

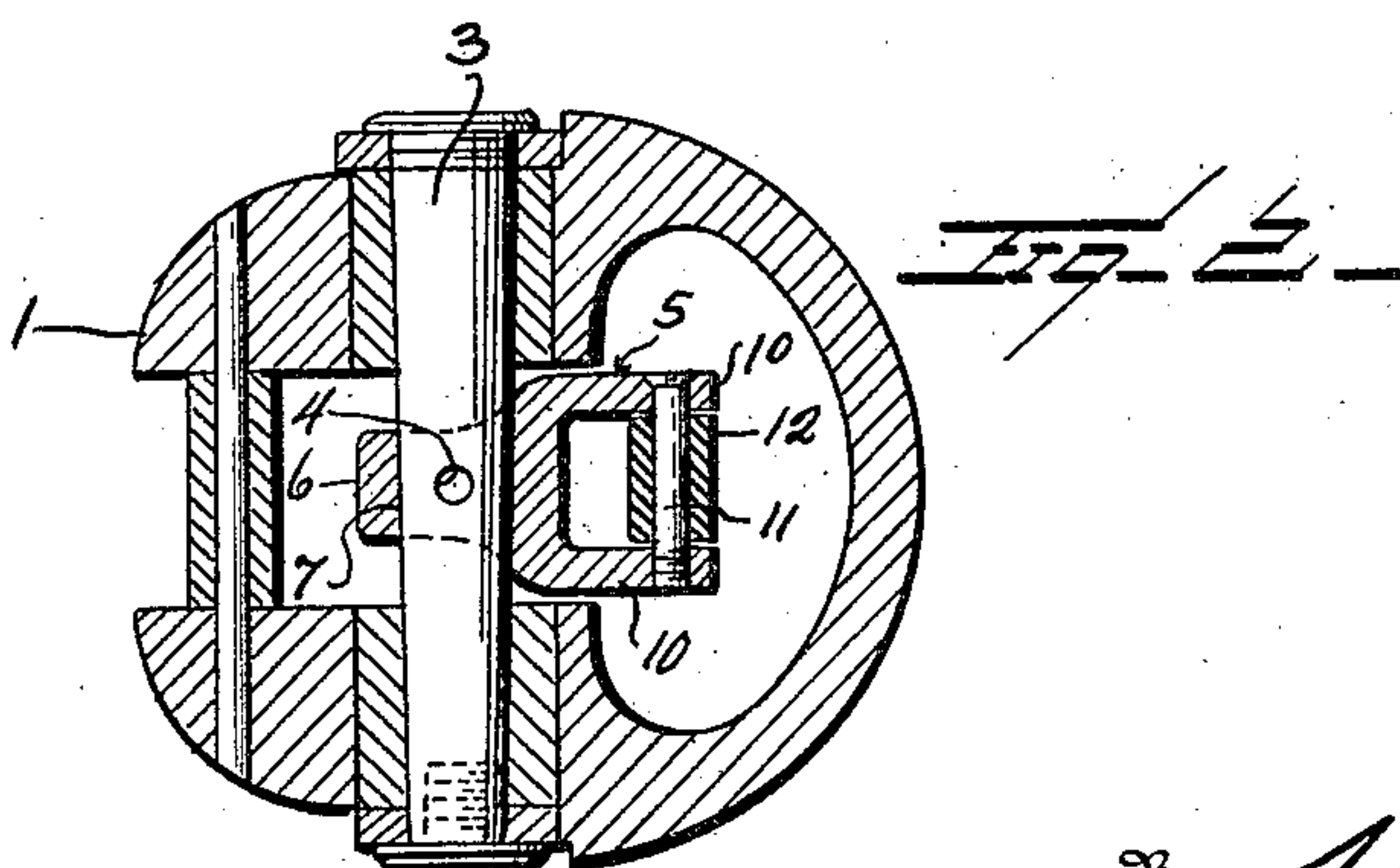
