

No. 844,851.

PATENTED FEB. 19, 1907.

A. DEAN.
BELT CHECKING DEVICE.
APPLICATION FILED DEC. 12, 1905.

Fig. I.

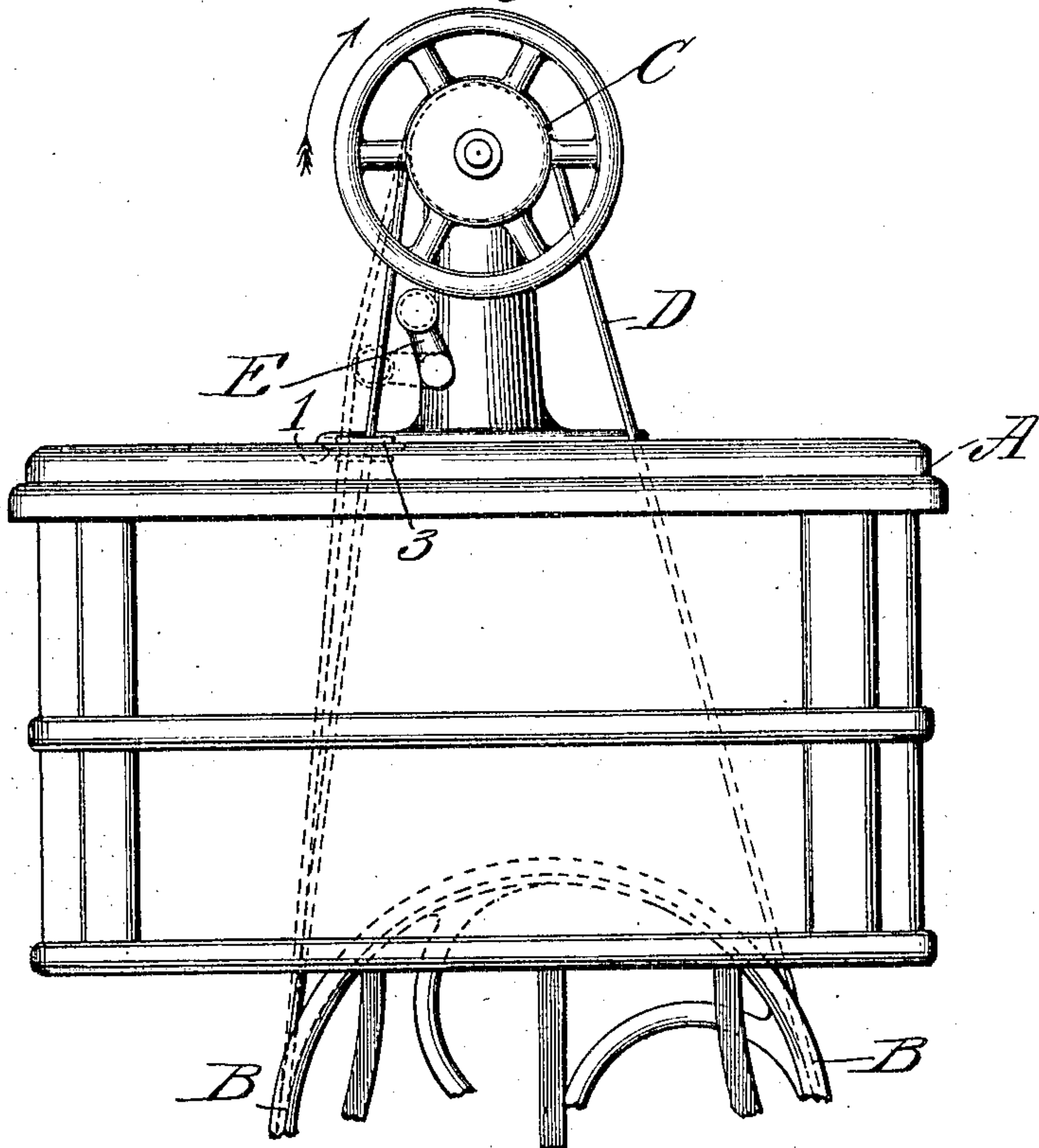


Fig. II.

