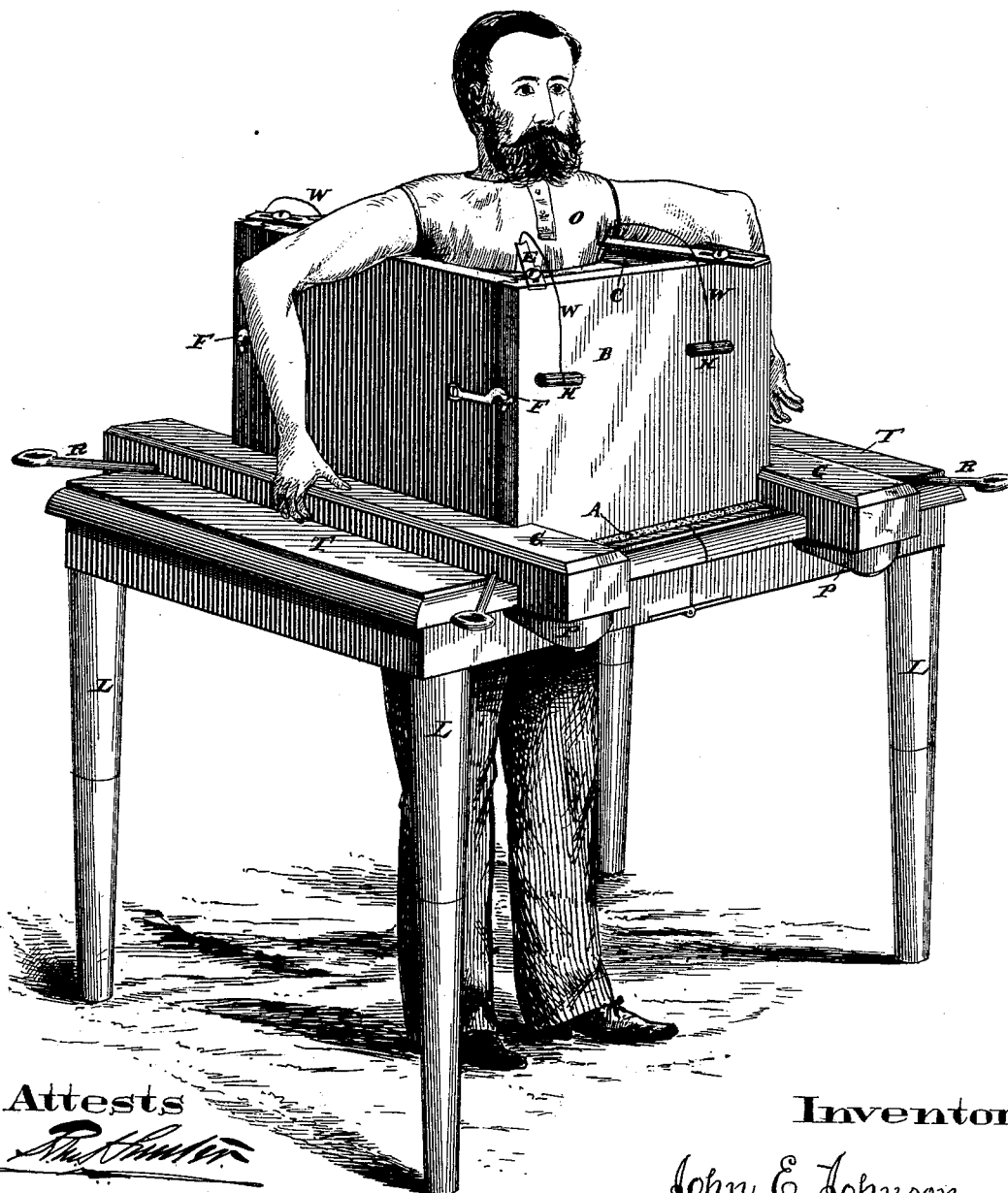


J. E JOHNSON.  
Apparatus for taking Casts of the Human Form, &c.  
No. 221,569. Patented Nov. 11, 1879.

Fig. 1



Attests

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by his Attorney in fact,  
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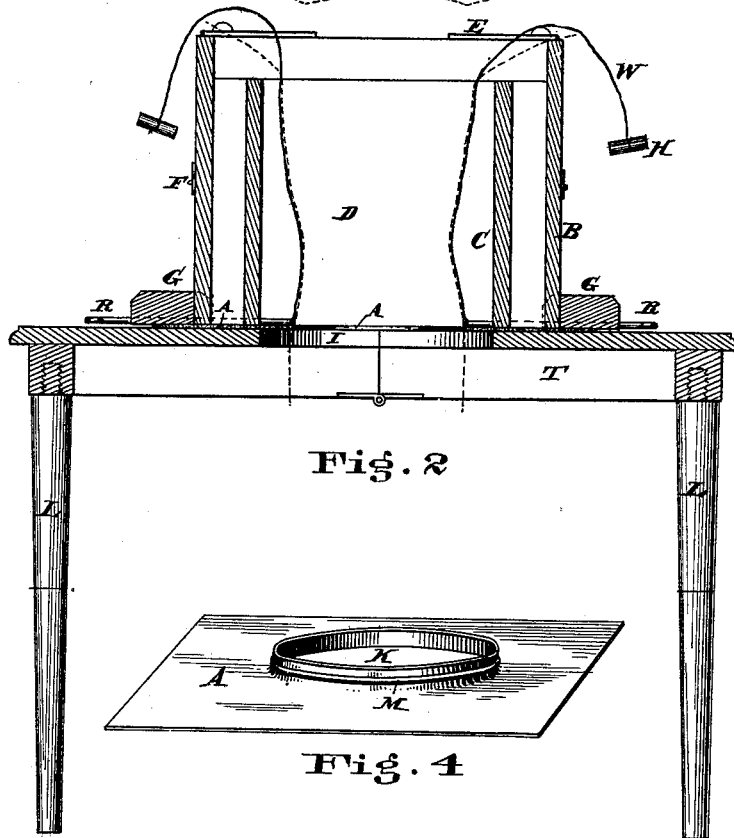


Fig. 2

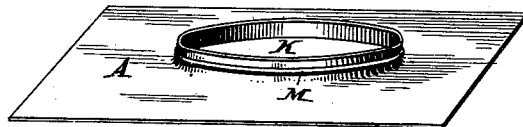


Fig. 4

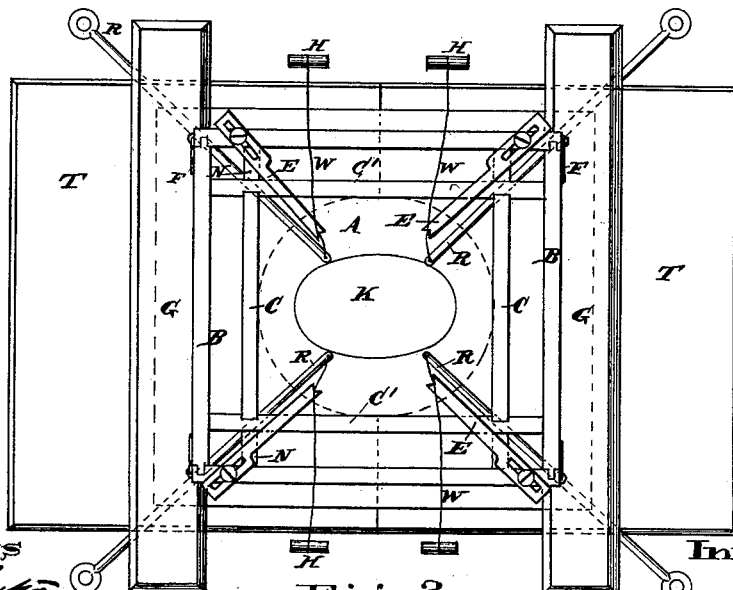


Fig. 3

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# UNITED STATES PATENT OFFICE.

JOHN E. JOHNSON, OF PHILADELPHIA, PENNSYLVANIA.

## IMPROVEMENT IN APPARATUS FOR TAKING CASTS OF THE HUMAN FORM, &c.

Specification forming part of Letters Patent No. **221,569**, dated November 11, 1879; application filed July 26, 1879.

### *To all whom it may concern:*

Be it known that I, JOHN E. JOHNSON, of the city and county of Philadelphia, and State of Pennsylvania, have invented a new and useful Improvement in Apparatus for Taking Casts or Molds of the Human Form, &c., of which the following is a specification.

The invention relates to the taking of molds or casts principally of the living human form, which casts may be used for artistic purposes, or as accurate fac-simile formers, upon which to mold surgical splints and jackets of felted fabric similar to that described in my Letters Patent No. 216,680, dated June 17, 1879.

The object of my invention is to facilitate the production of such molds.

In the accompanying illustrations, in which similar marks of reference indicate like parts, Figure 1 is a perspective view of my apparatus as arranged preparatory to obtaining a mold of a part of the trunk of a human body. Fig. 2 is a longitudinal sectional view. Fig. 3 is a plan; and Fig. 4 is a detached view of an elastic perforated apron, A.

