

Dec. 23, 1952

H. GERBAUD

2,622,368

WALKING AND SITTING DOLL

Filed March 21, 1951

3 Sheets-Sheet 1

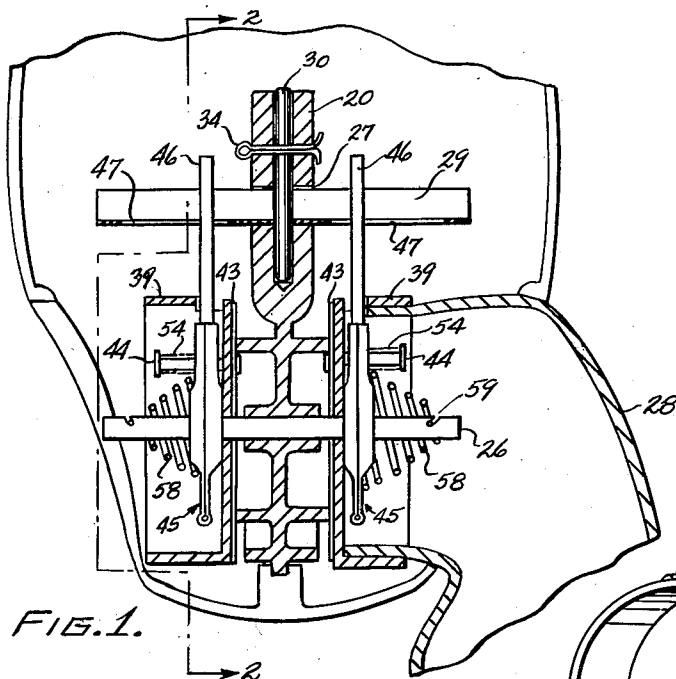


FIG. 1.

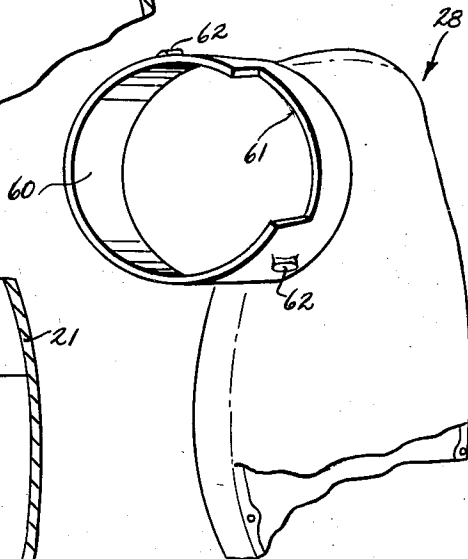


FIG. 3.

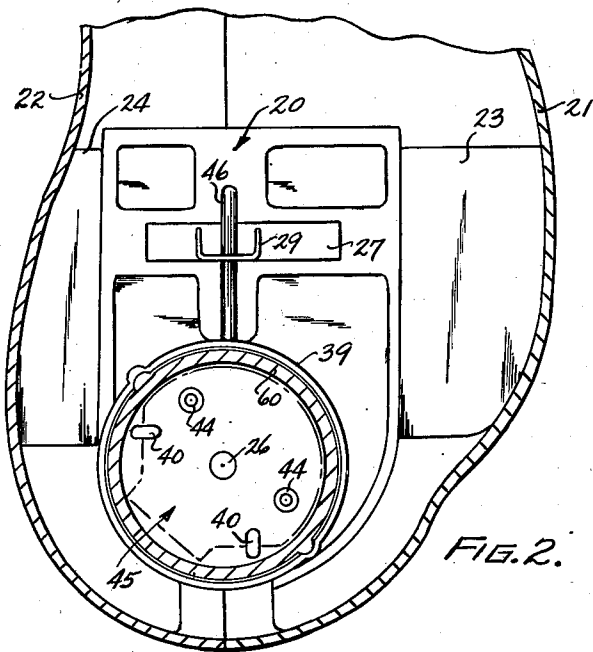


FIG. 2.

