

No. 875,980.

PATENTED JAN. 7, 1908

W. W. BURSON.
SINGEING MACHINE.
APPLICATION FILED APR. 17, 1903.

2 SHEETS—SHEET 1.

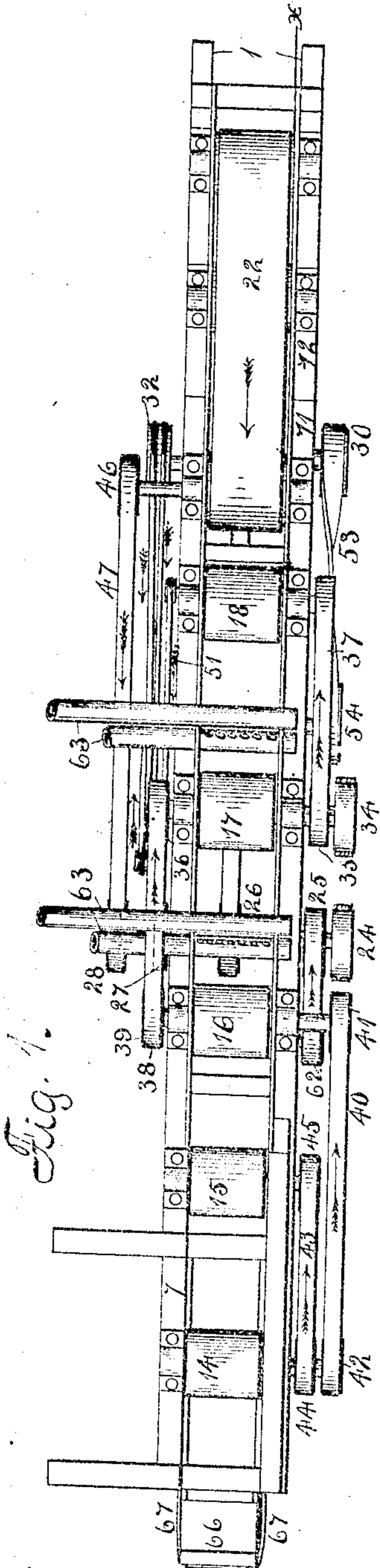
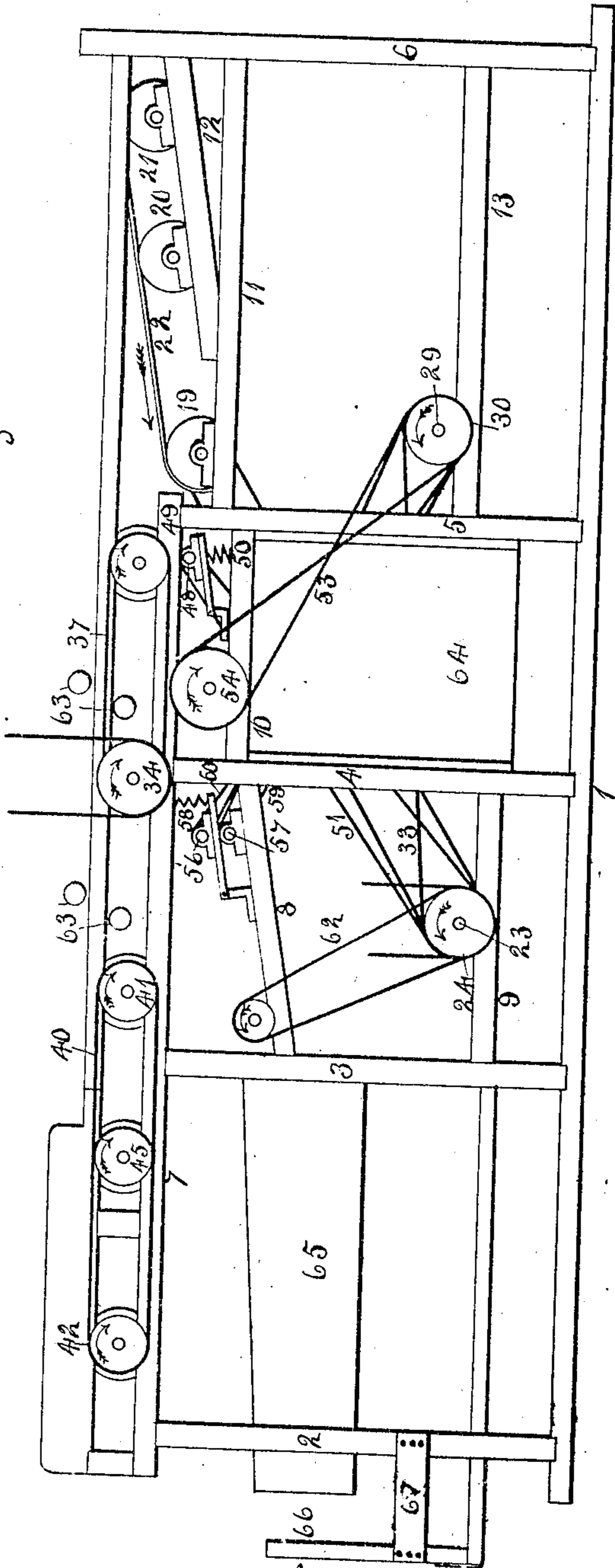


