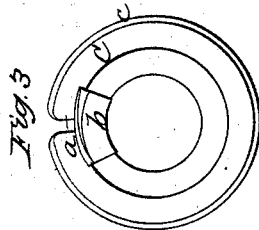
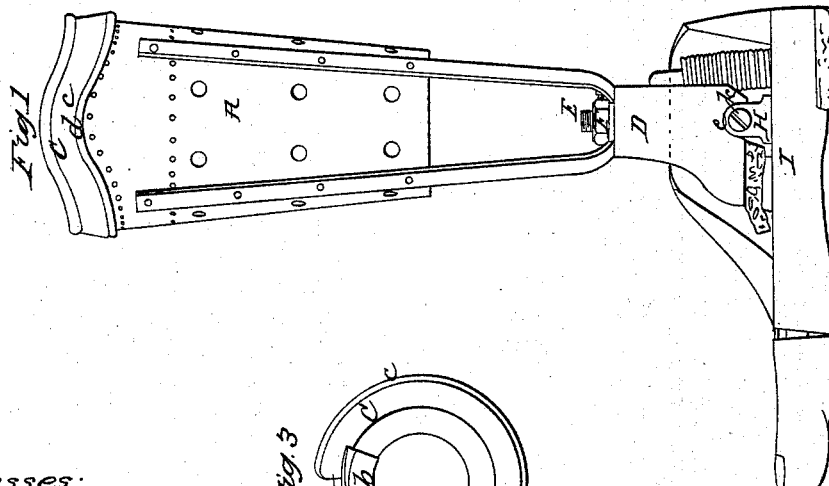
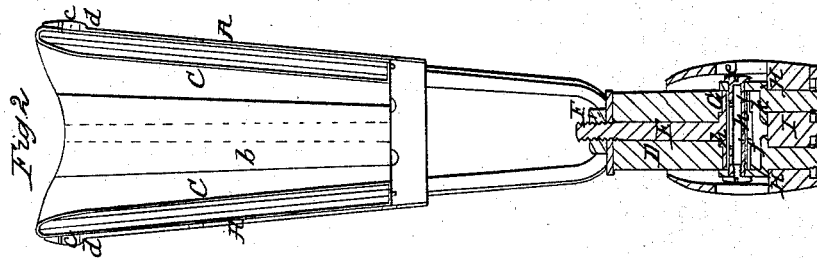
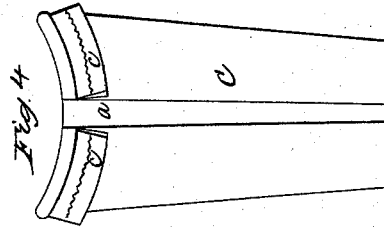


G. B. Jewett,

Artificial Leg,

Nº 49,529,

Patented Aug. 22, 1865.



Witnesses:

J. P. Hale Jr.
Fredrick C. Smith

Inventor:

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by his attorney
R. H. Ledy

UNITED STATES PATENT OFFICE.

GEORGE B. JEWETT, OF SALEM, MASSACHUSETTS.

IMPROVEMENT IN ARTIFICIAL LEGS.

Specification forming part of Letters Patent No. **49,529**, dated August 22, 1865.

To all whom it may concern:

Be it known that I, GEORGE B. JEWETT, of Salem, in the county of Essex and State of Massachusetts, have made a new and useful invention having reference to Artificial Legs; and I do hereby declare the same to be fully described in the following specification and represented in the accompanying drawings, of which—

Figure 1 is a side elevation, and Fig. 2 a transverse section, of an artificial leg constructed with my invention. Fig. 3 is a top view, and Fig. 4 a rear elevation, of the adjustable stump-cushion, to be hereinafter explained.

One portion of my invention consists in an improved pedestal-joint or ankle-joint, the same being made not only with a screw-pin, its holding-standards, and an encompassing pedestal tube or socket, but with an oil-chamber in the pin and an opening leading from the oil-chamber, as hereinafter explained; and my invention further consists in the combination and arrangement of a cap-screw with the ankle-joint made as above mentioned; and my invention further consists in the combination and arrangement of a shoulder or flange with a cushion or movable or soft socket of the permanent or rigid socket, as hereinafter explained; and my invention further consists in a mode of making the flange and the upper part of the rigid socket, whereby the auxiliary socket is prevented from turning around within the rigid socket while the apparatus may be in use; and my invention further consists in a peculiar construction of the cushion or soft socket—viz., with an opening from top to bottom of it and with an overlapping tongue to cover the same.