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3 Sheets-Sheet 2

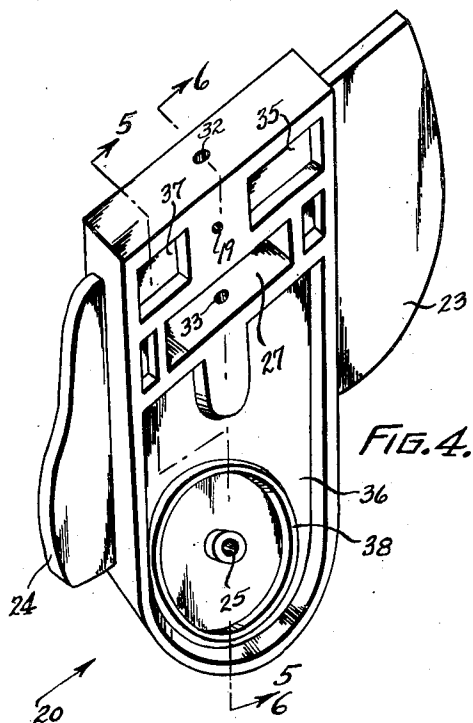


FIG. 4.

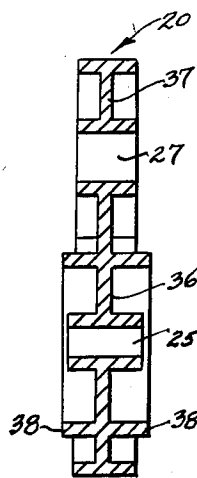


FIG. 5.

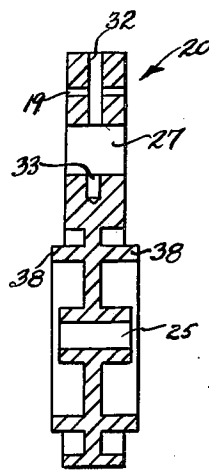


FIG. 6.



FIG. 7.

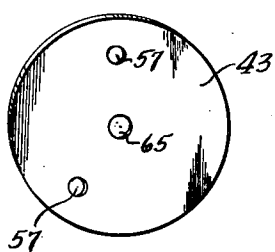


FIG. 8.

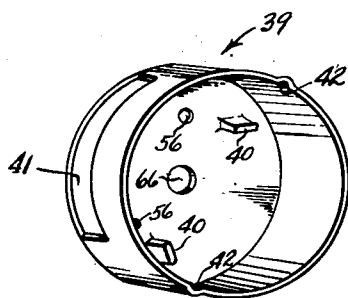


FIG. 9.



FIG. 11.

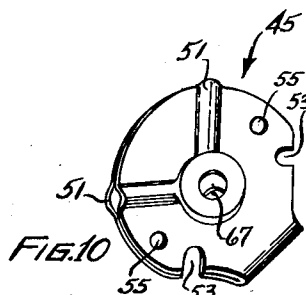


FIG. 10.

