

(No Model.)

M. W. ALDERSON.
HAND FOR DOLLS.

No. 440,986.

Patented Nov. 18, 1890.

Fig. 1.

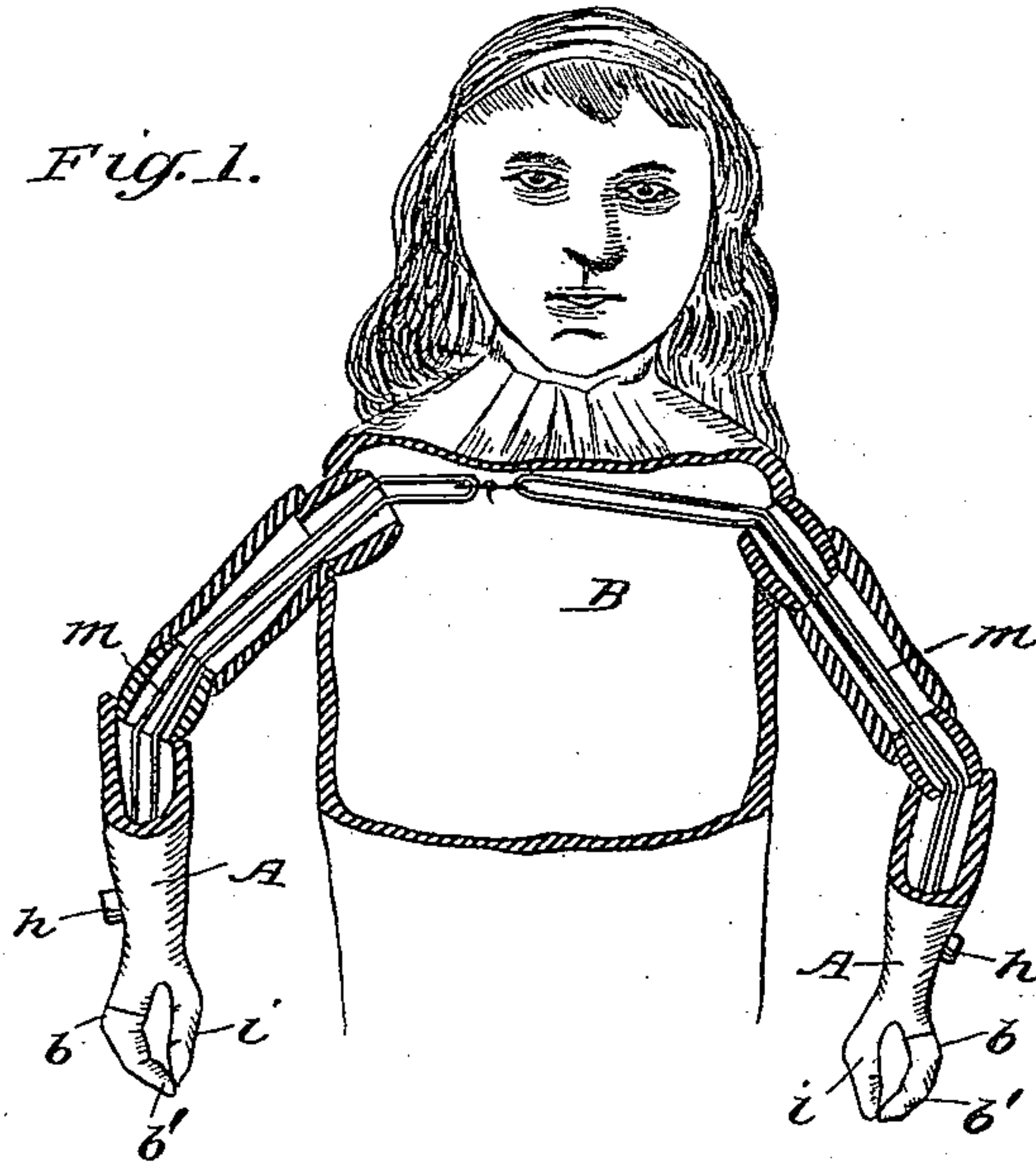


Fig. 2.

