

No. 644,464.

Patented Feb. 27, 1900.

J. F. ROWLEY.
ARTIFICIAL LIMB SUSPENDER.

(Application filed July 15, 1899.)

(No Model.)

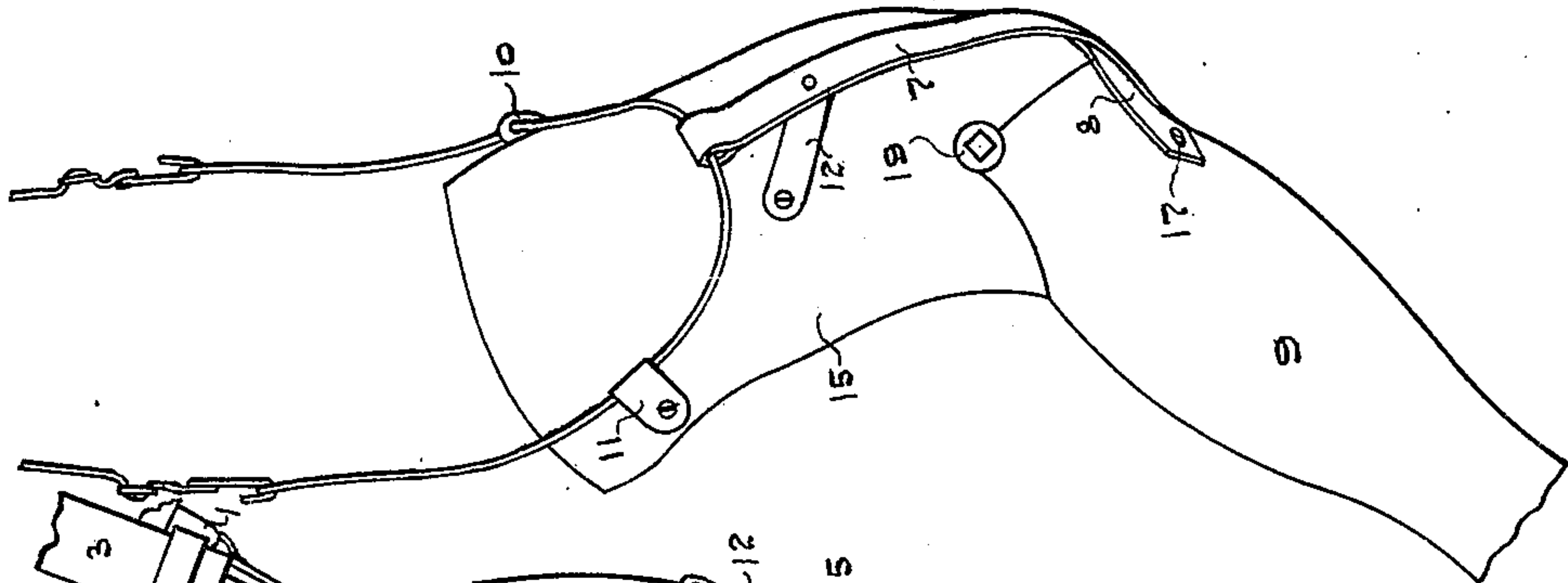


FIG. 4.