T is a horizontal table, supported on legs L, and divided into two parts, hinged together, in order that it may be doubled up for convenience in transportation. For a like reason the legs are screwed instead of being permanently fastened thereto.

The top of the table is pierced by an aperture, I, Fig. 2, somewhat larger than the average thickness of the human form. The shape of this aperture is unimportant, although an oval is preferred. Over it, and extending beyond its edge, is laid a sheet or apron, A, of india-rubber, or other elastic or flexible material, with an oval or circular opening, K, therein.

A case, B, without top or bottom, and of rectangular or other suitable form, rests upon that part of A extending beyond the aperture in the table.

For a purpose that will appear when I come to describe the *modus operandi* of my invention, the sides of the case B are temporarily, though securely, held together by means of catches F, or otherwise.

It is sometimes desirable, for reasons hereinafter appearing, to have a more contracted space over the aperture I than that comprised within case B, and this is secured by means

of the four side pieces fitted within the latter. Two of these, C', are provided with cleats N, which rest against the inside of B, also with grooves to receive the two other sides, C. In this way, by altering the width of the cleats and the location of the grooves, the aforesaid space may be varied to suit the occasion, and a case thereby formed within the outer one, B, the sides of which readily separate when the latter is removed.

B, as also the apron A, is held firmly in place by means of clamp-bars G, Fig. 1, provided with offsets to receive the case, and with turn-buckles P, which, impinging beneath the edge of the top of the table, serve to secure the clamps in their adjusted position. Before the latter are adjusted, however, rods R are placed diagonally at the corners of B, within grooves in G and B, provided for that purpose.

On the end of each of said rods, inside the case, is fastened a fine wire, W, made preferably of annealed steel, which wire extends up beyond the top of B, and is provided with holds or handles H. The ends of the rod projecting outside of B are provided with eyes, whereby they may the more easily be drawn back and forth.

Having now indicated the essential and important parts of my improved apparatus, I proceed to describe its practical operation in the process of taking a mold of the trunk of a living human subject, as illustrated in Fig. 1. Ordinarily the subject stands within the aperture in the table, upon the floor or a platform of a height to suit the person and the occasion; but when the object is to obtain a mold of the body of one afflicted with curvature of the spine, the person is suspended in the required position, beneath the arms or otherwise, so as to relieve the spinal column of the superincumbent weight. The apron A, through the opening in which the body has been passed, is adjusted as desired, the edges touching the body being turned up or flanged, as seen in Fig. 4, and further tightened, if necessary, by means of a band, M, drawn around the flange. Rods R are now pushed in until their ends come in contact with the body. The wires W are then compressed against and follow the contour of the latter the length of the part of which a mold is to be made. These wires, be-

ing of annealed steel and inelastic, retain the form and direction given them—that is to say, they stay where placed, closely against the body. Their upper portions are held in place—that is, against the upper part of the body—by means of the notched swinging arms E, made horizontally adjustable by means of the slot and screw seen in the drawings. The usual plaster-of-paris mixture, or any plastic substance, is now poured gradually into the box B, around the body incased therein, until the box is filled to the height desired. As soon as the mixture has set or hardened, the wires are made to divide the mass by drawing them taut to the corners of the box by pulling upon the rods and the handles H. The case is now opened, and also the inner one of the latter is used, and the several sections into which the material has been divided are drawn apart, and afterward fitted together to serve as a mold, in which castings may be obtained in the usual way.

It is apparent that with slight adaptations of my apparatus, which will occur to any one skilled in the art, molds of the entire body or any part thereof may be readily made.

In some cases the table can be dispensed with—that is, where casts of the lower part of the body or the entire form are to be taken.

In order to facilitate the removal of the mold from the body, (the plastic material sometimes clinging to the skin when covered with an unusual growth of hair,) the person may be incased in a thin tightly-fitting garment of knitted stuff, O, Fig. 1. The latter may also be treated with some sliding or repellent substance to prevent it adhering to the mold.

What I claim as my invention is—

1. The combination of the movable case B, the dividing-wires W, of annealed steel or its equivalent, and the adjustable sliding rods R, substantially as and for the purposes described.

2. The flexible elastic apron A, provided with opening K, in combination with table T, having the aperture I, and the casing B and clamps G, as and for the purposes hereinbefore set forth.

3. The inner casing made up of the cleated and grooved side pieces, C C', or the equivalent thereof, as specified.

4. The adjustable swinging arms E, operating substantially as and for the purposes shown and described.

JOHN E. JOHNSON.

Witnesses:

GEORGE RUSSELL,  
JNO. MAGRAW.