Sept. 29, 1936. J. W. SHIELDS 2,055,828

REVOLVING DOOR HARDWARE

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FIG. 1

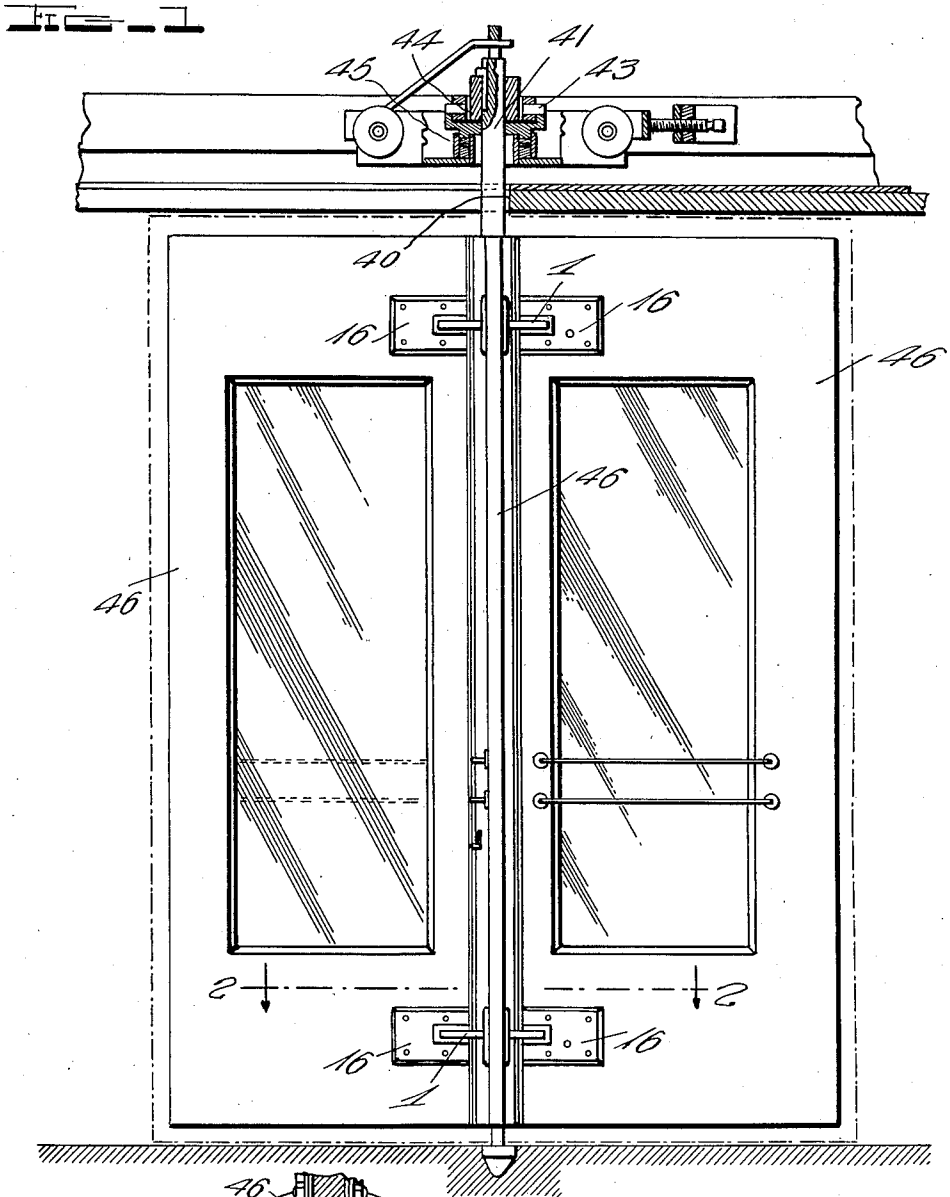
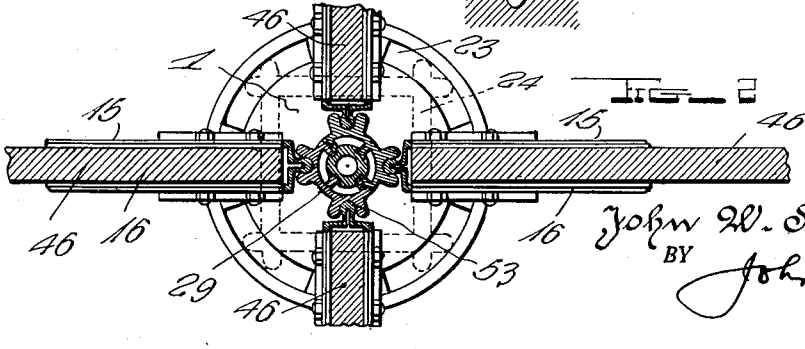


