

No. 708,251.

O. L. OWEN.  
LOOM.

Patented Sept. 2, 1902.

(Application filed Nov. 14, 1901.)

(No Model.)

Fig. 1.

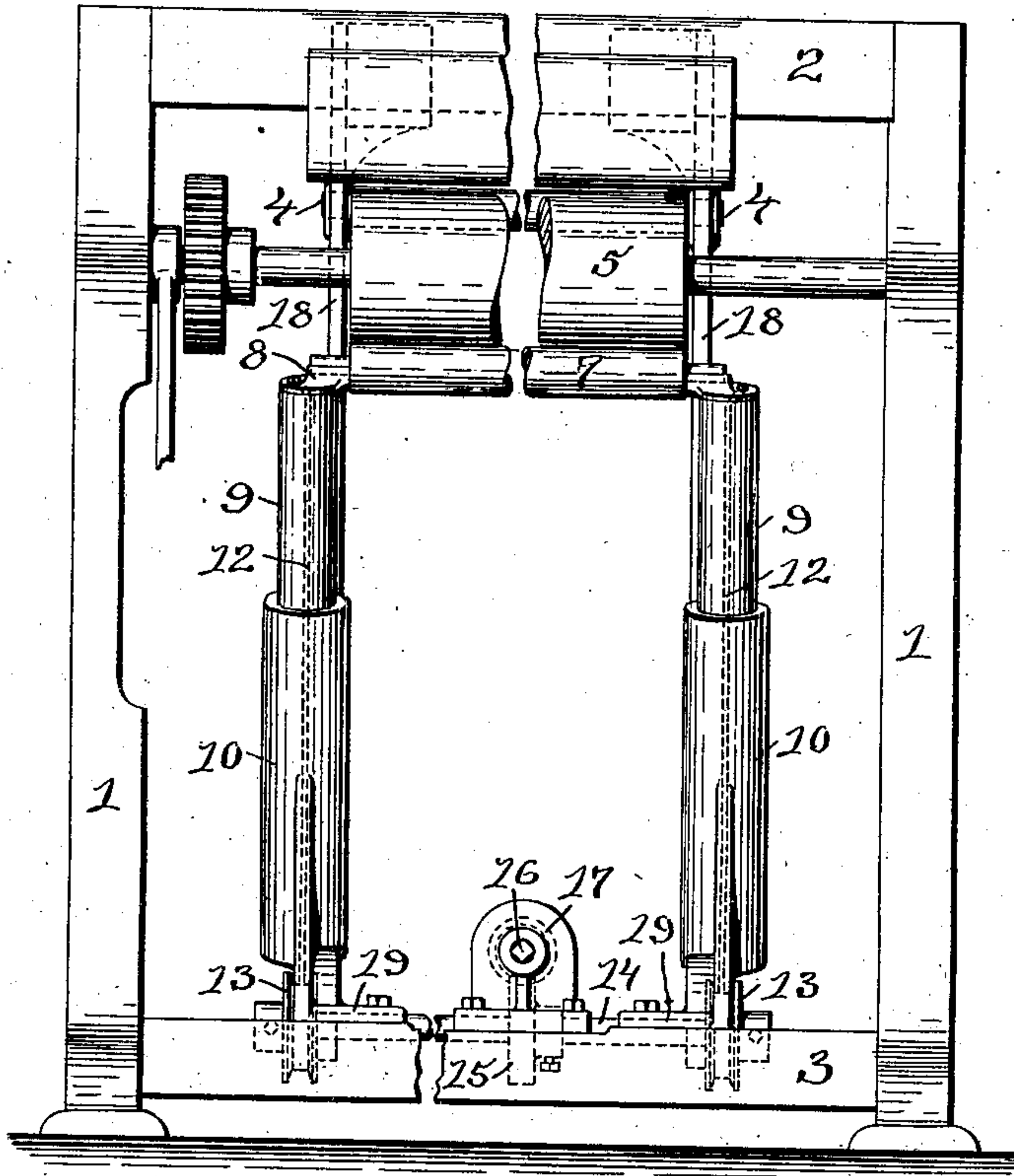


Fig. 2.

