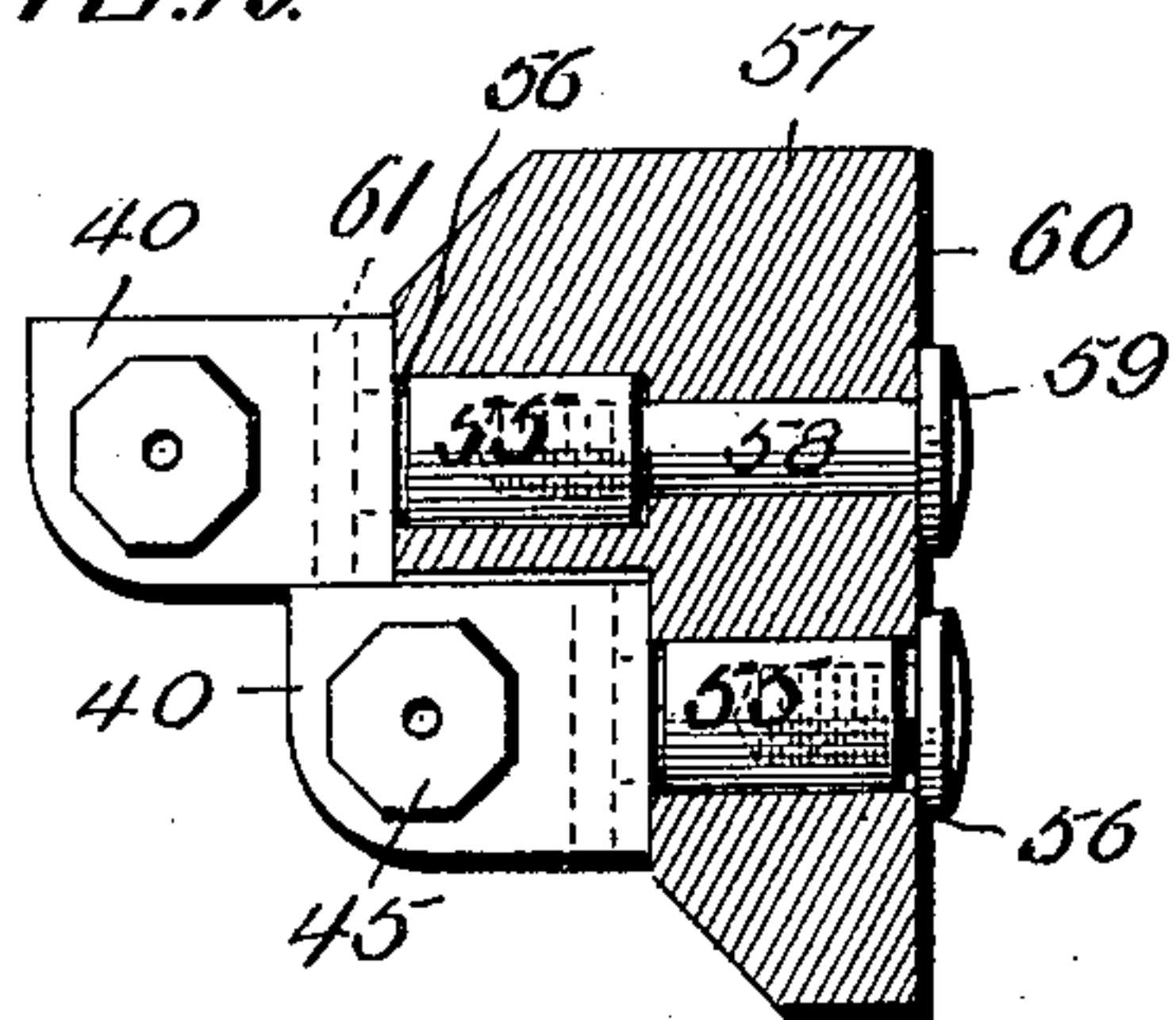
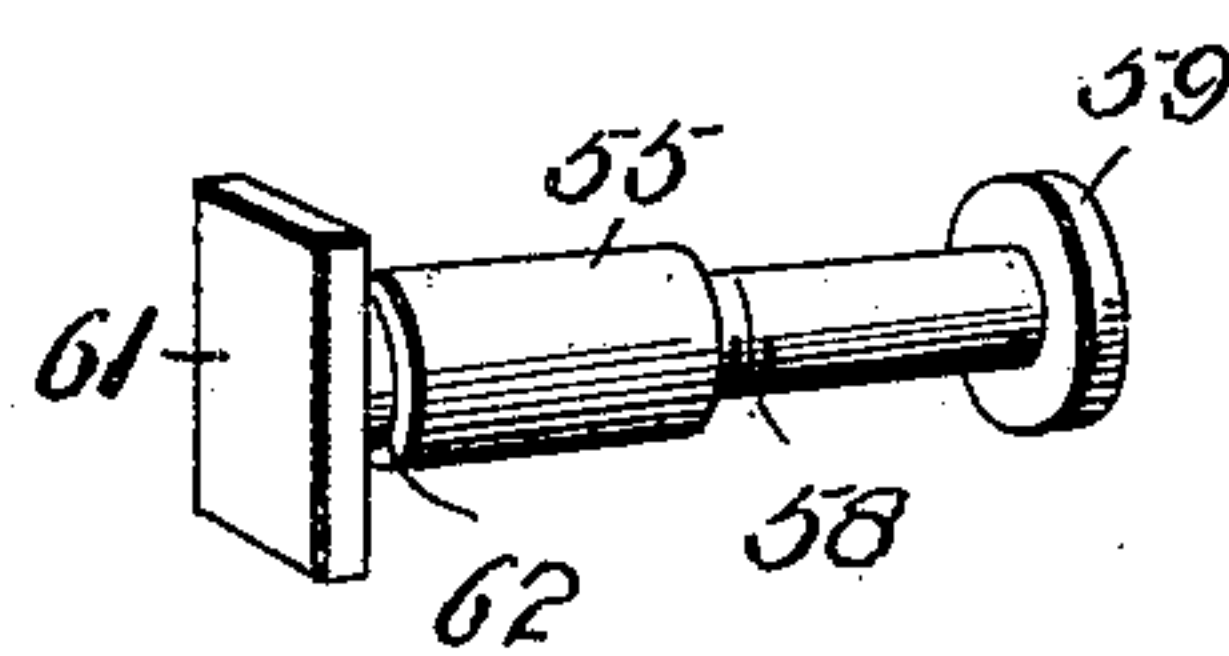