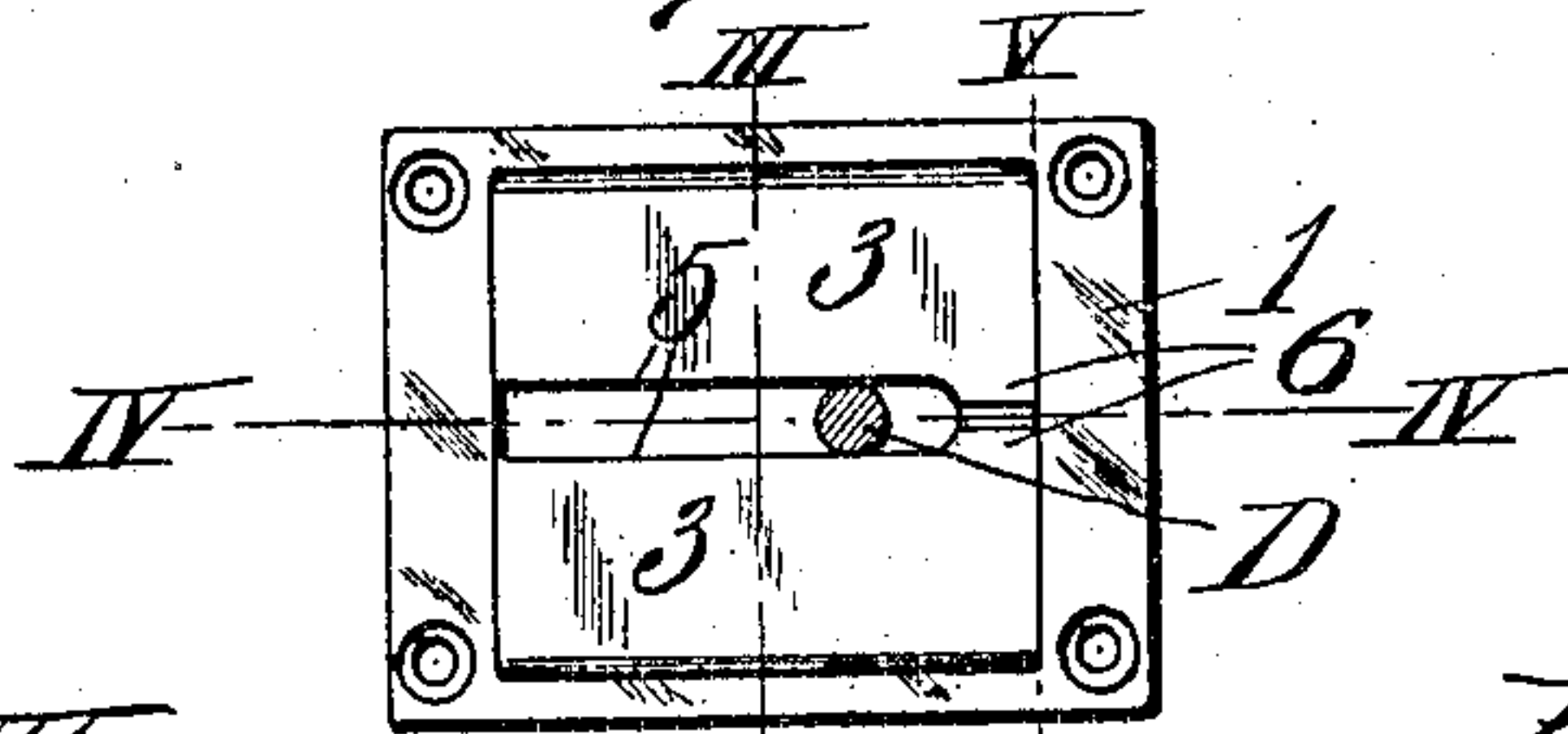


Fig. III.