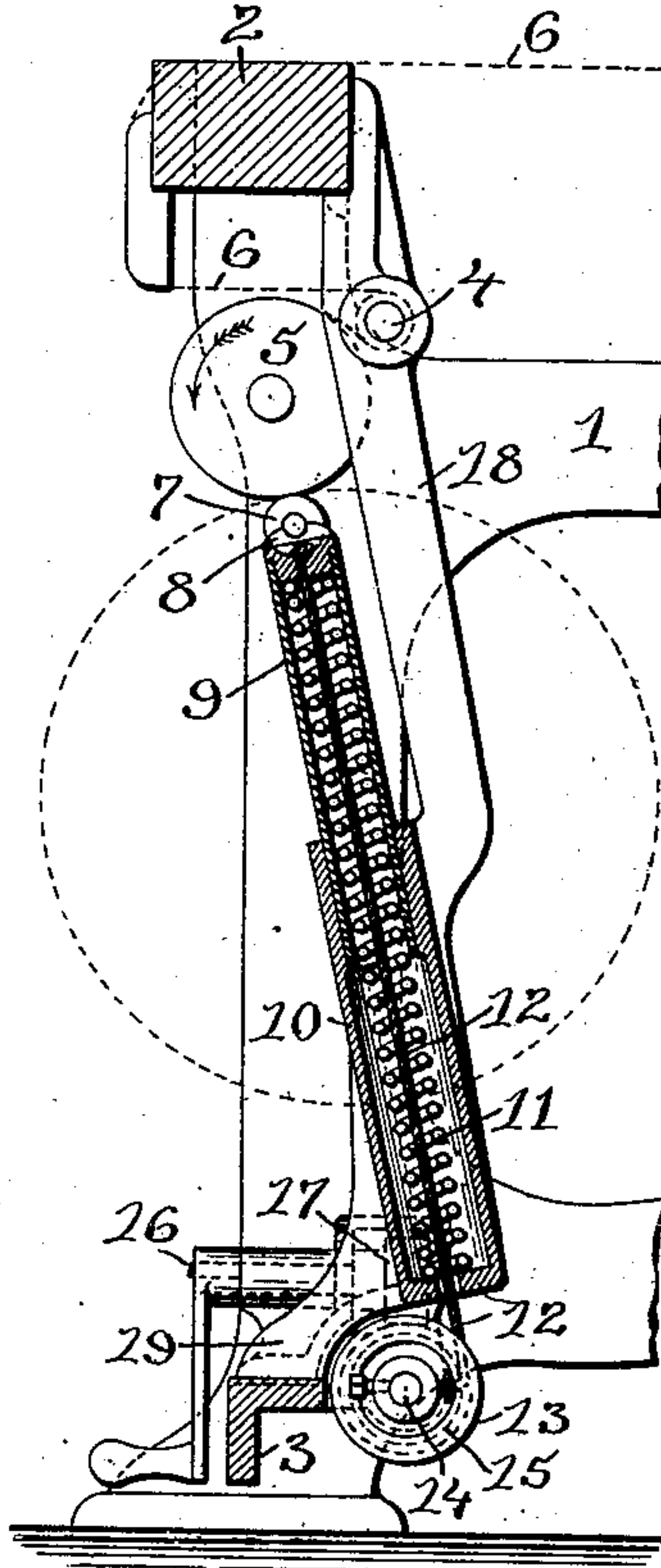


Fig. 3.

