

R. A. DAVIS.
ROPE MACHINE.
APPLICATION FILED MAY 14, 1907.

967,174.

Patented Aug. 16, 1910.

2 SHEETS—SHEET 1.

Fig. 1.

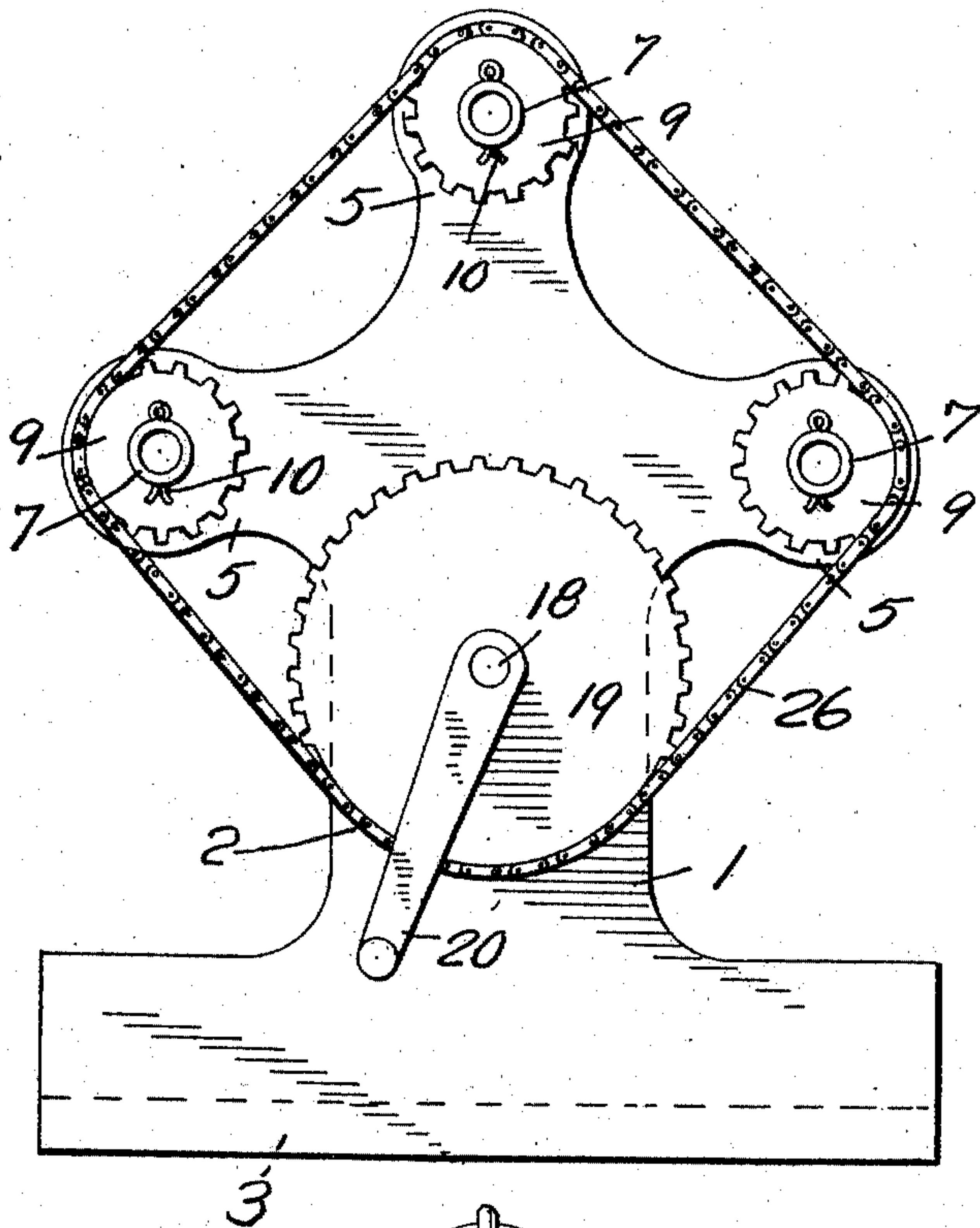
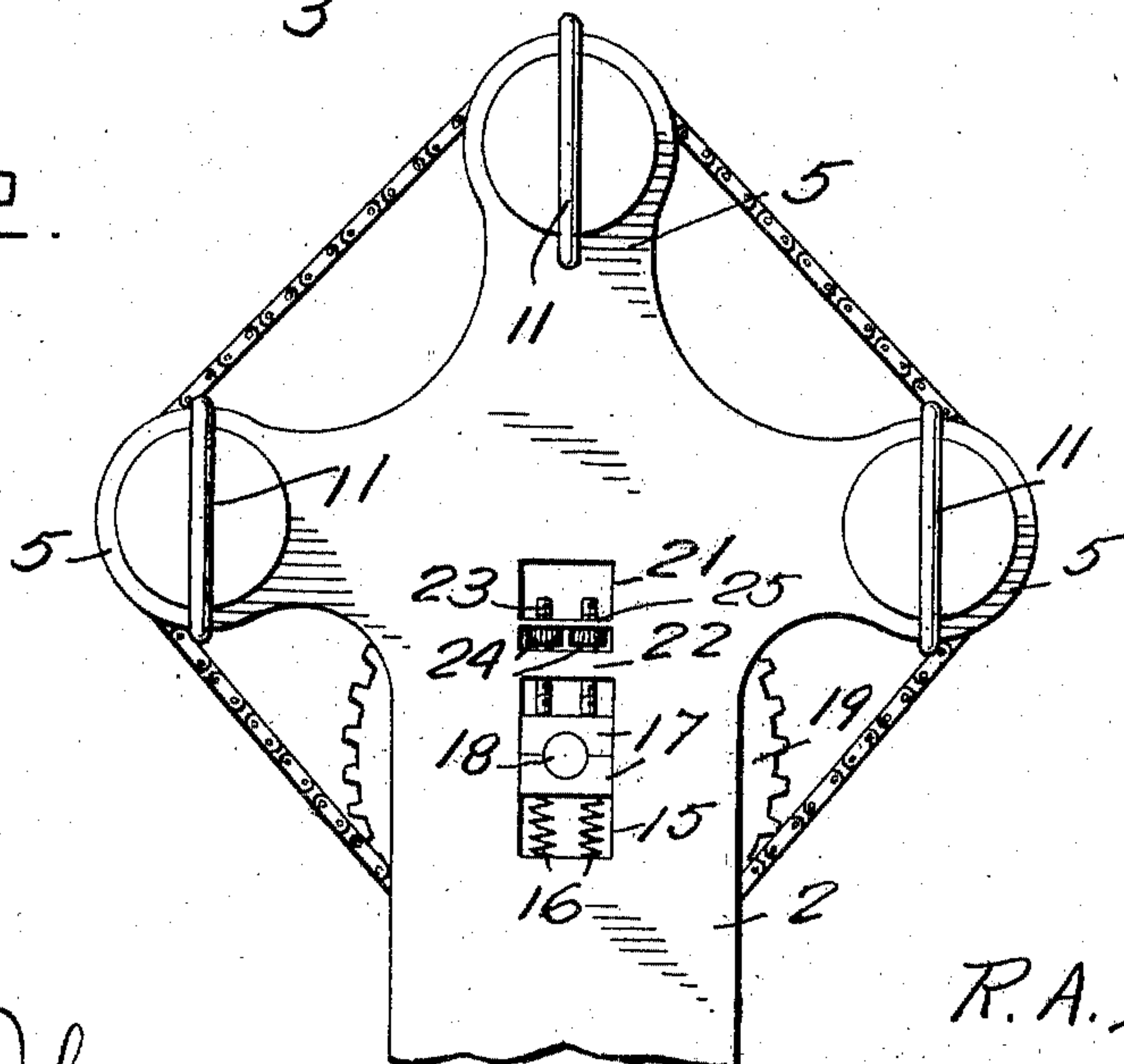


Fig. 2.