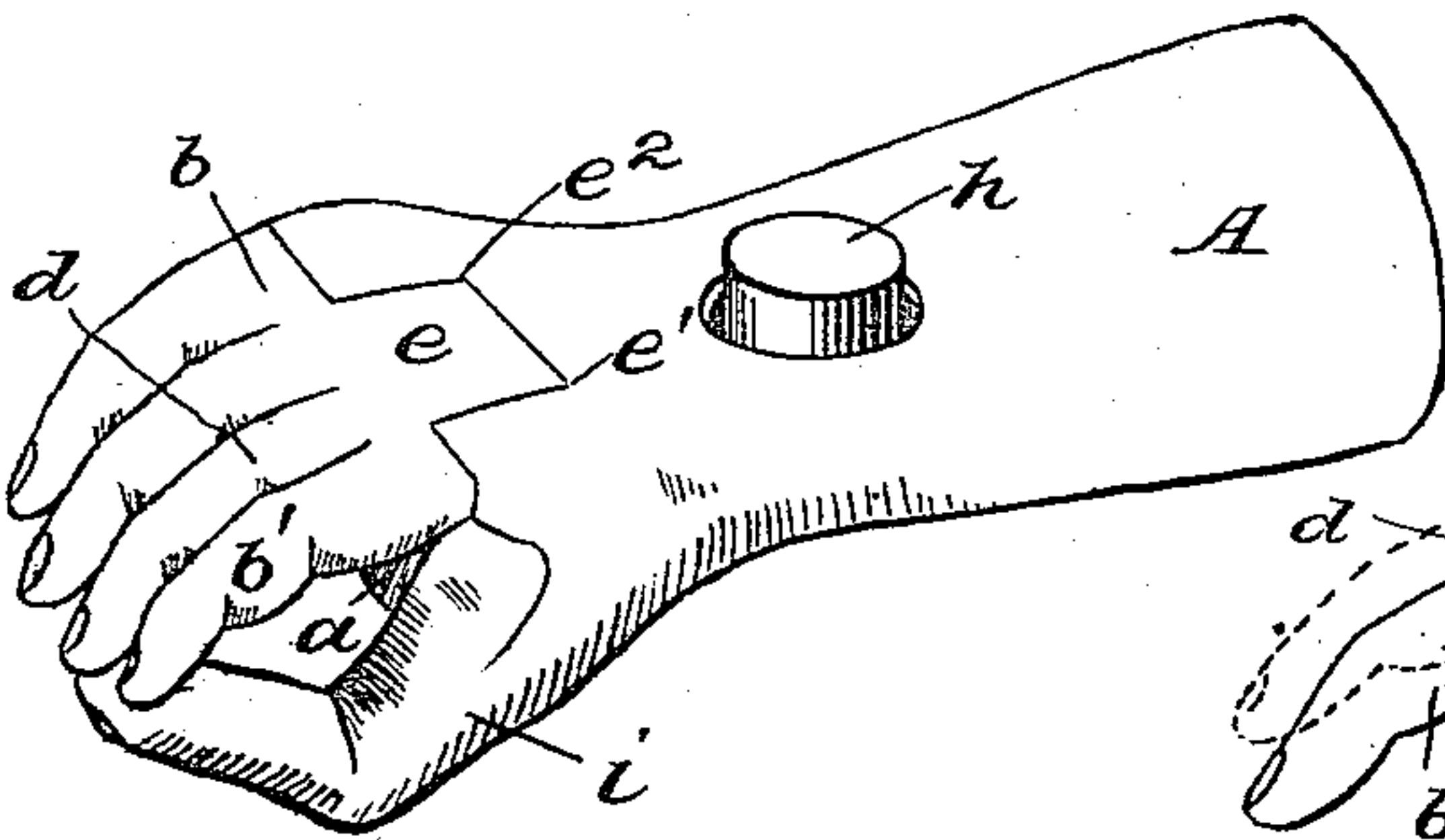


Fig. 3.