FIG. 2



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REVOLVING DOOR HARDWARE

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Fig. 3

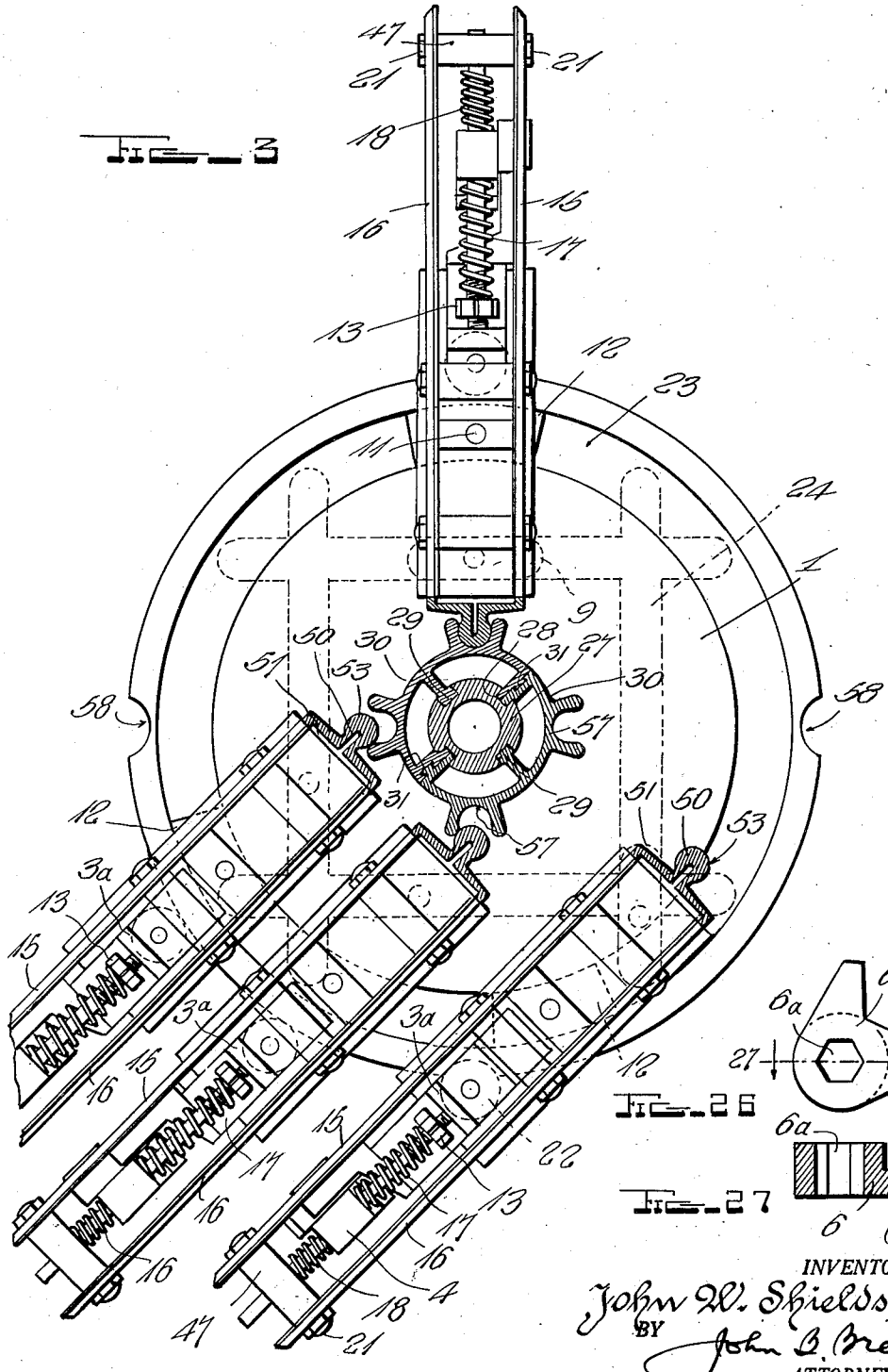


Fig. 26

Fig. 27

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REVOLVING DOOR HARDWARE

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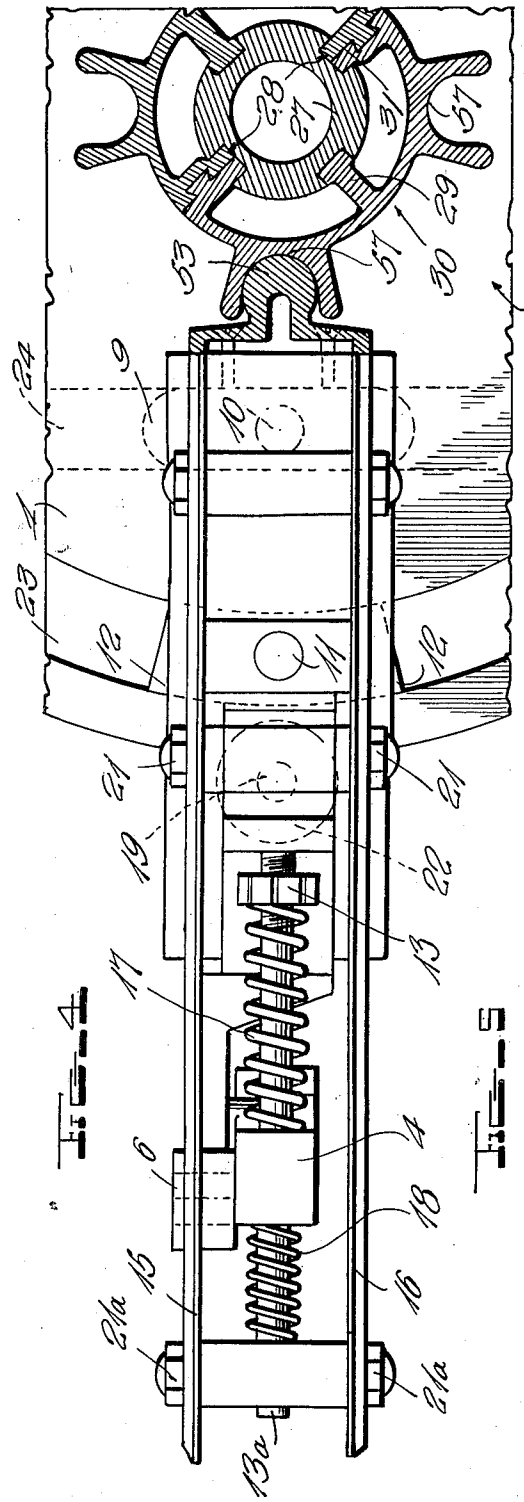


FIG. 4

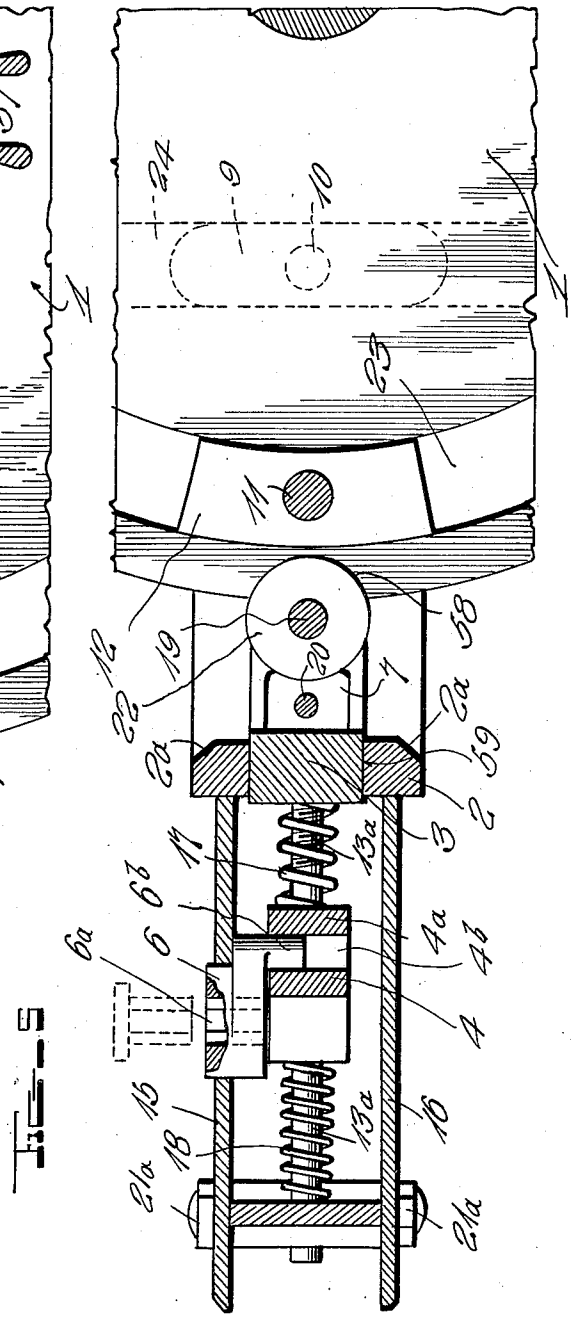


FIG. 5

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Sept. 29, 1936. J. W. SHIELDS 2,055,828