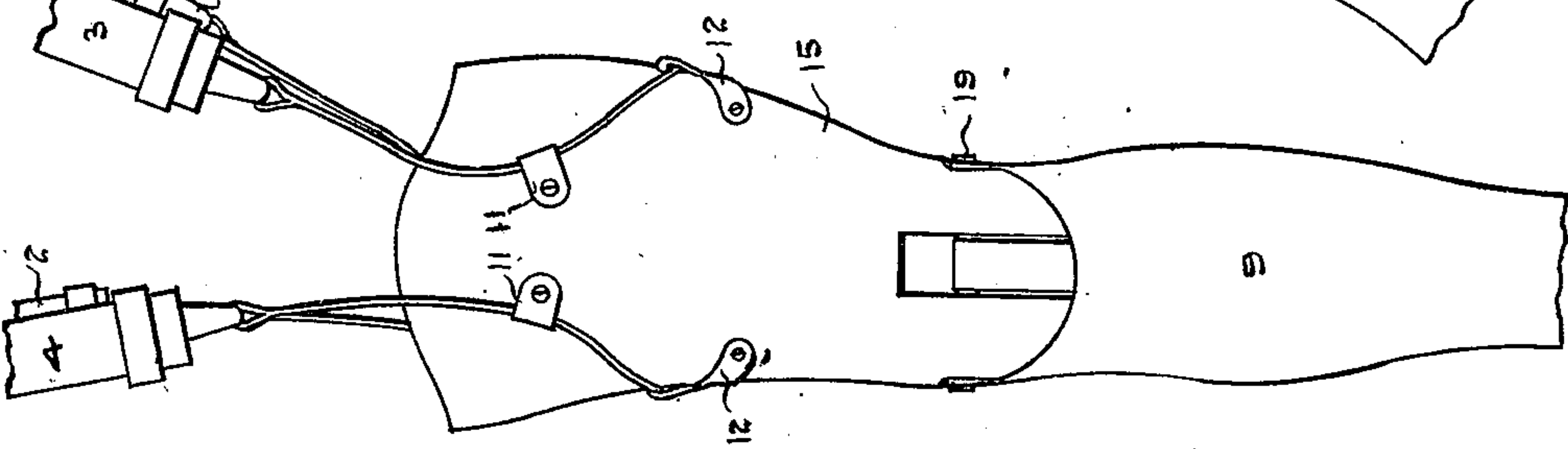


FIG. 3.

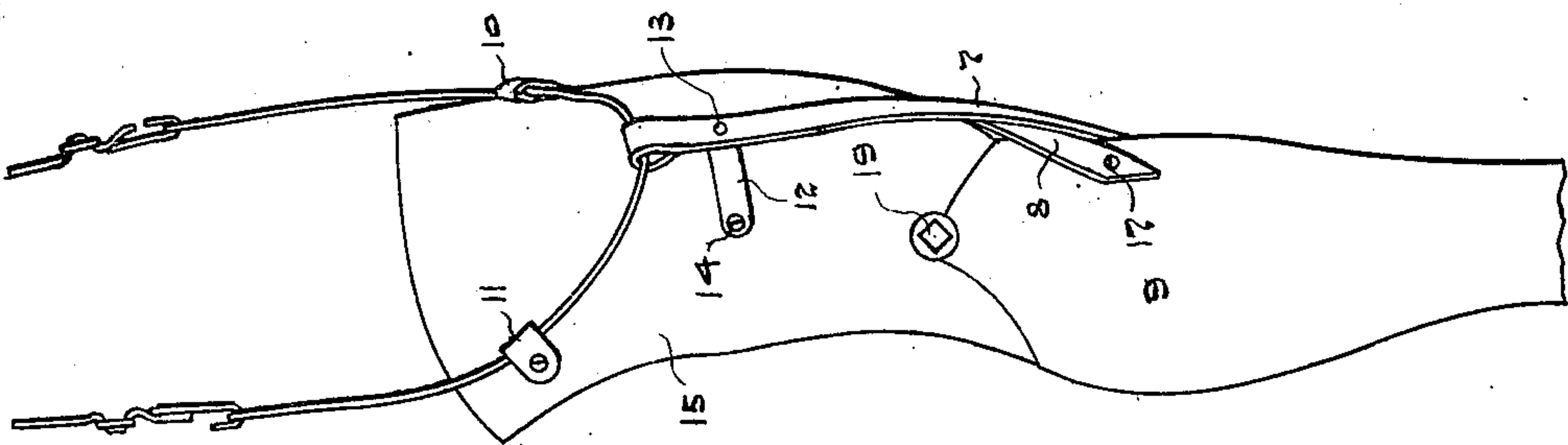


FIG. 2.