FIG. 14.



WITNESSES:

W. E. Burnett
Alfred S. Arge.

INVENTOR

WILLIAM E. BURNETT.

BY

E. B. Stocking

Attorney

UNITED STATES PATENT OFFICE.

WILLIAM E. BURNETT, OF ILION, NEW YORK.

TYPE-BAR AND HANGER.

No. 917,244.

Specification of Letters Patent.

Patented April 6, 1909.

Application filed July 20, 1908. Serial No. 444,415.

To all whom it may concern:

Be it known that I, WILLIAM E. BURNETT, citizen of the United States, residing at Ilion, county of Herkimer, and State of New York, have invented certain new and useful Improvements in Type-Bars and Hangers, of which the following is a specification, reference being had therein to the accompanying drawing.

10 This invention relates to a type bar and hanger, and particularly to a structure by which the type bar may be adjusted relative to its support and segment and securely held at such adjustment.

15 The invention has for an object to provide a novel and improved construction of type bar hanger embodying a headed bolt adjustably connected with the hanger and having cooperating securing means arranged to produce a longitudinal movement of the bolt in its socket thereby drawing the hanger against the face of the support to clamp it in adjusted position.

20 A further object of the invention is to provide the hanger with an interlocked or mortise connection with the bolt head to permit adjustment thereon laterally of the bolt and to provide the bolt with a seat against which a bearing screw may contact said screw being disposed at such an angle as to effect a pressure longitudinally of the axis of the bolt.

25 Another object of the invention is to provide a headed bolt for adjustably retaining the type bar hanger, said bolt being of circular cross section disposed in a corresponding socket with a circumferential bearing face to engage a retaining device whereby a rotative adjustment of the bolt may be effected.

30 A further object of the invention is to provide an improved construction of the hanger having a pintle or pivot adapted to cooperate with ball bearings carried by the bifurcated inner end of the type bar.

35 Other and further objects and advantages of the invention will be hereinafter fully set forth and the novel features thereof defined by the appended claims.

40 In the drawing:—Figure 1 is a vertical section showing the application of one form of the invention; Fig. 2 is a detail perspective of the type bar hanger shown in Fig. 1; Fig. 3 is a similar view of the headed bolt shown therein; Fig. 4 is a perspective showing a modified form of hanger for adjust-

ment parallel of the type bar pivot; Fig. 5 is a similar view of the cooperating bolt; Fig. 6 is a horizontal section through these parts as assembled in Figs. 4 and 5; Fig. 7 is a vertical section showing a modified form of hanger; Fig. 8 is a similar view showing a modified form of bolt; Fig. 9 is a detail perspective of the hanger shown in Figs. 7 and 8; Fig. 10 is a similar view of the bolt shown in Fig. 8. Fig. 11 is a vertical section of the hanger shown in Fig. 9; Fig. 12 is a detail perspective of the type bar pivoting end; Fig. 13 is a vertical section showing a modified form of bolt; Fig. 14 is a detail perspective of this bolt.

