

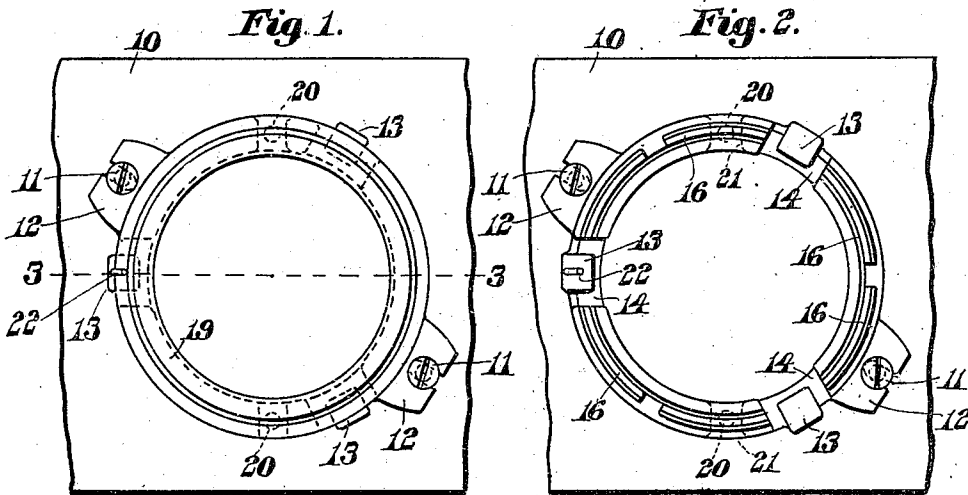
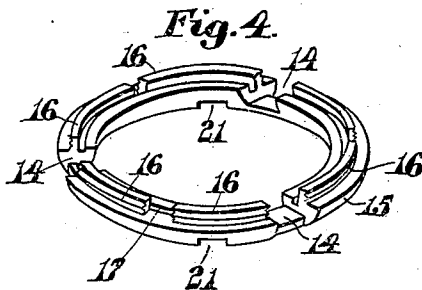
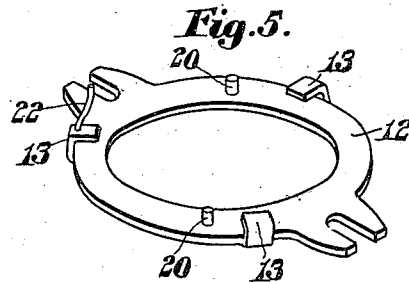
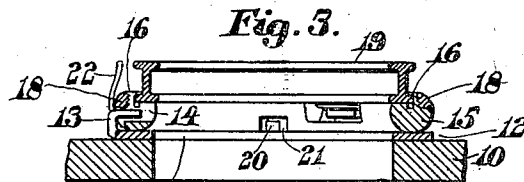
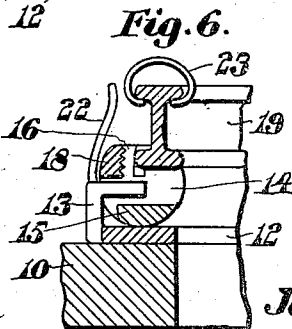
No. 843,810.

PATENTED FEB. 12, 1907.

J. HAYDEN, JR.

RING SPINNING AND TWISTING APPARATUS.

APPLICATION FILED JAN. 27, 1906.



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UNITED STATES PATENT OFFICE.

JOEL HAYDEN, JR., OF BOSTON, MASSACHUSETTS, ASSIGNOR TO HAYDEN MACHINERY COMPANY, OF BOSTON, MASSACHUSETTS, A CORPORATION OF MAINE.

RING SPINNING AND TWISTING APPARATUS.

No. 843,810.

Specification of Letters Patent.

Patented Feb. 12, 1907.

Application filed January 27, 1906. Serial No. 293,204.

To all whom it may concern:

Be it known that I, JOEL HAYDEN, Jr., a citizen of the United States of America, and a resident of Boston, in the county of Suffolk and State of Massachusetts, have invented certain new and useful Improvements in Ring Spinning and Twisting Apparatus, of which the following is a specification.

This invention relates to ring spinning and twisting apparatus, and particularly to that class of apparatus in which the rings are usually termed "stationary rings," inasmuch as they have no continuous rotary movement, although they are capable of slight rotative movement.

It relates, moreover, to that class of rings which is provided with a weighted member securely attached thereto and adapted to bear upon the horizontal base of the ring-supporting plate on which said intermediate member is adapted to have slight horizontal movement.

The particular object of the invention is to provide a ready means of securing the ring to the weighted or intermediate member to provide a slight vertical movement of said ring and weighted member relative to the ring-supporting plate and ring-rail to which it is attached while adapting said ring and weighted member to a slight rotary movement thereof and a slight horizontal movement of said weighted member on the face of said holder or plate. This invention accomplishes this object by means of certain novel features of construction and arrangement of parts, which will be thoroughly understood by reference to the description of the drawings and to the claims to be hereinafter given.

Of the drawings, Figure 1 represents a plan view of a portion of the ring-rail, with a ring-supporting plate or holder secured thereto, with the ring shown in position therein. Fig. 2 represents a similar view with the ring and the clamping member of the weighted intermediate member removed therefrom. Fig. 3 represents a vertical section on line 3 3 on Fig. 1. Fig. 4 represents a perspective view of the main part of the weighted member. Fig. 5 represents a perspective view of the ring-supporting plate or holder, and Fig. 6 represents an enlarged perspective view of a portion of the ring-supporting plate and the intermediate weighted member.