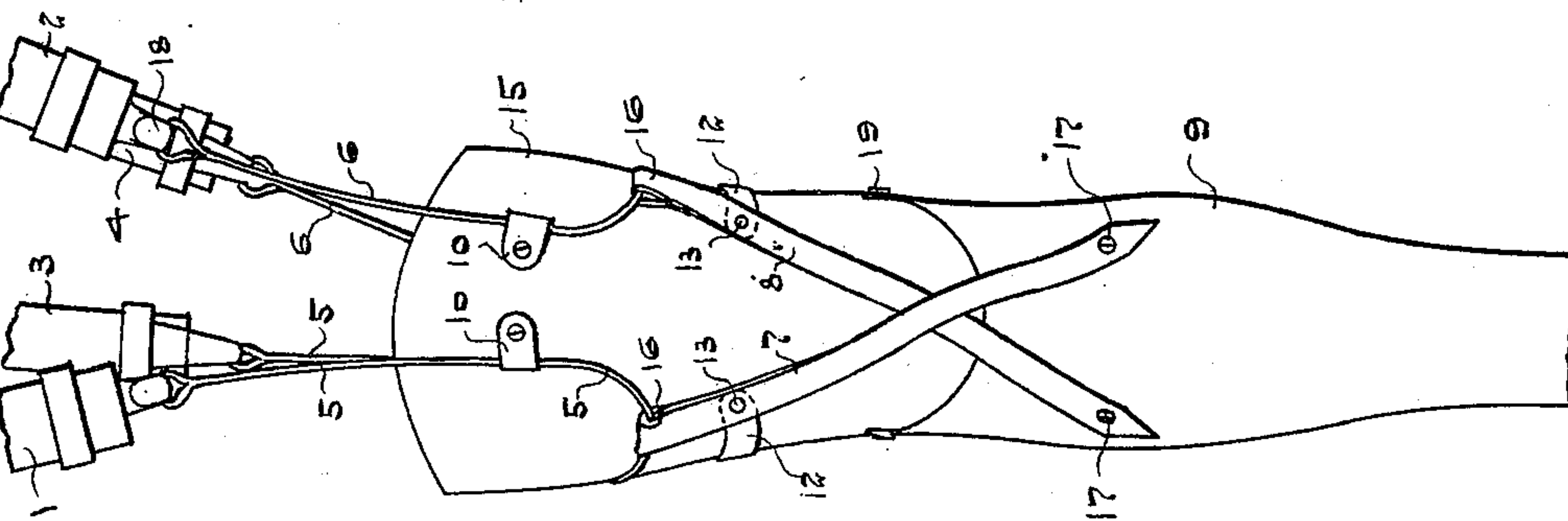


FIG. 1.

WITNESSES:

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UNITED STATES PATENT OFFICE.

JAMES F. ROWLEY, OF CHICAGO, ILLINOIS.

ARTIFICIAL-LIMB SUSPENDER.

SPECIFICATION forming part of Letters Patent No. 644,464, dated February 27, 1900.

Application filed July 15, 1899. Serial No. 723,928. (No model.)

To all whom it may concern:

Be it known that I, JAMES F. ROWLEY, a citizen of the United States of America, and a resident of the city of Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Artificial-Limb Suspenders, of which the following is a specification.

My invention relates to suspenders for artificial limbs, and has particular reference to the attachment for operating the leg below the knee-joint.

The main object of my invention is to provide an improved arrangement of suspenders whereby the wearer can straighten the limb or move the leg-section forward by a movement of his shoulders or body and which will support the thigh-section in proper position upon the stump of the wearer, either when his body is in a stooping position or in an erect position. I accomplish this object by the device illustrated in the accompanying drawings, in which—

Figure 1 is a front elevation of a limb and suspenders constructed according to my invention. Fig. 2 is a side elevation of same. Fig. 3 is a rear elevation, and Fig. 4 is a side elevation, showing the leg bent backwardly below the knee-joint.

The suspender consists of the front shoulder-straps 1 and 2, the rear shoulder-straps 3 and 4, the loop 5, connecting the straps 1 and 3, the loop 6, connecting the straps 2 and 4, and the members 7 and 8, slidingly engaging said loops and secured to the leg-section 9.