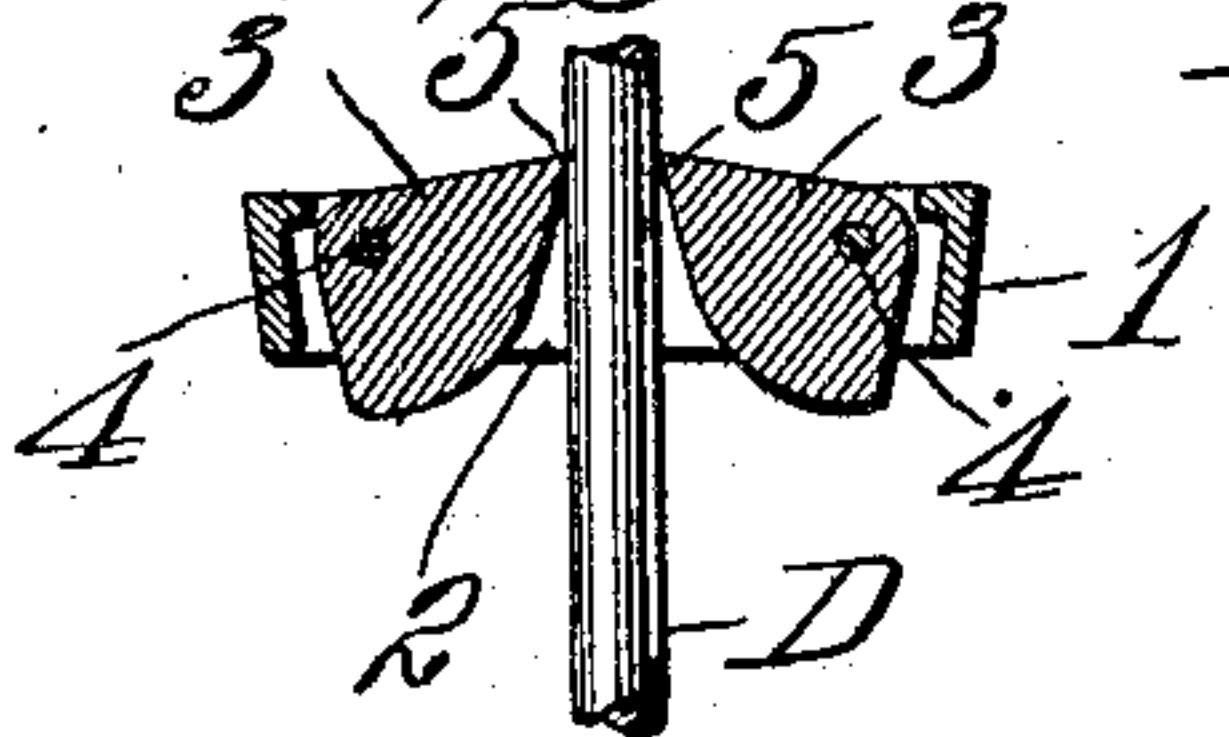


Fig. IV.

