

DEVICE FOR APPLYING TRAVELERS ON THE RINGS OF SPINNING FRAMES.

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To all whom it may concern:

Be it known that I, HERMAN HEVEY, a citizen of the United States, residing at Biddeford, in the county of York and State of Maine, have invented certain new and useful Improvements in Devices for Applying Travelers on the Rings of Spinning-Frames, of which the following is a specification, reference being had to the accompanying drawings.

This invention relates to spinning machinery, and particularly to means for applying a traveler upon a spinning ring.

The primary object of my invention is the provision of a very simple and easily operated device for applying travelers to spinning rings, the device including a magazine within which the travelers are normally disposed, a guide along which the traveler moves, and a plunger which acts to force the traveler from the device and force the traveler onto the spinning ring.

A further object of my invention is to so construct the device that it may be used to apply travelers having different widths, and in this connection to so form the body which receives the traveler from the magazine that the slot in which the traveler is received is adjustable so as to suit different widths of travelers.

A further object is the provision of a magazine so constructed that a plurality of series of travelers are supported within the magazine, any one of the series being adapted to be brought into alinement with the guide along which the traveler moves in order to be applied, and in this connection to provide means for holding the magazine set with any one of the series of rings in alinement with the guide.

A further object of the invention is the provision of a device of this character which may be operated by simply placing the ring receiving recess of the body against the ring and forcing inward on a plunger to thereby force a traveler upon the ring.

Other objects will appear in the course of the following description.

My invention is illustrated in the accompanying drawings, wherein:

Figure 1 is an elevation of one section of my device and showing a magazine in section; Fig. 2 is a longitudinal section at right angles to the plane of Fig. 1 and looking upward; Fig. 3 is a fragmentary elevation of

one end of the device, the magazine being partly broken away; Fig. 4 is a fragmentary face view of the head and barrel looking from underneath toward the ring receiving recess; Fig. 5 is a top plan view of the magazine, the spindle thereof being in section; Fig. 6 is a perspective detail view of the plunger blade which engages the travelers and forces them from the head; Fig. 7 is a view of a fragment of the ring upon which the traveler is to be applied, the traveler in dotted lines and the plunger blade.

Referring to these drawings, it will be seen that my improved device comprises a head which is designated generally 2, this head being made in two longitudinal sections *a* and *b*. This head includes the tubular shank 3, the transversely extending barrel 4, and the tangs 5 extending from the tubular portion of the head. As before stated, the head including the barrel, the tubular portion, and the tangs, are made in two lateral sections connected to each other by screws. The barrel, considered as one piece, is tubular, and intersecting the interior of the barrel is a slot 6. Formed upon the face of the barrel is a recess 7 which forms a ring seat which also intersects the slot 6. Disposed within one end of the tubular barrel is a plunger 8 whose stem is reduced and screw threaded as at 9. The bore of the barrel is enlarged to receive the head 8 of the plunger and then reduced to permit the stem 9 to extend out through the barrel.

A spring 10 is disposed in the bore 11 of the barrel and urges the plunger outward. Upon the screw threaded projecting end of the stem 9 there is disposed a nut 12 which, when rotated in one direction, acts to withdraw the plunger head 8 against the action of the spring 10, but which when rotated in the other direction permits the spring to force the plunger 8 outward and across the slot 6. A lock nut 13 is also disposed upon the stem 9 to lock the plunger in its adjusted position. That portion of the barrel which is formed upon the section *b* of the head is open at its extremity and is cut away upon its under side as at 14. Attached to this portion of the head by means of a bracket piece 15 is a magazine head 16 which is circular in form and is provided at one point with an approximately U-shaped slot 17 into which projects one end of an approxi-

mately T-shaped track or guide 18 whose detailed form is illustrated in Fig. 1. As will be seen from this figure, this track or guide has a relatively large head 19 having a rounded outer face. This guide extends inward from the magazine head and extends into the open end of the barrel as at 20. The web of the guide is securely soldered or otherwise connected to the barrel and intersects the ring seat 7, as at 21, the guide terminating even with one wall of the slot 6.

Detachably mounted upon the head 16 is a magazine 22 which is disposed at an inclination to the axis of the head, and preferably this magazine comprises a tubular member having a spider 23 at its lower end, this spider seating upon a longitudinally extending stem 24 which is screw threaded at its exterior end. The magazine is thus detachably and rotatably mounted upon the head and is held in place upon the head by means of a cup 25 which is perforated to engage the stem 24 and fits over the outer end of the magazine. A nut 26 holds the cap in place. The interior of the magazine is formed with a plurality of tracks 27 or guides having the same cross section as the guide 18 and adapted to be brought into alinement therewith. Upon these T-shaped guides 27 the travelers 28 are adapted to be placed. Each of these travelers consists of a semi-circular portion having inwardly turned extremities as illustrated in Fig. 7. The several guides may all contain the same kind of travelers, or the travelers on one guide may be of a different width from the travelers on the other guides.