REVOLVING DOOR HARDWARE

Filed Nov. 5, 1935 6 Sheets-Sheet 4

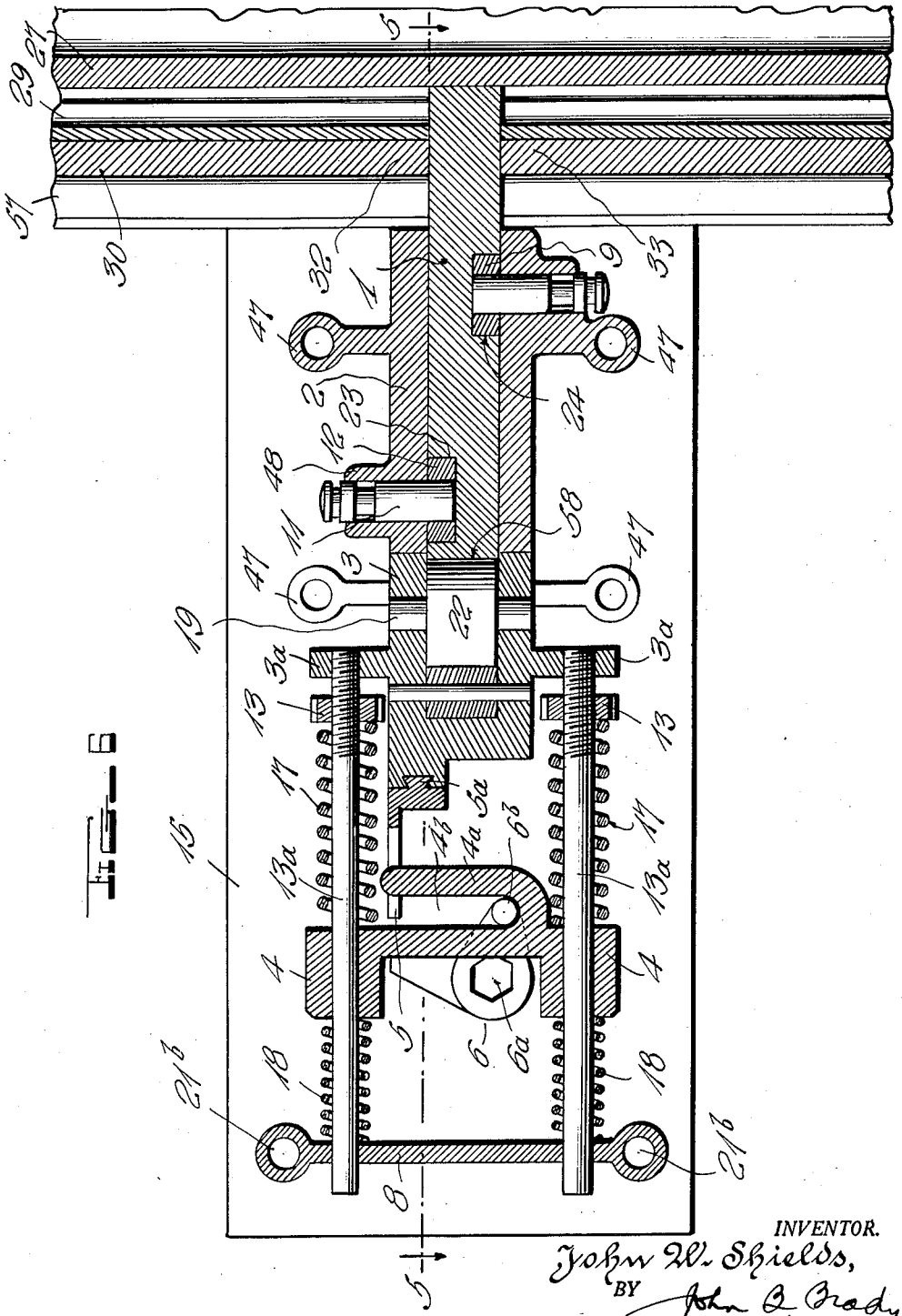


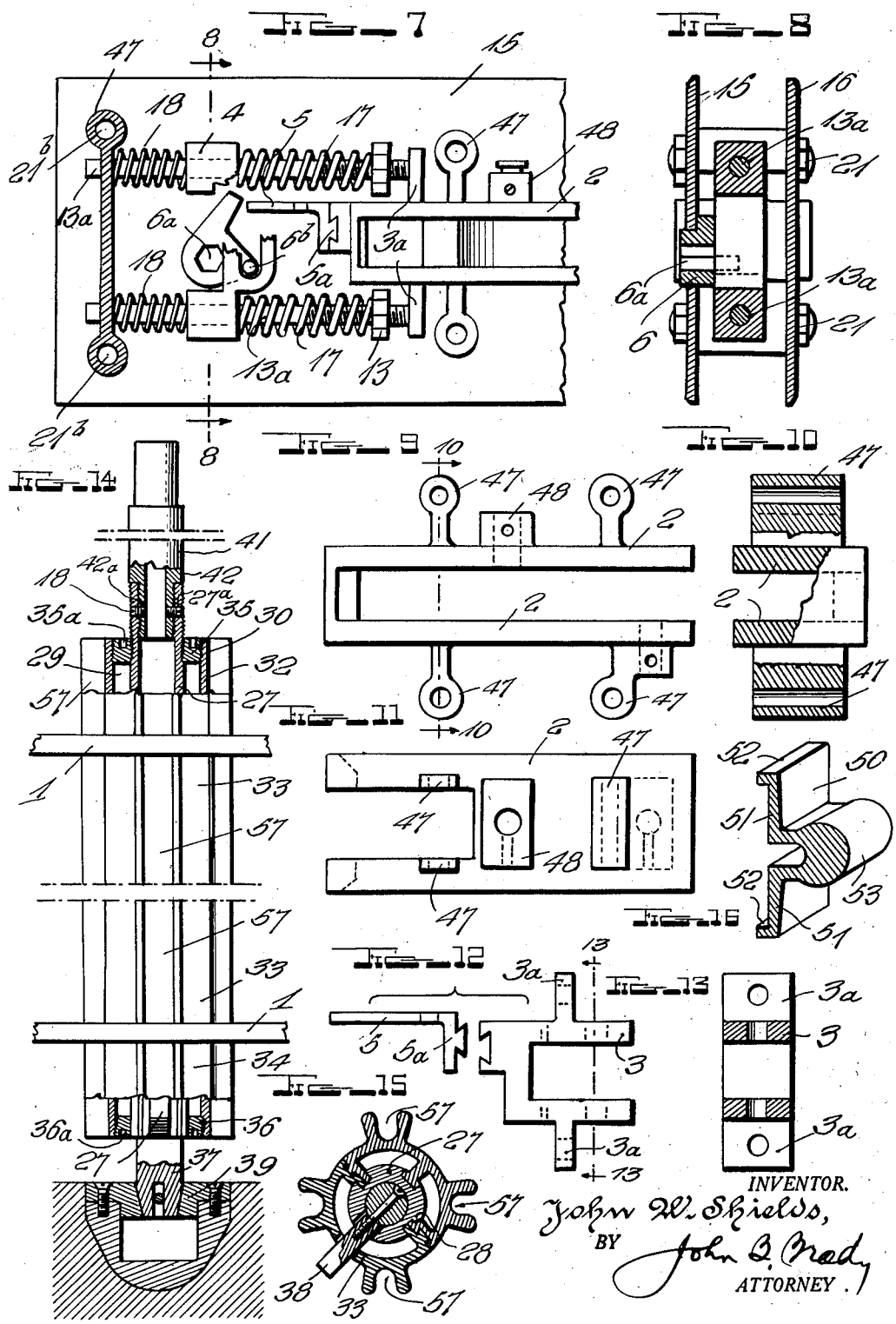
FIG. 6

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REVOLVING DOOR HARDWARE

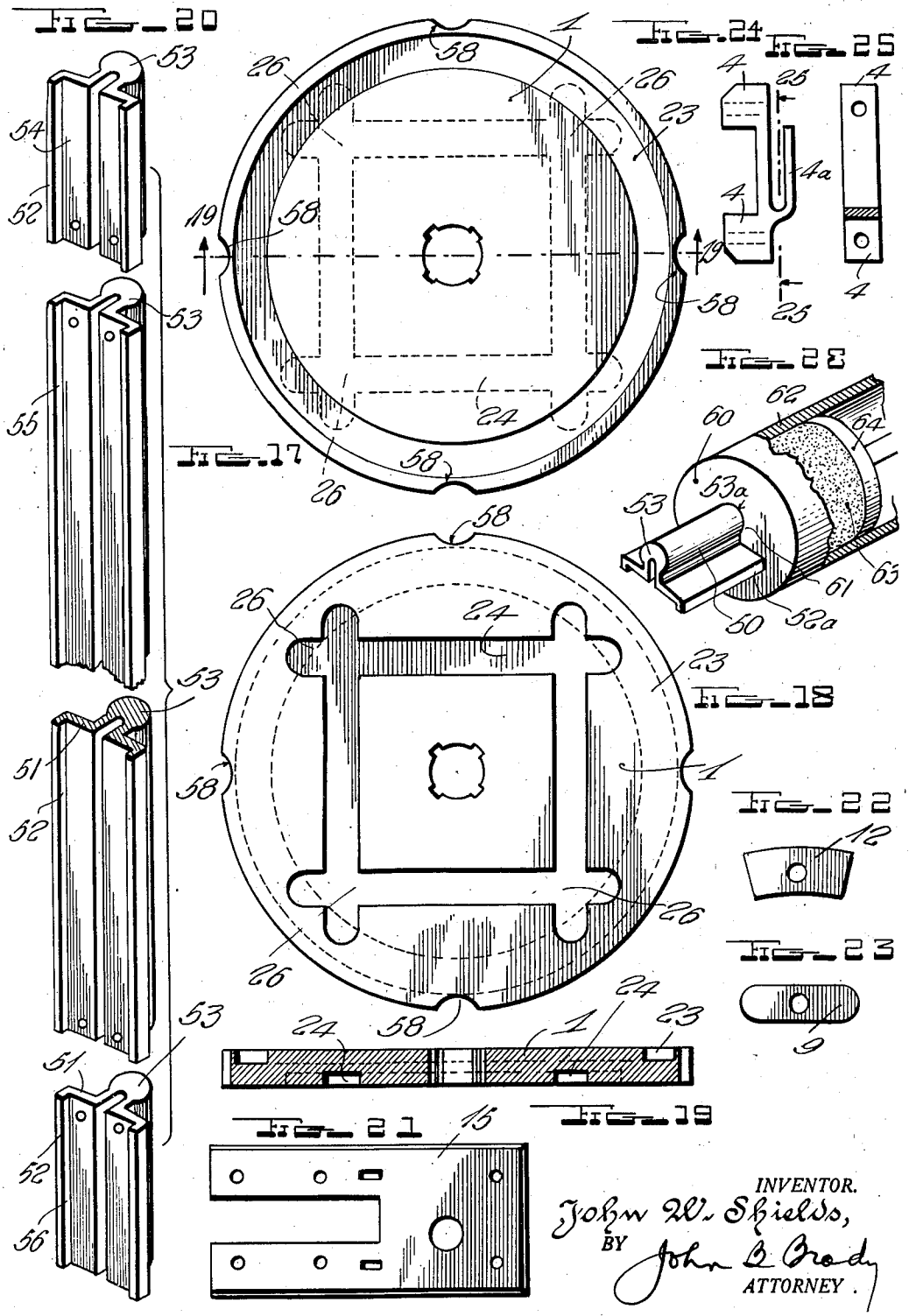
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REVOLVING DOOR HARDWARE

Filed Nov. 5, 1935 6 Sheets-Sheet 6



Patented Sept. 29, 1936

2,055,828

UNITED STATES PATENT OFFICE

2,055,828

REVOLVING DOOR HARDWARE

John W. Shields, Evansville, Ind., assignor to International Door Company, Evansville, Ind., a corporation of Illinois

Application November 5, 1935, Serial No. 48,389

19 Claims. (Cl. 20—18)

My invention relates broadly to revolving doors and more particularly to an improved construction of revolving door hardware.

One of the objects of my invention is to provide a construction of hardware for revolving doors in which an air-tight system of joints is provided for the revolving door structure.

Another object of my invention is to provide a construction of revolving door hardware having means for sealing the inner longitudinally extending edge portions of the hardware carried by the revolving door wings with respect to the central shaft of the revolving door.

Still another object of my invention is to provide a construction of joint between the revolving door shaft housing and the inner edge portions of the wings of the revolving door, formed by complementary members interengaging each other for forming a substantially air and moisture-tight joint between the revolving door wings and the central shaft.

A further object of my invention is to provide a construction of revolving door hardware which is capable of being extruded in the desired contour for rendering the manufacture and production of the revolving door hardware relatively simple and inexpensive.

A still further object of my invention is to provide a construction of revolving door hardware in which supporting discs for the revolving doors are grooved on both the upper and lower surfaces thereof and serve as guide means for the wings of the revolving door during a collapsing or a reassembling operation thereof.

Another object of my invention is to provide an arrangement of guide grooves for the supporting discs of revolving door hardware wherein the grooves are disposed on the upper and lower surfaces of the supporting discs, and wherein one of the grooves is disposed in an annular path and another of the grooves is disposed in a quadrilateral path.

