

Sept. 2, 1958

M. SCOPARINO

2,849,834

WALKING AND SITTING DOLL

Filed Aug. 15, 1957

2 Sheets-Sheet 1

FIG. 1

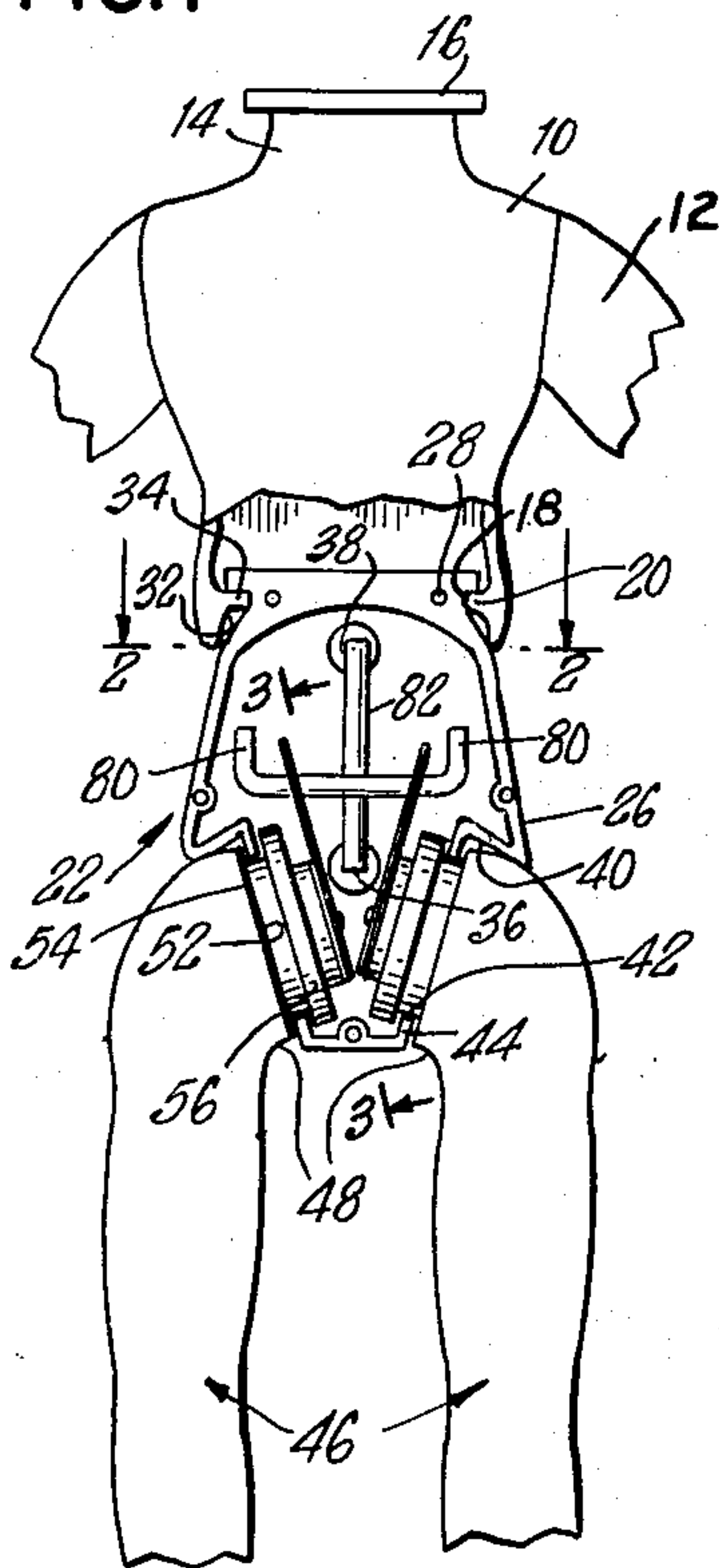


FIG. 3

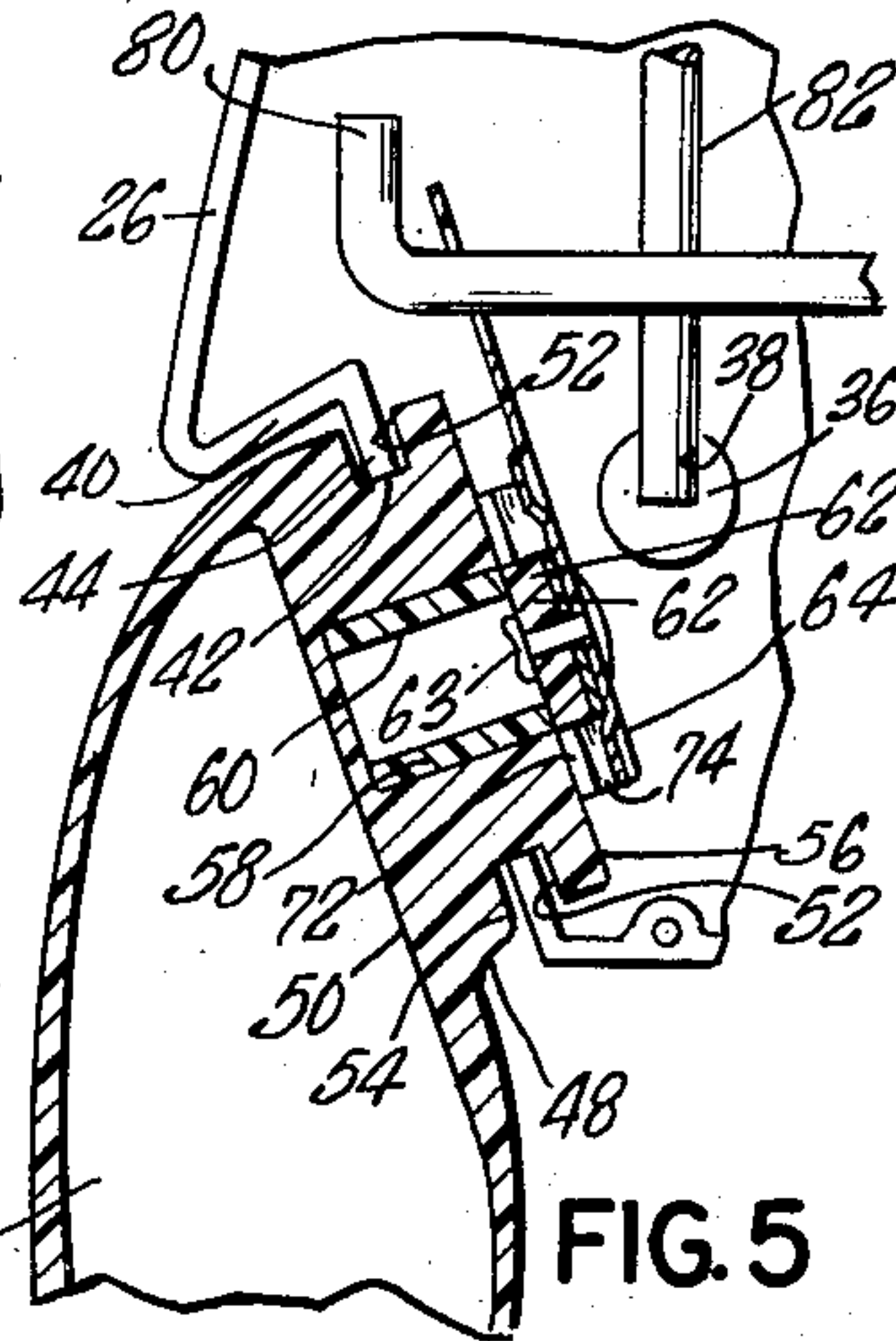
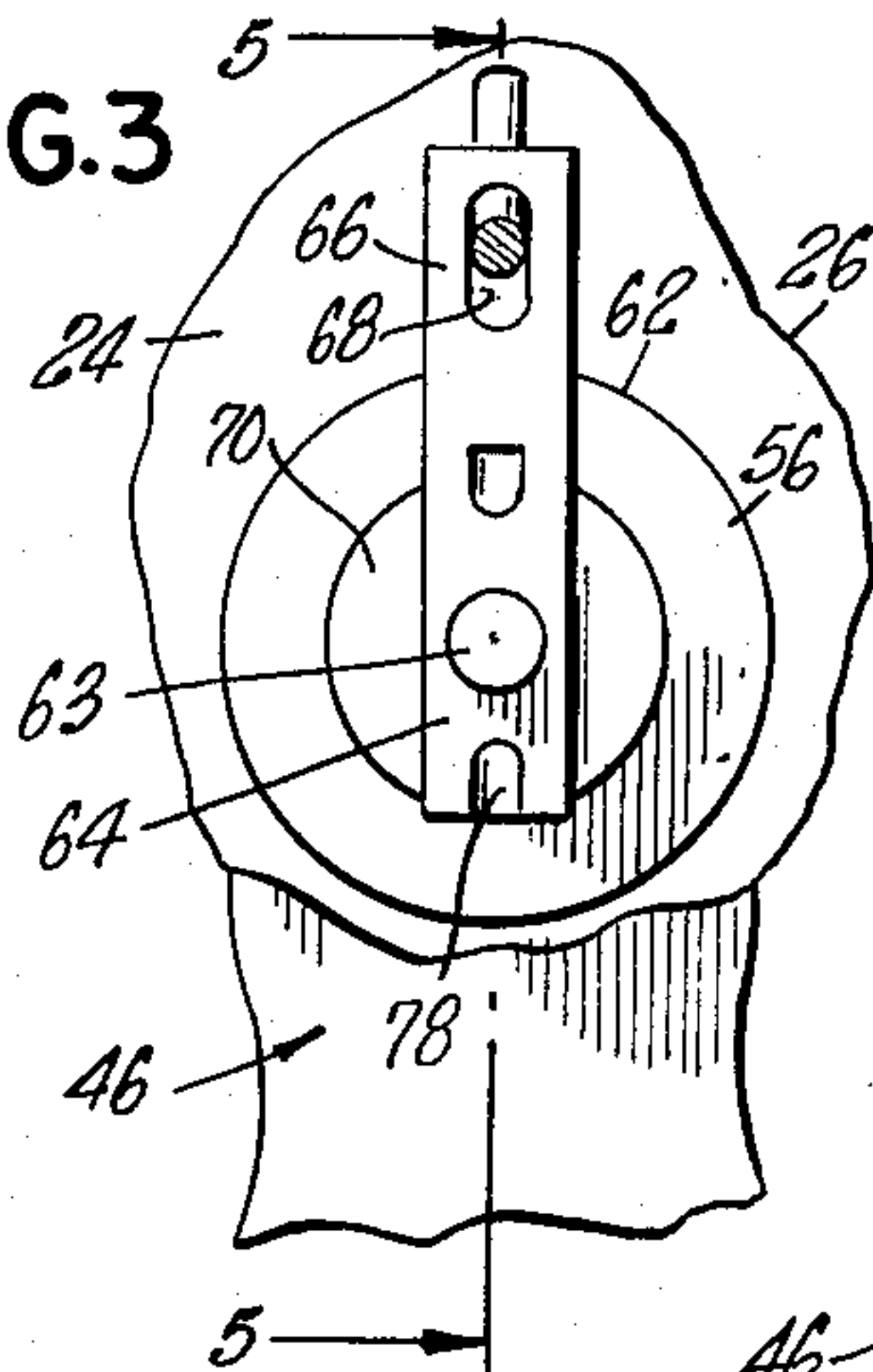