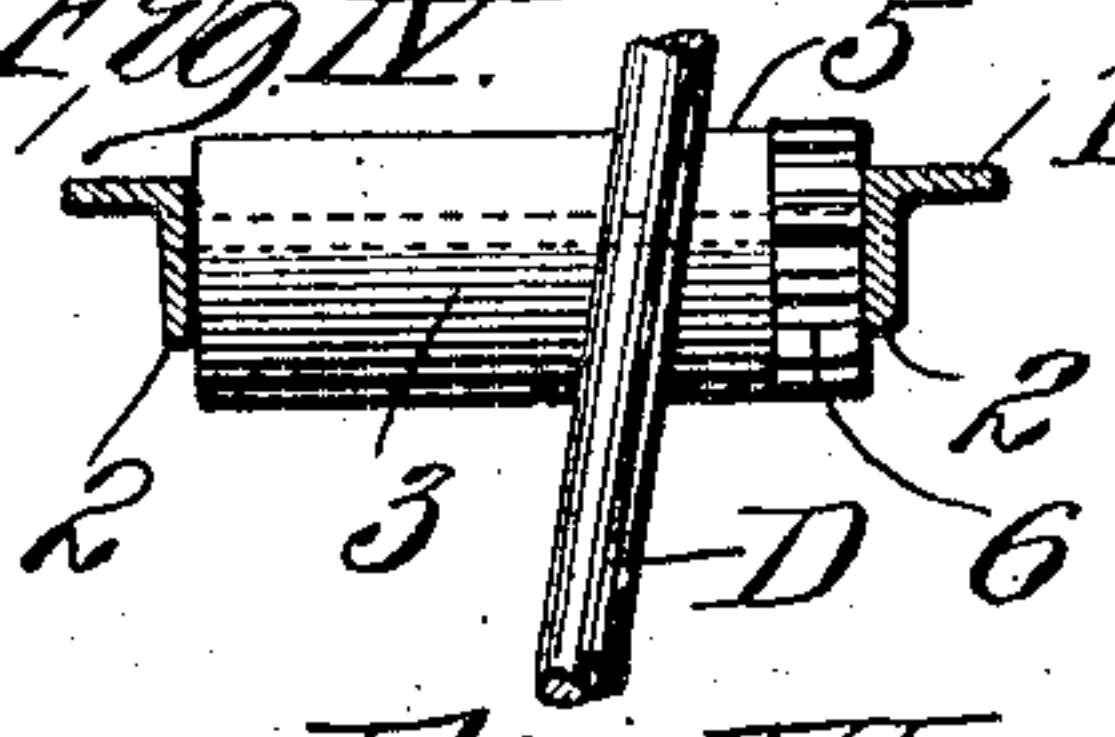


Fig. V.