A further object of my invention is to provide a construction of disc support for revolving door hardware coacting with a pressure equalized latching mechanism for controlling the yieldable engagement of a projecting member carried by the door wing with respect to the notched peripheral edge of the disc support.

A still further object of my invention is to provide a construction of manually operated retracting mechanism for rendering the spring mechanism of the latch of a revolving door wing ineffective with respect to a revolving door supporting disc, for allowing the door wings to be readily moved to collapsed position.

Other and further objects of my invention reside in the construction of collapsible revolving door hardware whereby the wings of a revolving door may be moved to a position in which the planes thereof are parallel and immediately adjacent each other under conditions of panic or under conditions wherein it is desirable to manually shift the door wings individually to a position adjacent one side of the drum of the revolving door, as set forth more fully in the specification hereinafter following by reference to the accompanying drawings, in which:

Figure 1 is an elevational view showing the revolving door mechanism of my invention applied to a revolving door in assembled position; Fig. 2 is a horizontal sectional view taken on line 2—2 of Fig. 1; Fig. 3 is an enlarged lateral sectional view showing the position of the revolving door hardware, where three of the wings are shown moved to collapsed position while one of the wings remains in assembled position, the supporting disc and the wing supports for the door wings being shown in plan; Fig. 4 is a horizontal sectional view through one of the wing hangers and illustrates a portion of the disc support for showing the seal between the inner edge of the wing and the central shaft of the revolving door; Fig. 5 is a horizontal sectional view taken through a wing hanger substantially on line 5—5 of Fig. 6 and showing parts of the wing hanger in cross-section, and a portion of the disc in plan view; Fig. 6 is a vertical sectional view through the door wing hanger, the supporting disc and a portion of the supporting shaft and vertical seal of the revolving door hardware; Fig. 7 is a fragmentary view showing the arrangement of the equalizing and balancing parts employed in the roller locking means showing the actuator moved to roller locking position; Fig. 8 is a vertical sectional view taken on line 8—8 of the wing hanger illustrated in Fig. 7; Fig. 9 is a side elevational view of the extruded body structure 2 of the wing hanger forming part of the revolving door hardware; Fig. 10 is a vertical sectional view taken through the extruded bosses of the body portion 2 of the wing hanger; Fig. 11 is a plan view of the extruded body portion 2 of the wing hanger; Fig. 12 is an elevational view of the roller mounting means employed in association with the wing hanger and illustrating the manner of connection of the tripping means with the roller car-

rier for automatically releasing the engaged roller under conditions of sudden and excessive pressure against the wings of the revolving door assembly; Fig. 13 is a vertical sectional view through the roller carrier taken on line 13—13 of Fig. 12; Fig. 14 is a vertical elevation of the revolving door shaft and housing arranged therewith and illustrating the manner of supporting the disc members of the revolving door hardware and showing in foreshortened view the separate parts of the shaft housing by which the discs of the revolving door hardware are supported; Fig. 15 is a cross-sectional view through the revolving door shaft and housing assembled in relation thereto; Fig. 16 is a perspective view of the sealing edge which is provided at the inner edge of the door wing for engagement with the complementary shaped shaft housing; Fig. 17 is a plan view of the upper face of one of the discs for the revolving door hardware; Fig. 18 is a plan view showing the lower face of the revolving door discs illustrated in Fig. 17; Fig. 19 is a cross-sectional view through the disc taken on line 19—19 of Fig. 17; Fig. 20 is a perspective view showing the sections of the sealing edge provided for each of the inner edges of the revolving door wings for coaction with the longitudinally extending grooved recesses in the shaft housing illustrated in Fig. 14; Fig. 21 is an elevational view of one of the escutcheon plates used in the revolving door hardware of my invention; Fig. 22 is a plan view of one of the arcuate shaped shoes employed in the groove in one face of the disc of the revolving door hardware; Fig. 23 is a plan view of the shoe employed in the quadrilaterally arranged grooves in the other face of the disc; Fig. 24 is a detailed view showing the yoke member employed for effecting the manual release of the roller locking mechanism; Fig. 25 is a view of the device illustrated in Fig. 24 taken on line 25—25 thereof; Fig. 26 is a plan view of the roller locking release trigger; Fig. 27 is a sectional view taken through the roller locking release trigger taken on line 27—27 of Fig. 26; and Fig. 28 illustrates the method employed for manufacturing the structural shaped member in the revolving door mechanism of my invention by extruding the metal through a preformed special die.

My invention is directed to an improved construction of hardware for revolving doors and particularly to a construction of hardware which may be inexpensively manufactured on a quantity production basis, and will meet all requirements of revolving door installations. With the rapid spread of air-conditioning systems in restaurants, theatres, and public places, the necessity for sealing the joints between the inner edges of the door wings and the revolving door shaft has become of very great importance. My invention provides means both weather-proof and air-tight to prevent the leakage of air or moisture between the revolving door shaft and the inner edges of the door wings. The special sections employed in the wing hangers and in the sealing elements are all of such construction as may be readily extruded through a preformed die shaped to the desired section.

I provide a construction of disc for supporting the door hangers having an annular groove on one face and quadrilaterally disposed grooves on the opposite face with shoe members connected with the wing hangers and engaged in each of the grooves and guided thereby for insuring the precision guiding of the door wings under conditions of collapse or assembly. I provide a roller locking mechanism in association with the hardware of my invention having means for manually releasing the roller locking means or automatically releasing the roller locking means to insure the individual shifting of any one of the revolving door wings or allowing the simultaneous collapse of all of the door wings under panic conditions for increasing safety in revolving door installations.

Referring to the drawings in detail, reference character 1 designates the central disc formed from rolled bronze or other suitable material. Both the upper and lower hardware mechanisms are identical in construction, except that the face of disc 1 is directed upwardly for the upper hardware and downwardly for the lower hardware. Looking at the face of disc 1, there is provided an annular groove 23 which is shown more clearly in the cross-sectional view in Fig. 19, and in Figs. 4 and 5. In addition to the annular groove 23 in one face of disc 1, I provide sets of quadrilateraly disposed grooves 24 in the opposite face of disc 1. The sets of quadrilaterally disposed grooves 24 do not communicate with the annular groove 23 but are arranged in opposite faces of the disc 1. The grooves 23 and 24 serve different guide means which I have indicated at 12 and 9, respectively. The guide means operative in annular groove 23 is in the form of a shoe 12 carried by pin 11. The guide means operative in quadrilateraly disposed grooves 24 is in the form of a shoe 9 rounded at opposite ends thereof and pivoted on pin 10. The ends of the quadrilateraly disposed grooves 24 intersect and overlap at the corners to provide enlarged recesses indicated at 26 for affording a longer path of travel for the shoes 9.

