No. 882,334. PATENTED MAR. 17, 1908.

D. P. MOORE.

DAMPENING MACHINE.

APPLICATION FILED DEC. 20, 1906.

5 SHEETS—SHEET 1.

Fig. 1.

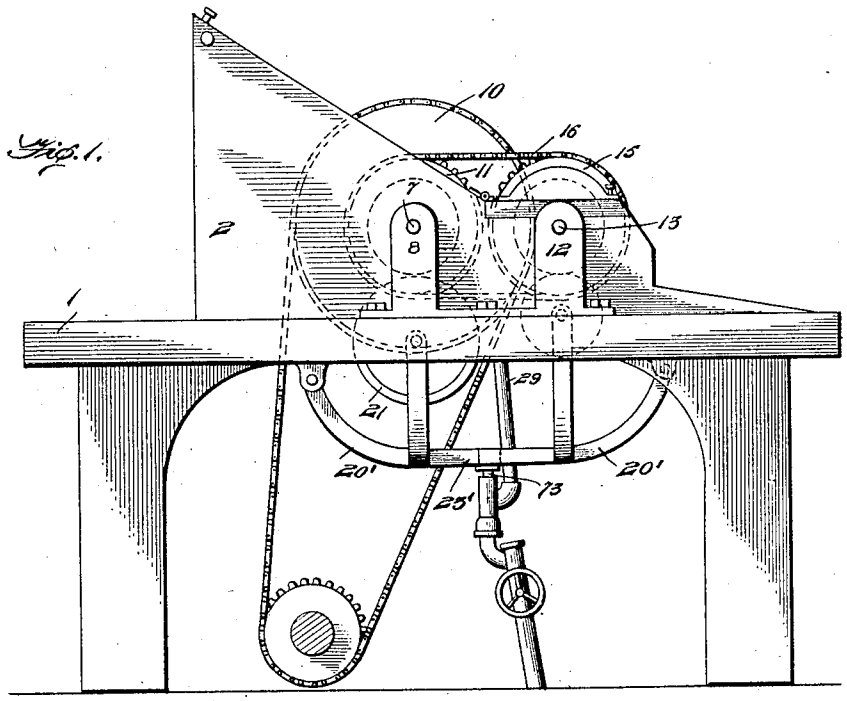
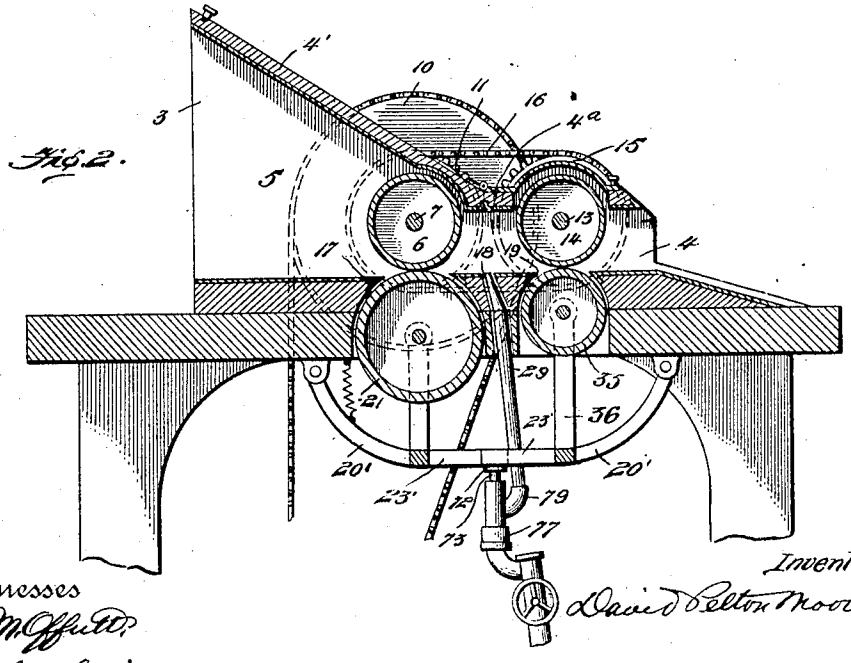


Fig. 2.



