# PATENT SPECIFICATION

Convention Date (Germany): Dec. 7, 1929. **346,878**

Application Date (in United Kingdom): Jan. 30, 1930. No. 3200/30.

Complete Accepted: April 23, 1931.

COMPLETE SPECIFICATION.

## Constructional Toy Sets for Making Human Figures.

I, ARTUR DEICHMANN, a citizen of Germany, of Godesburg on Rhine, Germany, do hereby declare the nature of this invention and in what manner the same is to be performed, to be particularly described and ascertained in and by the following statement:—

This invention relates to constructional toy sets of the kind in which a figure is composed of separate elements joined together in such a manner that they can be taken apart.

The method of producing toy figures consisting of head, body and limbs, is already known. By the present invention however, it is possible to change the facial expression in a variety of ways by means of interchangeable face-sections, especially those parts representing the nose and the chin. This variation can either be obtained by interchanging the parts or by positioning them differently. Furthermore, in the new constructional toy set, the individual pieces are arranged in such a manner that the joints are designed as restricted universal joints, of the kind allowing movement around two axes at right angles, and it is therefore possible to obtain any desired attitude, by varying for instance the position of the upper parts of the body in relation to the lower part, or of the head in relation to the body, or of the limbs in relation to each other. In order to obtain a firm support for the figure, the foot and leg connections are advisably designed not as joints, but as parts which can be pushed into one another; by means of holes drilled at various angles in the parts representing the thighs of the figure, and into which holes the parts forming the legs and feet are fitted, variations of posture are made possible, so that in particular the attitudes of running and also sitting and similar positions can be produced.

Where joints are employed fitting one another after the manner of pin and socket or slot and tongue joints, the actual locking effect can be secured by providing the contacting surfaces with material designed to increase the frictional grip.

The constructional toy set can be used either for constructing ordinary dolls or, more particularly, for making grotesque figures, for instance for advertising purposes, in which case the individual parts of the figure are designed as conical or pyramidal-shaped bodies, or as flat pieces for insertion, for example, in the parts of the face.

I am aware that it has already been proposed to employ ball and socket joints for connecting parts of toy figures and further that it has been proposed to employ toy building elements of which one is in the shape of a sphere adapted to engage a spherical cavity upon another member, the movement of the parts in their adjusted position being prevented by a stud within a cavity engaging one of a series of sockets upon the sphere.

In order that the invention may be the better understood reference is made to the accompanying drawings in which:—

Fig. 1 shows a front elevation of an example of a figure according to one form of the invention.

Fig. 2 the corresponding side-view with head turned to front.

Fig. 3 is a front elevation of the face section and

Fig. 4 shows twelve different examples out of an indefinite number of possibilities, obtainable by positioning differently two parts of the figure forming the face, i.e. nose and chin section.

Referring to the accompanying drawings. 1 represents the head cut from flat wooden parts with an insertable nose section 2 and a chin section 3 which can also be pushed in. By means of a peg 4, a cap 5 is affixed. By means of projection 6, the head is rotatably inserted in the truncated pyramid 7 representing the upper part of the body. Upper arms 10 and 11 are fixed rotatably to shoulder parts 8 and 9, which in turn are adjustably attached to part 7.

Engaging slots 12 and 13, in parts 10 and 11, are the forearms 14 and 15 provided with cylindrical parts 16 and 17 representing fists, in which holes are formed for carrying tools. In the illustration a square golf club 17*a* is shown as a removable tool. By means of the joint 18, the upper part of the body 7 is supported

[*Price* 1/-]

on the parts 19 and 20 representing the thighs, which latter are provided with holes 21 and 22 into which legs 23, 24 with feet are fixed.

Instead of a universal-joint, different holes and pegs on the various parts of the figure could be used, as in the leg parts in order to obtain, for instance, forward inclinations of the head or of the upper part of the body by differently positioning those parts.

Having now particularly described and ascertained the nature of my said invention and in what manner the same is to be performed, I declare that what I claim is:—

1. Constructional toy set for making representations of human figures in which the head of the figure is provided with an ample slot allowing freedom of movement for a pair of pieces forming nose and chin sections which by their interchangeability and variable positioning in said slot are adapted to give a variety of varying expressions.

2. Constructional toy set, according to claim 1, in which the joints of the figure are designed as restricted universal joints of the kind allowing movement around two axes at right angles in order to permit of alteration in the position of the parts in relation to each other.

3. Constructional toy set embodying the features according to claims 1 and 2 in which joints are employed fitting one another after the manner of pin and socket or slot and tongue joints.