Witnesses

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2 SHEETS—SHEET 2.

Fig. 4.

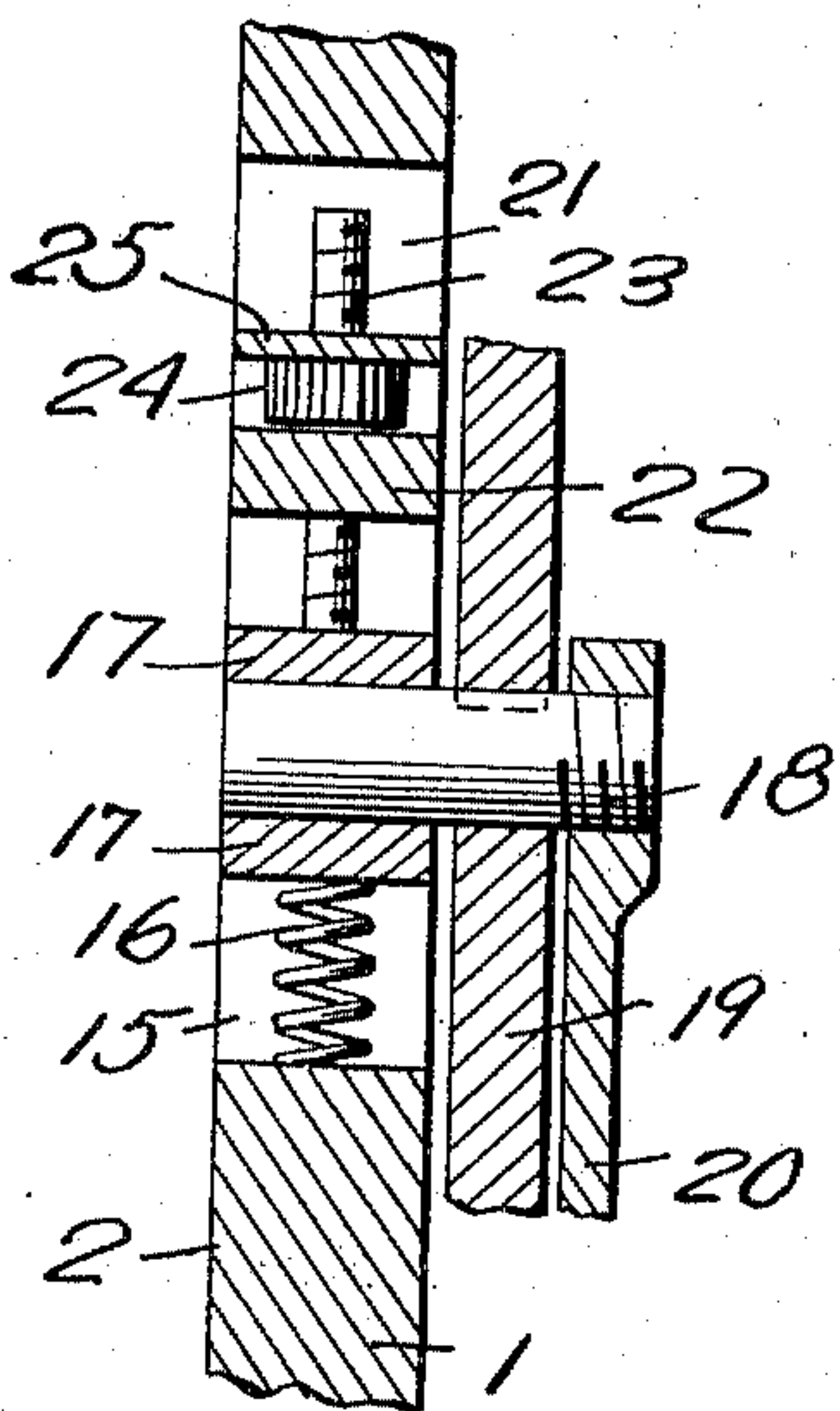


Fig. 3.