Witnesses

B. M. Offutt

E. M. Spring.

Inventor.

David Pelton Moore.

THE NORRIS PETERS CO., WASHINGTON, D. C.

No. 882,334. PATENTED MAR. 17, 1908.

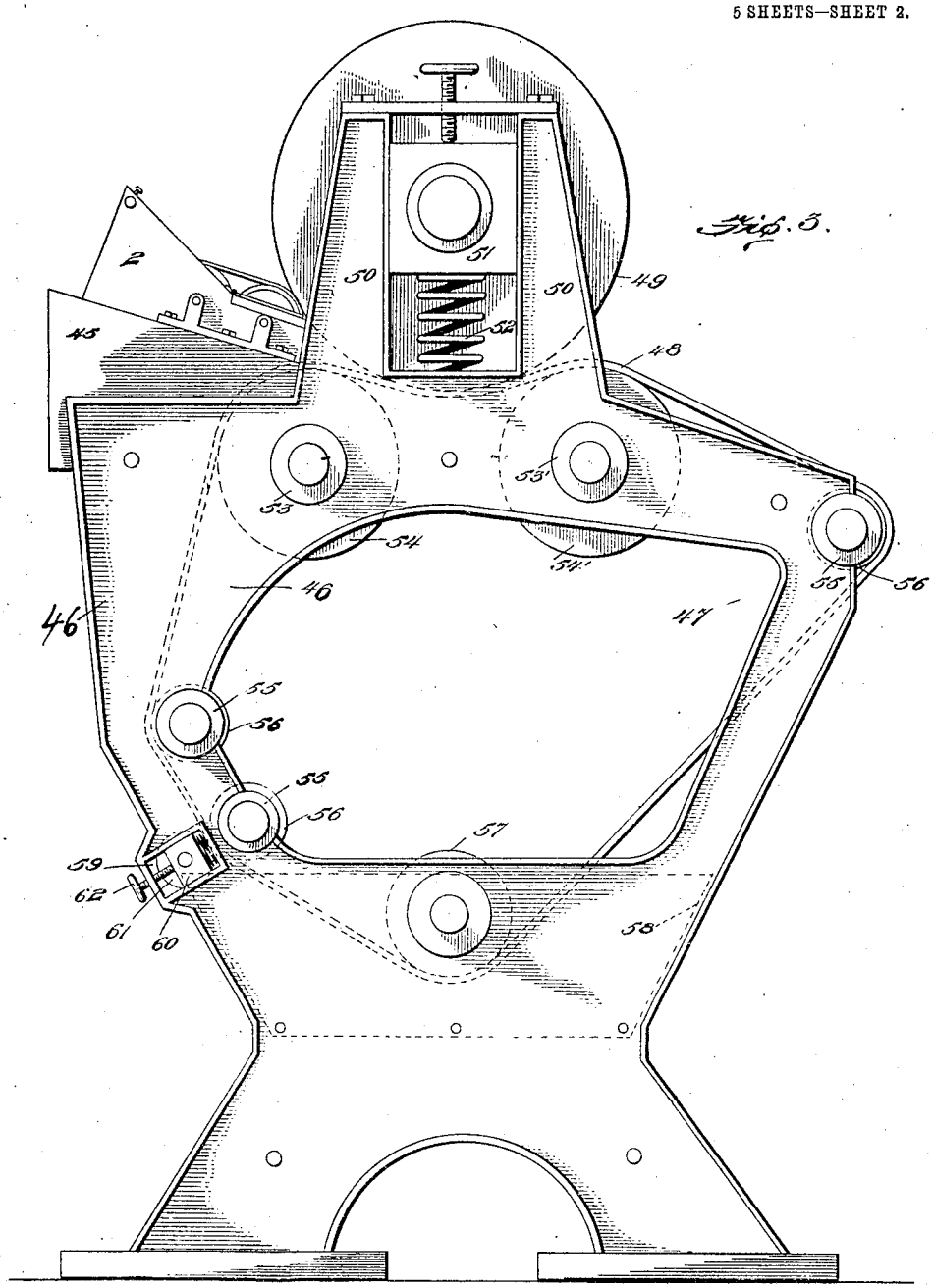
D. P. MOORE.

