

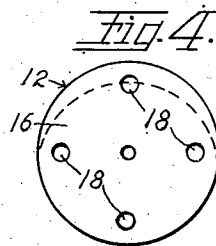
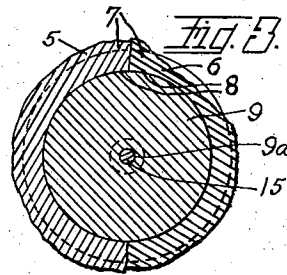
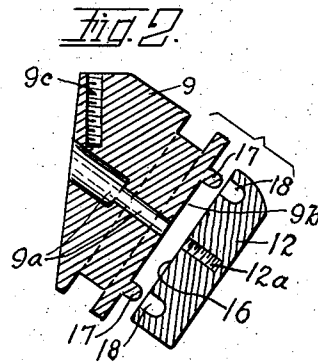
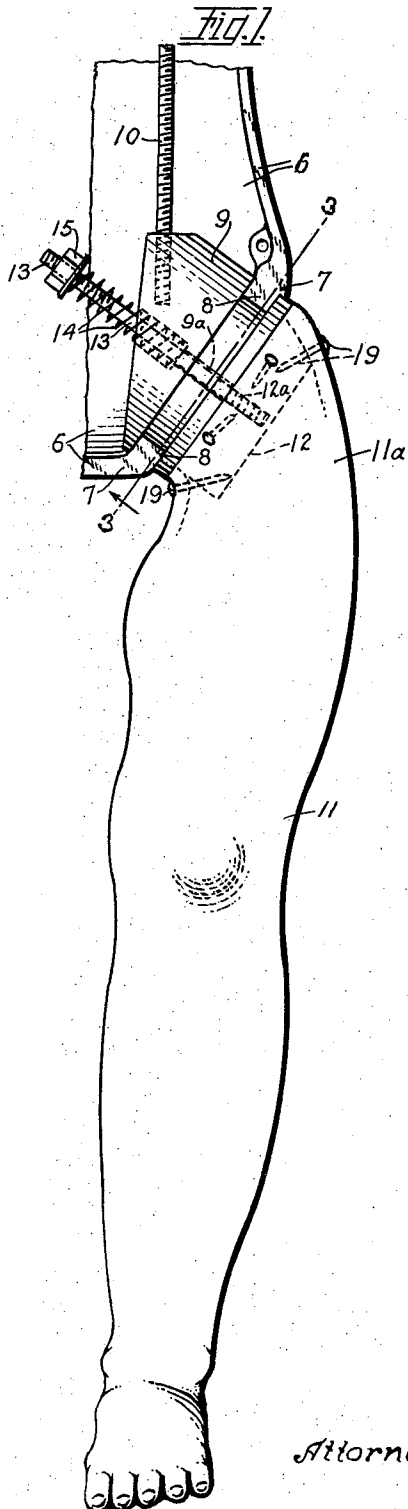
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WALKING DOLL

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WALKING DOLL

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1 Claim. (Cl. 46—150)

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This invention relates to figure toys, especially to doll-hip-joints and to improvement in a walking doll.

The main object or purpose of this invention is to provide a walking doll with a comparatively simple, low-cost, thoroughly practical, hip-joint or limb-joint combination that includes not only leg-movements that simulate walking of the doll, but also includes movements of the legs into various adjustments forwardly and rearwardly of their normal upright, standing and walking, positions; for instance, to forward position as when sitting, or respectively in forward and rearward positions as when performing a front-rear straddle, or as when one leg is in high kicking position while the other is in standing position.

Another object of this invention is to provide inter-locking devices in the hip-joint, in combination with a helical spring-device that normally secure the legs in their normal walking relation to the doll's body or trunk, and that can be unlocked by easily pulling the thigh-simulant of either leg laterally from the hip-joint-member, so that the leg (including the thigh-simulant) can then be swung to a forward-upward or rearward-upward position and then pulled by said spring-means or spring-device into the newly adjusted interlocked position.

In the accompanying drawings, only one leg and hip-joint are shown, for the companion (right) hip-joint is counterpart of the left hip-joint here shown and hereinafter described and claimed, as follows: Similar reference characters refer to similar parts in the several figures of drawings and in the specification.