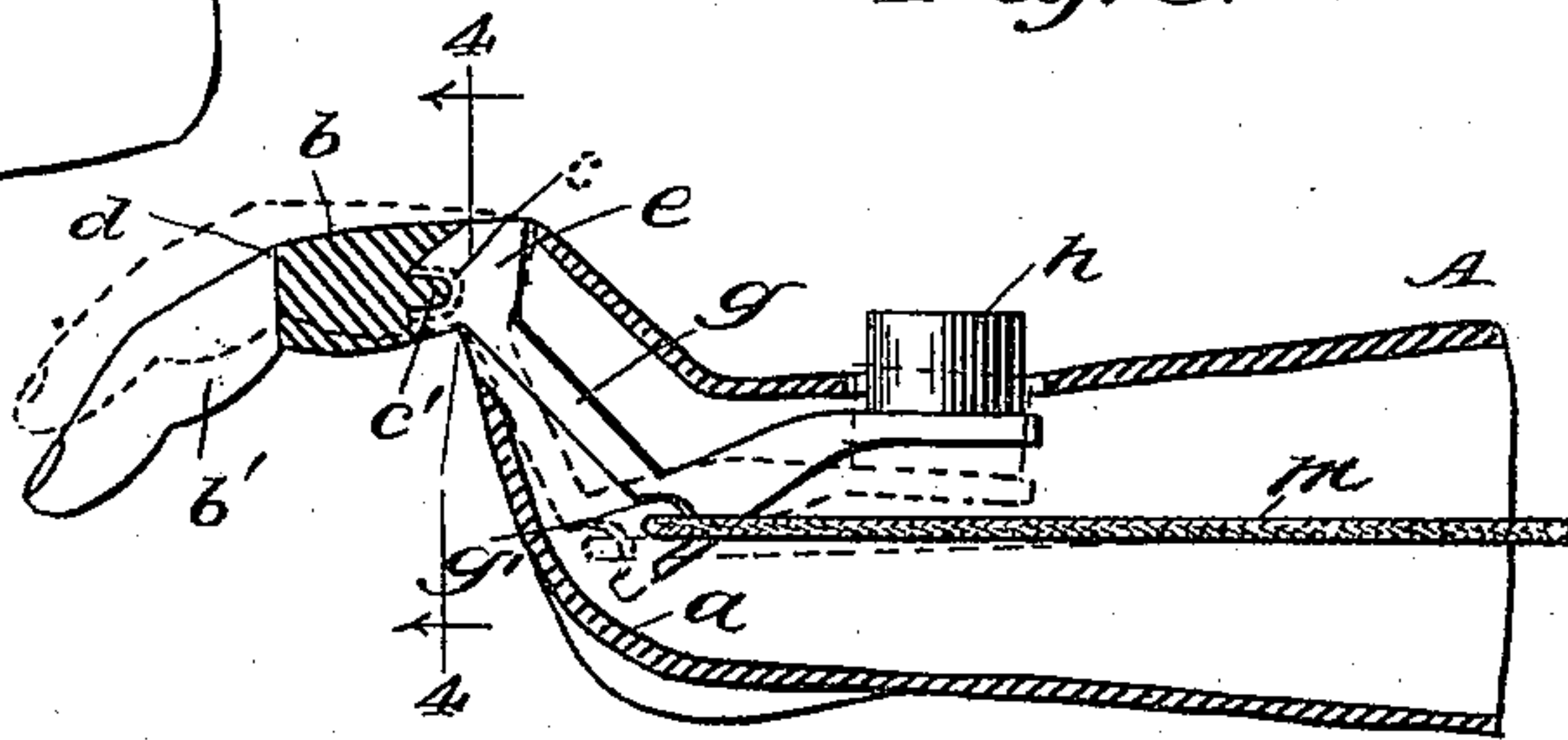
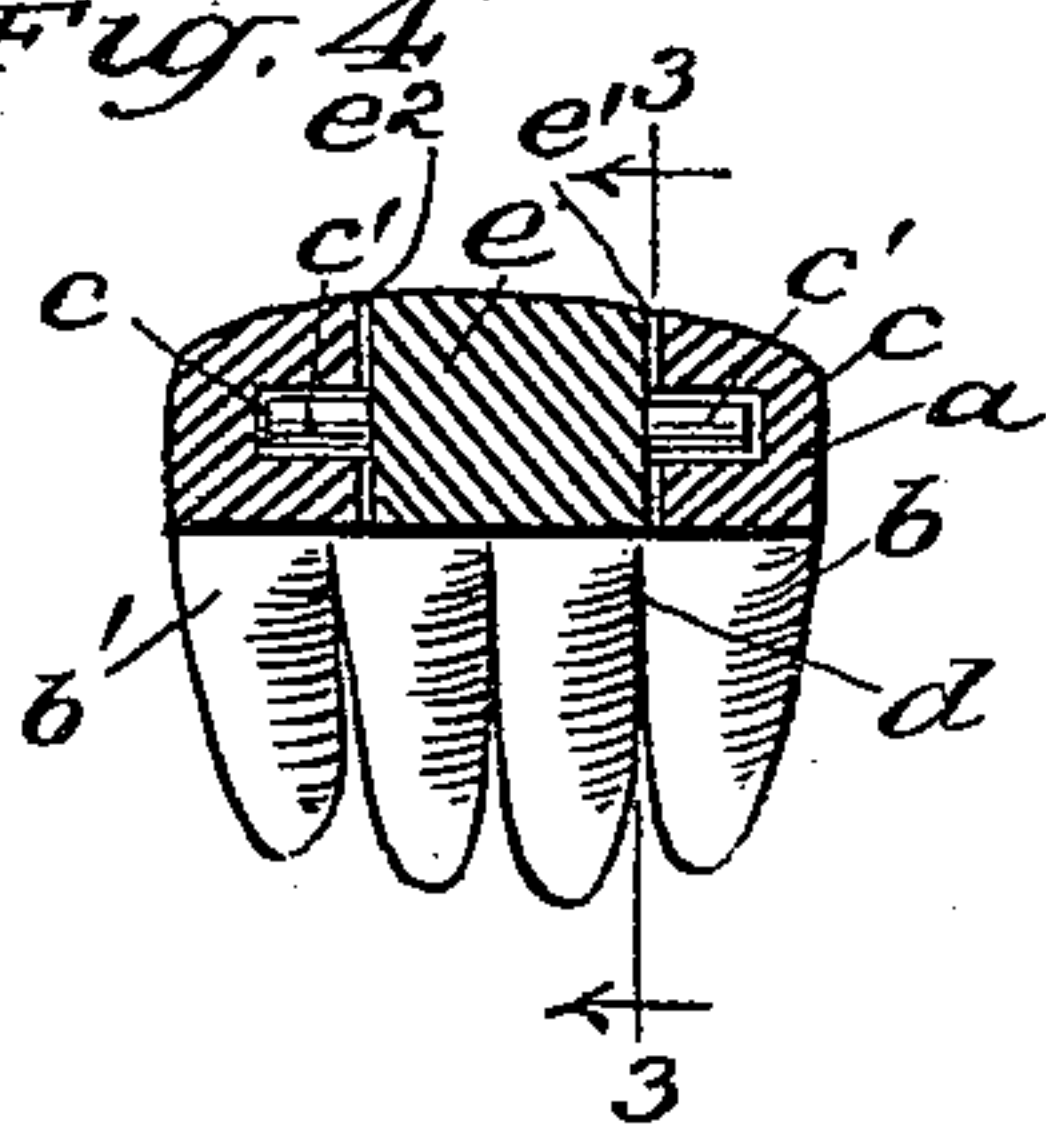