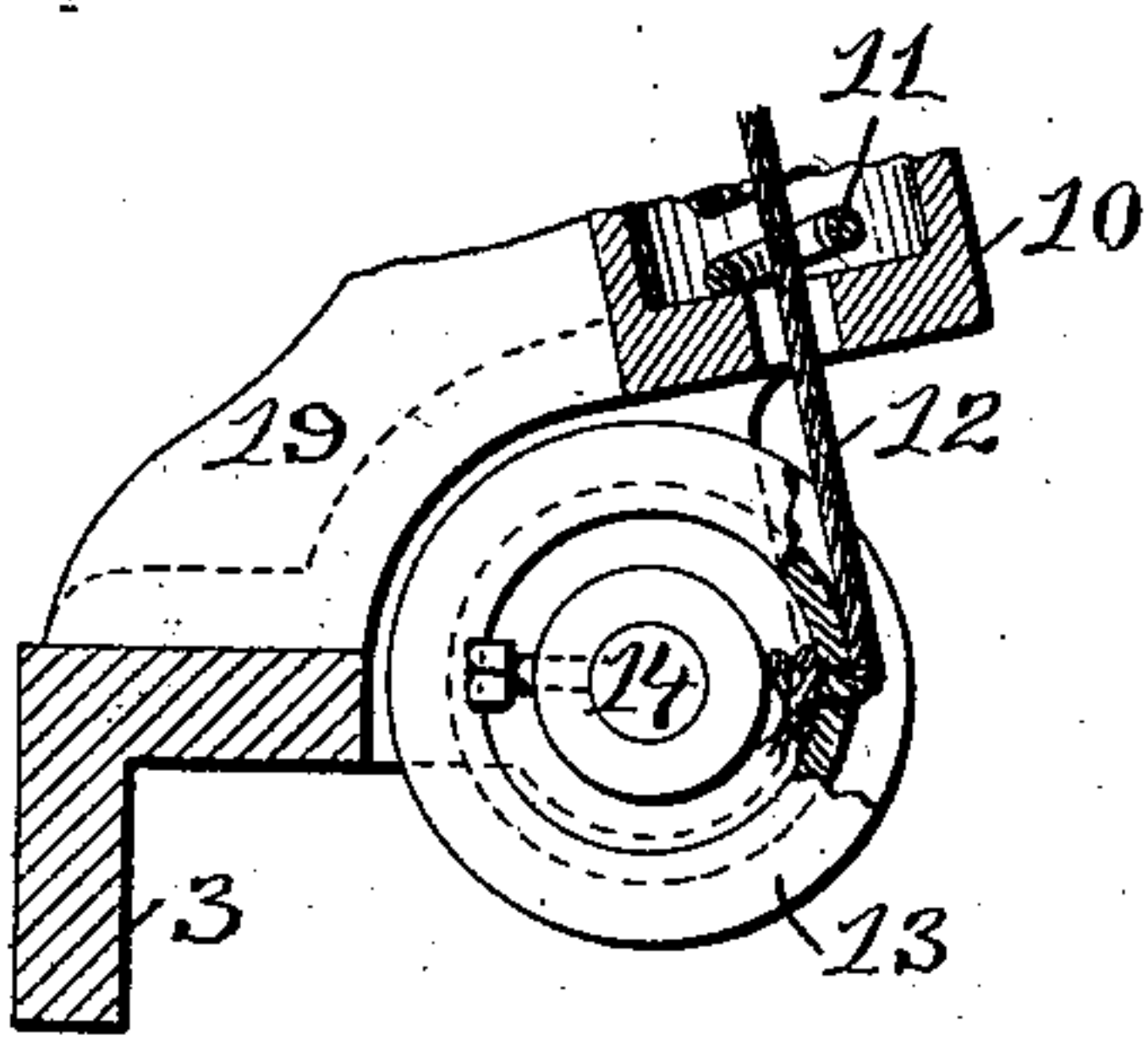
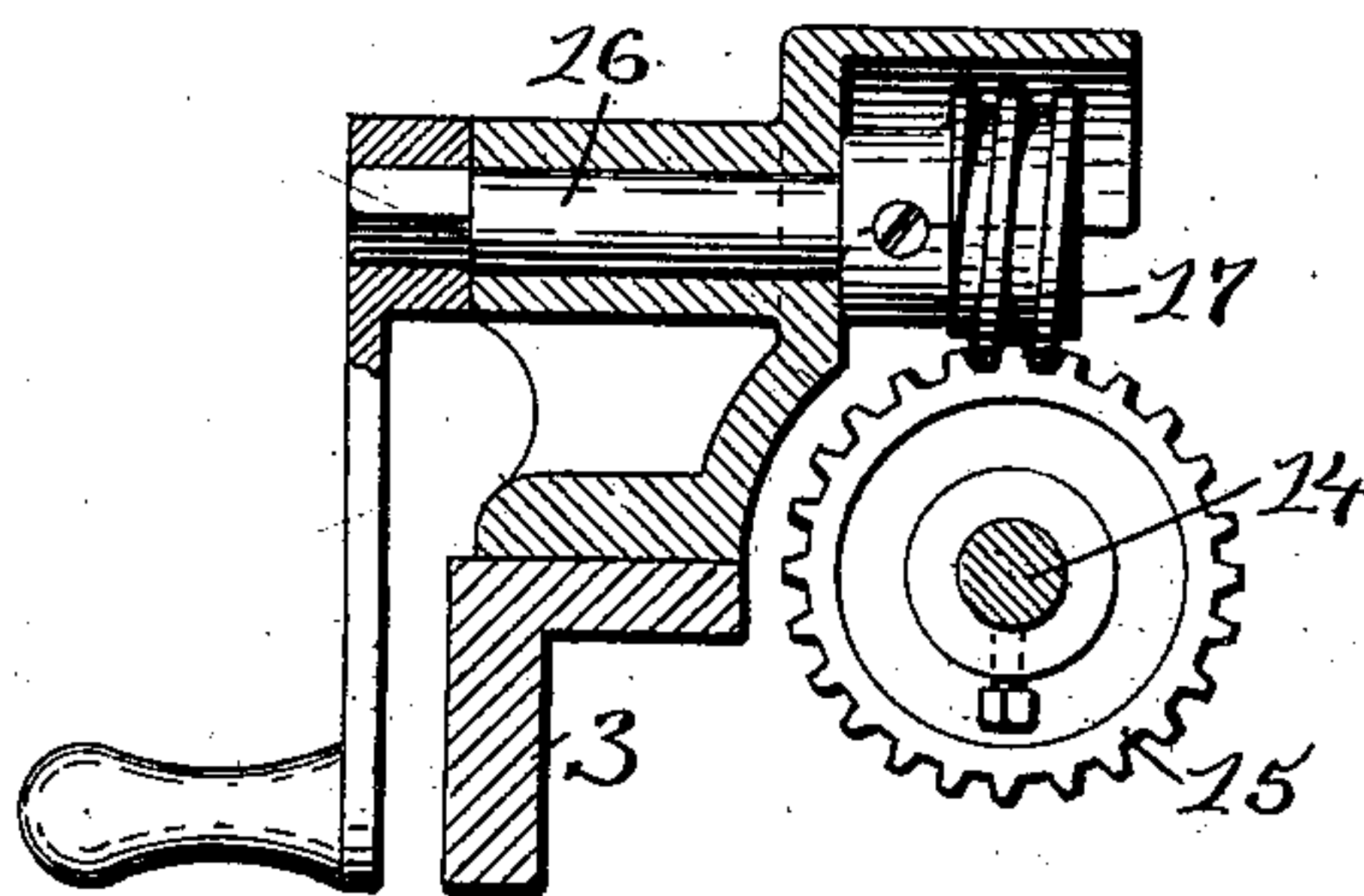