4. Constructional toy set according to claim 3, in which by lining with friction-increasing material, a locking effect is obtained in the joints.

5. Constructional toy set according to claim 1 in which the parts representing the thighs are provided with drilled holes running in different directions in relation to each other, into which holes the leg parts of the figure are fixed, in order to obtain, in particular, attitudes of running.

6. Constructional toy set according to claim 1, in which the lower part of the body is connected to the upper part of the body by means of a restricted universal joint of the kind defined in claim 2, through which any desired bending or turning of the upper part of the body in relation to the lower part is made possible.

Dated this 30th day of January, 1930.

J. E. EVANS-JACKSON & Co.,
Agents for the Applicant.

Redhill: Printed for His Majesty's Stationery Office, by Love & Malcomson, Ltd.—1931.

[This Drawing is a reproduction of the Original on a reduced scale.]

Fig. 1.

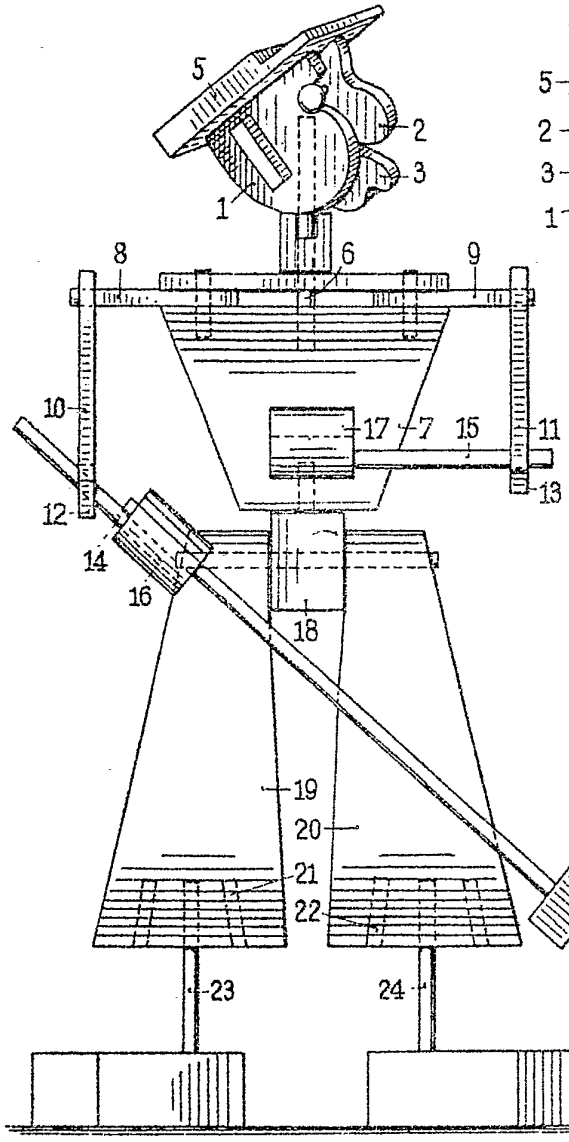



Fig. 3.

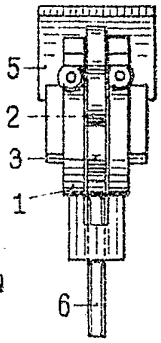
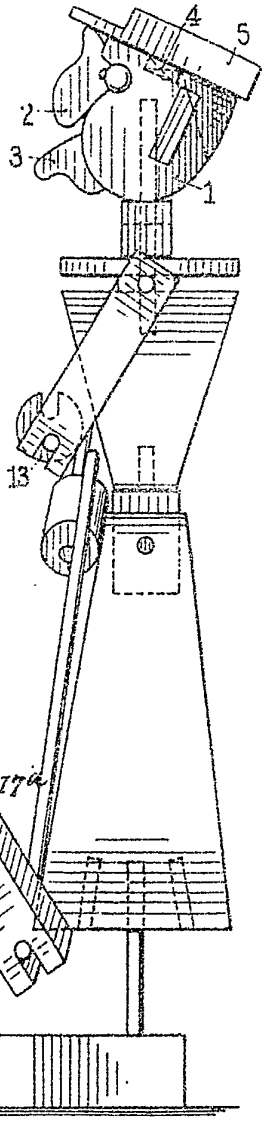
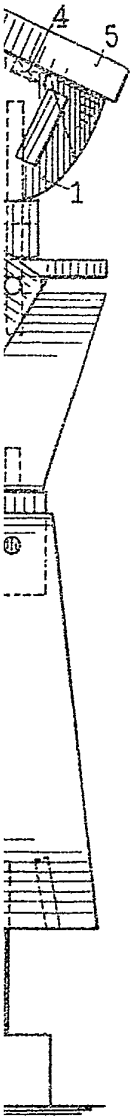



Fig. 2.



g. 2.