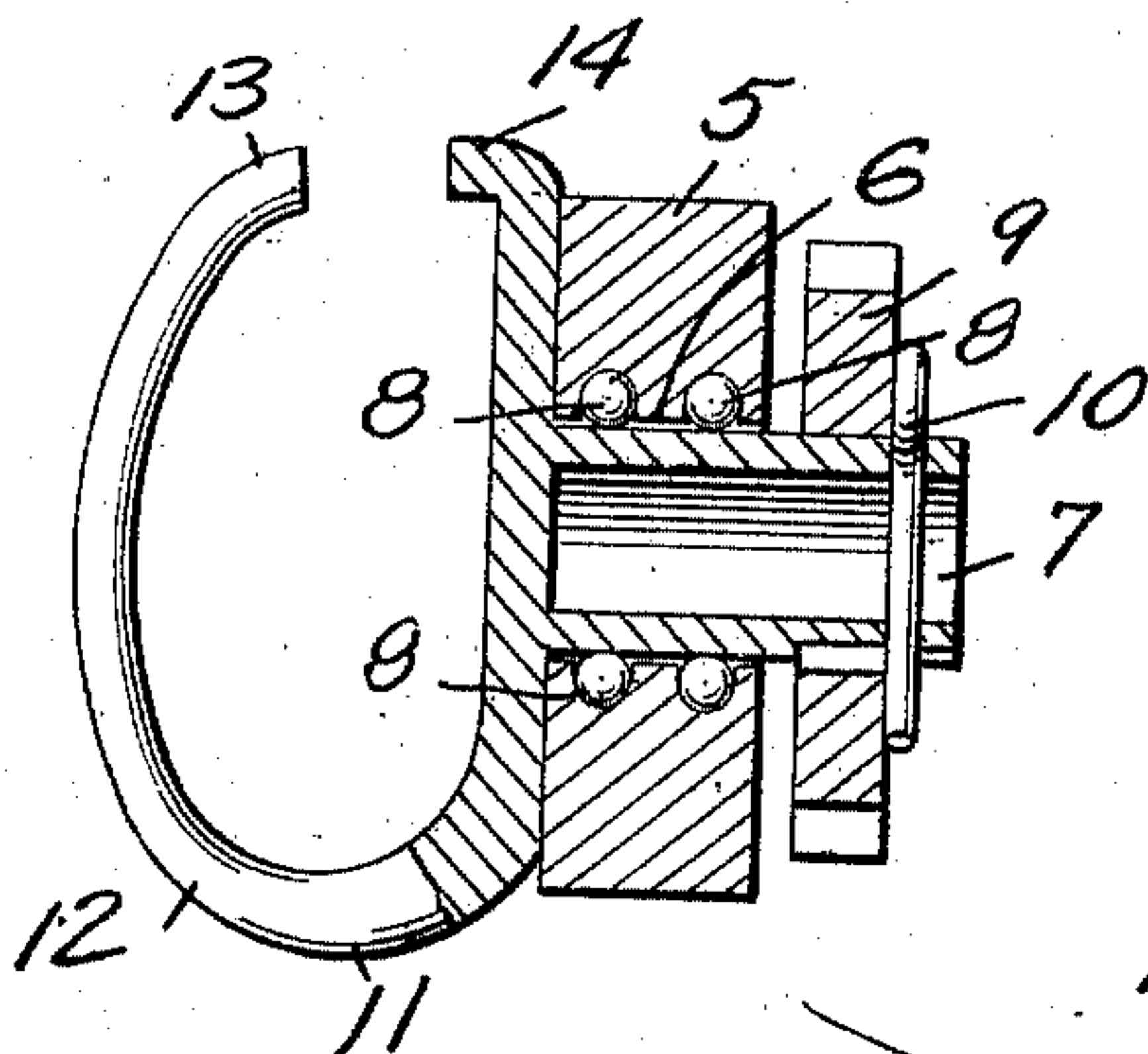