Fig. 4.



WITNESSES:

Chas. H. Luther Jr.  
Ada E. Taggart

INVENTOR:

Oscar L. Owen.  
by Joseph A. Miller & Co.  
ATTORNEYS:



# UNITED STATES PATENT OFFICE.

OSCAR L. OWEN, OF WHITINSVILLE, MASSACHUSETTS, ASSIGNOR TO THE  
WHITIN MACHINE WORKS, INCORPORATED, OF WHITINSVILLE, MASSA-  
CHUSETTS.

## LOOM.

SPECIFICATION forming part of Letters Patent No. 708,251, dated September 2, 1902.

Application filed November 14, 1901. Serial No. 82,238. (No model.)

*To all whom it may concern:*

Be it known that I, OSCAR L. OWEN, a citizen  
of the United States, residing at Whitinsville,  
in the county of Worcester and State of Massa-  
chusetts, have invented a new and useful Im-  
provement in Looms, of which the following  
is a specification.

This invention relates more particularly to  
the part of the loom mechanism by which the  
cloth-roll is supported and held against the  
take-up or sand roll.

The principal object of the invention is to  
provide means for controlling the support, and  
thereby facilitate the insertion and the re-  
moval of the cloth-roll. To this end I have  
devised a support for the journals of the cloth-  
roll in which coiled springs inclosed in tele-  
scopic tubes form the yielding supports of the  
journal-supports and with a winding-drum con-  
trol the actions of the coiled springs, whereby  
the cloth-roll may be lowered to release the  
pressure of the cloth-roll against the take-up  
roll to facilitate the removal of the same or a  
cloth-roll placed on the journal-bearings and  
raised under the control of the operator  
against the take-up roll.

The particular novel features of my inven-  
tion will be more fully described hereinafter  
and more particularly pointed out in the  
claims.

Figure 1 is a front elevation of parts of a  
loom, illustrating my invention. Central por-  
tions are shown cut out to reduce the width  
of the drawing. Fig. 2 is a transverse sec-  
tional view of the front part of a loom pro-  
vided with my improvement. Fig. 3 is an en-  
larged view, partly in section, of a detail,  
showing the connection of the cord with the  
winding-drum. Fig. 4 is a sectional view of  
a detail, showing the worm and worm-gear  
for operating the winding-drums.

Similar marks of reference indicate corre-  
sponding parts in all the figures.