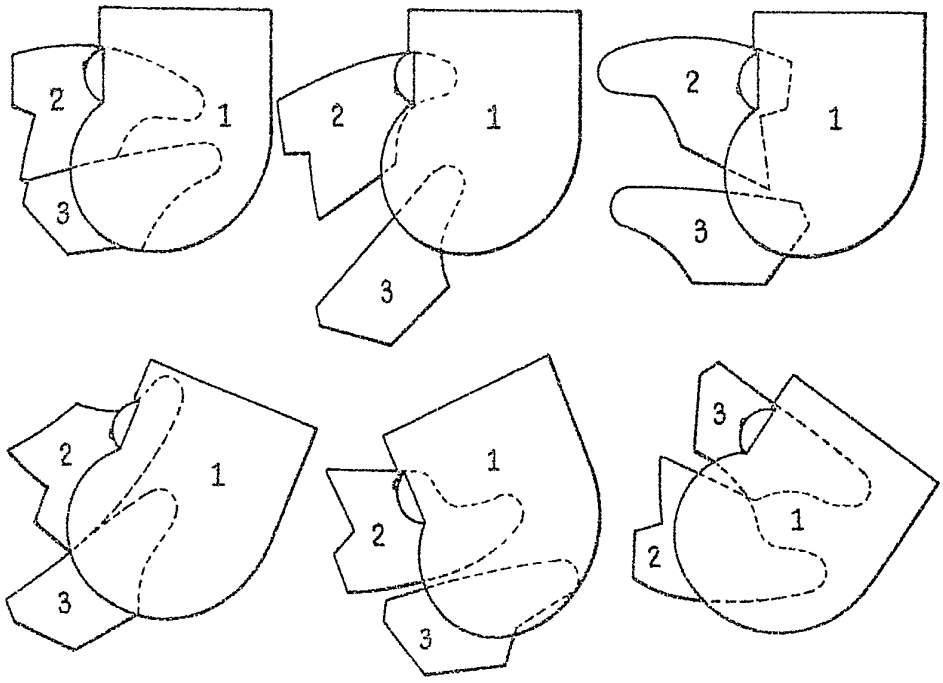




Fig. 4.

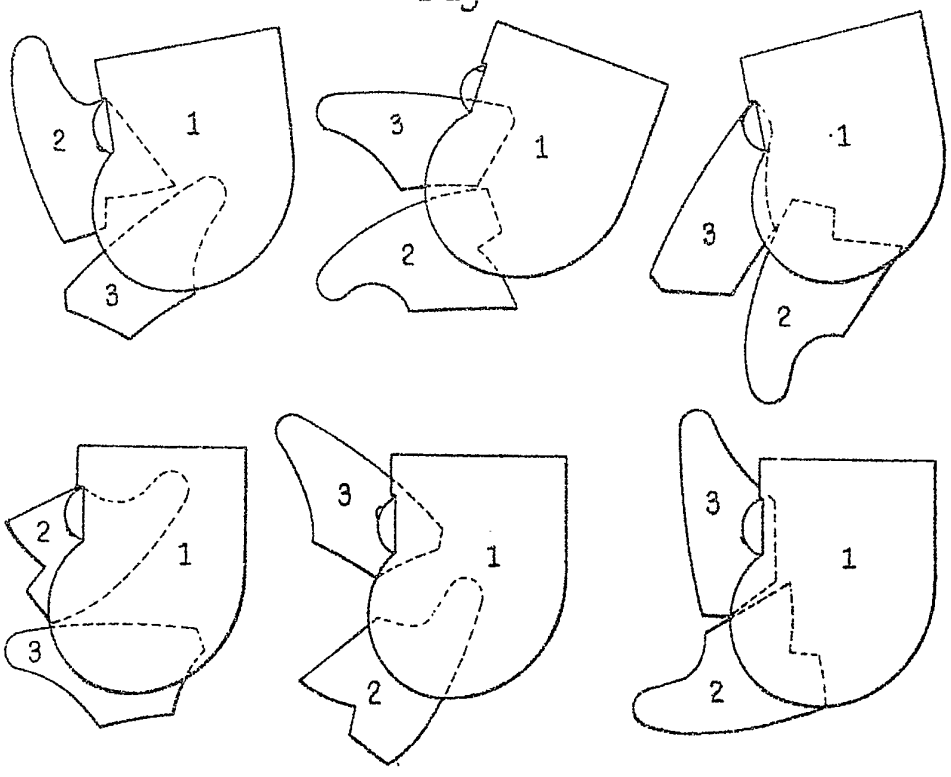



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Fig. 1.