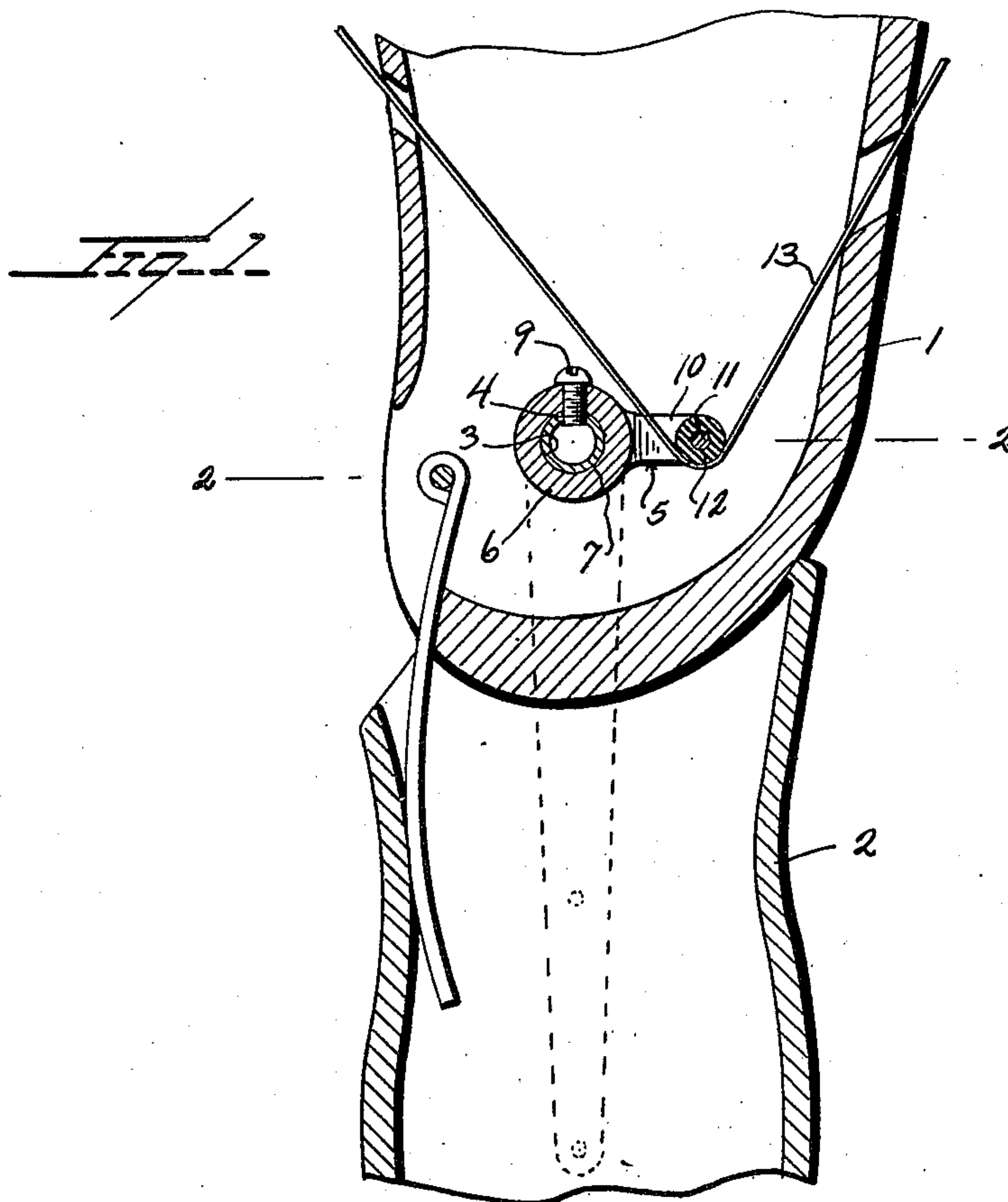
June 19, 1923.