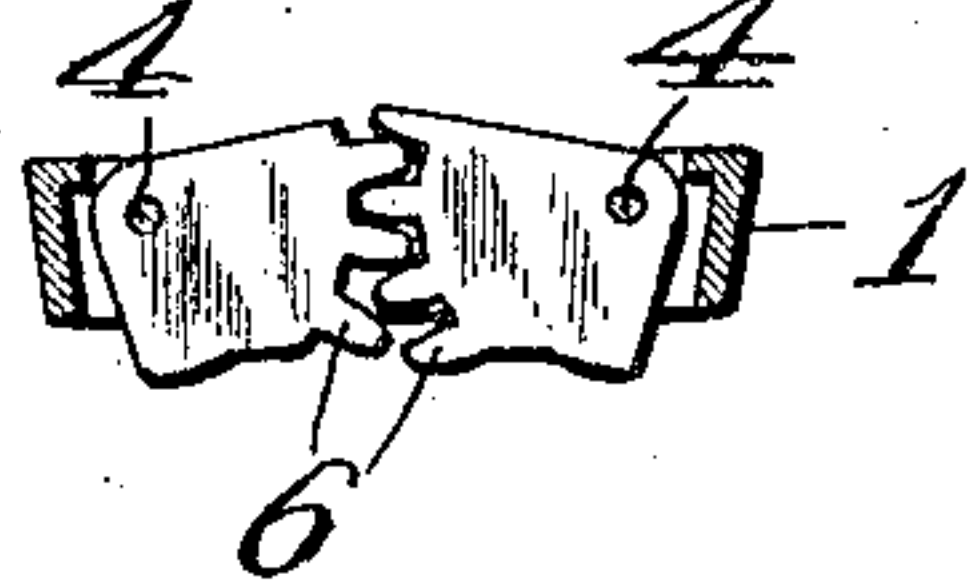
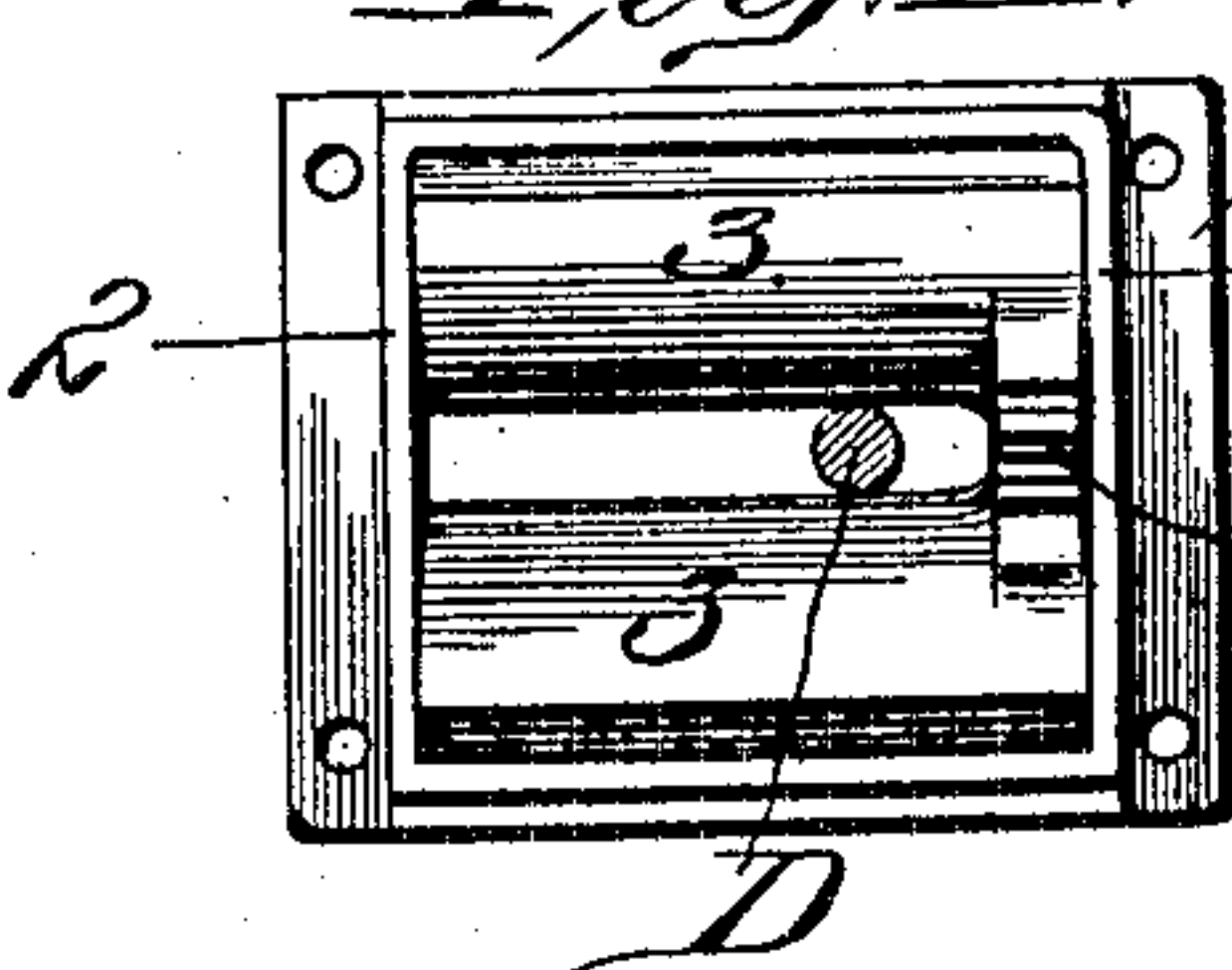


Fig. VI.



Attest:
J. M. Scott.
H. S. Cook

Inventor:
Alexander Dean.
By Wright & Co.
Attys.

UNITED STATES PATENT OFFICE.

ALEXANDER DEAN, OF DENVER, COLORADO.

BELT-CHECKING DEVICE.

No. 844,851.

Specification of Letters Patent.

Patented Feb. 19, 1907.

Application filed December 12, 1905. Serial No. 291,489.