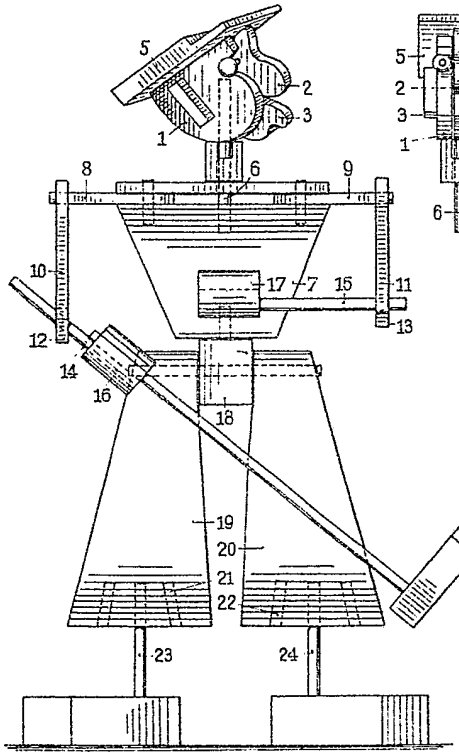
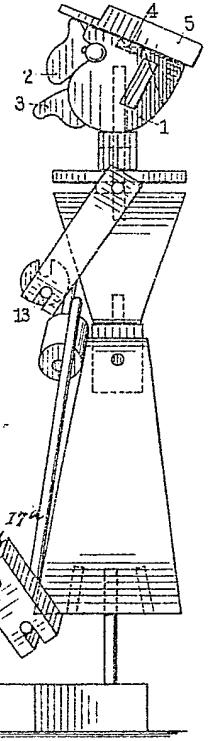



Fig. 3.




Fig. 2.



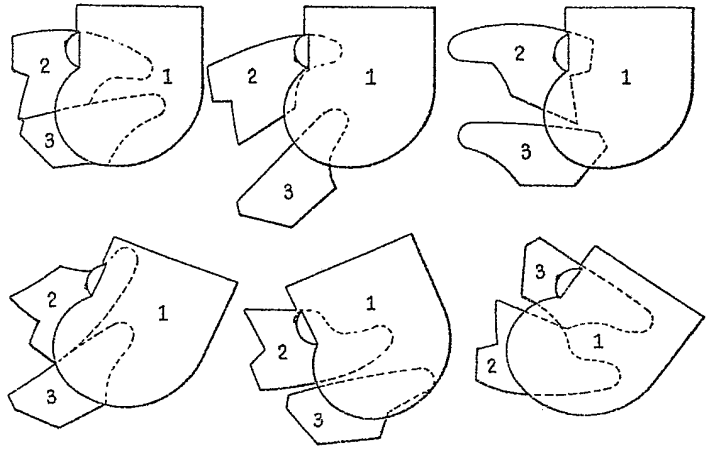
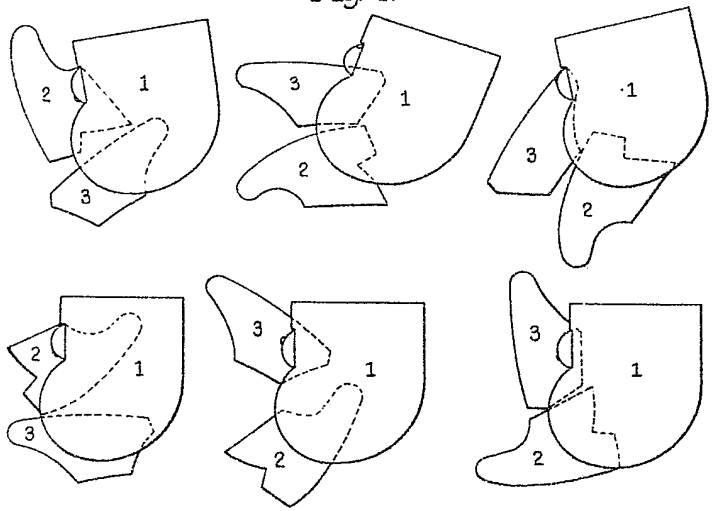




Fig. 4.

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