The drawings are briefly described as follows:

Fig. 1 is a front elevational view of a doll-leg connected to a lower-rear part of a doll-torso or trunk by our improvement in mechanical hip-joints; this view also including a screw-threaded rod for operative connection to an undisclosed means for imparting a walking motion to the leg.

Fig. 2 is a vertical sectional view of two main joint-units disposed in slightly spaced relation to one another, in axially aligned relation and in proper position to be moved axially into inter-engagement or inter-locked relation with one another, the section being along the axes of these joint-units.

Fig. 3 is a sectional view taken along the line 3—3 of Fig. 1, with addition of a fragment of the lower-front part of the torso or hollow trunk fitted against the lower-rear portion of the trunk.

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Fig. 4 is a view of the plane apertured side of the lower-right element or unit in Fig. 2.

In broad terms, the invention comprises, in combination, a hip-portion 7 of the front and rear trunk-portions 5 and 6 that are combined and normally united with one another and formed with an annular bearing 8, a hip-joint-member 9 journaled in said annular bearing, and a transmission element or means 10 united with and projecting upward from the unit 9 within the hollow trunk 5—6, and operable to turn the unit 9 slightly in opposite directions in the bearing 8 for effecting stepping movements to the doll-leg or limb 11. The unit or member 9 is formed with an axially aligned bore or opening 9a through which extends a screw-threaded rod that has its lower end secured in a screw-threaded aperture 12a of the element 12. From the aperture 12a, the rod 13 extends through the opening 9a and into the hollow of the trunk 5—6 through a helical compression spring 14 whose inner end is seated against the unit or member 9 and held compressed thereagainst by cooperation of the post 13 and a nut 15 thereon, and such cooperation of elements 13, 14 and 15 normally press the plane side 16, of element 12, against the plane side 9b of the unit or member 9 while also keeping studs or detents 17 inter-engaged with apertures or sockets 18 of the element 12. When the parts 17 are normally interengaged in the upper and lower sockets 18, the legs 11 are thereby retained in the stepping or walking position, because the element 12 of each leg is secured in the hollow upper end of the thigh-simulant 11a; but when either leg is turned to a horizontal position, either forward or rearward, the detents 17 engage with the horizontally disposed sockets 18. To effect the turning of the united elements 11 and 12 to different inter-locked adjustments, the user grasps the respective thigh-simulants and pulls them horizontally or outward until the detents are out from the sockets 18, then turns the leg or legs forward or rearward thru a 90° angle, then releases the pull so that the spring 14 pulls the plane surface 16 against unit or hip-joint-member 9 and interlocks the parts 17 with the correlated sockets 18 of the thigh-joint-element 12.

Though brads 19 are shown as the means for securing the element 12 in the hollow thigh-simulant 11a, other securing means may be used to supplement or substitute the fasteners 19. The element 10 may have its lower end screwed into the screw-hole (as in Fig. 1); or may be

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united with the hip-joint-member 9 by any appropriate means.

This invention is not limited to any specific material in its various elements, nor to the precise construction or arrangement of its elements as illustrated and specified, for various changes may be made within the scope of the inventive ideas herewith shown and expressed. This invention is applicable to shoulder-joints also.

This invention is claimed as follows:

In a walking doll mechanism that includes a hollow trunk that has a hip-portion provided with an annular bearing, a leg including a hip-joint-member journaled in said annular bearing, a transmission element comprising a rod having a lower end tightly secured within and projecting up from the upper part of said hip-joint-member within said hollow trunk and being operable to oscillate said leg in opposite directions in said bearing for imparting stepping movements to said leg, in combination with an axially aligned bore thru said hip-joint-member, an axially disposed rod extending thru and beyond said bore, a helical compression spring having

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one end seated against said hip-joint-member while a portion of said axially disposed rod extends through said spring, a leg-joint-element united with the outer end of said axially disposed rod, said hip-joint member and leg-joint-element being provided with interengaging spring-pressed elements thereof to selectively lock said leg in various positions relative to said trunk, and an element adjustably secured on the inner end-portion of said axially disposed rod and cooperative therewith and with said helical spring for keeping said interengaging elements in releasably interengaged relation.

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