In the disclosure of my invention as illustrated, I have shown the complementary sealing means as including a beaded member on the door wing and a coacting recess on the revolving door shaft, but the positions of the beaded member and the recess in the revolving door shaft may be reversed and the bead located on the shaft housing and the recess located on the wing.

The disc 1 serves to support the revolving door hardware by reason of the mounting of the disc with respect to the vertical shaft in a novel manner. The vertical shaft is formed from a specially drawn tube indicated at 27 having four keyways indicated at 28 extending the entire length of the tubular shaft. The keyways 28 receive the radially extending ribs 29 which are integrally connected with the complementary parts of the shaft housing shown at 30. The shaft housing 30 extends the entire length of tubular shaft 27 and is formed from complementary parts having groove and dovetailed connections 31 therebetween. The portions of the radially extending ribs 29 which coact to provide the dovetailed connections 31 also extend into the longitudinally disposed grooves 28 in the tubular shaft 27 forming a rigid connection between the shaft 27 and housing 30. The housing 30 is divided into three longitudinal sections, one section located above the upper disc, as represented at 32, one section intermediate the two discs, as represented at 33, and the third section below the lower disc, as represented at 34. The sections of the housing indicated at 32, 33, and 34 are secured to tubular shaft 27 in such manner as to lock the discs 1 in position properly centered for support of the revolving door hardware. The means which I employ for mounting

the discs 1 in proper position with respect to shaft 27 consists of threaded spanner nuts 35 and 36. Spanner nut 36 engages screw threads on the lower end of shaft 27 and is adapted to fit within a recess provided by the cutaway end portions of ribs 29. Spanner nut 35 is adapted to engage screw threads formed on the upper end of tubular shaft 27 and fit within the annular space between housing 30 and shaft 27 within a space provided by the foreshortening of ribs 29. A spanner wrench fitting within recesses 35a and 36a may be used in securing the spanner nuts 35 and 36 in position.

After the discs 1 have been assembled in position with respect to tubular shaft 27 and locked in position by means of spanner nuts 35 and 36, the revolving door assembly is ready for mounting in the drum. I may employ various means for mounting the shaft with respect to the drum, and for purposes of explaining my invention I have illustrated the form of pintle support on the lower end of the door in accordance with the construction shown in John W. Shields application Serial No. 751,367, filed November 2, 1934, for Revolving door hardware.

The usual form of actuator device operative through a longitudinally extending slot in tube 27 and section 33 of the housing 30, is employed to control the position of the pintle 37 as indicated generally at 38. The upper end of the door is mounted in a very special manner which enables the assembled door structure to be conveniently moved into position within the drum, while allowing the doors to swing out of vertical position without affecting the carrying device or trolley.

In order to facilitate erection of the doors the assembly may be completed outside or remote from the drum and the assembled doors moved to a position in which the pintle 37 may be ejected by movement of device 38 for mounting the doors with respect to bearing plate 39, and then the upper end of the assembled tubular shaft and housing is centered beneath the opening 40 in the ceiling of the drum to allow the shaft extension 41 to be passed through the trolley and screw-threaded into the interior of the upper end of tubular shaft 27 until annular shoulder 42 abuts with the upper end of tubular shaft 27, and apertures 42a aligned with the apertures 27a for the passage of set screws 18 therethrough for locking shaft member 41 with respect to shaft 27. Shaft member 41 passes through the trolley structure which I have shown generally at 43 and is journaled therein through universal joint designated generally at 44 in Fig. 1. The weight of the door is carried upon the thrust bearing designated generally at 45.

The revolving door mechanism is carried by discs 1, the said mechanism serving to mount the wings of the revolving doors shown generally at 46. In order to mount the revolving doors with respect to the discs 1, I provide a special construction of extruded body structure 2 having vertically projecting and downwardly depending bosses 47, which extend in a substantially horizontal direction and provide means for securing the escutcheon plates 15 and 16 on opposite sides of the wings of the door. The bosses 47 are extruded as part of the body structure 2 and serve as threaded recesses into which bolts 21 may be passed through aligned apertures in the escutcheon plates 15 and 16. The body structure 2 is also provided with a boss 48 through which passes the pin 11. Pin 11 forms a pivot for a segmental shoe 12 as heretofore explained, for guiding the wing support in an annular path, defined by the annular groove 23.

The inner edges of each of the door wings 46 are covered by a longitudinally extending sealing extruded member 50. The extruded member 50 is shaped as shown more particularly in Figs. 16 and 20, and includes a capping portion 51 with side portions 52 thereon, and a central longitudinally extending rounded bead portion 53. The extruded member 50 is formed in three sections corresponding to the three sections of the housing 30, that is, sections 54, 55 and 56. Section 54 of the extruded member 50 is arranged above the disc 1. Section 55 of the extruded member is arranged intermediate the upper and lower disc 1, and section 56 of the extruded member is arranged between the lower edges of the door wings and the lower portion of disc 1. Thus it will be observed that a completely sealed connection is provided between the inner edges of door wings and the shaft housing 30. This sealed connection extends throughout the length of the revolving door wings, including the movable parts constituting the connections adjacent disc 1 and the tubular shaft 27. This sealed connection remains intact while the door wings are in normal position, and serves as an abutment when the door wings are moved to collapsed position under conditions of panic for all of the door wings, except the wings which are moved to a position with the central bead 53 thereon shifted out of contact with the housing 30.

This arrangement will be more clearly understood by considering the structure of housing 30 which is provided with longitudinally extending recesses 57 for receiving the longitudinally extending bead 53 on the sections of the extruded member 50.

The abutment which is afforded by the coaction between the bead portions 53 and the walls of the recesses 57 of housing 30 is such as to insure a stabilizing action as the wings are moved to collapsed position either manually or automatically under panic conditions. That is to say, the inner face of extruded member 50 bears against the face of the wall of the recessed portion 57 forming a substantial restraining means for the door wings. This action is particularly helpful in the reassembling operation for the door wings as the stabilizing action tends to assist in the restoring of the door wings to radial position.