Similar characters designate like parts throughout the several figures of the drawings.

In the drawings, 10 represents a ring-rail of any well-known construction, having secured thereto by means of screws 11 the ring-supporting plate or holder 12. The plate 12 is provided with ears 13, projecting upwardly therefrom and having the upper ends thereof bent inwardly to engage recesses 14 in the weighted member 15, which is provided with an upwardly-extending annular threaded flange 16.

The recesses 14 and slots 17 cut the flange 16 into a plurality of segments. An annular threaded ring 18, having its threaded inner face slightly tapered, is adapted to cooperate with the segmental annular flange 16 to cause said segments to be bent inwardly when the ring 18 is secured thereon, so that said segments 16 are caused to engage with and securely clamp the spinning-ring 19 (of any well-known construction) securely in position and prevent it from rotating upon said weighted member 15.

The clips or ears 13 are slightly narrower than the width of the recesses 14, so that the weighted member 15 is free to move in a rotary direction to a limited extent upon the horizontal surface of the ring-supporting plate or holder 12. The plate 12 is provided with two diametrical upwardly-projecting pins 20, which project into slots 21, cut in the under face of the weighted member 15. These pins 20 cooperate with the slots 21 to limit the movement of the weighted member 15 upon the supporting-plate 12 in one direction—that is, transversely of said slots—while they permit a freer and more extended movement of the weighted member upon said supporting-ring 12 in a direction longitudinally of said slots. This better facilitates the centering of the ring with the spindle and prevents the clips 13 from engaging the walls of the recesses 14 in the movement of the weighted member upon the plate 12. The pins 20 are usually placed upon the plate 12 in such position that when the plate is attached to the ring-rail the pins 12 will be located transversely of the ring-rail, as shown in dotted position in Fig. 2.

The ears 13 project upwardly, so that the under face of the horizontal bent-over por-

tion thereof is somewhat removed from the upper face of the recess 14, thereby permitting the weighted member 15 to have a slight vertical movement or a slight tilting movement to better facilitate the operation of the ring and permit it to accommodate itself to different circumstances during the operation of the spinning.

On one of the ears 13 is secured a traveler clearer 22, adapted to be bent into a position in which it will cooperate with the traveler 23 in the usual manner.

The divided threaded weighted member 15-18 makes a very convenient form of securing the ring and weighted member together and permits of such a clamping upon the ring 19 as to prevent any accidental movement thereof upon said weighted member 15.

It is believed that the advantages of the invention and the operation of the device is fully apparent from the foregoing explanation without any further description.

I claim—

1. The combination of a spinning-ring, a supporting plate or holder, a weighted member secured to said ring normally resting upon the upper horizontal face of said plate and provided with a plurality of engaging shoulders, and means secured to said plate or holder coacting with said shoulders whereby said member is permitted to move horizontally in contact with the upper surface of said plate or holder or vertically to a limited degree but is prevented from continuous movement.

2. In a spinning-ring, a supporting plate or holder, a weighted member secured to said ring resting normally on the horizontal surface of said plate or holder, and provided with a plurality of engaging shoulders, and means secured to said plate or holder coacting with said shoulders whereby said member is permitted to move laterally on the horizontal surface of said plate or holder or vertically to a limited degree but is prevented from continuous movement.

3. The combination of a spinning-ring, a two-part weighted member secured thereon, and means permitting said member lateral movement but preventing continuous rotative movement.

4. The combination of a spinning-ring, a two-part weighted member secured thereon, and means permitting said member limited vertical movement but preventing continuous rotative movement.

5. The combination of a spinning-ring, a

weighted member provided with an annular threaded flange, and an annular threaded ring cooperating with said flange.

6. The combination of a spinning-ring, a weighted member provided with an annular segmental threaded flange, and an annular threaded ring cooperating with said flange to cause said segmental flange to impinge upon the spinning-ring.

7. The combination of a spinning-ring, a weighted member provided with an annular threaded flange, and an annular threaded ring provided with a tapered inner threaded face cooperating with said flange.

8. The combination of a spinning-ring, a weighted member provided with an annular segmental threaded flange, and an annular threaded ring provided with a tapered inner threaded face cooperating with said flange to cause said segmental flange to impinge upon the spinning-ring.

9. The combination of a spinning-ring, a supporting plate or holder provided with a plurality of clips and two projections diametrically opposite, and a weighted member secured to said ring and provided with shouldered recesses for the reception of said clips and slots diametrically opposite and removed from said recesses for the reception of said projections, said clips and shouldered recesses and said projections and slots cooperating to permit said weighted member slight lateral movement in either direction upon the horizontal face of said holder but greater movement in one direction than in a direction at right angles thereto.

10. The combination of a spinning-ring, a supporting plate or holder provided with a plurality of clips and two projections diametrically opposite located transversely of the ring-rail, and a weighted member secured to said ring and provided with shouldered recesses for the reception of said clips and slots diametrically opposite and removed from said recesses for the reception of said projections, said clips and shouldered recesses and said projections and slots cooperating to permit said weighted member slight lateral movement in either direction upon the horizontal face of said holder but greater movement in one direction than in a direction at right angles thereto.

Signed by me at Boston, Massachusetts, this 23d day of January, 1906.

JOEL HAYDEN, JR.

Witnesses:

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