In order to hold the magazine in a rotated position so that one of the guides 27 therein may come in alinement with the guide 18, I preferably mount upon the head the bracket member 29 whose end extends approximately parallel to the magazine and is provided with a sleeve 30 at one end through which passes a set screw 32. This set screw is adapted to engage with any one of a plurality of perforations 33 formed upon the magazine. When the set screw is engaged with any one of the perforations, one of the guides 27 will be in exact alinement with the guide 18.

The portion 3 of the head is bored out as at 34 to form a tubular chamber which terminates short of the barrel but connects thereto by a slot 35. Disposed within the bore 34 is the stem of a plunger 36 having at its forward end a blade 37 and at its outer end a relatively enlarged portion 38. Surrounding the body of the plunger is a spring 39 which engages against the end wall of the bore 34 and which acts to force the plunger outward. By forcing inward on the plunger, however, the blade is caused

to project through the slot 35 and into the bore in alinement with the slot 6. The plunger is shifted outward by means of a handle 40. This handle is recessed on each side, as at 41, and the web forming the bottom of these recesses is longitudinally slotted as at 42. The tangs 5 are disposed within these recesses 41 and a screw 43 passes through the tangs and through the slot 42. It will thus be seen that the handle will have reciprocation upon the tangs 5 and that when the handle is forced inward the end of the handle will force the plunger outward, and that when pressure upon the handle is released the spring 39 will retract the plunger and force the handle rearward.

In practical use the travelers are threaded as it were upon the guides 27 until the magazine is full. The magazine is then locked by means of the set screw 32 in any desired position with one of the guides in alinement with the guide 18. If it is then desired to apply a traveler to a spinning ring the implement is disposed so that the ring will bear in the seat 7. The travelers will of course slide down the guide 18 and be disposed in successive order upon the portion 21 of the guide. The first traveler of all will of course slide into the slot 6 and will be removed from the guide. The handle 40 is now forced inward. This will cause the curved end of the blade 37 to engage the curved portion of the traveler and force it over the ring as illustrated in Fig. 7. It will be obvious that the plunger head 8 forms an adjustable wall to the slot 6 and limits the movement of the traveler away from the extremity of the guide portion 21 so that the blade will engage the traveler properly and the traveler will not turn under the pressure of the blade. By adjusting the head 8 in the manner heretofore described through the instrumentality of the nuts 12 and 13, travelers of different widths may be applied and it will be obvious that travelers of different widths may be placed upon the guides 27 of the magazine and that then by rotating the magazine travelers of any particular width may be brought into conjunction with the guide 21.

Travelers have usually been placed upon the rings of spinning frames with fingers. The travelers have to be held in the hands and in the operation as many travelers have dropped upon the floor as have been put upon the rings. With my construction all of the travelers will be placed positively upon the rings without any waste. A further advantage of my construction resides in the fact that it takes from seven to eight minutes to put the travelers upon the rings by hand with a waste of fifty per cent. of the travelers. With my device, however, it will require only one to two minutes and no rings will be wasted. Inasmuch as the

travelers on the spinning ring have to be changed once a week there is a gain of from five to six minutes a week on each frame.

Having thus described my invention,
5 what I claim is:

1. In a device for applying travelers to spinning rings, a traveler guide, a discharging blade having its edge disposed in a plane just beyond the end of the guide, and a member opposed to the guide but spaced therefrom and adjustable toward and from the end of the guide.

2. In a device for applying travelers, a traveler guide, a reciprocable blade having a flat face and a beveled face, the blade having its flat face disposed in a plane just beyond the plane of the end of the guide, a member opposed to the guide and movable toward and away therefrom, and a spring urging the member toward the end of the guide.

3. A traveler applying implement of the character described comprising a magazine including a head having a tubular barrel formed upon its face with a longitudinally extending ring seat and with a slot intersecting the tubular barrel, a guide extending from the magazine into the tubular head and discharging at the slot, and a plunger movable through the barrel and operating within the slot to force the travelers therefrom.

4. A traveler applying implement of the character described comprising a magazine including a head having a tubular barrel formed upon its face with a longitudinally extending ring seat and with a slot intersecting the tubular barrel, a guide extending from the magazine into the tubular head and discharging at the slot, and a plunger movable through the barrel and operating within the slot to force the travelers therefrom, said plunger including a handle reciprocable with relation to the head.

5. A traveler applying implement comprising a head having a tubular barrel, the face of the barrel being formed with a ring seat, and there being a slot intersecting the said seat and the bore of the barrel, a plunger operating in said slot and extending out from the head, a handle mounted upon the head for reciprocation and engaging said plunger, a magazine mounted upon the head and having a discharge opening, and a track or guide extending from the discharge opening of the magazine through one end of the tubular head and discharging at said slot.

6. A traveler applying implement comprising a magazine, a head having a barrel formed with a ring seat upon its face and a traveler discharge slot intersecting the seat and the bore of the barrel, a member adjustable longitudinally along the barrel

and forming one wall of the slot, and means for guiding travelers from the magazine to said slot.