FIG. 4

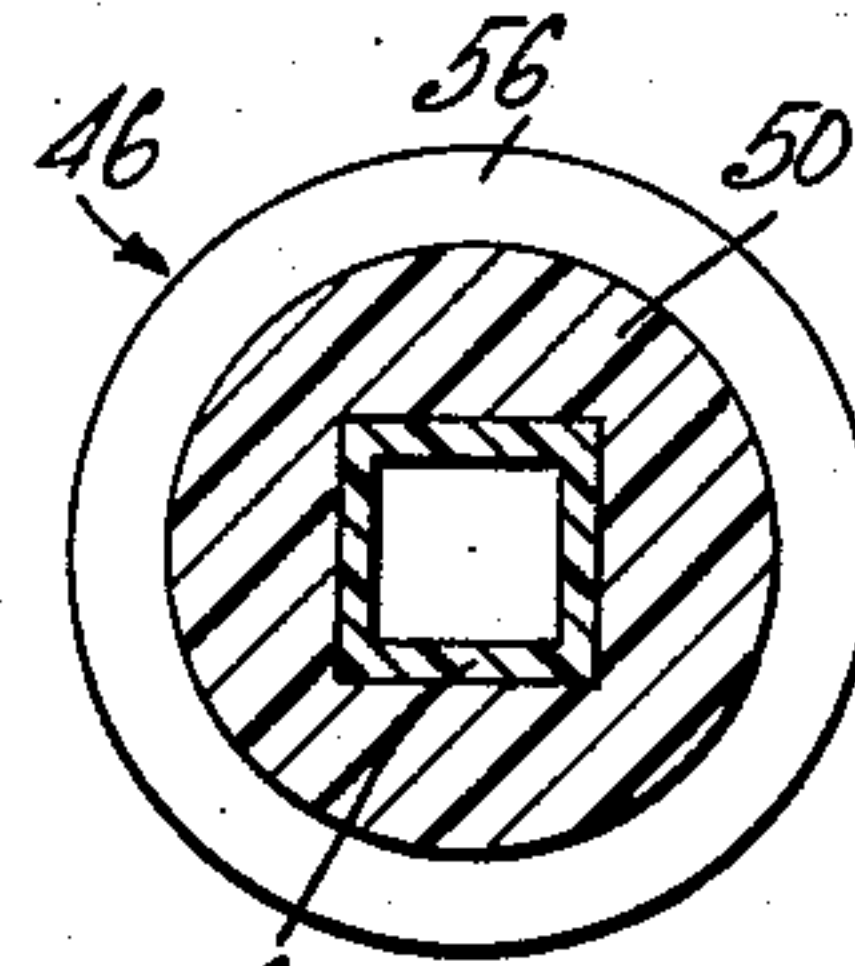
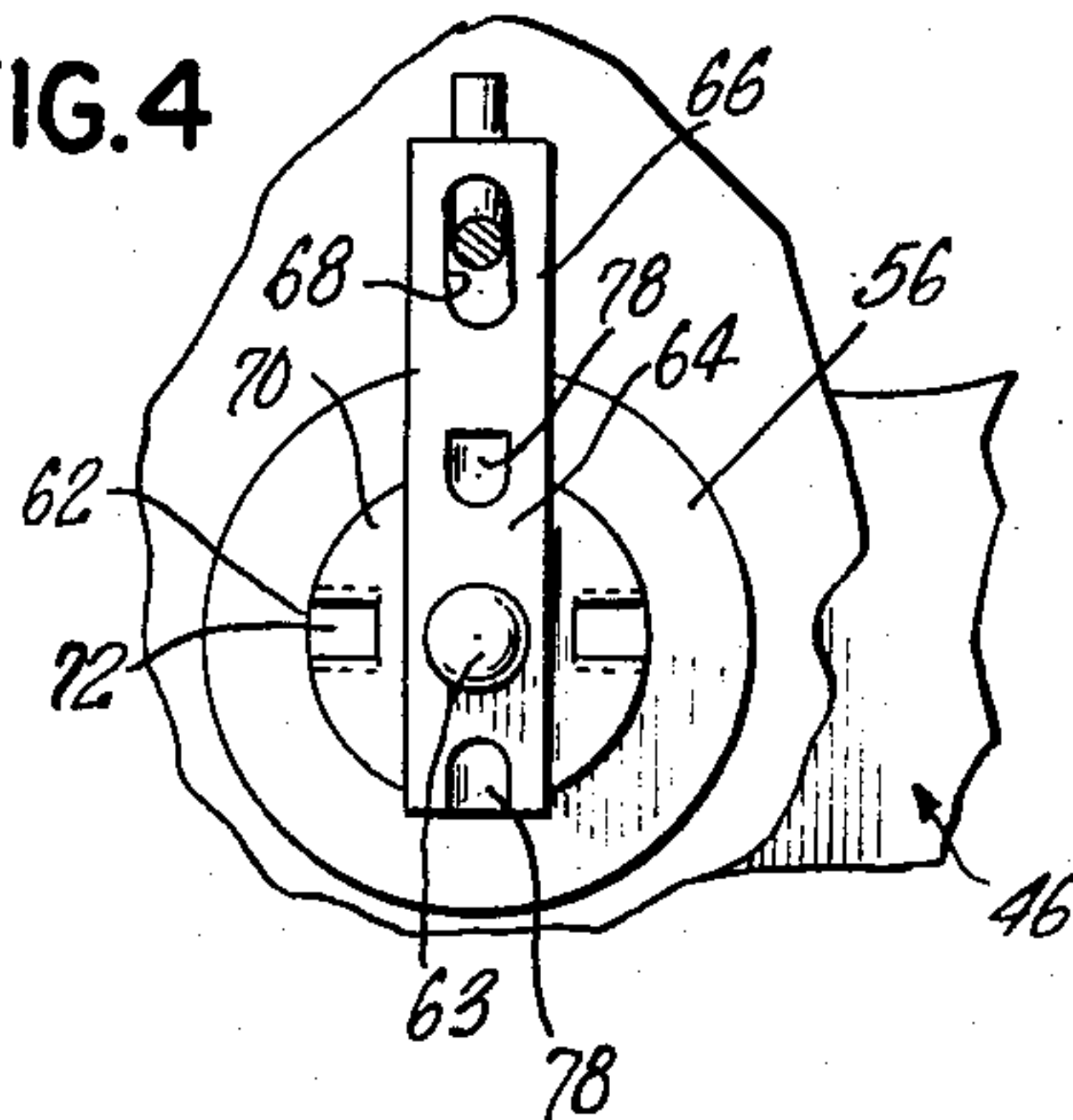