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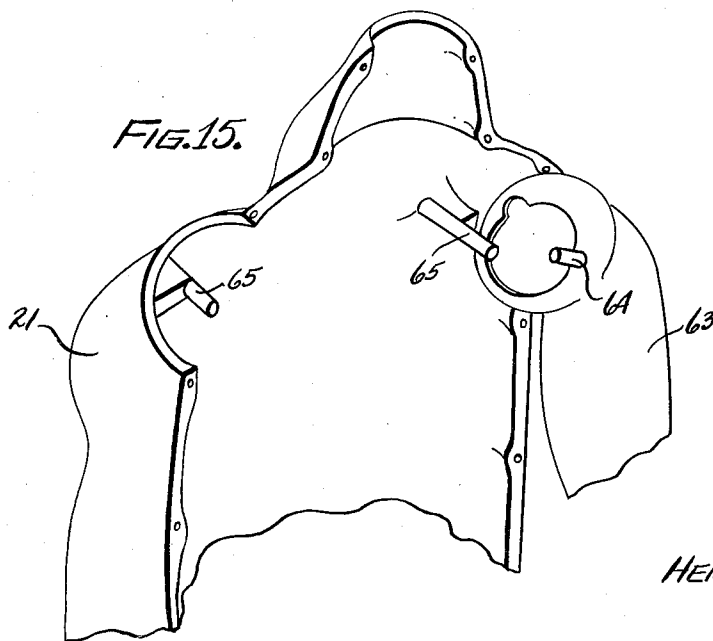
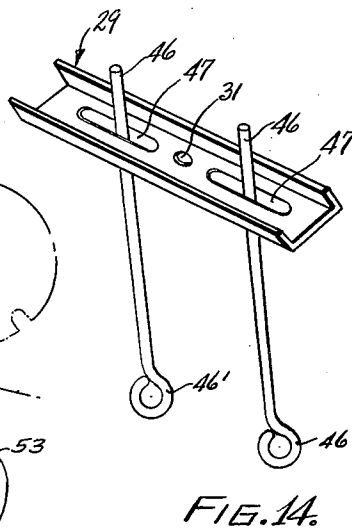
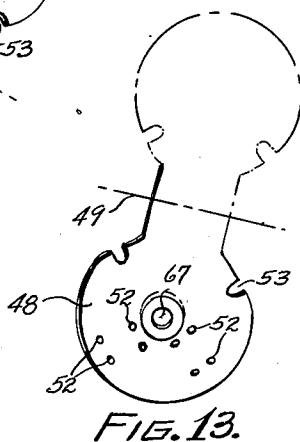
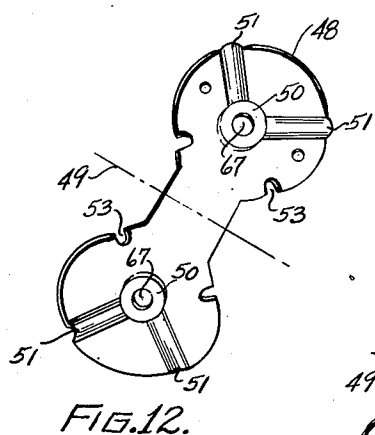
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3 Sheets-Sheet 3



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UNITED STATES PATENT OFFICE

2,622,368

WALKING AND SITTING DOLL

Henri Gerbaud, New York, N. Y.

Application March 21, 1951, Serial No. 216,769

6 Claims. (Cl. 46-149)

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The present invention relates to dolls and more particularly to the type which walk when led and whose legs can be set to sitting position.

It is common to provide each leg with an upwardly extending pin associated respectively with the ends of a horizontally swingable element mounted on an axis intermediate such ends thereof, so that upon movement of one leg in one direction, the other leg will move in the opposite direction. Various attempts have heretofore been made to disconnect such mechanism from the legs proper, so that the legs are free thereof for movement to sitting position. In such constructions, much difficulty is encountered in resetting the legs into engagement with the "walking" mechanism.

It is therefore the principal object of this invention to provide a novel and improved "walking" and "sitting" doll construction which avoids such disassociation by never disconnecting the "walking" mechanism from the legs proper, and which affords positive rather than speculative means to condition the doll for "walking" by simply manually moving the legs to upright position with respect to the doll body.

Another object hereof is to provide a doll of the character mentioned, of novel and improved construction, which in addition to being able to "walk" when in upright condition, can be led to "walk" with its body bent forward so as to appear as though it was looking for something on the ground.

A further object of this invention is to provide a novel and improved doll structure which can be arranged to sit and to "walk," affording simple and economical assembly in manufacture.

Still another object of this invention is to provide a novel and improved "walking" and "sitting" doll of the type described, which assures foot movement without dragging of the doll's feet along the ground.