7. In a traveler applying implement of the character described, a barrel having a traveler receiving and discharging slot, one wall of the slot being adjustable toward the other, and a plunger for forcing travelers out of said slot.

8. In a traveler applying implement a barrel having a traveler receiving and discharge slot, a discharge plunger operating through the slot, and an element forming a portion of one wall of the slot and adjustable toward or from the other wall thereof.

9. In a traveler applying implement a barrel having a traveler receiving and discharging slot, the barrel being tubular and the slot intersecting the bore of the barrel, means disposed within the barrel on one side of the slot for guiding travelers thereto, a member disposed in the bore of the barrel on the other side of the slot and adjustable toward or from the side of the slot opposite said member, and a plunger operating through the slot to discharge the travelers therefrom.

10. In a traveler applying implement a head, a guide mounted upon the head, a magazine having a plurality of traveler receiving guides mounted upon the wall thereof, said magazine being shiftable to bring any of its guides into alinement with the guide on the head.

11. In a traveler applying implement, a head including a barrel having a discharge slot, a plunger operating through said slot, a traveler guide extending from the head and extending into said slot, a magazine head mounted upon the end of said guide and having a discharge opening partially surrounding the guide, and a magazine rotatably mounted upon the magazine head and having a plurality of traveler guides therein, the magazine being rotatable to bring any one of said guides into conjunction with the first-named guide.

12. In a traveler applying implement, a head including a barrel having a discharge slot, a plunger operating through said slot, a traveler guide extending from the head and extending into said slot, a magazine head mounted upon the end of said guide and having a discharge opening partially surrounding the guide, and a magazine rotatably mounted upon the magazine head and having a plurality of traveler guides therein, the magazine being rotatable to bring any one of said guides into conjunction with the first-named guide, and a cap detachably closing the upper end of the magazine.

13. In a traveler applying implement, a head including a barrel having a discharge

slot, a plunger operating through said slot, a traveler guide extending from the head and extending into said slot, a magazine head mounted upon the end of said guide
5 and having a discharge opening partially surrounding the guide, and a magazine rotatably mounted upon the magazine head and having a plurality of traveler guides therein, the magazine being rotatable to
10 bring any one of said guides into conjunction with the first-named guide, and means for holding the magazine set in any of its rotated positions.

14. An implement for applying travelers
15 to spinning rings including a head having a discharge slot, a plunger operating through said slot, a guide coacting with the slot, a magazine head at which said guide terminates, the magazine head having an opening
20 surrounding the guide and having a longitudinally directed stem, a tubular magazine rotatably mounted upon the stem and bearing against the magazine head, said magazine having upon its walls a plurality of
25 guides any one of which may be brought into register with the first-named guide upon a proper rotation of the magazine, and means for holding the magazine set in any rotated position.

30 15. A device for applying travelers to the rings of spinning frames including a barrel adapted to seat against a spinning ring, means for guiding travelers into the barrel, and means for ejecting travelers from the
35 barrel.

16. A device for applying travelers to the rings of spinning frames including a barrel adapted to seat against a spinning ring, means for guiding travelers into the barrel,
40 and means for ejecting travelers from the barrel, said means including a plunger forming a handle and reciprocable relative to the barrel.

17. In a device for applying travelers, a
45 supporting guide, and a magazine including a plurality of guides movable into alinement with the supporting guide.

18. In a device of the character described,

a supporting guide, and a magazine including a plurality of guides, the magazine being movable to bring any one of its guides into alinement with the supporting guide.

19. In a traveler applying implement, a traveler guide, a magazine head mounted upon the end of the guide and having a discharge opening partially surrounding the
55 guide, and a magazine rotatably mounted upon the head and having a plurality of guides therein, the magazine being rotatable to bring any one of the guides into conjunction with the first-named guide.
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20. In a traveler applying implement, a member formed to provide a ring engaging seat having a horizontal elongated face and a concavely curved face intersecting the horizontal face, said member having a slot intersecting both of said faces, means for
65 guiding a traveler into the slot, and means operating through the slot for forcing the traveler out of the slot and onto the spinning ring.
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21. In a traveler applying implement, a hollow barrel having a spinning ring seat formed in its outer face, said seat formed by a horizontal elongated face and a concavely
75 curved face intersecting the horizontal face, said barrel having a traveler receiving slot intersecting both of said faces, means for supporting travelers within the barrel and one of said travelers in said slot, and a manually operable blade reciprocative through
80 the barrel and slot for forcing the traveler out of the slot and onto the spinning ring.

22. In a device for applying travelers, a traveler guide, an applying blade movable
85 across the end of the guide, and a yieldable means for supporting a traveler in position slightly beyond the end of the guide and opposite said blade.

In testimony whereof I hereunto affix my
90 signature in the presence of two witnesses.

HERMAN HEVEY.

Witnesses:

ROBERT B. SEIDEL,
JOHN LEONARD.