

(No Model.)

W. C. ULMER & T. E. McNAMARA.
ARTIFICIAL ARM.

No. 423,840.

Patented Mar. 18, 1890.

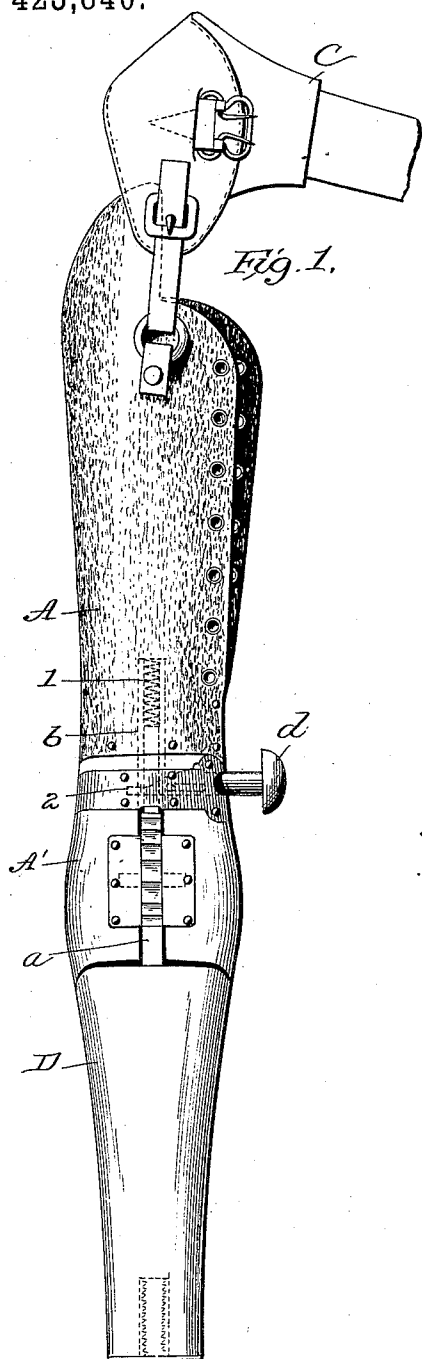


Fig. 2.

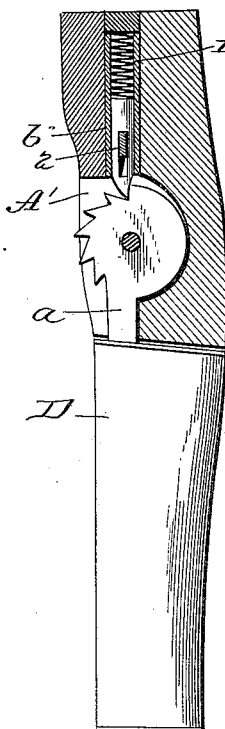
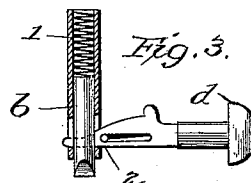


Fig. 3.



Attest
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UNITED STATES PATENT OFFICE.

WILBERT C. ULMER AND TIMOTHY E. McNAMARA, OF ROCKLAND, MAINE.

ARTIFICIAL ARM.

SPECIFICATION forming part of Letters Patent No. 423,840, dated March 18, 1890.

Application filed January 11, 1890. Serial No. 336,689. (No model.)

To all whom it may concern:

Be it known that we, WILBERT C. ULMER and TIMOTHY E. McNAMARA, of Rockland, in the county of Knox and State of Maine, have invented a new and useful Improvement in Artificial Arms; and we do hereby declare that the following is a full, clear, and exact description of the same.

Our invention is an improved artificial arm; and its object is to produce, in the first place, an arm composed of two parts, the lower part being of wood and the upper part, which is adapted to be joined to the shoulder and stump on the amputated arm, of felt or like material.

A second object is to provide the arm with a joint which may be readily operated by the person using the arm, so as to raise or lower the end of the arm to carry articles to the mouth without necessitating the use of the other arm, thus making the invention particularly desirable for the use of persons who have sustained the loss of both arms.

The invention is shown in the accompanying drawings, in which Figure 1 is a side elevation of the arm, and Fig. 2 a partial section of the same, showing the operating parts. Fig. 3 is a detail view of the spring-bolt and push-button.

In the drawings the arm is represented as adapted for use by a person having the stump of an amputated arm remaining, the amputation being above the elbow, and our invention aims to provide a construction of arm which will have substantially the same action as the elbow-joint in the human arm. The arm is composed of wood, which is preferably of the lighter kind and felt or like material, this latter material being shown at A as fastened to the part A', which is composed of wood, and the upper part of the felt portion is curved around to fit the shoulder, the stump fitting within the recess formed above the wooden part A' by the tubular form of the felt. The felt portion is cut down one side and is provided with eyelets, so that after the stump is inserted the portions of the felt may be drawn together by lacing to make a close fit. A bracing-strap, as shown at C, is secured to the felt to give further support to the arm. The lower part of the arm is made in two parts, the forearm being shown at D. This has a screw-threaded socket in its lower end, and

in this may be secured any article of cutlery for the use of the person wearing the arm. The forearm is pivoted to the part A' by means of a pin passing through the circular head of a shank *a*, this head being provided with teeth on its periphery forming a ratchet-wheel. The end of the shank is suitably secured in the end of the forearm. The elbow part A' is slotted on its upper face to receive the end of the shank and the ratchet and to allow movement of the forearm on its pivot-pin. In rear of the slot in the part A' a recess is bored, which receives a tube *b*, having a spring 1 in the rear end and a catch-bolt in the front end, the bolt being normally under the pressure of the spring and thus pressed outward to engage the teeth of the ratchet-wheel. The end of the catch-bolt is inclined, so as to offer no obstruction to the upward movement of the forearm, but prevents its downward movement. The catch-bolt is slotted, as is also the wall of the tube, and through these slots pass the end of a push-button *d*, which is inclined as shown in the figure, so that as this button is pushed in the inclined side acts upon the bottom of the slot in the catch-bolt, and as the incline increases as the button is pushed in, the bolt is pushed back and the forearm released.

We claim as our invention—

1. An artificial arm composed of a lower wooden portion made in two parts and an upper portion composed of felt or like material in tubular form, substantially as described.

2. In an artificial arm, a shoulder-piece, and a forearm pivoted thereto so as to be moved freely to bend the same, and a pawl-and-ratchet connection for preventing its downward movement, substantially as described.

3. In combination with the shoulder part, forearm pivoted to the shoulder part to have free upward movement, means for limiting its downward movement, and a push-button for controlling the downward movement, substantially as described.

In testimony whereof we have signed our names to this specification in the presence of two subscribing witnesses:

W. C. ULMER.
TIMOTHY E. McNAMARA.

Witnesses:

A. A. BEATON,
E. R. CHAPLES.