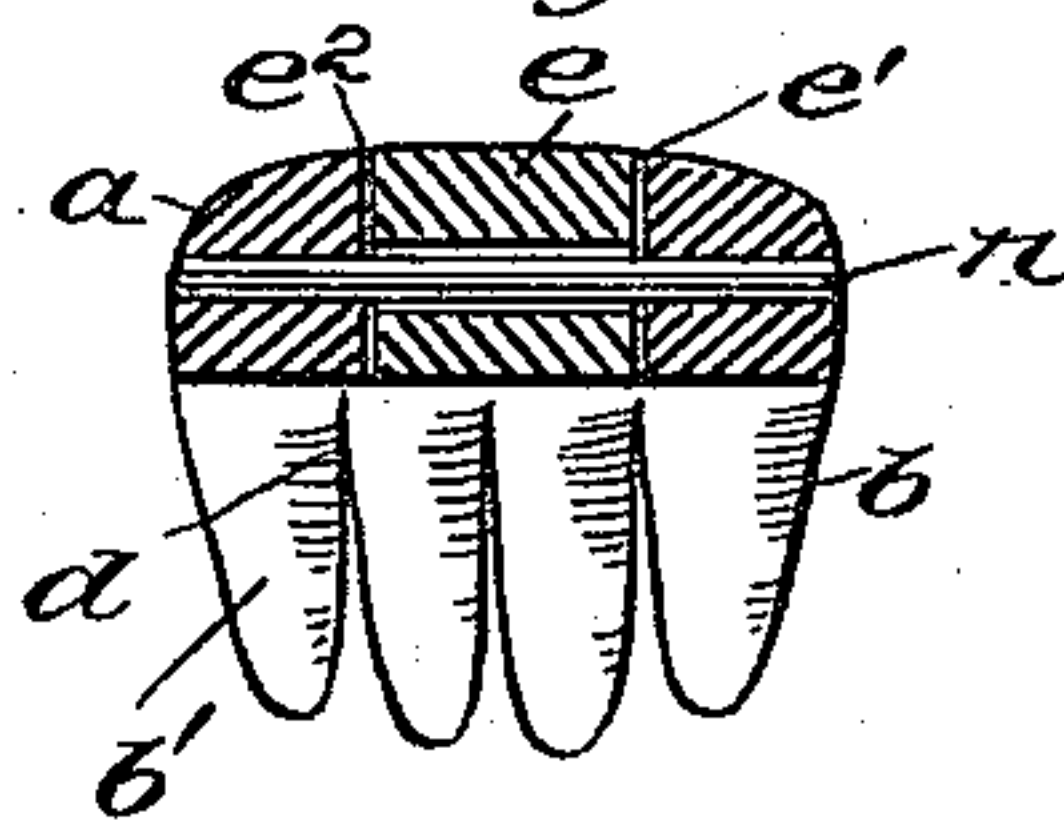
Fig. 4.