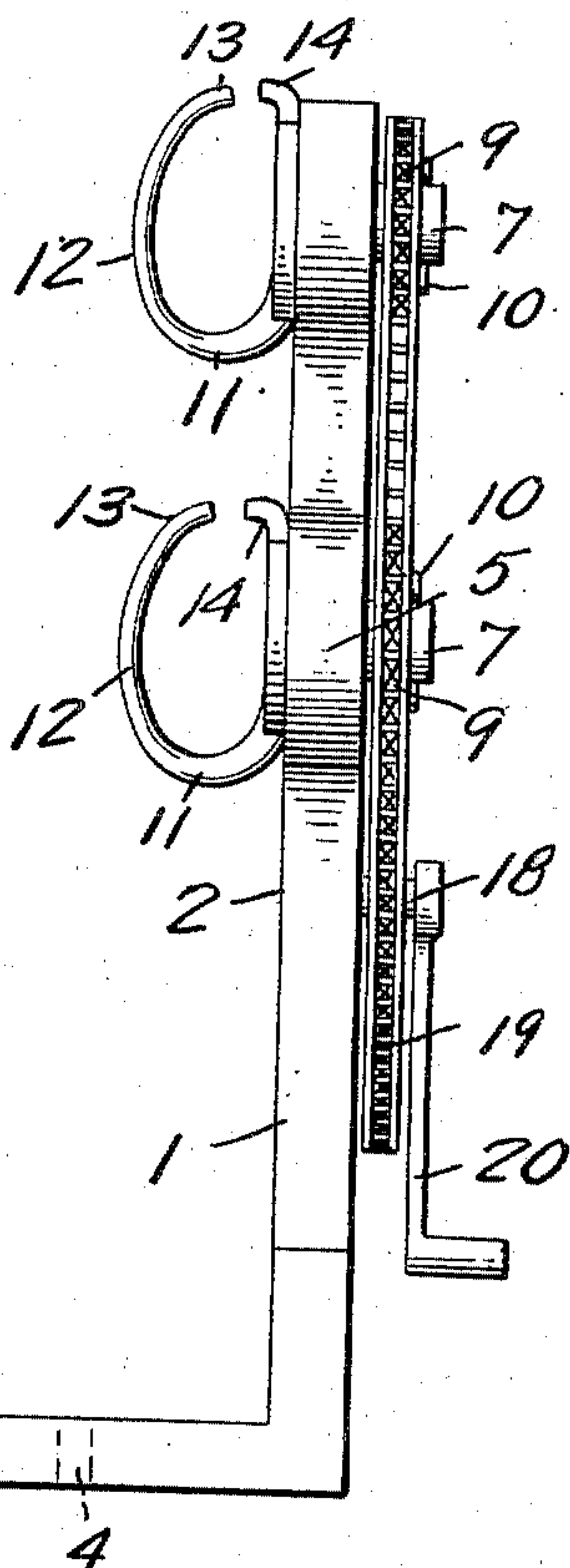