FIG. 6

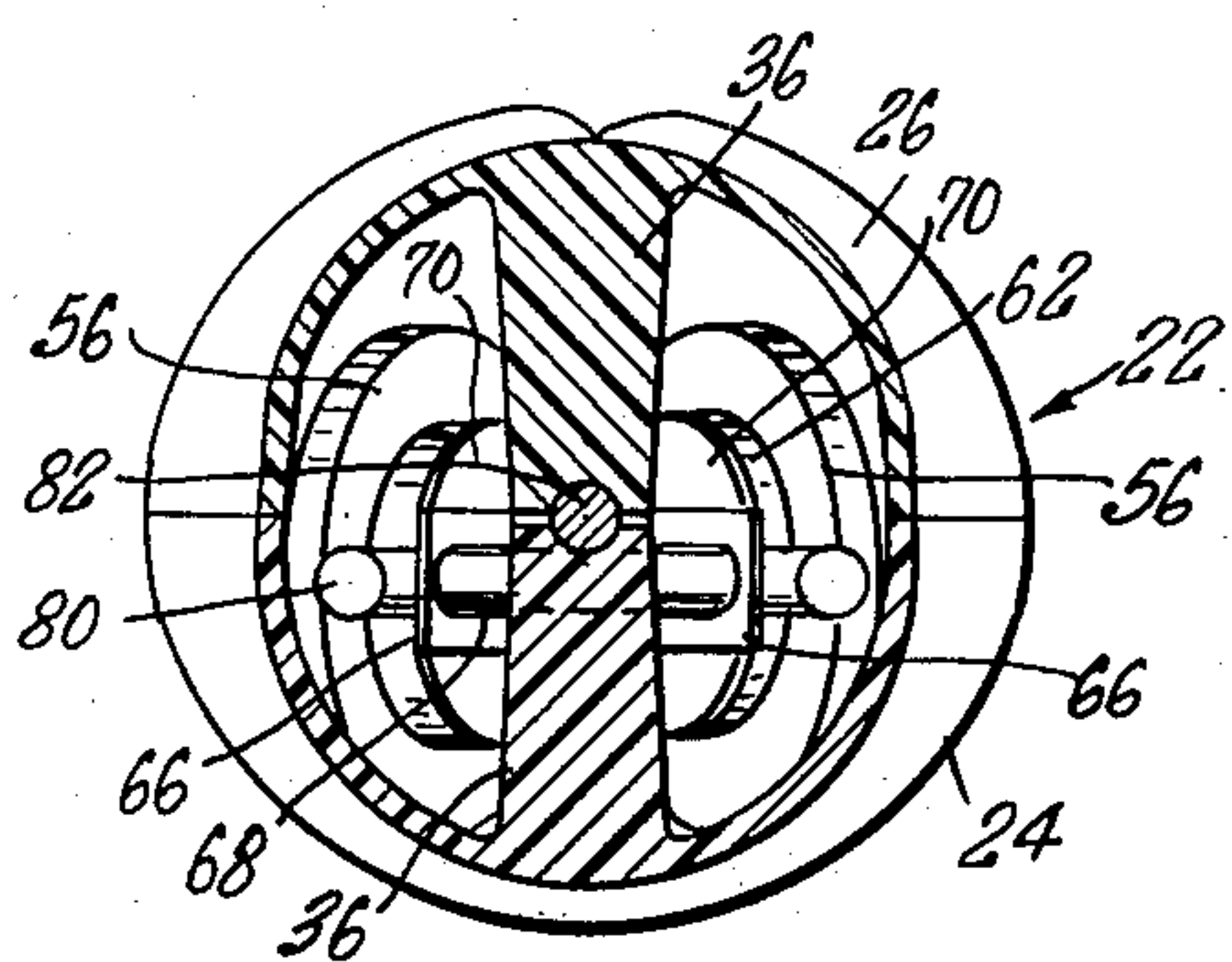


FIG. 2

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2 Sheets-Sheet 2

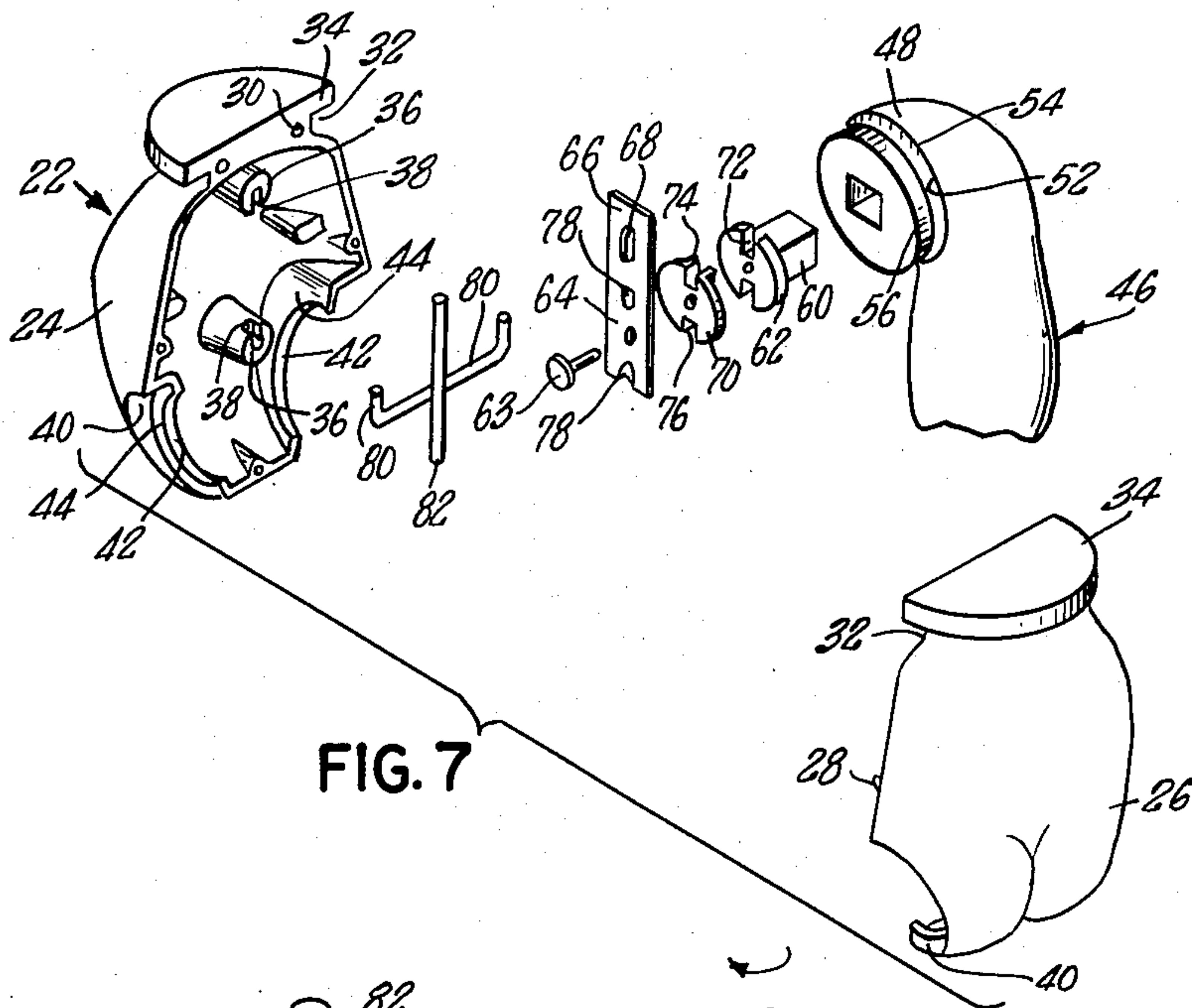


FIG. 7

FIG. 8

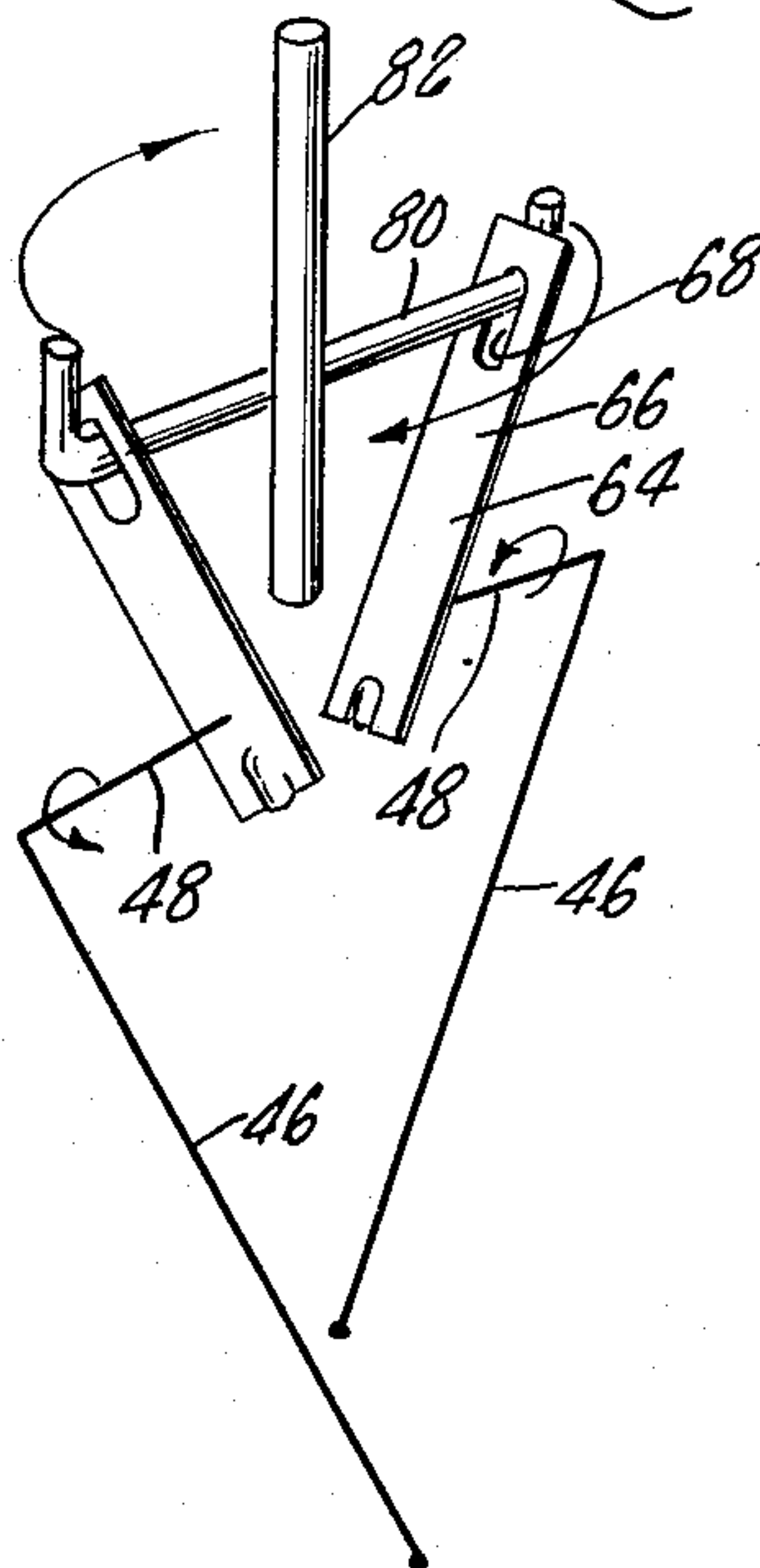
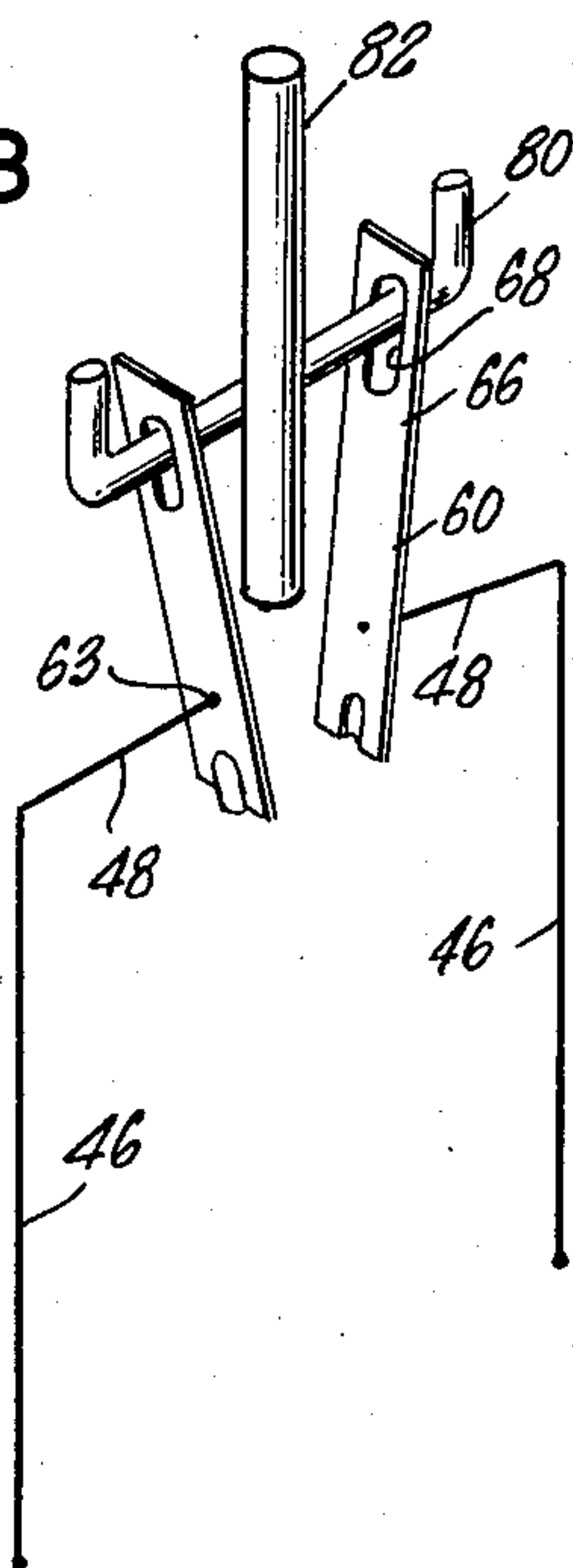


FIG. 9

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WALKING AND SITTING DOLL

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11 Claims. (Cl. 46—149)

The present invention relates to a doll and more particularly, to a walking doll.