WITNESSES:

J. A. Griswold
C. Sedgwick

Fig. 5.



INVENTOR:

M. W. Alderson
BY *Munn & Co*

ATTORNEYS

UNITED STATES PATENT OFFICE.

MATTHEW W. ALDERSON, OF BOZEMAN, MONTANA, ASSIGNOR TO THE
AMERICAN DOLL COMPANY, OF NEW YORK, N. Y.

HAND FOR DOLLS.

SPECIFICATION forming part of Letters Patent No. 440,986, dated November 18, 1890.

Application filed January 22, 1890. Serial No. 337,709. (No model.)

To all whom it may concern:

Be it known that I, MATTHEW W. ALDERSON, of Bozeman, in the county of Gallatin and State of Montana, have invented a new and
5 useful Improvement in Hands for Dolls, of which the following is a full, clear, and exact description.

My invention relates to an improvement in dolls' hands, and has for its object to provide
10 such members of a doll with jointed or movable fingers, whereby the hands may be made to hold various articles.

To this end my invention consists in certain features of construction and combinations of parts, as is hereinafter described, and
15 indicated in the claims.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar letters of reference indicate
20 corresponding parts in all of the figures.

Figure 1 is a front elevation of the upper portion of a doll's body, partly in section, with the improved hands connected to its arms. Fig. 2 is an enlarged detached view of the
25 hand and forearm of a doll embodying the improvement. Fig. 3 is a longitudinal section of the hand and broken forearm, taken on the line 3 3 in Fig. 4. Fig. 4 is a transverse section of the improved hand, taken on the line 4 4 in
30 Fig. 3, showing the preferred form of joint of the fingers to the palm of the hand; and Fig. 5 represents a transverse section of the hand through the major knuckle-joints, showing a different means of pivotally connecting the
35 fingers to the palm.

The hands of the doll are preferably made integral with the forearms, dispensing with wrist-joints, the forearms A being made hollow, of any suitable material, papier-maché
40 being preferred.

The palm *a* of the hand is produced by an upward inclination of the material of the forearm, properly shaped, the upper and lower walls of the same converging to produce a
45 throat, where the finger-section *b* is jointed thereto.

In Fig. 4 the preferred form for the knuckle-joint attachment of the finger-section *b* to the palm *a* is shown. This consists in forming
50 opposite aligning recesses *c* in the side walls

of the palm portion *a*, of a proper size and rearward inclination to receive projecting rounded tongues *c'*, formed on the finger-section *b*, and loosely support said section, so that it may rock thereon.