DAMPENING MACHINE.

APPLICATION FILED DEC. 20, 1906.

5 SHEETS—SHEET 2.

Fig. 3.



Witnesses
B. M. Offutt.
G. M. Spring.

Inventor
David Pelton Moore.

THE NORRIS PETERS CO., WASHINGTON, D. C.

No. 882,334. PATENTED MAR. 17, 1908.

D. P. MOORE.

DAMPENING MACHINE.

APPLICATION FILED DEC. 20, 1906.

5 SHEETS—SHEET 3.

Fig. 4.

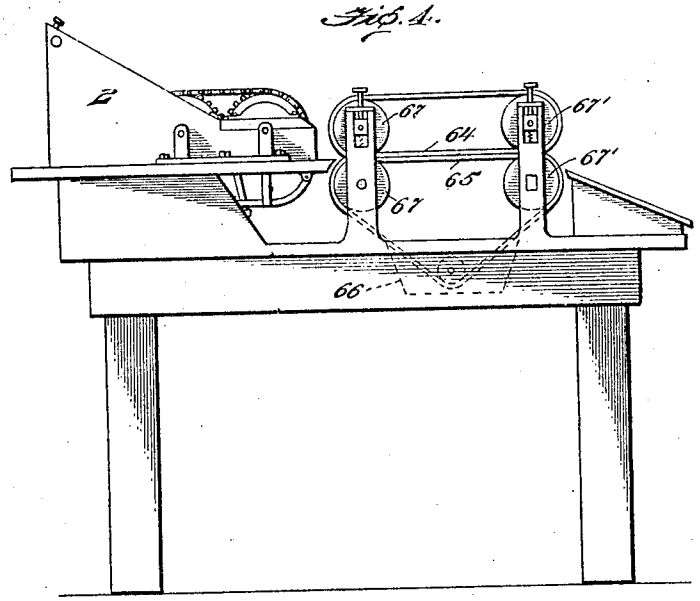
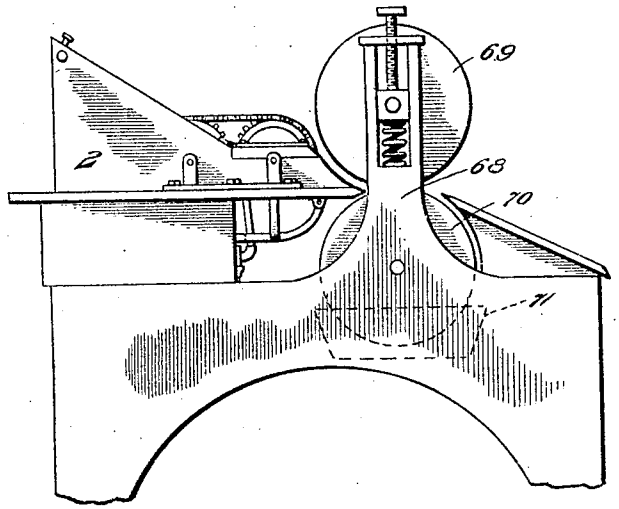


Fig. 5.



Witnesses

E. M. Offutt.

A. M. Spring.

Inventor

David Pelton Moore.

THE NORRIS PETERS CO., WASHINGTON, D. C.

No. 882,334. PATENTED MAR. 17, 1908.

D. P. MOORE.

DAMPENING MACHINE.

APPLICATION FILED DEC. 20, 1906.