A further object hereof is to provide a doll of the nature set forth, which is simple in construction and operation, reasonable in cost and efficient in carrying out the purpose for which it is designed.

Other objects and advantages will become apparent as this disclosure proceeds.

In the accompanying drawings, similar characters of reference indicate corresponding parts in all the views; said drawings forming part of this specification.

Fig. 1 is a fragmentary sectional view of the lower part of the torso of a doll embodying the teachings of this invention; the section being

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taken by a vertical plane extending from side to side of the doll body. The front half of the hollow torso is omitted and only one leg is shown mounted.

Fig. 2 is a section taken at line 2-2 in Fig. 1.

Fig. 3 is a fragmentary perspective view of the top portion of a leg of the doll, ready to be secured in its cap aforementioned.

Fig. 4 is a perspective view of the mounting member, both faces of which are identical.

Fig. 5 is a section taken at lines 5-5 in Fig. 4.

Fig. 6 is a section taken at lines 6-6 in Fig. 4.

Fig. 7 shows the shaft in perspective.

Fig. 8 is a perspective view showing a washer included in the illustrated embodiment.

Fig. 9 is a perspective view of a cap with which a leg is associated.

Fig. 10 is a perspective view of a clamping means carried by each leg within the cap.

Fig. 11 is a perspective view showing a spring-carrying rivet used in the assembly.

Fig. 12 is a perspective view of the formed blank for the gripping means shown in Fig. 10.

Fig. 13 is a similar view of a blank for a slightly different form of gripping means; the difference being in certain stop elements thereon.

Fig. 14 is a perspective view of shanks, which are intended respectively to extend from the top end of a leg. These shanks are here shown with an associated swingable member, all of which are included in the walk-producing mechanism.

Fig. 15 is a fragmentary perspective view showing the inside surface of the front half of the torso, and particularly illustrating the construction here used to limit the raised position of an arm which is to be held and the doll led thereby.

In the drawings showing a preferred embodiment of this invention, the numeral 20 designates generally a frame member or mounting piece which essentially is a vertical plane centrally positioned to partition the lower portion of the torso shell from front to back. The torso may be made of a front half 21 and a back half 22, and said mounting member 20 may have end portions 23 and 24 which conform to the inside contour of the torso shell. Through a hole 25 in the mounting member, there extends a shaft or stud 26, along the horizontal line which is to be the axis of swing of the legs 28. Above the legs, said mounting member 20 has an elongated horizontal slot 27, through which extends what may be the channel member 29; the latter being pivoted at mid-point on a vertically positioned pin 30 which is free through hole 31 and is in the holes 32 and 33, where it is secured by for

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instance, the cotter pin 34 through hole 19. Since it is practical to mold the mounting piece 20, as well as the torso parts 21 and 22, of rigid plastic material, it is advisable for economy sake to thin the body thereof wherever possible, as at 35, 36 and 37; in the latter instance, forming the ring bosses 38, which serve as the rest for the inner ends of the legs respectively.

It might here be noted that such inner ends of the legs in this embodiment, are the caps 39, which being of plastic because of the ease in providing the lugs 40, the opening 41 and the grooves 42, is best faced by a metal disc 43, as a support for the hollow rivets 44. Said mounting member 20 is suitably secured in place within the torso in any practical manner as by cementing or otherwise, but such assembly is made after both legs and the walk-producing mechanism are mounted with all other associated parts thereon, to form a unitary structure.

Each leg 28 carries a clamping means denoted generally by the numeral 45 which holds in its grip a pin or shank 46. Each such pin extends from the leg it is associated with, through one of the elongated slots 47 in the swingably mounted cross-piece 29. For normal walking condition, the leg and its associated pin 46, are parallel. The clamping means 45 is such that its hold on pin 46 is firm, but on application of sufficient force, the said clamping means ever maintaining its hold on said pin, may be moved relative thereto so as to bring the leg 28 in angular relation with its pin 46, preferably to an extent of at least a right angle, so as to permit setting the doll either in standing or sitting position, or in any intermediate angular relation whereby the doll will assume the position of body bent forward.