In order to more fully explain the manner in which the door wings are normally maintained in radial position, reference is made to Fig. 5 of the drawings from which it will be observed that roller member 22 mounted on pin 19 is normally urged into engagement with the notches 58 in the peripheral edges of the disc 1 at 90° peripheral displacement with respect to each other. The roller members 22 are mounted in carrier member 3 and mounted on pin member 19. The carrier member 3 has the ends thereof extending over the disc 1 which prevents displacement of carrier member 3 in any position. The carrier member 3 is continuously urged toward the main body portion 2 of the revolving door mechanism by means of coil springs 17 acting against the adjustable tension nuts 13 carried by rod members 13a. Rod members 13a are screw-threaded into the oppositely extending lugs 3a on the carrier 3 at one end and pass freely through apertures in end plate 8 disposed between escutcheon plates 15 and 16 at the opposite end. End plate 8 is

secured between escutcheon plates 15 and 16 by means of bolt members 21a which extend through apertures 21b in enlarged end portions of the end plate 8. The rod members 13a also support the slidable spring abutment 4 which is freely movable over rod members 13a. The slidable spring abutment 4 is shaped intermediate the rod members 13a to provide a fork portion 4a. The slidable spring abutment 4 is also constructed of extruded brass which is also the material of end plate 8. The reason that fork portion 4a is left open is that this form of construction facilitates extruding. The fork portion 4a serves as a means of connection for the end finger 6b of the actuator 6 which is mounted for angular movement on the interior of escutcheon plate 15. The actuator 6 contains a socket opening 6a therein into which a socket wrench (shown in dotted lines in Fig. 5) may be introduced from the side of the door wing over which escutcheon plate 15 is secured for imparting angular movement to actuator 6 for shifting the end finger 6b in the slot 4b in the fork portion 4a of slidable spring abutment 4 whereby translatory movement is imparted to the slidable spring abutment for temporarily withdrawing the force of springs 17 against carrier 3 allowing a retraction of roller 22 and a collapsing of the door wing. The carrier 3 is slidable through the aperture 59 in the end of main housing 2 and, in order to provide sufficient bearing for carrier 3 in main housing 2, the end of carrier 3 projects beyond the extremity of housing 2 as shown in Fig. 5. The gap between the interior portion of carrier 3 and roller 22 is closed by means of filler block 7 which may be an extruded section of brass and which is secured in position in carrier 3 by means of pin 20.

In carrying out the manual operation of the roller locking device, I provide a set of compensating springs 18 disposed between the slidable spring abutment 4 and the end plate 8 on rods 13a which resist the movement of the slidable spring abutment 4 in a position tending to reduce the effect of coil springs 17. When manual force is removed from the socket wrench in socket 6a which is employed to angularly shift the actuator 6 the tension of coil springs 18 becomes effective to restore slidable spring abutment 4 to its original position, thus projecting roller 22 for a sufficient distance to allow the roller to enter notch 58 with very light spring pressure. The amount of tension necessary to compensate for the tension offered by coil springs 17 is not large and facilitates restoration of the roller 22 to normal locking position as the revolving door wing is straightened out to radial position. In other words, coil springs 18 are symmetrically arranged with respect to coil springs 17 on opposite sides of the slidable spring abutment so that the slidable spring abutment is compensated in movement for either a manual or an automatic operation of the roller locking device 22.

In order to fully understand the automatic feature of the locking device of my invention, it will be observed that an extruded trip member 5 is secured to the end of the carrier 3 by means of a dovetail connection indicated at 5a. By employing a dovetail connection between extruded trip member 5 and carrier 3, I am enabled to attach the automatic trip to the mechanism in a very simple manner where it is difficult to work in the restricted available space. The end of the extruded trip member 5 is aligned with the angularly movable actuator 6 and under conditions wherein roller 22 is abruptly subjected to tension tending to dislodge roller member 22 from notch 58, the trip member 5 engages the remote end of actuator 6 and tends to angularly displace pin 6b which moves in slot 4b in fork portion 4a and displaces slidable spring abutment 4 away from coil spring 17, thus reducing the spring tension exerted against yoke 3 and facilitating the quick retraction of roller 22 allowing the door wing to be quickly and automatically moved to collapsed position. The compensating coil springs 18 which are of reduced tension characteristic with respect to coil spring 17 are depressed by this automatic operation, storing up potential energy which tends to restore the slidable spring abutment 4 to its normal position for again locking the revolving door in radial position when the door is returned from collapsed position.

In order to allow full collapsed position of the revolving doors, I chamfer the edges of the main body structure 2, as indicated at 2a as shown in Fig. 5. The reducing of the section at 2a allows the revolving doors to be shifted to a substantially parallel position in close proximity one to the other under conditions of panic or collapse of the doors.

It will be observed that the parts of the revolving door mechanism of my invention have been designed to eliminate all castings with the accompanying expense thereof. In lieu of castings, I form the several parts from extruded metal thereby substantially decreasing the cost of the mechanism. The method of extruding the parts for the manufacture of the revolving door mechanism of my invention has been illustrated more particularly in Fig. 28. While I have shown the bead or sealing strip 53 in the process of extrusion, it will be understood that the same method is employed for the main body structure 2, the carrier 3, filler block 7, shoes 9 and 12, plate 8, and other parts of the revolving door hardware. I have shown a die 60 having an aperture 61 therein shaped to the contour of the section which is being extruded, which in the example illustrated is the shape of the sealing member 50. That is to say, the die is shaped at 53a to allow the passage of material to form the bead 53 and shaped at 52a to allow the passage of material to form the flange portions 52, and is shaped for the passage of material to insure the recess in the rear of bead 53 and the flat surface adjacent thereto as shown.

A suitable housing 62 is provided adjacent die 60 to direct the material 63 which is forced through the die head by means of plunger 64 operated by any suitable mechanism. The extruded member formed from bronze may be subsequently cut in the desired lengths to provide the sections 54, 55, and 56 illustrated in Fig. 20. In the case of the main body structure 2 the extruded member is sawed into relatively short lengths in forming the hardware for the individual wing hangers.

As heretofore pointed out the bead 53 may be carried by shaft housing 30 and recess 57 may be formed on the inner edge of the door wing. The extruded member 30 and extruded member 50 not only serve as a seal but also constitute a stabilizer for the inner edge of the wing. There is no roller or pin entering into slot 24 to hold the inner edge of the wing, and the entering of bead 53 into recess 57 serves to maintain the inner edge in place. Thus the wing is stabilized

against turning on the various shoes. The bead also acts as a fulcrum for the roller 22.

The equalizing forces which are obtained by the coaction of coil springs 17 and 18 are such that either automatic or manual operation of the door wing is very simple. Moreover, the balanced operation of the springs 17 and 18 is such that manual reset of the locking roller 22 is readily accomplished.

I have found the structure of my invention highly practical in manufacture and production and successful in its operation, and while I have described a preferred embodiment of my invention I desire that it may be understood that modifications may be made and that no limitations upon my invention are intended other than are imposed by the scope of the appended claims.

What I claim as new and desire to secure by Letters Patent of the United States is as follows:

1. Revolving door mechanism comprising in combination with a central shaft member, a housing for said member having longitudinally extending recesses therein, a plurality of revolving door wings, and sealing and stabilizing means carried by the inner edges of each of the revolving door wings, said sealing and stabilizing means including a member operative to form an overlapping connection with the longitudinally extending recesses in said housing.

2. Revolving door mechanism comprising in combination with a central shaft member, a housing for said member, a plurality of revolving door wings, and means for sealing the connection between the inner edges of said door wings and said housing comprising longitudinally extending interengaging members shiftable in varying angular relationships for continuously providing a stabilizing and substantially airtight seal between the door wings and said housing.