5 SHEETS—SHEET 4.

Fig. 6.

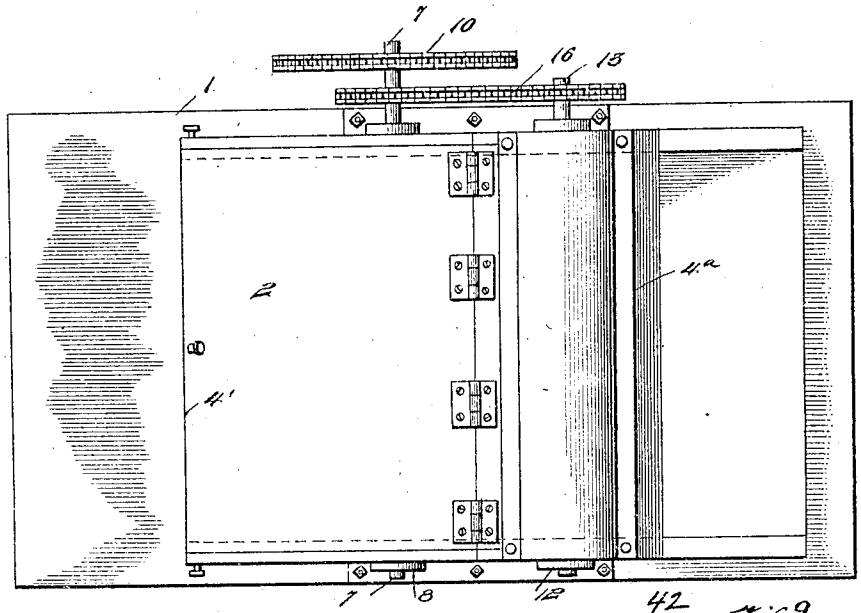


Fig. 8.

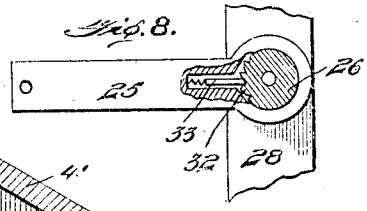


Fig. 9.

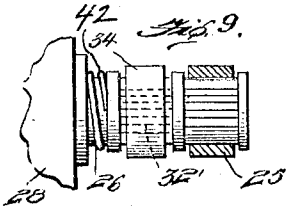


Fig. 7.

Witnesses
B. M. Offutt.
G. M. Spring.

Inventor
David Peeton Moore.

THE NORRIS PETERS CO., WASHINGTON, D. C.

No. 882,334. PATENTED MAR. 17, 1908.

D. P. MOORE.

DAMPENING MACHINE.

APPLICATION FILED DEC. 20, 1906.

5 SHEETS—SHEET 5.

Fig. 15.

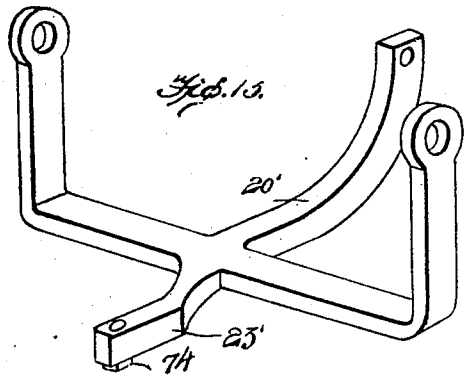


Fig. 10.

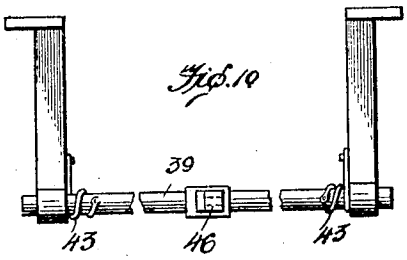


Fig. 16.