As a practical construction, each pin or shank 46 may be provided with an eye 48' at one end, so that it can be mounted free on the shaft 26, between the leaves or jaws of the clamp which may be made of a blank 48 of spring steel, which is folded in half, both halves downwardly with respect to fold line 49. For the embodiment shown, both leaves of the clamp may be absolutely flat, except for the wells 50 which house the eye 48' of the shank or pin 46. If desired, channels 51 may be formed in one or both leaves of the clamp blank, or else a few inward teats or merely inward point projections as at positions 52 may be provided so that two positions of the pin 46 may be determined which are in right angle relation; one such position determining walking condition, and the other, sitting position.

The clamping means 45 is mounted on the leg 28 to move along therewith. To simplify assembly, notches 53 admit the lugs 40. Assembly is maintained and the clamping force on the pin 46 is enhanced by the springs 54 on the hollow rivets 44, which pass through the registered holes 55, 56 and 57, in the clamping leaves, the cap 39, and in the disc 43. Said disc may be omitted, if the cap 39 is of metal. The leg 28 is mounted, assembly maintained, and the clamping force on the pin 46 is enhanced by the conical compression springs 58, the outer end of which is anchored in slot 59 of the shaft 26. In the assembly effected, all compression springs 53 and 54, are in stressed condition. The leg 28 has a suitable rim 60 to receive the cap 39. Such mounting of the leg into its cap is of course made after the complete assembly of the mounting plate 20 and all it holds. Said rim 60 has a suitable cut-out 61 to afford clearance for the open-

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ing 41; the length of such opening being such as to permit a ninety degree change in the angular relationship between a leg and its associated pin 46, and such opening 41 is so located so that the feet may be set for standing and when desired for sitting position, and of course to any intermediate angular relation. For proper positioning of the leg and its cap 39, lugs or teats 62 on the said rim 60, are in proper register with the channels 42. Of course, at least a chamber must exist in the top portion of each leg to house the mechanism within the cap 39, but since the leg shown is hollow, such space is provided. This is because in the embodiment shown, the clamping means 45 is mounted interior rather than exterior the leg proper. If the shaft 26 is fixed to the plate 20, the caps 39 and the clamps 45 should be free for turning thereon. If the said shaft can revolve, then at least one cap and its associated clamp should be free for turning thereon.

While the doll is being led forward or backward, the leg resting on the ground is in sufficient frictional engagement therewith to cause such leg to swing in relation to the torso in motion; the strength or effect of the springs 58, being insufficient to hamper such leg motion relative to the torso. The other leg will automatically come ahead of the first leg in the direction of the line of motion of the doll, due to the swing of the cross-piece 29, which is an action well known in this art. The doll is usually led by holding its arm 63.

In order to avoid a dragging of the dolls feet occasioned because of the free swingability of the arm on the torso, I provide the construction shown in Fig. 15. Each arm, or at least one of them, at socket region, has a pin extending therefrom into the torso, spaced from the axis of swing of the arm. This pin 64 is adapted to be engaged by a stop pin 65 extending in its path from the interior surface of the torso; the position of said pins 64 and 65 being such that they are in engagement when the arm 63 is in a predetermined raised position, so that the hand will not move further towards the rear. This is adapted to facilitate forward walking motion of the doll.

It is to be noted that during "walking" operation of the doll, the pin 46 and its associated leg remain in their fixed relative position, which is, in parallel relation with each other for walking in erect condition, or in a large obtuse angular relation with each other for walking with body bent forwardly. In the latter position, the doll will "walk" and be in position appearing as though it were looking for something on the ground.

