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MANIKIN

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8 Claims. (Cl. 35-17)

This invention relates to a manikin of the type known as a hospital doll designed for the teaching of various nursing and medical procedures.

It is common practice at the present time to provide in hospitals for the training of student nurses manikins simulating the human body, which manikins may be handled and treated for practical demonstration purposes, particularly in connection with treatments for which patients or volunteers would not be available.

It is the broad object of the present invention to provide a manikin of the type just indicated having improved features for the more realistic carrying out of certain treatments, more specifically involving catheterization, bladder irrigation, colonic irrigation, administration of enemas, and administration of hypodermic injections. With the improved features there may be incorporated in the manikin other well known and conventional features.

The broad object, and other objects of the invention particularly relating to details of construction, will become more apparent from the following description, read in conjunction with the accompanying drawings, in which:

Figure 1 is a fragmentary sectional elevation of the manikin showing various internal parts constituting the improvements;

Figure 2 is a vertical section through the same;

Figure 3 is an enlarged fragmentary section showing details of construction;

Figure 4 is a perspective view of an element incorporated in the upper arm of the manikin for the purpose of simulating the administration of hypodermic injections;

Figure 5 is a longitudinal section through the same; and

Figure 6 is a perspective view of a band arranged to be associated with the element of Figure 4, as illustrated in Figure 5.

The torso 2 of the manikin is fitted with a head (not shown) and jointed arms 4 and legs 6 in conventional fashion. As mentioned above, it may incorporate any of the conventional features, such as external details, of this type of manikin and the description will be confined to those features which constitute the present improvements.

There are provided urethral, vaginal and rectal tubes 8, 10 and 12 respectively, which may be formed of thin walled tubing. The urethral tube 8 is closed at its inner end and is provided with an annular restriction 14 adapted to provide a seal about an inserted catheter. Inwardly of the restriction 14 is a valve housing 16 having a bore

communicating with the tube 8 in which bore there is provided a seat for a valve 18 pressed upon the seat by a spring 20. A nipple 22 terminates the bore above the valve and projects into an opening 24 of housing 16 exposed through the abdominal portion of the manikin.

When the manikin is used to demonstrate catheterization, there is connected to the nipple 22 a tube communicating with a suspended tank containing water. The tube may be provided with a clamp or valve under the control of the instructor. When the catheter is inserted into the tube 8, it is sealed by the restriction 14 and then engages the stem of valve 18 lifting it from its seat so that flow of water may take place through the catheter. This flow may be interrupted at the proper time by the instructor's controlling the clamp or valve provided on the tube from the supply tank.

For the demonstration of bladder irrigation, a small tank connected with the nipple 22 may be placed on the doll and the customary technique in administering irrigations followed.

The rectal tube 12 is provided with a restriction 28 approximately seven inches from its open end and communicates with a tank 30 located in the forward right hand side of the chest, desirably partially within the right breast of the manikin so that when the manikin is either on its back or left side the tube 12 will extend upwardly from its external opening to the tank.

Communicating with the tube 12 in advance of the restriction 28, and through openings 34 of restricted size which will prevent passage of an inserted tube, is a second tube 32 which communicates with a tank 36, larger than the tank 30 and located in the left hand side of the chest extending into the left breast of the manikin. This arrangement is such that the tube will extend inwardly and upwardly when the manikin is on its back, but inwardly and downwardly when the manikin is on its left side. The tanks 30 and 36 preferably have the shapes illustrated. The tanks are vented to the atmosphere through tubes 38, 40 and 42 communicating with the vent tube 26 which enters the vaginal tube 10, which is open to the atmosphere.

By the arrangement of parts just described, colonic irrigation and the administration of enemas may be simulated.

By insertion of the colon tube beyond the restriction 28 to any desired extent, the system will function in normal manner when the manikin is on either its left side or back, since the tank 30 is raised above the outlet in both positions.