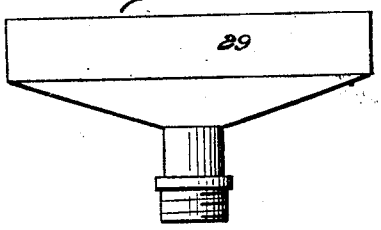


Fig. 17.



Fig. 11.

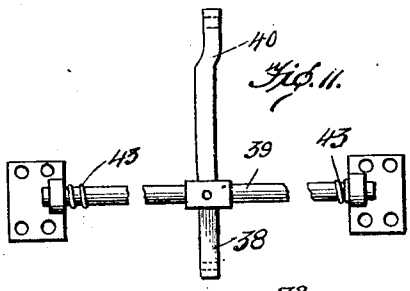


Fig. 18.

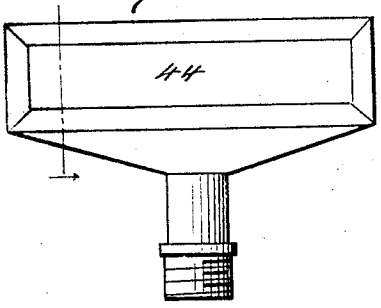


Fig. 19.

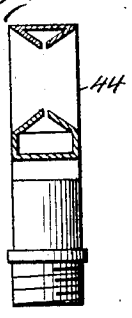


Fig. 12.

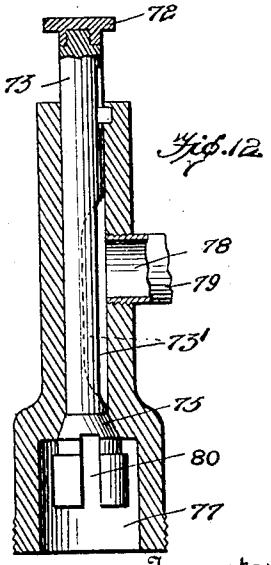
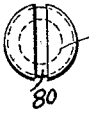


Fig. 14.



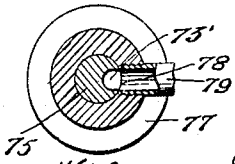


Fig. 13.

Witnesses
B. M. Offutt.
G. M. Spring.

Inventor.
David Pelton Moore.

THE NORRIS PETERS CO., WASHINGTON, D. C.

UNITED STATES PATENT OFFICE.

DAVID PELTON MOORE, OF WASHINGTON, DISTRICT OF COLUMBIA.

DAMPENING-MACHINE.

No. 882,334. Specification of Letters Patent. Patented March 17, 1908.

Application filed December 20, 1906. Serial No. 348,816.

To all whom it may concern:

Be it known that I, DAVID PELTON MOORE, a citizen of the United States, residing at Washington, in the District of Columbia, have invented certain new and useful Improvements in Dampening-Machines, of which the following is a specification, reference being had therein to the accompanying drawing.

My present invention relates to improvements in dampening machines, and the main object of my invention, is the production of a machine in which the moistening or dampening agent is under pressure, and is preferably steam or hot water, the supply of which is controlled by a means, which is actuated by the thickness of the article, which is to be operated upon, thus providing a machine which insures the even dampening of articles without resorting to a compress, or other means before ironing.

To this end, my machine consists of a hopper into which the article is introduced, mechanism being so disposed within and below the hopper, so as to be operated upon by the thickness or "ply" of the article, to project, spray or atomize the moisture in the desired quantity upon the article, an auxiliary mechanism being actuated by the article for continuing the action of moistening after the article has passed the first mechanism; but should it be desired to use a final dampening machine, my invention may be employed as a preliminary dampener, which is coupled directly to the final moistener, without departing from the spirit of my invention.

The machine is more particularly designed to operate upon collars and cuffs, and by the mechanism hereinafter described, it will be seen that the thickest portion of the collar or cuff regulates the supply of moisture to the collar or cuff.

To carry the invention into effect many forms of machines may be devised, but I illustrate and describe only several preferred forms.