The advantages of my improved pedestal-joint or ankle-joint are to be found in its great strength and amount of bearing-surface, and in its ability to keep lubricated for a long period; also in the facility which it affords for its being readily supplied with oil for its lubrication.

The advantages incident to the improved movable soft socket are that its shoulder or flange, when resting on the top of the case or rigid socket, prevents the soft socket from being farther depressed within the case. Its side opening prevents the soft socket from being so pressed into the rigid socket as to ren-

der it difficult to separate them. The tongue-piece enables a wearer of the artificial leg to have the soft socket open in rear without danger of the flesh of the stump being pressed into the opening and becoming pinched therein. The opening enables the wearer, by means of one or more wrappers placed around the soft socket, to compress it more or less to accommodate it to the stump, as the latter may become reduced by absorption of its flesh.

Another great advantage of the improved soft socket, made as hereinafter described, is that when the stump of the leg of the wearer of the apparatus, as frequently occurs, is encumbered by loose flesh the socket, when removed from its case, can be opened or spread sufficiently to receive the stump, which, together with the soft socket, may next be introduced within the case or rigid socket. In this way I can effectually obviate the painful strain on the extremity of the stump incident to an attempt to force a mass of loose flesh down to its proper place in the socket. This very great advantage is conditioned on the opening, the tongue-piece, and the shoulder of the soft socket. It is altogether peculiar to my improved artificial leg, or one made with the movable soft socket to fit into a rigid socket and with such soft socket constructed in manner as hereinafter explained. By means of the soft socket so constructed a stump which may be larger at the extremity than at its middle can readily be placed in a proper position in the rigid socket, and this without pain or inconvenience.

In the accompanying drawings, A denotes the exterior case or rigid socket, which may be constructed of sheet metal and in manner as represented. Within this is the auxiliary or soft socket C, which is made of one or more layers of felt or other suitable yielding or elastic material covered with soft leather or other proper substance, the said soft socket being separate from the rigid socket and designed to fit the stump of a leg as nearly as possible. It is open in rear, or from top to bottom, as shown at *a*, and is provided with a leather tongue, *b*, which is attached to one side of the opening, and laps on or over the other side, so as to cover the opening, the said tongue being on the inner surface of the said socket C. Furthermore, the soft socket is provided with a

flange or shoulder, *c*, made at and around its upper part, and to project from its outer surface and rest and fit on the upper edge of the rigid socket, such rigid socket being rounded up at each of its opposite sides, in manner as shown at *d*, in order to protect the soft socket from being accidentally turned around within the rigid socket. Thus the shoulder or flange, with the so-projecting rounded parts of the top of the rigid socket, performs another useful function—viz., that of keeping the inner from turning around within the outer socket.

The rigid socket rises from a pedestal, *D*, to which it is connected by a screw-bolt, *E*, and a nut, *F*, screwed thereon, the same being as shown in the drawings. The bolt *E* at its lower end springs from the middle of a tube, *G*, whose ends are arranged between the standards *H H*, that project upward from the foot *I*. Extending through the standards and the tube *G* is a screw-pin, *K*, which is passed through one standard and screwed into the other, and is provided with a head, *e*, to rest against the first one. The said screw-pin is tubular—that is, it has an oil-chamber, *f*, formed within it—and provided with a cap-screw, *g*, which screws into its open end and performs two functions—viz., not only that of closing the end of the oil-chamber, but that of preventing the pin from becoming unscrewed accidentally from the next adjacent standard *H*.

A hole, *h*, leads laterally out of the chamber *f* and through the pin, in order to discharge

oil between the wearing or rubbing surfaces of the joint.

For the purpose of preventing wear of the joint the tube *G*, when made of iron, may be bushed with a tube, *i*, of some other metal—as brass, for instance.

What I claim as my invention in the above-described apparatus is as follows, viz:

1. The improved ankle-joint, made with the screw-pin *K*, its holding-standards *H H*, encompassing-tube *G*, and the oil-chamber, arranged within the pin and provided with a discharging-opening, *h*, as explained.

2. The combination and arrangement of the cap-screw *F* with the ankle-joint as constructed, substantially as hereinbefore described.

3. The combination of the shoulder or flange *c* with the auxiliary socket *C*.

4. The combination of the raised projections of the top of the rigid socket with the auxiliary socket and its flange or shoulder, the same being for the purpose explained.

5. The construction of the auxiliary socket *C* with the opening *a*, or the same and the tongue *b*, arranged as set forth.

6. The auxiliary or soft socket, as made with the shoulder or flange *c*, the opening *a*, and the flap or tongue *b*, arranged substantially as described.

GEO. B. JEWETT.

Witnesses:

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