Of importance to note, is that the walking mechanism shanks 46 are always between the clamp jaws of means 45 and always carried by the leg, and never disengaged therefrom regardless of how the legs are arranged with respect to the torso, whether for walking, sitting or any other position or relation.

Change of angular relation of a shank 46 and the longitudinal line of its associated leg 28, can be effected only when the cross piece 29 is at rest. This occurs when both legs are moved together in the same direction, or else when one leg is moved and the other held against movement.

To complete notation of parts, the holes designated respectively by the numerals 65, 66 and 67 in Figs. 8, 9 and 10, are for mounting the components shown, on the shaft 26.

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This invention is capable of numerous forms and various applications without departing from the essential features herein disclosed. It is therefore intended and desired that the embodiment shown herein be deemed illustrative and not restrictive and that the patent shall cover all patentable novelty herein set forth; reference being had to the following claims rather than to the specific description herein to indicate the scope of this invention.

I claim:

1. In a doll having legs swingably mounted for walking and adapted to be set to sitting position, separate clamping means carried along by each leg, separate elements positioned and gripped, one by each of said clamping means respectively, means constantly engaged by said elements to effect simultaneous movement of said elements whereby one leg will move in one direction when the other leg is moved in the opposite direction; all said means and elements being housed within the doll; each of said clamping means being adapted to be moved with respect the element it holds in its grip and maintain such grip hold thereon during such movement, whereby the angle such element makes with the longitudinal line of the leg it is associated with is altered, by manual movement of both legs in the same direction or by manual movement of the leg it is associated with, while the other leg is held at rest and a shaft mounted interior the torso; each of said clamping means comprising a sheet blank folded in half to form a two leaf structure; each such leaf having a hole therethrough and each of the mentioned elements being a shank positioned between a pair of associated leaves of said clamping means and having an eye at one end; said shaft being positioned through said eyes and through the holes in all the leaves.

2. A doll as defined in claim 1, including spring means engaged on the shaft and acting to hold the legs on the shaft and also acting on leaves of the clamping means to enhance their gripping action.

3. In a doll, a hollow torso having leg openings at its sides, a frame piece mounted within the torso, a shaft extending in the direction from side to side of the torso, mounted a mid-region on the frame piece, caps carried on the shaft, one at each side of the frame piece and capable of axial rotation with respect to each other; the mouth of each cap being away from the frame piece, separate clamping means within and carried along with each cap, separate elements positioned and gripped one by each of said clamping means and extending exterior the cap it is associated with through an opening in such

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cap and into the torso, means maintaining the caps on the shaft, legs, each having a laterally extending upper portion extending through the leg openings respectively and engaged by said caps respectively; said legs being free for movement with respect to the torso, to and between standing and sitting positions and for walking, and means carried on the frame piece, constantly engaged with said elements to effect simultaneous movement of said elements in opposite directions whereby one leg will move in one direction when the other leg is moved in the opposite direction about the axis of said shaft; each of said clamping means being adapted to be moved with respect to the element it holds in its grip and maintain such grip thereon during such movement, whereby the angle such element makes with the longitudinal line of the leg it is associated with, is altered by manual movement of both legs in the same direction or by manual movement of the leg it is associated with, while the other leg is held at rest; the opening in each cap through which its associated element extends, being sufficient to permit the leg to be moved to at least to and between walking and sitting positions.

4. A doll as defined in claim 3, wherein each clamping means comprises a sheet blank folded in half to form a two leaf structure; each such leaf having a hole therethrough, and wherein each of the mentioned elements is a shank positioned between a pair of associated leaves of said clamping means; said shanks having an eye at one end respectively and said shaft being positioned through said eyes and through the holes in all the leaves.

5. A doll as defined in claim 3, including spring means engaged on the shaft, acting to hold the caps on the shaft and acting on leaves of the clamping means to enhance their gripping action.

6. A doll as defined in claim 3, wherein each clamping means and its associated cap are maintained against relative rotary motion, by a lug on one engaged in an opening in the other.

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