Fig. 5.

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UNITED STATES PATENT OFFICE.

RAYMOND A. DAVIS, OF FARGO, NORTH DAKOTA.

ROPE-MACHINE.

967,174.

Specification of Letters Patent.

Patented Aug. 16, 1910.

Application filed May 14, 1907. Serial No. 373,653.

To all whom it may concern:

Be it known that I, RAYMOND A. DAVIS, a citizen of the United States, residing at Fargo, in the county of Cass, State of North Dakota, have invented certain new and useful Improvements in Rope-Machines; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to new and useful improvements in machines for twisting rope strands, and it has particular reference to a machine of that type which embodies a supporting frame and rotatable spindles provided with rope-engaging means.

In connection with a machine of the above type, the invention aims as a primary object to provide a novel construction, combination, and arrangement of parts, details of which will appear in the course of the following description, in which reference is had to the accompanying drawings forming a part of this specification, like characters of reference designating similar parts throughout the several views, wherein:—

Figure 1 is an elevation looking rearwardly at a machine constructed in accordance with the present invention. Fig. 2 is a front elevation thereof. Fig. 3 is a side elevation thereof. Fig. 4 is a central longitudinal section showing the adjustable bearing of a driving sprocket embodied in the invention. Fig. 5 is a detail sectional view showing the bearings for the shafts that carry the rope spindles.

Referring specifically to the accompanying drawings, the numeral 1 designates a supporting frame provided with a body portion 2, and an angularly disposed horizontal base 3, having screw holes 4 therein, for the reception of suitable fastening means to secure the frame to a support. The body portion 2 at its upper end is of cruciform shape, and is provided with three arms 5, disposed at approximate right angles to one another. The arms 5 are each formed at their terminations with openings 6, through which are received hollow stub shafts 7, and said openings may be provided with anti-friction rollers constituting journals for said shafts. This embodiment of the invention is illustrated in Fig. 5, the anti-friction rollers being designated by the numeral 8. The shafts 7 at their rear ends have sprockets 9

splined thereon, which are held from displacement by cotter pins 10 passing through the shafts 7. At their projecting front ends, the shafts 7 are provided with rope spindles 11 comprising shanks 12 fixed to said shaft, and provided with inturned hook bills 13 pointing toward the angular end 14 of said shanks. The body portion 2 is provided with a longitudinal slot 15, in which are supported on expansive coil springs 16, the latter resting on the lower edge of said slot, inter-connected bearing members 17, for a horizontal shaft 18, the latter carrying at its rear end a driving sprocket 19, provided with a wrist pin or crank arm 20, to permit of the rotation thereof, manually or otherwise. Above the slot 15 is a second slot 21, a web 22 thus being afforded between the slots 15 and 21. Vertical adjusting screws 23 are threaded through the web 22, and bear with their lower ends against the uppermost of the bearing plates 17. The screws 23 are moved vertically in either direction by means of adjusting nuts 24, interposed between the lower wall of the slot 21 and between a narrow web 25, spanning said slot and having openings therein for the passage of the upper end of the screws 23 therethrough. A sprocket chain 26 is trained over the several sprockets 9 and the drive sprocket 19, the former being driven by the latter to rotate the spindles 11 and twist the rope strand engaged therein and move through the hooked portions thereof, as will be readily understood.

It will be apparent that the springs 16 will force the members 17 to the limit of their movement upwardly, as controlled by the lower ends of the screws 23, and that by adjusting said screws in the proper direction by means of the nuts 24, the members 17 and shaft 18 may be raised or lowered in the slot 15 to tighten or loosen the chain 26.

What is claimed is:

The herein described rope machine comprising a frame having a vertical standard, said standard being provided with a plurality of fixed bearings and also with a vertical guide slot, an intermediate slot above said guide slot, and an upper slot above said intermediate slot, stub shafts mounted for rotation in said fixed bearings and each provided with a twisting hook at one end on one side of said standard and a sprocket wheel on the other end, on the opposite side of said standard, a bearing mounted for ver-

tical movement in said guide slot, a stub
shaft mounted in said vertically movable
bearing, a sprocket wheel and a crank on
said stub shaft, an endless sprocket chain
5 connecting the said sprocket wheels, a sup-
porting spring in the lower portion of said
guide slot and under said vertically mov-
able bearing, adjusting screws on the upper
side of said vertically movable bearing and
10 passing through the webs between the guide,

intermediate and upper slots, and adjusting
nuts on said screws and disposed in said
intermediate slots.

In testimony whereof, I affix my signa-
ture, in presence of two witnesses.

RAYMOND A. DAVIS.

Witnesses:

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