Like numerals refer to like parts in the several views of the drawing.

This invention is adapted for application to any character of typewriter and in connection with any desired form of type bar, being here shown in Fig. 1 as assembled in a front strike machine, the frame 15 of which is provided with a segment or type support 16 and the type rest 17 with which the type bars 18 contact when not in use. These bars are controlled by any desired keyboard connections, such for instance, as the links 19 extended to the pivot levers 20 carried by the bracket 21, the opposite ends 22 of which levers are suitably connected at the keyboard. The type bars when in writing position contact with the platen 23.

35 In the application of the form of the invention shown in Fig. 1, the support or segment is provided with sockets 24 adapted to receive the retaining bolts 25 which are preferably of curved cross section in order to permit their rotative adjustment in their sockets. This bolt is provided with the head 26 which may be of any desired conformation, for instance, a rectangular plate, as shown in Fig. 3, and the shank of the bolt is provided with a circumferential holding face 27 formed in any preferred manner thereon, for instance by the oppositely inclined surfaces 28, as shown in Fig. 3. For the purpose of retaining this bolt in its socket and exerting pressure longitudinally thereof, a securing device, such as a screw 29 is disposed in the socket 30 which communicates with the socket 24 of the bolt intermediate of the ends thereof and at such an angle relative to the longitudinal axis of the bolt socket as to effect a longitudinal movement of the bolt as the retaining device is fed inward.

Coöperating with the bolt just described is the type bar hanger 31, which in the form shown in Fig. 2 is provided with a lug 32 upon its front face having pintles or pivots 5 33 at opposite sides thereof. The rear face of this hanger is formed with coöperating interlocking members, for instance, the mortise 34 formed by the flanges 35 extending 10 spaced therefrom, so as to form a way in which the plate 36 of the bolt may travel, while the angular formation of these prevents oscillatory movement while permitting adjustment at an angle to the type bar 15 pivot. The flanges 35 extend into the circumferential groove 39 at the rear of the plate 26. With the parts as assembled in Fig. 1 the longitudinal pressure upon the bolt draws the flanges 35 into firm contact 20 with the outer face of the support thus clamping the parts in adjusted position. A desirable arrangement of a plurality of these hangers is shown in Fig. 1 where they are disposed in different parallel planes and 25 secured in position by the screws which being disposed at an angle of substantially forty five degrees at the upper and lower portion of the support are easily accessible to permit the adjustment of the hanger 30 either rotatably of the bolt or laterally thereof by simply loosening the screws while a partial removal of the screws permits the complete withdrawal of the parts.

Coöperating with the form of hanger 35 shown in Fig. 2 is a form of type bar having a bifurcated pivoting end 36 in which the bearing cups 37 are threaded for adjustable mounting and carry the usual bearing balls 38 which contact with the ends 33 40 of the pivot carried by the lugs 32 of the hanger. This provides a bearing having only three points of contact which reduces the friction and wear to a minimum and by disposing the ball bearings in the bifurcated 45 portion of the type bar the construction is materially economized and rendered more easy of production. In Figs. 4 and 5 a modified form is shown in which the flanges 35^a of the hanger are disposed to permit a 50 lateral adjustment upon the bolt parallel with the type bar pivot.

In Fig. 7 a modified form of hanger 40 is shown coöperating with a similar construction of headed bolt to that shown in Fig. 1. 55 This form of hanger is shown in detail in Fig. 9 and is adapted to coöperate with a type bar 41 having the pivots 42 thereon, the side walls 43 of the hanger having threaded apertures 44, as shown in Fig. 9, adapted to 60 receive the ball bearing caps 45, Fig. 7. In this form of hanger the mortise or interlocking connection 46 for the plate 26 is disposed vertically or at an angle to the vertical axis of the type bar in the hanger, and 65 the flanges 47 forming the way for adjust-

able connection with the plate are adapted to be drawn into contact with the front face of the support 16 by means of the securing screws 29 engaging the face 27 upon the 70 headed bolts 25, the same as described in connection with Fig. 1. This form provides for both a rotative adjustment of the bolt and the adjustment of the hanger laterally thereon at an angle to the type bar 75 pivot.