To all whom it may concern:

Be it known that I, ALEXANDER DEAN, a citizen of the United States, residing in Denver, in the county of Denver and State of Colorado, have invented certain new and useful Improvements in Belt-Checking Devices, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, forming part of this specification.

My invention relates to a device for checking the movement of power-belts used in sewing-machines, the object of the invention being to prevent retrograde movement of the belt without in any degree impeding the proper forward movement of the belt.

Figure I is an end elevation of a sewing-machine, illustrating the adaptability of my belt-checking device in association with the belt of the machine. Fig. II is a top or plan view of my belt-checking device, with a belt shown in cross-section between the jaws of the device. Fig. III is a cross-section taken on line III III, Fig. II. Fig. IV is a longitudinal section taken on line IV IV, Fig. II. Fig. V is a cross-section taken on line V V, Fig. II. Fig. VI is an inverted plan of the device.

Referring first to Fig. I of the drawings, A designates the table of a sewing-machine; B, the driving-wheel; C, the driven wheel, and D, the belt by which power is transmitted from the driving-wheel to the driven wheel.

1 designates a frame, preferably of rectangular shape, that is adapted to be fitted to the table A, preferably by seating it therein. The frame may be secured to the table by any suitable means, such as screws. The frame 1 is preferably provided at its lower side with flanges 2.

3 designates a pair of belt-gripping jaws that are rockingly positioned within the frame 1 and between which the belt D is adapted to operate. The belt-gripping jaws are eccentrically supported for rocking movement by pins or shafts 4, seated therein and fitted in the ends of the frame 1. Each gripping-jaw has at its inner edge and opposing the other gripping-jaw a belt-engaging portion 5, preferably of angular shape in order that it will be caused to bite into or firmly grip the belt when said belt is moved in a downward direction between the jaws. For the purpose of causing the gripping-jaws

to move in unison and act in common with gripping effect upon the belt, I provide at one end of each jaw a toothed segment 6, the teeth of these segments being arranged in mesh, as most clearly seen in Figs. II, V, and VI.

In the practical use of my belt-checking device the operation is as follows: While the belt and the pulleys to which it is applied are traveling in the direction indicated by the arrow, Fig. I, the belt will travel freely between the gripping-jaws 3, due to its bearing against the inner facing edges of the jaws being such as to tend to throw the jaw-gripping portions away from each other. In the event, however, of the belt being moved in the reverse or retrograde direction said belt acts frictionally against the gripping portions of the jaws 3, thereby tending to throw said gripping portions inwardly, causing them to freely grip the belt-checking action due to the approach of the gripping portions of the jaws. It will be seen that by reason of the jaws being geared together in common by the segments 6 each jaw will act upon the belt with the same effect. Moreover, I have found that if the gripping-jaws are not geared together the belt is liable to bear against one jaw only and tend to force it downwardly without forcing the other jaw downwardly, and therefore the gripping action secured is not as perfect as it is by the geared arrangement of the jaws.

The gearing-segments are provided at one end of each jaw only in order that there may exist an uninterrupted space between the segments 6 and the opposite ends of the jaws. This construction permits of the belt being thrown outwardly to the requisite distance by the bobbin-winder E when said bobbin-winder is in use, as indicated by dotted lines, Fig. I.

While I have shown and described my belt-checking device as applied to a sewing-machine, I wish it understood that I do not limit myself to its use in connection with a belt of this particular class of machines, as it may be used to check the movement of various other kinds of machines.

I claim—

1. In a belt-gripping device, the combination of a frame, and a pair of belt-gripping jaws rockingly mounted in said frame; said jaws being provided with toothed segments

meshing with each other, substantially as set forth.

2. In a belt-checking device, the combination of a pair of belt-gripping jaws of greater
5 length than the width of the belts to be gripped and geared together at one point and spaced apart aside from the gear portions to

furnish belt-gripping portions, and means whereby said jaws are rockingly supported, substantially as set forth.

ALEXANDER DEAN.

In presence of—

MAMIE CHARLIE STERNE,
HARRY C. WATT.