The thigh-section 15 is provided with guides 10 and 11, through which the loops pass. The members 7 and 8 are flexible straps, each having a link or guide 12 pivoted thereto at 13 and pivoted to the thigh-section at 14.

The members 7 and 8 are provided at their upper ends with loops 16, loosely engaging the loops 5 and 6, so as to permit the free sliding movement of the latter. The loops or guides 10 and 11 likewise loosely engage the loops 5 and 6, so as to permit a free sliding movement of same. The straps 7 and 8 are pivotally secured to the leg-section 9 at 17. The loops 5 and 6 are secured to the shoulder-straps by the hooks 18.

The operation of the device is as follows: When the wearer stands in an erect position,

the shoulder-straps, through the loops 5 and 6, will draw upwardly on the members 7 and 8 and thereby pull the leg-section toward the forward limit of its pivotal movement at 19 on the thigh-section. This position is shown in Figs. 1, 2, and 3. When the wearer bends forward slightly or lowers his shoulders or raises the thigh-section, as in the act of walking, the shoulder-straps will cease to draw on the members 7 and 8, thereby permitting the leg-section 9 to move backwardly on its pivotal center at 19. To straighten the leg-section or bring same forward to its former position, the wearer need only straighten his body or raise the shoulders, so as to draw on the members 7 and 8.

In any position of the leg the free forward-and-backward movement of the body is not interfered with, since the loops 5 and 6 will slide freely through the guides 10 and 11 and through the loop 16. The purpose of the links 12 is to prevent the members 7 and 8 from moving too far toward either side; but, as will be seen, their pivotal connection permits a free up-and-down movement of the upper parts of said members 7 and 8.

It will be seen that the details of construction of the different parts shown may be altered in numerous ways without departing from the spirit of my invention. I therefore do not confine myself to such details.

I am aware of patent to Reichenbach of January 12, 1864, and do not claim the construction therein shown.

What I claim as my invention, and desire to secure by Letters Patent, is—

1. The combination of an artificial limb comprising a thigh-section and a leg-section, pivotally connected together, a suspender comprising a loop slidingly connected to the leg-section independently of said pivotal connection and adapted to pass over and be supported on the shoulder of the wearer, and guides on said thigh-section slidingly engaging said loop; all arranged to swing the leg-section forward on its pivotal connection, through an upward tension on said loop.

2. The combination of an artificial limb comprising a thigh-section and a leg-section, pivotally connected together; a suspender comprising a strap secured to the front of the leg-section and extending upwardly upon the

thigh-section, movable thereon, and a loop
slidingly engaging said strap and adapted to
pass over and be supported on the shoulder
of the wearer; and guides on the thigh-section
5 slidingly engaging said loop; all arranged
to swing the leg-section forward on its piv-
otal connection, through an upward tension
on said loop.

3. The combination of an artificial limb
10 comprising a thigh-section and a leg-section,
connected together by a knee-joint; a pair of
guides on the thigh-section; a suspender, com-
prising a loop passing through said guides,
and slidingly engaged thereby, and connected
15 to the leg-section, independent of said joint
connection, at a part of said loop intermedi-
ate of said guides; the upper end of said loop
being adapted to pass over and be supported
on the shoulder of the wearer.

4. The combination of an artificial limb 20
comprising a thigh-section and a leg-section,
connected together by a knee-joint; a pair of
guides on the thigh-section; a suspender, com-
prising a loop passing through said guides,
and slidingly engaged thereby; a strap con- 25
nected to the leg-section, independent of said
joint connection, and engaging said loop at
a part intermediate of said guides; the upper
end of said loop being adapted to pass over
and be supported on the shoulder of the 30
wearer.

Signed by me at Chicago, Illinois, this 13th
day of July, 1899.

JAMES F. ROWLEY.

Witnesses:

JOHN D. BARKHURST,

WM. R. RUMMLER.