Fig. 8 illustrates a modified form of bolt, shown in detail in Fig. 10 and adapted to coöperate with the form of hanger shown in Figs. 7 and 8. This bolt 48 is provided with a curved contact face 49 and disposed 80 in the support or segment 16 having the sockets 24 and 30, as shown in Fig. 1, the latter socket being adapted to receive the screw 29 and the former bolt 48. This bolt is provided with a plate or head 50 and circumferential groove 53 adapted to coöperate 85 with the mortise connection 46 forming a tenon and mortise for adjustment of the hanger upon the bolt.

In Fig. 11 a vertical section of the form 90 of hanger illustrated in Fig. 9 is shown, the inner wall 51 of which is cut away upon a curved line extending at an angle to the pivot axis so as to provide a clearance for the end of the type bar beyond its pivot 49, 95 and a solid upper wall 52 extending to the outer edge of the hanger thus strengthening the bracket and preventing dust, dirt or erasings from entering the bearings thereof.

In Fig. 13 a further modified application 100 of the bolt is shown which coöperates with the hanger 40, as shown in Fig. 9, this bolt being specifically shown in detail in Fig. 14. This bolt 55 is mounted in a suitable socket 56 formed in the type support 57, said bolt 105 being provided with an interiorly threaded recess adapted to receive the inner threaded end of the securing bolt 58 which is provided with a head 59 adapted to bear against the rear face 60 of the support and thus 110 exert a longitudinal tension upon the bolt. The bolt 55 is also provided with a plate 61 adapted to seat in the mortise 46 and having a circumferential groove 62 into which the edges of the flanges 47 extend so as to form 115 a positive connection between these parts.

The application and operation of the invention will be apparent from the foregoing description, and it will be seen that the type bar hangers may in an instant be readily 120 adjusted upon their supports laterally of the retaining bolt and clamped in such adjustment by longitudinal pressure applied upon the bolt. This pressure is most effectually 125 obtained by means of a screw or other device accessibly mounted in the support at such an angle to the bolt as to draw the same longitudinally of its socket by contact with the surface thereon, and when this surface is circumferential of the bolt a rotative ad- 130

justment of the bolt may be secured. The hanger is adapted for lateral adjustment upon the bolt in order to secure the proper alinement of the parts and this may be
 5 either in a plane at an angle to or parallel with the type bar pivot as found most desirable in the positioning of the type bar upon its support or segment. The use of the T-slot in connection with the headed bolt
 10 permits the removal of the hanger and type bar from the segment without a removal of the bolt or its securing screw as it is only necessary to slightly remove this screw in order to permit a ready adjustment of the
 15 parts.

It will be obvious from the foregoing that various means may be used for exerting a longitudinal tension upon the bolt in order to draw the hanger into clamping contact
 20 with the face of its support and hold it at its adjustment upon the head of the bolt. It is also apparent that the character of screw may be varied as well as the conformation of the interlocked or mortise connection between the bolt and hanger.
 25

The bifurcated type bar having the ball bearings mounted thereon in connection with the pivot upon the hanger has been found very desirable and efficient in use obviating many difficulties present in the reverse relation of these parts and materially economizing the manufacture, but the invention is not confined thereto.
 30

Having described my invention and set forth its merits, what I claim and desire to secure by Letters Patent is:—
 35

1. In a type bar hanger, a support having a socket therein, a headed retaining bolt mounted in said socket, a hanger adjustably
 40 mounted upon the head of said bolt, and means for effecting a longitudinal movement of the bolt to bring said hanger into contact with the face of said support.

2. In a type bar hanger, a support having
 45 a socket therein, a retaining bolt mounted in said socket, a hanger adjustably mounted upon said bolt, and a retaining device mounted in said support to engage said bolt at an angle to effect a longitudinal movement
 50 thereof.

3. In a type bar hanger, a support having a socket therein, a retaining bolt mounted in said socket, a hanger adjustably mounted upon said bolt, and a screw threaded into
 55 said support to engage said bolt at an angle to effect a longitudinal movement thereof.

4. In a type bar hanger, a support having a socket therein, a retaining bolt mounted in said socket, a hanger adjustably mounted
 60 upon said bolt, and a retaining device mounted in said support at an angle of substantially forty five degrees to the axis of said bolt and adapted to contact with a seat thereon.

65 5. In a type bar hanger, a support having

a socket therein, a retaining bolt mounted in said socket, a hanger adjustably mounted upon said bolt, a circumferential seat provided upon said bolt intermediate of its ends, and a retaining device mounted in the sup-
 70 port to engage said seat to effect a longitudinal movement of the bolt.