In the drawings, 1 indicates the end frames  
of the loom; 2, the breast-beam; 3, the lower  
front strut; 4, the friction-roll; 5, the take-  
up or sand roll; 6, the path of the cloth over  
the breast-beam, the friction-roll 4, and the  
take-up roll 5 of the cloth-roll 7. The jour-  
nals on the opposite ends of the cloth-roll are  
supported on the journal-bearings 8, secured

in the upper end of the tube 9, which tube  
telescopes with and slides in the tube 10. The  
bottom ends of the tubes 10 are perforated. 55  
The coiled spring 11 extends from end to end  
of the two telescopic tubes 9 and 10 and bears  
against the closed ends of the tubes to force  
the tube 9 outward from the tube 10. The  
cord 12 has one end secured to the journal- 60  
bearing 8. The cord extends through the cen-  
tral space inclosed by the coiled spring 11,  
through the opening in the bottom of the tube  
10, and onto one of the sheaves 13. The two  
sheaves 13 13 are secured to the shaft 14, on 65  
which the worm-gear 15 is secured. The worm  
17 engages with the worm-gear 15 and is se-  
cured to the crank-shaft 16, supported in suit-  
able bearings. By this construction the cord  
12 may be partially wound on the sheave 13 and 70  
the tube 9 drawn into the tube 10 against the  
force exerted by the coiled spring 11. As  
there are two such spring-supports for the  
cloth-roll, one for each journal, and as the  
sheaves 13 13 are on the same shaft, the ro- 75  
tation of the shaft 14 by the worm 17 and  
worm-gear 15 controls the position of both  
the journal-bearings 8 8 and of the cloth-roll.

In the preferred construction the tube 10  
is formed integral with the arm 18 and with 80  
the base 19. The arm 18 is rigidly secured  
to the breast-beam 2, and the base 19 to the  
strut 3, the friction-roll 4 being preferably  
supported in the arm 18. The strain exerted  
by the springs 11 11 through the cloth-roll on 85  
the take-up roll is resisted by the structures  
forming the cloth-roll, which is secured to the  
breast-beam and the front strut some dis-  
tance from the end frames and imparts  
strength and rigidity to the loom. 90

As the cloth is wound upon the cloth-roll 7  
the diameter increases and the tubes 9 9 are  
gradually pushed into the tubes 10 10 against  
the action of the springs 11 11, the cords 12  
12 becoming slack until the desired amount 95  
of cloth is wound upon the roll 7 and the same  
is to be removed, when upon turning the  
crank-shaft 16 in one direction the shaft 14 is  
revolved, and with it the sheaves 13 13, to  
take up the slack of the cords 12 12 and also 100  
sufficiently to lower the cloth-roll 7, so that  
the same may be readily removed from the  
bearings 8 8 and another roll substituted  
therefor. The crank-shaft is then turned in



the opposite direction to unwind the cords 12 12 from the sheaves, which causes the springs 11 11 to lift the cloth-roll to the desired position for the rewinding of the cloth thereon.

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

1. In a loom, the combination with the cloth-roll, and the telescopic spring-actuated supports of the same, of a winding-shaft, sheaves on the same, cords connected with the cloth-roll supports and with the sheaves on the winding-shaft, and means, comprising a worm and worm-shaft, for operating the winding-shaft, as described.

2. A journal-support for the cloth-roll of a loom consisting of two tubular chambers, a tube sliding longitudinally in each tubular chamber, journal-supports on the free ends of the sliding tubes, coiled springs bearing on the bottom of the tubular chambers and the journal-supports on the sliding tubes, and cords connected with the sliding tubes and with a winding device, as described.

3. In the loom, the combination with the breast-beam, the front strut, the take-up roll, and the cloth-roll, of vertical struts secured

to the breast-beam and the front strut, a tubular chamber forming part of each strut, tubes telescopically supported in the tubular chambers, journals bearing on the free ends of the tubes, a winding mechanism below the tubular chambers, and cords connected with the winding mechanism and the sliding tubes, as described.

4. In a loom, the combination with the breast-beam, the take-up roll, the friction-roll, and the cloth-roll, of the arm 18, the tube 10, and the base 19 formed integral and secured to the breast-beam and the front strut, the tube 9, the journal-bearing 8 on the same, the cord 12 connected with the journal-bearing and with the winding-sheave 13, and mechanism for operating the two winding-sheaves of two journal-bearings simultaneously and comprising a worm and worm-gear, as described.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

OSCAR L. OWEN.

Witnesses:

ADA E. HAGERTY,  
JOSEPH A. MILLER, Jr.