3. Revolving door mechanism comprising in combination with a central shaft member, a housing for said member having longitudinally extending recesses therein, sealing and stabilizing means carried by the inner edges of each of the revolving door wings, said sealing and stabilizing means including a central longitudinally extending portion engageable in the longitudinally extending recesses, and operative to establish abutting contact with the side portions of the said longitudinally extending recesses.

4. Revolving door mechanism comprising in combination with a central shaft member, a housing for said member having longitudinally extending recesses therein, sealing means carried by the inner edges of each of the revolving door wings, said sealing means including a central longitudinally extending bead engageable within the recesses of said housing, and adapted to form abutments with the side walls of the said recesses in varying angular positions of said revolving door wings.

5. Revolving door mechanism comprising in combination with a central shaft member, a housing for said member having longitudinally extending recesses therein, sealing means carried by the inner edges of the revolving door wings, comprising members having a central bead engageable within the recesses in said housing, said central bead projecting with respect to the inner edge of the door and adapted to abut with the side walls of the said recesses in varying angular positions of the revolving door wings.

6. Revolving door mechanism comprising in combination with a central shaft member, a multiplicity of revolving door wings, and sealing means disposed between the inner edges of the revolving door wings and said shaft member comprising extruded sections of metal having engaging complementary portions coacting in overlapping relationship, one with respect to the other, and forming a substantially weatherproof seal in varying angular positions of the revolving door wings.

7. Revolving door mechanism comprising in combination with a central shaft member, a housing for said member having longitudinally extending recesses therein, revolving door wings, disc-like members for supporting said door wings, and sealing means carried by the inner edges of said revolving door wings, said housing and said sealing means being formed into corresponding sections, said disc-like members being supported with respect to said shaft member by means of the sections of said housing, the sections of said housing having longitudinally extending recesses, and the sections of the sealing means on the inner edges of said doors carrying projecting means adapted to interengage the recesses in the sections of said housing.

8. Revolving door mechanism comprising in combination with a central shaft member and coacting revolving door wings, a plurality of sectionalized housing members and coacting sealing members, disc-like members supported in spaced position by the sectionalized housing members with respect to said shaft member, each of said disc-like members containing an annular groove and sets of quadrilaterally disposed grooves a plurality of ribbed recesses in the sectionalized housing members, means projecting from the sectionalized sealing members for establishing an overlapping connection with the recesses in the sectionalized housing members, and means slidable in said annular groove and providing pivotal connections for each of said door wings whereby said sealing members are engageable with and disengageable from the recesses in said housing members.

9. Revolving door hardware comprising a supporting shaft, disc members supported with respect to said shaft, revolving door wings, hangers connected with said revolving door wings, quadrilaterally disposed grooves in said discs, a separate groove in each of said discs and guide means connected with said hangers and operative in said quadrilaterally disposed grooves and said separate grooves for guiding said door wings from assembled to collapsed positions.

10. Revolving door hardware comprising a revolving door shaft, discs supported with respect to said shaft, door wings having hangers embracing said discs, quadrilaterally disposed grooves in said discs, adjacent grooves having their ends extending beyond each other and forming relatively wide intersecting corner portions for the said grooves, and guide means connected with said hangers and operative in said quadrilaterally arranged grooves and around said intersecting corner portions for moving said doors from an assembled to a collapsed position.

11. Revolving door hardware comprising a supporting shaft, disc members supported with respect to said shaft, revolving door wings, hangers for said wings, said hangers embracing said disc members, said disc members each having an annular groove in one face thereof and a quadrilaterally arranged groove in the opposite face thereof, and guide means carried by said hangers and extending into said grooves for controlling

the movement of said hangers when the door wings are moved from an assembled to a collapsed position.

12. Revolving door hardware comprising a revolving door shaft, discs supported with respect to said shaft, revolving door wings, hangers for said wings, each of said discs having an annular groove in the upper face thereof, and quadrilaterally disposed grooves in the under face thereof, and guide means carried by each of said hangers and pivoted with respect thereto, one of said guide means extending downwardly from each of said hangers and engaging the said annular grooves, and the other of said guide means extending upwardly from each of said hangers and engaging the quadrilaterally disposed grooves in the said discs.

13. Revolving door hardware comprising a revolving door shaft, a pair of supporting discs, and means for mounting said supporting discs with respect to said shaft comprising aligned shaft housing sections including a lower section, an intermediate section, and an upper section, said lower section serving to support one of said discs and said intermediate section serving to support the other of said discs in abutment with said upper section, means for securing said lower section and said upper section to said shaft, and longitudinally extending recesses formed in each of the sections of said housing and aligned one with respect to the other for establishing a seal with respect to the coacting revolving door wings.

14. Revolving door hardware comprising a supporting disc, a wing hanger including an extruded housing, extruded bosses formed integrally with said housing, and oppositely projecting pin guides formed integrally with said extruded housing, said housing disposed to embrace opposite sides of said supporting disc, and pin members projecting through said pin guides and engaging portions of said supporting disc.

15. Revolving door hardware comprising in combination with a revolving door wing, a sealing bead carried by the inner extremity of the revolving door wing, the said sealing bead being constituted by a multiplicity of sections of extruded material and having a longitudinally extending rounded edge.

16. Locking means for revolving doors comprising in combination with a disc support, a wing hanger, a carrier supported with respect to said wing hanger, a roller journaled in said carrier and operating to peripherally engage notches disposed in predetermined portions of the periphery of said disc support, a pair of coil springs disposed in spaced parallel planes for exerting pressure radially inwardly for forcing said roller member in yielding engagement with the notched periphery of the disc support.

17. Revolving door hardware comprising in combination with a supporting disc, notched at 90° intervals about the periphery thereof, a roller member for establishing locking engagement with the notched periphery of the disc, a carrier for said roller member, and a pair of spring members engaging opposite sides of said carrier for exerting an inwardly directed force thereon for yieldingly maintaining said roller member in engagement with the notched periphery of the disc.

18. Revolving door hardware comprising in combination with a supporting disc notched at 90° intervals about the periphery thereof, a roller member engageable in a predetermined notch, a carrier for said roller member, spring means for normally urging said carrier towards said supporting disc, a trip member connected with said carrier and means actuated by said trip member operative under conditions of abrupt forces tending to dislodge said roller member for immediately reducing the tension of said spring means for insuring the quick dislodgment of said roller member from the coacting notch in said supporting disc.

19. Revolving door hardware comprising in combination with a supporting disc notched at the periphery thereof, a roller member engageable with a selected notch in the periphery of the disc, a carrier for journaling said roller member, a slidable frame structure connected with said carrier, a trip member on said carrier, separate sets of spring members each operative upon said carrier and said frame structure, manually operable means engaging said frame structure for releasing the tension of said spring members on said roller member, and a projection on said means engageable by said trip member upon the automatic dislodgment of said roller member under conditions of panic for automatically releasing the tension of said spring members on said roller member.

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