6. A type bar hanger comprising a support, a bolt mounted thereon and provided with a head at its outer end, means for ad-
 75 justing said bolt longitudinally of its socket in said support, and a hanger having a cooperating interlocking member adjustable upon said head laterally of the bolt.

7. A type bar hanger comprising a sup-
 80 port, a bolt mounted thereon and provided with a head at its outer end, means for adjusting said bolt longitudinally of its socket in said support, a hanger having a cooperating interlocking member adjustable
 85 upon said head laterally of the bolt, a lug carried by said hanger and provided with a pivot, a type bar having a bifurcated end, and ball bearing caps adjustably mounted in said end to engage said pivot.
 90

8. In a type bar hanger, a support, a headed bolt mounted in said support for longitudinal clamping movement, a hanger adjustably mounted upon the head thereof and provided with a lug having pivots at
 95 opposite sides, a type bar having a bifurcated end, and ball bearing caps mounted in said end to engage the pivots of the hanger at opposite sides of the lug thereon.

9. In a type bar hanger, a support having
 100 a socket therein, a bolt mounted in said socket and provided at its outer end with a head plate, and a hanger provided on its inner face with a mortise connection to receive said plate.
 105

10. In a type bar hanger, a support having a socket therein, a bolt mounted in said socket and provided at its outer end with a head plate, a hanger provided on its inner face with a mortise connection to receive
 110 said plate, and means mounted at an angle to the axis of said bolt and bearing thereon to adjust it longitudinally.

11. In a type bar hanger, a retaining bolt provided at one end with a rectangular head
 115 plate, and a hanger having flanges parallel to the body thereof to form a cooperating mortise to receive said plate.

12. In a type bar hanger, a retaining bolt provided at one end with a rectangular head
 120 plate, and a hanger having flanges parallel to the body thereof to form a cooperating mortise to receive said plate, said bolt being provided at the rear of said plate with a circumferential groove to receive the edges
 125 of said flanges.

13. A type bar hanger comprising a bolt having a circumferential groove with oppositely inclined faces thereon, and a rectangular head with a circumferential groove
 130

at the rear thereof in combination with a hanger having a rectangular mortise to receive said plate, and flanges adapted to enter the grooves at the rear thereof.

- 5 14. A type bar hanger comprising a bolt having a circumferential groove with oppositely inclined faces thereon, and a rectangular head with a circumferential groove at the rear thereof in combination with a
10 hanger having a rectangular mortise to receive said head, flanges adapted to enter the groove at the rear thereof, a support having a socket to receive said bolt, and a securing screw threaded in said support at an angle
15 of substantially forty-five degrees to the axis of said bolt.

- 15 15. In a type bar hanger, a support having sockets therein, a plurality of retaining bolts mounted in parallel planes, hangers
20 adjustably mounted to embrace the heads of said bolts, and securing devices mounted in said support at opposite sides of said bolts and adapted to engage the same at an angle to effect a longitudinal movement of the
25 bolts.

- 30 16. In a type bar hanger, a support, a bolt mounted therein, a hanger embracing the head of said bolt and adjustable thereon, and means for drawing said hanger into
35 contact with a face of said support.

17. In a type bar hanger, a support, a bolt mounted therein and having an angular head, a hanger laterally adjustable upon the head of said bolt, means for drawing
35 said hanger into contact with a face of said support, and means for permitting a ro-

tative adjustment of said bolt in said support.

18. In a type bar hanger, a support, a bolt mounted thereon for longitudinal
40 clamping adjustment and having an angular head, and a hanger slidably mounted upon the head of said bolt.

19. In a type bar hanger, a support, a bolt mounted thereon for longitudinal
45 clamping adjustment, and a hanger slidably mounted upon the head of said bolt and having flanges at the rear of said head to engage a face of said support.

20. In a type bar hanger, a support, a
50 bolt mounted thereon for longitudinal clamping adjustment, a hanger slidably mounted upon the head of said bolt and having flanges at the rear of said head to engage a face of said support, and a securing
55 screw mounted to effect a longitudinal movement of the bolt while permitting a rotative adjustment thereof.

21. In a type bar hanger, a support, a headed bolt mounted therein, a hanger hav-
60 ing a type bar pivoted thereon, means for laterally adjusting said hanger upon the head of said bolt at an angle to the pivot of the type bar, and means for drawing said hanger into contact with the face of said
65 support.

In testimony whereof I affix my signature in presence of two witnesses.

WILLIAM E. BURNETT.

Witnesses:

WILLIAM F. PARKER,
DONALD B. GOULD.