Walking dolls or dolls whose feet are capable of moving forward, one foot at a time, as the other foot is rested on a supporting surface, in simulation of walking, have long been known and used. Such walking dolls have, heretofore, been most effective when their bodies were formed of rigid material. A number of efforts have heretofore been made to form such walking dolls having bodies made of resiliently flexible material such as the vinyl dolls currently popular with children. These efforts have not proven satisfactory for the reason that the resiliently flexible bodies of such dolls provide poor support for mounting the requisite leg-moving mechanism, and for the further reason of the excessive friction between the doll legs and torso due to their soft textures.

The present invention, therefore, is directed to the provision of a walking doll having a generally soft, resiliently flexible body that will operate substantially as effectively and as efficiently as the similar hard bodied walking dolls of the prior art.

It is the object of the present invention to provide walking dolls having bodies formed generally of resiliently flexible material, but, nevertheless, provide ample support and secure mounting means for the leg-moving mechanism to enable such mechanism to operate efficiently and effectively.

It is also an object of the present invention to provide a walking doll of the character described in which the friction between the moving legs and their supporting body portion is sufficiently reduced to enable the easy and ready movement of the legs by the walking mechanism of the doll.

It is another object of the present invention to provide a walking doll of the character described having a body formed generally of resiliently flexible material having leg-moving mechanism provided with adjustable connections to the doll legs that will compensate for minor displacement of the legs, such as may result from the rough handling given the doll by a child, without disturbing or diminishing the effectiveness of the walking mechanism.

It is still another object of the present invention to provide a walking doll of the character described which is formed of a minimum number of simple parts that may be economically mass produced and may be easily, quickly and economically assembled.

It is a further object of the present invention to provide a walking doll of the character described having improved means whereby the doll legs may be adjusted and maintained in sitting position.

It is a still further object of the present invention to provide a walking doll of the character described which is of strong, sturdy and durable construction and capable of withstanding the hard usage generally given by children to such objects.

The foregoing and other objects and advantages of

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the walking doll of the present invention will become more readily apparent to those skilled in the art from the embodiment thereof shown in the accompanying drawings and from the description following. It is to be understood, however, that such embodiment is shown by way of illustration only, to make the principles and practice of the invention more readily comprehensible, and without any intent of limiting the invention to the specific details therein shown.

In the drawings:

Fig. 1 is an elevational and partly sectional view of the torso and legs of a walking doll of the present invention; the torso having a lower front portion thereof removed to illustrate the details of the leg-moving mechanism thereof, the mounting therefor and its association with the legs;

Fig. 2 is a section taken on line 2—2 of Fig. 1;

Fig. 3 is a fragmentary, sectional view, on an enlarged scale, taken on line 3—3 of Fig. 1, with the leg shown in walking position;

Fig. 4 is a view similar to that of Fig. 3 with the leg shown in sitting position;

Fig. 5 is a fragmentary, enlarged, sectional view showing the doll leg mounting and its connection to the walking mechanism, taken on line 5—5 of Fig. 3;

Fig. 6 is a plan view of the upper end face of the leg of a doll of the present invention;

Fig. 7 is a blown view of the lower, leg supporting torso portion, walking mechanism and leg assembly, showing the walking mechanism of the doll and the means for connecting the walking mechanism to the leg and the means for supporting the walking mechanism within such torso portion;

Fig. 8 is a perspective view of the walking mechanism of the doll of the present invention shown substantially at rest with the position of the legs diagrammatically indicated by the solid dark lines; and

Fig. 9 is a view of the walking mechanism illustrated in Fig. 8 shown in moving position.

Generally stated, the present invention primarily contemplates attaining the advantages of a rigid body for a soft body walking doll by providing on such doll a separate, rigid lower torso portion. The lower and leg portions of the body are associated, for the purpose of housing and supporting the walking mechanism of the doll and for movably mounting and supporting, with a minimum of friction, the soft legs that are connected to and actuated by the walking mechanism.

The present invention also contemplates the provision of a movably adjustable connection between the legs and the walking mechanism of the doll which would permit the relative limited displacement of the legs on the lower torso portion without interference with the effective operation of the walking mechanism thereon.

Referring now in greater detail to the embodiment of the doll of the present invention illustrated in the drawings, the same comprises an upper hollow torso portion 10 that may be molded of resiliently flexible material, such as vinyl plastic commonly used for the purpose. The upper torso portion 10 may be provided with conventional arm holes into which are preferably movably fitted arms 12 and with a neck portion 14 upon which a head of any suitable type may be mounted in any desired manner, as by means of engaging over the flange 16 provided at the end of the neck 14.

The upper torso portion 10 is formed to have a bottom opening 18 and with an internally extending flange 20 adjacent such opening, by which it is engaged over the upper end of a lower torso portion, generally designated as 22. Such lower torso portion 22 is preferably formed of two shell-like front and rear halves 24 and 26, respectively, each formed of a rigid preferably synthetic

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plastic material conventionally used for the purpose. The two halves 24 and 26 have registering edges that may be cemented together to complete the hollow lower torso portion. For the purpose of assembling of the two halves 24 and 26, one of them may be provided with aligning pins 28 and the other with corresponding, registering, aligning recesses 30.

Each of the lower torso portions 24 and 26 is formed with a groove 32 adjacent its upper end forming a lip 34 over which the flange 20 of the upper torso portion 10 may be forced to engage within the groove 32, for assembling the two torso portions into a unitary structure.

Each of the lower torso portion halves 24 and 26 is provided with a pair of vertically aligned and spaced, laterally extending, preferably integrally molded posts 36, each extending the thickness of the lower torso half of which it is part and registering with a corresponding post in the other lower torso half. The upper ends of each of the posts 36 is formed with a recess 38 extending from the edge portion thereof facing the other post, part of the post thickness for a purpose which will hereafter be made clear.

Each of the lower torso halves or shells 24 and 26 is provided at the edge of each side of its lower end portion with an inwardly offset, substantially semi-circular recess 40 having a flat, inner wall portion in which is formed a semi-circular cutout 42 defined by a flat arcuate flange portion 44. The corresponding recesses 40 on the two matching shells 22 and 24 combine to complete the leg socket 40 having the opening 42 in its inner wall which is surrounded by the leg-engaging circular flange 44.

Each of the legs 46 of the doll may be formed of a non-rigid or soft plastic material, which may be the same or similar to that of which the upper torso portion 10 is formed, and is of hollow construction and may be of generally conventional shape. Each leg 46 is formed, at its upper end, with a laterally offset portion 48 adapted to fit loosely within a corresponding socket 40. Such offset portion 48 is provided with a preferably integrally formed relatively thick wall 50 which may be disposed at a slight angle to the vertical and may have formed therein, adjacent its edge, an annular circular groove 52, of preferably substantially rectangular cross section, forming a shoulder 54 on one side and a parallel annular flange 56 on the other side thereof.