Fig. 1.

Witnesses
E. Behel.
C. B. Clark

Fig. 2



Inventor:
William Worth Burson
By A. O. Behel
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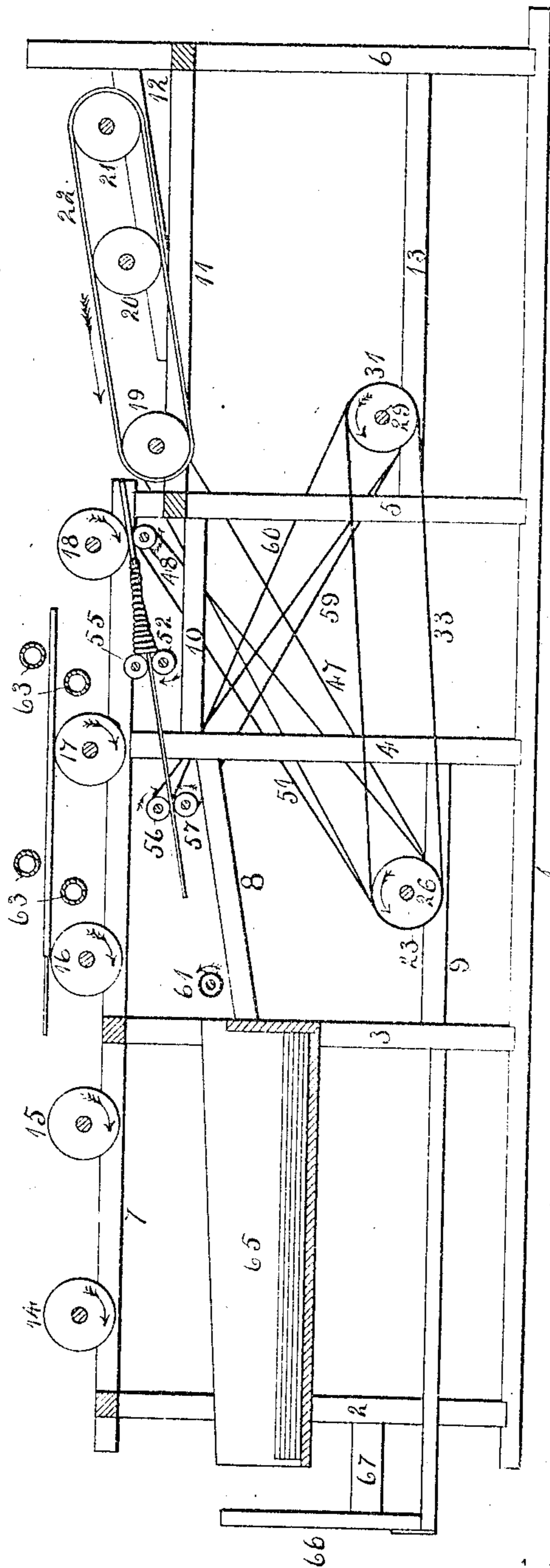
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Fig. 3.



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E. Behel
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UNITED STATES PATENT OFFICE.

WILLIAM WORTH BURSON, OF CHICAGO, ILLINOIS, ASSIGNOR TO BURSON KNITTING COMPANY, OF ROCKFORD, ILLINOIS, A CORPORATION OF ILLINOIS.

SINGEING-MACHINE.

No. 875,880.

Specification of Letters Patent.

Patented Jan. 7, 1908.

Application filed April 17, 1903. Serial No. 153,087.