1,459,235

W. E. MORRISON ET AL

ARTIFICIAL LEG

Filed Jan. 13, 1923



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UNITED STATES PATENT OFFICE.

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ARTIFICIAL LEG.

Application filed January 13, 1923. Serial No. 612,498.

To all whom it may concern:

Be it known that we, WILLIAM E. MORRISON and KALLE KORPELAINEN, citizens of the United States, residing at Harrisburg, in the county of Dauphin and State of Pennsylvania, have invented certain new and useful Improvements in Artificial Legs, of which the following is a specification, reference being had to the accompanying drawings.

This invention relates to certain improvements in artificial legs of a type for use in connection with an amputation above the knee, and it is an object of the invention to provide a device of this general character with a novel and improved inside knee control.

Another object of the invention is to provide a novel and improved inside knee control for an artificial leg comprising a lever or arm having a predetermined fixed position upon the knee bolt and which arm or lever is provided with means affording a convenient and effective engagement with the suspender.

Furthermore, it is an object of the invention to provide a novel and improved knee control adapted to be directly engaged with the knee bolt and wherein said knee bolt is tapered from one end to the other for insertion through a tapered collar comprised in the lever or arm with which the suspender coacts.

The invention consists in the details of construction and in the combination and arrangement of the several parts of our improved artificial leg whereby certain important advantages are attained and the device rendered simpler, less expensive and otherwise more convenient and advantageous for use, as will be hereinafter more fully set forth.

The novel features of our invention will hereinafter be definitely claimed.

In order that our invention may be the better understood, we will now proceed to describe the same with reference to the accompanying drawings, wherein:—

Figure 1 is a view partly in section and partly in elevation illustrating an artificial leg constructed in accordance with an embodiment of our invention; and

Figure 2 is a sectional view taken substantially on the line 2—2 of Figure 1.

As disclosed in the accompanying draw-

ings, 1 denotes the socket or thigh section of an artificial leg, and 2 denotes the lower leg or shin section, said sections 1 and 2 being of any ordinary or preferred construction and pivotally connected through the instrumentality of the knee bolt 3. The sections 1 and 2 are otherwise connected in the conventional manner. The bolt 3 is tapered from one end to the other, and as herein disclosed said bolt 3 is tubular.

At substantially its longitudinal center, a wall of the bolt 3 is provided therethrough with a threaded opening 4, which opening positively determines the location of the lever or arm 5 with respect to the bolt 3. The arm or lever 5 comprises a sleeve or collar 6 having a tapered bore 7 which snugly receives the bolt 3 when the arm or lever 5 is in desired position upon the bolt 3. Threaded through the wall of the sleeve 8 is a holding screw 9 which, when threaded inwardly, extends through the opening 4 whereby the arm or lever 5 is effectively maintained in desired position upon the knee bolt 3.

Extending outwardly from the sleeve or collar 6 are the parallel arms 10 spaced in a direction lengthwise of the bolt 3. Connecting the outer ends of the arms 10 is a pin 11, said pin being freely disposed through one of the arms 10 but in threaded engagement with the second of said arms whereby the pin can be readily removed or applied when desired. Snugly fitting between the arms 10 and loosely mounted on the pin 11 is a roller 12 preferably of hard fiber and with which is adapted to be engaged a suspender 13.

The inside knee control as comprised in the arm or lever 5 results in a structure which is free of rattle and one which can be readily applied in working position and effectively maintained in such position. The lever or arm 5 is also rigid in structure and is of particular advantage in a device of this character in view of the simplicity of construction. The control as herein disclosed is also of particular advantage in view of the fact that the arm or lever 5 is secured to the knee bolt 3 in a predetermined fixed position so that derangement of the arm or lever 5 from its desired location is prevented. In other words, the applied arm or lever 5 is not adjustable.

From the foregoing description it is thought to be obvious that an artificial leg

constructed in accordance with our invention is particularly well adapted for use by reason of the convenience and facility with which it may be assembled and operated, and it will also be obvious that our invention is susceptible of some change and modification without departing from the principles and spirit thereof and for this reason we do not wish to be understood as limiting ourselves to the precise arrangement and formation of the several parts herein shown in carrying out our invention in practice except as hereinafter claimed.

We claim:—

1. In an artificial leg, the combination with a knee bolt pivotally connecting the thigh section and the lower leg section, a lever provided at one end with a sleeve through which the knee bolt extends, a member threaded through the wall of the sleeve, said bolt being provided with an opening to receive said member whereby the lever is positively held at a fixed position upon the knee bolt, and integral parallel arms ex-

tending outwardly from the sleeve and spaced in a direction lengthwise of the knee bolt, and a roller supported by and between the arms, said roller being adapted to have operative engagement with a suspender.

2. In an artificial leg, the combination with a knee bolt pivotally connecting the thigh section and the lower leg section, a lever provided at one end with a sleeve through which the knee bolt extends, a member threaded through the wall of the sleeve, said bolt being provided with an opening to receive said member whereby the lever is positively held at a fixed position upon the knee bolt, and integral arms extending outwardly from the sleeve and spaced in a direction lengthwise of the knee bolt, and a roller supported by and between the arms, said roller being adapted to have operative engagement with a suspender.

In testimony whereof we hereunto affix our signatures.

WILLIAM E. MORRISON.
KALLE KORPELAINEN.