The wall 50 is formed with a polygonal, preferably rectangular, recess 58 which receives a correspondingly cross-sectioned, removable plug 60 having a laterally extending flange 62 of preferably circular shape at its outer end. The plug 60 is preferably hollow and is preferably molded of a rigid plastic material, the same or similar to the material of which the lower torso 22 is formed.

Rotatably secured against the outer face of the plug 60, as by an eyelet 63, is a resilient, metallic connecting bar 64 which is formed with a projecting portion 66 in which is formed a preferably longitudinally elongated opening 68. Bearing means are interposed between the connecting bar 64 and the outer face of the plug 60 which may comprise a metallic disc 70 secured in place, preferably by the same eyelet rivet 62 that holds the connecting bar in place. The bearing plate or disc 70 is preferably immobilized, as by means of the diametrically opposed notches formed in the flange 62, and the correspondingly disposed struck-out lugs 74 in the bearing plate 70, which extend into the notches 72 to immobilize the plate; such notches 72 leaving diametrically opposed gaps or spaces 76 which may serve to removably receive the detent debossments 78 formed on the connecting bar 64. It may here be stated that the notches 72 may be so arranged on the plug 60, that the plug may be disposed within the recess 58 with such notches aligned substantially with the vertical axis of the leg and the connecting

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bar thereby maintained in alignment with the leg 46, for a purpose which will hereafter become clear.

Each of the openings 68 in the connecting bar is engageable over a hook member 80 fixedly secured at right angles to a rod 82 immediate its ends, which rod 82 is arranged to rest with its ends disposed and held within the recesses 38 at the ends of the pairs of posts 36 in the lower torso halves 24 and 26.

In order to assemble the doll of the present invention or, more specifically, to assemble the torso with the legs and walking mechanism therefor, each of the legs 46 is engaged by its annular groove 52 over the flange 44 of the socket section 40 of one of the torso halves, as 24, for instance. The plug 60 may be inserted within the leg recess 58 either before or after its assembly with the said lower torso half, with the connecting bar extension 66 extending above the leg 46 and in alignment therewith. The walking mechanism is then engaged with the legs by passing its hooks 80 through the opening 68 of the connecting bar extension 66 and thereafter placing the ends of their supporting rod 82 in the opposed recesses 38 of the posts 36. Thereafter, the second of the torso halves, as 26, is placed over and cemented to the first of the two torso halves 24, so that its leg socket flanges 44 engage within the other portion of the leg grooves 52 and its opposed post recesses 38 engage over the ends of the walking mechanism rod 82, to retain the latter in place.

After the lower torso portion 22 is thus assembled with the legs 46 and the leg-moving mechanism, the upper torso portion 10 may be resiliently snapped over the lip 34. This may be accomplished due to the flexibility and sufficient inherent resilience of the plastic material from which the upper torso portion 10 is formed. The arms and head of the doll may be secured to the upper torso portion 10, in the conventional manner, either before or after its assembly to the lower torso portion 22.

When the doll is thus assembled, it will be apparent that when either of the legs 46 is moved forwardly the connecting bar extension 68, which is substantially firmly connected to the leg 46 by the engagement of the detents 78 within the gaps 76 of the bearing plate 70, secured to the end face plug 60, will tend to move its associated hook member 80 rearwardly. This will cause the rod 82 to rotate in its supporting recesses 38, so that its other, opposed, hook member 80 will move forwardly and cause the associated bar extension 68 to move forwardly and the leg 46 firmly supporting the same will move rearwardly; the flanges 44 of the respective leg sockets 40 serving as pivots for the leg movement; all as clearly and more or less diagrammatically indicated in Figs. 8 and 9 of the drawing.

In order to dispose the doll in sitting position, the legs 46 may each be grasped and rotated on the eyelet 62 with sufficient force to move the detents 78 out of the gaps 76 until such legs are disposed at a suitable right angle position with respect to the doll torso.

This completes the description of the walking doll of the present invention. It will be readily apparent that such doll, although having a generally non-rigid body, is capable of adequately, firmly and securely supporting a leg-moving mechanism in the same manner as the all rigid dolls of the prior art. It will also be apparent that, by reason of the provision of the plug and strip connection between the leg-moving mechanism and the leg, assembly of the doll is facilitated, as the plug may be inserted into place either before or after its association with the hooks 80. It will additionally be apparent that the provision of the plug connection between the mechanism of the leg permits a self-adjustable connection between leg and moving mechanism that will maintain the association between them even though the leg is displaced to a limited extent. It will be further apparent that the provision of a separate disc and metal strip upon

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the end face of the leg 46 permits a more ready, safer and more flexible adjustment of the legs of the doll into sitting position, as clearly indicated in Fig. 4 of the drawing.

Finally, it will be apparent that numerous variations and modifications of the soft-body walking doll of the present invention may be made by anyone skilled in the art in accordance with the principles of the invention hereinabove set forth and without the exercise of any inventive ingenuity. I desire, therefore, to be protected for any and all such variations and modifications that may be made within the spirit of the invention and the scope of the claims hereto appended.

What I claim is:

1. In a walking doll, a torso comprising a hollow upper section of non-rigid material, said upper torso section having a bottom opening and inwardly extending rib means adjacent its open bottom, and a rigid hollow lower torso section, said lower torso section comprising vertically extending front and rear shell members, each of said shell members having outwardly extending rib means at its upper end engageable within said upper torso portion over the rib means thereof, each of said front and rear shell members having a complementary leg socket portion at each side of its lower end portion, a leg of non-rigid material rotatably supported by its upper end within each of said leg sockets, and means mounted within said lower torso section and interengaging said legs for automatic movement of one of said legs in one direction upon the manual movement of the other of said legs in the opposed direction.

2. In a walking doll, a torso comprising a hollow upper section of non-rigid material, said upper torso section having an open bottom and inwardly extending rib means adjacent its open bottom, and a rigid lower torso section, said lower torso section comprising vertically extending front and rear shell members, each of said shell members having outwardly extending rib means at its upper end engageable within the open bottom end of said upper torso section over said inwardly extending rib means thereof, each of said front and rear shell members having a complementary leg socket portion at each side of its lower end portion, said socket portion including a substantially flat inner wall having a circular central cutout portion leaving a marginal flange, a leg mounted by its upper end within each of said leg sockets, said leg including an annular groove engaging over said flange, means within said lower torso section interengaging the upper ends of said legs for automatic movement of one of said legs in one direction upon the manual movement of the other of said legs in the opposed direction, and means within said lower torso section supporting said leg interengaging means.