To all whom it may concern:

Be it known that I, WILLIAM WORTH BURSON, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Singeing-Machines, of which the following is a specification.

The prime object of the invention is to provide a machine for singeing or otherwise treating the surface of stockings or other similar articles, mounted upon suitable boards, supports or formers, with a stripping device, which acts to automatically remove the article from its support after said article has been treated by the machine.

In the accompanying drawings. Figure 1 is a plan view of a singeing machine containing my improvements. Fig. 2 is a side elevation. Fig. 3 is a vertical section taken on the line $x-x$ of Fig. 1.

The main frame consists of the base beams 1, vertical posts 2, 3, 4, 5 and 6, top beam 7, and connecting bars 8, 9, 10, 11, 12 and 13. The top beam 7 supports carrier rollers 14, 15, 16, 17 and 18, all located in the same horizontal plane. Three rollers 19, 20 and 21 are supported by the bars 11 and 12 and an apron 22 connects the rollers. The apron is inclined toward the feed end of the machine. A driven shaft 23 is supported by the bars 9 and supports five pulleys 24, 25, 26, 27 and 28. A shaft 29 is supported by the bars 13, and supports three pulleys 30, 31 and 32. A belt 33, connects the pulleys 26 and 31.

The shaft of the roller 17 supports a pulley 34 and is connected by a belt with the main motive power. This shaft also supports pulleys 35 and 36 and a belt 37 connects the pulley 35 with the pulley of the roller 18. A belt 38 connects the pulley 36 with a pulley 39 on the shaft of the roller 16, and a belt 40 connects the pulley 41 on the shaft of the roller 16 with the pulley 42 on the shaft of the roller 14. A belt 43 connects the pulley 44, on the shaft of the roller 14, with the pulley 45 on the shaft of the roller 15. When the pulley 34 is driven by the motive power all the rollers will be revolved in the direction indicated by the arrows thereon. The carrier 22 will be moved in the direction indicated by the arrow thereon by the pulley 46 on the shaft of the roller 19, having a con-

nection by the belt 47 with the pulley 28. Beneath the roller 18 is located a roller 48 held in boxes 49 in a yielding manner by the springs 50, and this roller is driven by a belt 51 connected with the pulley 27.

A roller 52 is supported by the bar 10, and is driven by the belt 53 connecting the pulleys 30 and 54. Above this roller 52 is located a similar roller 55. Two rollers 56 and 57 are supported by the bars 8, the roller 56 is held in contact with the roller 57 by the spring 58. These rollers are driven in opposite directions by the belts 59 and 60 connected with the pulley 32. A roller 61 is supported by the bars 8 and is rotated in the direction indicated by the arrow, by the belt 62 connected with the pulley 25 on the main driving shaft. Four gas burners 63 are located over the machine, two above the upper surface of the carrying rollers and two below.

The boards or other suitable supports or formers upon which are placed the stockings or other articles to be singed are carried by the carrying rollers between the two sets of burners when the singeing takes place, they are then run onto the endless carrier 22 and will force them between the stationary roller 55, and the roller 52 revolving contrary to the direction the board or other support upon which the article is mounted is moving, the said article will be held from further movement while its support is being drawn free of it by the rollers 56 and 57, as shown at Fig. 3. The stocking will drop down the chute 64, and the roller 61 will carry the board into the receptacle 65 at the feed end of the machine under the rollers 14 and 15. The vertical board 66 has a connection with the main frame of the machine, and the leather straps 67 permit it to yield, thereby forming a stop for the boards or supports in their return movement. By this connection the board or other support holding the stockings, is automatically fed between the singeing burners, after which the stockings are automatically removed from their boards or supports, and the latter returned to the feed end of the machine.

While I have described my invention as being an improvement in stocking singeing machines, I do not wish to be understood as limiting myself to this type of machines specifically for it will be readily understood that

the improvements may be employed in connection with other machines of a similar nature for treating tubular articles that are required to be mounted upon supports during treatment.

It is evident that the arrangement of the belts for driving the various rollers may be changed without departing from the scope of my invention, as the chief novelty lies in stripping the stockings from the boards, supports or formers.

I claim as my invention.

1. The combination of means for operating upon stockings carried by boards, means for carrying the boards to the operating means, and means for stripping the stockings from the boards.

2. The combination of burners, means for carrying the boards holding the stockings between the burners and means for stripping the stockings from the boards.