The fingers are formed of one piece of material and are bent as shown in Fig. 3, they being separated slightly from the second joints *d* to the tips to give them a natural appearance. Rearwardly from the joints *d* the
55 fingers are integral, that all may be pivotally supported by the projecting tongues *c'*, as before mentioned. The joint portion *e* of the finger-section *b* is shaped so as to look natural and fill the space between the parallel
60 vertical shoulders *e'* *e''* of the rearwardly-cut slot produced in the top wall of the hand, said joint-piece *e* being rearwardly and downwardly extended, as a limb *g*, to a point *g'*,
65 (see Fig. 3,) where said limb is bent upwardly, so as to bear against the inner surface of the top wall of the forearm A, opposite a perforation in the same, through which a push-button *h* on said limb projects when the fingers
70 are in normal position.

At a proper point to simulate a natural member the thumb *i* is projected from the side wall of the hand, which thumb is bent upwardly at a suitable point to represent a proper flexure of the member and project it
75 so that the partially-bent finger-section *b* will impinge upon it, the first finger *b'* and one next to it engaging the thumb, as represented in Fig. 2.

The improved hands are preferably used
85 in connection with a doll having joints in its arms, as represented in Fig. 1, the parts being shaped to permit flexure in different directions, there being ball-and-socket joints formed at proper points to represent elbow
90 and shoulder articulations.

As a means for connecting the portions of the arms so that they may be moved and remain where adjusted, the elastic cords *m* are provided, preferably doubled strands being employed.
95

No claim is made for the construction of the arms nor their flexible elastic connection, as this is already in use. The manner of utilizing the elastic cords *m* for operating the
100

jointed hands is one of the important features of this improvement, which will be explained.

The elastic cords *m* being doubled, the bight in each strand is hooked over or into a notch cut at the angle *g'* in the limb *g* of each hand, and the opposite terminals of said strands or cords are drawn through the hollow sections of the arms and into the body B, where they are secured together, they being stretched taut, so as to hold all the joints intact and the finger-sections *b* drawn down upon the thumbs *i*.

It is obvious that if a proper degree of elasticity is afforded the cords *m* the hands will be closed and so retained when the arms of the doll are bent to assume any desired position, and to open the fingers by elevating the finger-sections *b* said sections may be rocked upwardly on their tongue-and-socket supports by depression of the push-buttons *h*, as shown in dotted lines in Fig. 3.

In Fig. 5 a modified form of rocking joint for the finger-section *b* is shown. This consists in introducing a pin *n* through a transverse perforation formed in the palm portion and finger-section of the hand, thus hinging these two parts together. The provision made for upward-rocking movement of the finger-sections *b* and automatic retraction of the same affords means to insert and retain any small article in the doll's hands, so that a fan, porte-monnaie, reticule, grip-sack, or any other article of suitable dimensions may be held in any desired position by the hands of the doll and be removed at will.

There may be slight changes made in the construction of my improved hand which will manifestly fall within the scope of my

invention—as, for example, the fingers may be separated and each have a limb *g*, which will engage one or more elastic cords *m*, or this cord may be non-elastic and a coiled spring be introduced at some point in the body or arms of the doll to afford the requisite resilience and tensional strength to the cords, whereby the same results will be secured as are afforded by elastic cords. Hence I do not restrict the construction to the exact forms shown.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. In a doll, the combination, with a jointed arm, of a pivotally-mounted finger-section and an elastic cord extending through the arm and normally maintaining said pivoted section in the closed position, substantially as described.

2. In a doll, a pivotally-mounted spring-actuated finger-section having a push-button for throwing said section against the action of the spring, substantially as described.

3. The combination, with the jointed arms of a doll's body, of a hand integral with the forearm, having a pivoted spring-actuated finger-section and a rigid thumb portion, a bent limb extending rearwardly from said finger-section within said forearm and provided with a push-button projecting outwardly from said forearm, and an elastic connection between said bent limb and said jointed arms, substantially as shown and described.

MATTHEW W. ALDERSON.

Witnesses:

EDGAR TATE,
E. M. CLARK.