In the accompanying drawings:—Figure 1 is a side elevation of a complete machine mounted upon its table in operable position. Fig. 2 is a longitudinal central sectional view through the hopper to illustrate the mechanisms. Fig. 3 illustrate the machine used in conjunction with a "final" dampener. Fig. 4 is a similar view with another form of "final" dampener. Fig. 5 is still another form of "final" dampener, and Fig. 6 is the top plan view of the device as shown in Fig. 1. Fig. 7 is a longitudinal central sectional view through a hopper showing a modified form of actuating mechanism. Fig. 8 is a detailed view of the valve stem and actuating lever as used in Fig. 7. Fig. 9 is an elevation of said stem with one of the levers in section. Figs. 10 and 11 are detailed views of the auxiliary actuating shaft and levers as used in the construction shown in Fig. 7. Fig. 12 is a vertical sectional view of the actuating valve as shown in Figs. 1 and 2. Fig. 13 is a cross section of the same through the point at which the pipe 79 enters. Fig. 14 is a bottom plan view of the valve shown in Fig. 12. Fig. 15 is a perspective view of the frames 20 and 20′ as shown in Figs. 1, 2, 4 and 5. Figs. 16 and 17 are detailed views of one form of sprayer. Fig. 18 is a front view of a double sprayer and Fig. 19 is a section of the same taken on the line and looking in the direction of the arrow Fig. 18.

Referring to the drawings:—The numeral 1 designates a support or table, upon which is mounted the hopper or casing 2, which is provided with the enlarged receiving end 3 and the reduced delivery end 4, the top of the casing being formed in two hinged sections 4′ and 4ª. This hopper may have one or a plurality of compartments and mechanisms, but in order to simplify the construction, I show only one, it being illustrated at 5. The feed roller 6, is mounted within the hopper, but has its axle 7, journaled in the bearings 8, carried by the table exterior to and upon opposite sides of the casing, a sprocket wheel 10, being carried by one end of the axle, whereby power is transmitted to the machine, the smaller sprocket wheel 11, being employed to transmit power to the remainder of the machine. Journaled also in the bracket and in its bearings 12, is the axle 13, of the rear feed roller 14, which carries a sprocket wheel 15, which by means of the chain 16, receives motion from the roller 6.

The bottom of the casing or hopper, is provided with the transverse slots or openings 17, 18 and 19, the purpose of which will presently appear. Carried by the pivoted yoke 20, and adapted to project through the slot 17, and contact the roller 6, is the lower roller 21, which is held in contact with the roller 6, by means of the spring 22 as shown in Fig. 7. The projecting arm 23, of the yoke or frame 20, has pivotally secured there-

to, the rod or link 24, whose upper end is connected to the lever or crank 25, which is rotatably connected to the stem 26, of the valve not shown, which is mounted in the moisture supplying agent's pipe 28, the spray end or distributer 29, of which enters the forwardly inclined slot 18, and projects the agent against the article as it passes from the roller 6 through the chest 31 to the roller 14.

The valve stem is provided with two sets of oppositely arranged ratchet teeth 32 and 32′, the former being acted upon by the spring actuated detent or pawl 33, of the lever 25, the lever 34, being similar in construction to the lever 25, but acting in an opposite direction upon the ratchet teeth 32′ which are similar to the ratchet teeth 32. As above stated, as the article is passing from the roller 6 to the roller 14, the moistening agent is acting upon the article, but to allow the feed roller 21 to return after the article has passed between the rollers 21 and 6 and be ready for the next article, without effecting the supply of moistening agent to the article still within the chest, the roller 35, carried in the yoke 36, of the frame 37, is held depressed until the article leaves the casing, the said frame 37, being connected to the arm 38, which operates the pivoted shaft 39, so that the forward arm 40, through the rod or link 41, holds the lever 34 upwardly, thus holding the valve (not shown) open, and continuing the spraying started by the roller 21.