3. The combination of burners, means for carrying the boards holding the stockings between the burners and means for stripping the stockings from the boards on their return movement.

4. The combination of burners, means for carrying the boards holding the stockings between the burners, an endless carrier for returning the boards and means for stripping the stockings from the boards on their return movement.

5. The combination of burners, means for carrying the boards holding the stockings between the burners, means for stripping the stockings from the boards and a receptacle for the boards.

6. In combination with singeing means, of means for carrying the supports holding the articles to be singed through the said singeing means, and means for stripping the said articles from their supports.

7. In combination with singeing means, of means for carrying the supports holding the articles to be singed through the said singeing means, means for returning the supports and means for stripping the said articles from their supports on their return movement.

8. In combination with singeing means, of means for carrying the supports holding the articles to be singed through the said singeing means, a carrier for returning the said supports and means for stripping the said articles from their supports on the return movement.

9. In combination with singeing means, of means for carrying the supports holding the articles to be singed through the said singeing means, means for stripping the said articles from the supports and a receptacle for the supports.

10. In combination with means for treating tubular fabrics supported from within upon suitable formers, of means for carrying the said formers with the articles to be treat-

ed through the said treating means, and means for stripping the said articles from formers.

11. In combination with singeing means, of means for carrying the boards holding the articles to be singed, in operative relation to said singeing means, and means for stripping the singed articles from the boards.

12. In combination with means for treating tubular articles supported from within upon boards, of means for carrying the boards with the articles thereon through said treating means, devices for engaging one end of the articles after they have been treated and arresting the movement thereof, and means for withdrawing the boards therefrom.

13. In combination with means for treating stockings or similar tubular articles supported from within upon boards, of means for carrying the boards with the articles thereon through said treating means and means interposed in the path of movement of said boards for engaging the articles and stripping them therefrom.

14. In combination with means for singeing stockings or similar articles mounted upon supports, of means for carrying the articles through said singeing means, and means for returning the supports.

15. In combination with means for singeing stockings or similar articles mounted upon supports, of means for stripping the articles from their supports after they have passed through the singeing means.

16. A machine for singeing stockings or similar articles embodying stripping means for removing the stockings from the supports upon which they were mounted during the singeing operation.

17. In combination with means for singeing stockings or like articles mounted upon supports, of means for carrying the supports with the articles thereon through said singeing means, means for changing the direction of movement of the supports after they have passed through the singeing means, and means for returning the supports.

18. In combination with means for singeing stockings or like articles mounted upon supports, of means for carrying the supports with the articles thereon through said singeing means, means for changing the direction of movement of the supports after they have passed through the singeing means, and means for returning the supports below the level of the singeing means and delivering them at a point adjacent to the feed end of the machine.

19. In combination with means for singeing stockings or like articles mounted upon supports, of means for carrying the supports with the articles thereon through said singeing means, means for returning the supports and for delivering them at a point adjacent to the feed end of the machine, and means

for stripping the articles from their supports on the return movement.

20. In combination with means for singeing stockings or like articles mounted upon supports, of means for carrying the articles through the singeing means, an inclined belt located in the path of movement of the said supports for changing the direction of movement thereof, means for returning the supports to a point adjacent to the feed end of the machine, and means for stripping the articles from their supports.

21. In a finishing machine, in combination with the stripping means, and means for conveying the stockings in different planes whereby the stockings will be engaged by said stripping means, the stockings being mounted on supports so as to be acted upon by said stripping means.

22. A finishing machine embodying stripping means, the articles to be treated being mounted on supports so as to be acted on by said means.

23. In a machine for singeing textile products, the combination of a series of rollers whereby the object to be singed while mounted upon a stretching block is continu-

ously advanced in position; singeing jets in proximity to the path which the block is thus caused to pursue; and a stripping device whereby the further motion of the block effects its withdrawal from the textile fabric stretched upon it.

24. In a machine for singeing textile products, the combination of a series of rollers, the terminal point of which is in proximity to the initial point; whereby the object to be singed, while mounted upon a stretching block, is continuously advanced in position from the initial point to the terminal point; singeing jets in proximity to the path which the block is thus caused to pursue; and a stripping device whereby the further motion of the block effects its withdrawal from the textile fabric stretched upon it, whereby the stripped block is returned to a point near that where, after again having an article stretched upon it, it is to be fed again to the machine.

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Witnesses:

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