3. In a walking doll, a torso comprising a hollow upper section of non-rigid material, said upper torso section having an open bottom and inwardly extending rib means adjacent its open bottom, and a rigid lower torso section, said lower torso section comprising vertically extending front and rear shell members, each of said shell members having outwardly extending rib means at its upper end engageable within the open bottom end of said upper torso section over said inwardly extending rib means thereof, each of said front and rear shell members having a complementary leg socket portion at each side of its lower end portion, said socket portion including a substantially flat inner wall having a circular central cutout portion leaving a marginal flange, a leg mounted by its upper end within each of said leg sockets, said leg including an annular groove engaging over said flange, means within said lower torso section interengaging the upper ends of said legs for automatic movement of one of said legs in one direction upon the manual movement of the other of said legs in the opposed direction, said leg interengaging means comprising an end wall on the upper end of each of said legs, said end

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5 wall having a strip of resilient material pivotally secured thereto, means engaging said strip against said end face in longitudinal alignment with said leg, said strip having an upper extension having an opening formed therein, a rod vertically disposed within said lower torso portion, said rod having laterally and oppositely extending hook members, each of said hook members engaging within the opening of one of said strip extensions, and means within said lower torso section axially rotatably supporting said rod.

10 4. The walking doll of claim 3, wherein said means for supporting said rod within said lower torso section comprises a pair of vertically spaced posts within each of said shell members extending the depth thereof in register with the corresponding posts in the other of said shell members, each of said posts having a recess in its upper corner portion facing the other post of a depth to accommodate approximately half the thickness of the end of said rod.

20 5. In a walking doll, a torso comprising a hollow upper section of non-rigid material, said upper torso section having an open bottom end and inwardly extending rib means adjacent its open bottom, and a rigid lower torso section, said lower torso section comprising vertically extending front and rear shell members, each of said shell members having outwardly extending rib means at its upper end engageable within the open bottom end of said upper torso section over said inwardly extending rib means thereof, each of said front and rear shell members having a complementary leg socket portion at each side of its lower end portion, said socket portion including a substantially flat inner wall having a circular central cutout portion leaving a marginal flange, a leg mounted by its upper end within each of said leg sockets, said leg including an annular groove engaging over said flange, means within said lower torso section interengaging the upper ends of said legs for automatic movement of one of said legs in one direction upon the manual movement of the other of said legs in the opposed direction, said leg interengaging means comprising a relatively thick end wall at the upper end of each of said legs, said end wall having a central polygonal recess formed therein, a rigid plug of corresponding polygonal cross section slidably disposed within said recess, said plug having an outer end wall having a flange overhanging its sides, said plug end wall having diametrically opposed cutouts formed in its overhanging edge, a resilient metallic strip rotatably disposed against the outer face of said plug end wall, a bearing plate disposed intermediate said strip and said end face, said bearing plate having struck-out lugs engaging within said cutouts to immobilize said bearing plate against said plug, rivet means passing through said strip and the center of said bearing plate and pivotally securing said strip to said plug, said strip having depressed detent elements engageable within the openings formed between the struck-out lugs in said bearing plate, said strip having an extension provided with an opening, a rod vertically disposed within said lower torso section, said rod having laterally and oppositely extending hook members, each of said hook members engaging within the opening of one of said strip extensions, and means axially rotatably supporting said rod by its ends within said lower torso section.

65 6. The walking doll of claim 5, wherein said means for supporting said rod within said lower torso section comprises a pair of vertically spaced posts within each of said shell members extending the depth thereof in register with the corresponding posts in the other of said shell members, each of said posts having a recess in its upper corner portion facing the other post of a depth to accommodate approximately half the thickness of the end of said rod.

70 7. In a walking doll, a torso comprising a hollow upper section of non-rigid material, said upper section having a bottom opening, and a lower torso section, said

lower torso section comprising vertically extending rigid front and rear shell members, means removably interengaging the lower end of said upper torso section with the upper end of said lower torso section, each of said front and rear shell members having a complementary leg socket section at each side of its lower end portion, a leg of non-rigid material rotatably supported by its upper end within each of said leg sockets, said leg having a relatively thick upper end wall, said end wall having a central recess of polygonal cross section formed therein, a rigid hollow plug of corresponding cross section slidably disposed within said recess, means within said lower torso section interengaging said plugs for automatic movement of one of said legs in one direction upon the manual movement of the other of said legs in the opposed direction, and means within said lower torso section for supporting said plug interengaging means.

8. In a walking doll, a torso, including a rigid lower section comprising vertically extending front and rear shell members each having a complementary leg socket portion at each side of its lower end portion, said socket portion including a substantially flat inner wall having a circular central cutout portion leaving a marginal flange, a leg mounted by its upper end within each of said leg sockets, said leg including an annular groove engaging over said flange, means within said lower torso section interengaging the upper ends of said legs for automatic movement of one of said legs in one direction upon the manual movement of the other of said legs in the opposed direction, said leg interengaging means comprising an end face on the upper end of each of said legs, said end face having a strip of resilient material pivotally secured thereto, means engaging said strip against said end face in longitudinal alignment with said leg, said strip having an upper extension having an opening formed therein, a rod vertically disposed within said lower torso section, said rod having laterally and oppositely extending hook members, each of said hook members engaging within the opening of one of said strip extensions, and means within said lower torso section axially rotatably supporting said rod.

9. The walking doll of claim 3, wherein said means for supporting said rod within said lower torso section

comprises a pair of vertically spaced posts within each of said shell members extending the depth thereof in register with the corresponding posts in the other of said shell members, each of said posts having a recess in its upper corner portion facing the other post and of a depth to accommodate approximately half the thickness of the end of said rod.

10. In a walking doll, a torso, including a rigid lower section comprising vertically extending front and rear shell members each having a complementary leg socket portion at each side of its lower end portion, a leg mounted rotatably by its upper end within each of said leg sockets, means within said lower torso section interengaging the upper ends of said legs for automatic movement of one of said legs in one direction upon the manual movement of the other of said legs in the opposed direction, said leg interengaging means comprising an end face on the upper end of each of said legs, said end face having a strip of resilient material pivotally secured thereto, means engaging said end strip against said end face in longitudinal alignment with said leg, said strip having an upper extension, a rod vertically disposed within said lower torso section, said rod having laterally and oppositely extending elements each engaging one of said strip extensions, and means within said lower torso section axially rotatably supporting said rod.

11. The walking doll of claim 3, wherein said means for supporting said rod within said lower torso section comprises a pair of vertically spaced posts within each of said shell members in register with the corresponding posts of the other of said shell members, said registering posts substantially contacting one another and each having a recess formed in its end corner portion facing the other post in its shell member and of a depth to accommodate approximately half the thickness of an end of said rod.

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