Many forms of quick acting valves may be used without departing from the spirit of my invention, but to assist in the return of the various parts, I employ the valve stem spring 42, and springs 43, to operate the pivoted shaft 39, thereby insuring the return of the rollers 21 and 35, and the valve to their normal position.

Many forms of sprayer or distributer may be employed, and the moistening agent may be projected upon one side only of the articles, and upon both sides, in which case, I provide the double sprayer or distributer 44, as clearly shown in Figs. 18 and 19.

The above description applies to the main portion of my machine, which may be used as a complete dampener, or it may be used as a preliminary dampener, as shown in Figs. 3, 4 and 5.

In the form shown in Fig. 3, I mount the casing upon the upper forward portion 45, carried by the sides or frames 46, of the final dampener 47, the delivery end of the preliminary moistener, being in such a position, as to feed the article to the belt 48 and upper enlarged compression roller 49. The side frames in this form of machine are provided with the central projection 50, for the reception of the boxings 51, carrying the roller 49, the boxings being adjustable and supported upon springs 52, as shown. Journaled in the side frames in the bearings 53 and 53′, which are equi-distant from the center of the roller 49, are the lower compression rollers 54 and 54′. Mounted in the bearings 55 are the guide rollers 56, while the guide roller 57, is so mounted as to have the greater part of its surface projected into the tank 58, containing water. Slidably mounted within the recesses 59, are boxings 60, carrying the roller 61, the adjusting screws 62, being employed to adjust the roller, and at the same time regulate the amount of moisture carried by the moisture conveying and article conveying endless belt 48. This belt passes around the guide rollers and between the large roller 49 and the smaller rollers 54 and 54′, and thus the preliminary dampened articles is received upon this belt and passed between these rollers thereon, and delivered at the opposite side of the machine.

In the form of "final" dampener shown in Fig. 4, I employ the two parallel endless belts 64 and 65, the lower one 65, of which passes into the tank 66, and receives the moisture, the two pairs of compression rollers 67 and 67′, being employed to transmit motion to the belts and assist in evenly distributing the moisture as the article passes between each pair.

The "final" dampener shown in Fig. 5, consists of the frame 68, having the upper adjustable roller 69, and the lower stationarily journaled moisture supplying roller 70, which dips in the tank 71 to receive the moistening agent.

When using my machine as a "preliminary" dampener, the same is properly geared or "timed" in its action with the "final" dampener, so that there will be no crowding of the articles as they are passed from one to the other.

In Figs. 12, 13, and 14, I show my preferred form of valve, which is held closed by the pressure of the moistening agent, the valve when closed also holding the rollers 21 and 35, in contact with their respective stationary rollers within the casing, thus dispensing with springs, although springs may, if necessary be used. The steel head 72, of the valve stem 73, engages the steel button 74, carried by the arms 23′, of the yoked frames 20′, which carry the rollers 21 and 35, respectively, and thus the valve holds the rollers upwardly. As either frame is depressed, the valve 75, is depressed and opened, and the moistening agent under pressure, enters from the supply pipe to the valve casing 77, the elongated channel of the stem 73′, to the opening 78, and thence to the sprayer through the pipe 79. The lower end of valve is provided with a slot 80, by means of which the weight of the valve is lessened and a passage is provided whereby the steam more quickly passes through the casing and

out to the pipe 79. It will thus be seen that this construction of valve is quickly opened or closed, and that the pressure holds all parts in their normal position, while the collar or cuff disturbs the frames and opens the valve.

What I claim, is:—

1. In a dampening machine, the combination of means for supplying moisture to the article, means controlled by the thickness of the article for actuating the moisture supplying means, and means for continuing said action after the article has passed the first mentioned means, actuated by the article.

2. In a dampening machine, the combination of a casing adapted to receive and deliver the article, a moisture supplying mechanism mounted in the path of the article, means actuated by the article for controlling the supplying mechanism, and means for continuing said action after the article has passed the first mentioned means, said means being actuated by the article.

3. In a dampening machine, the combination of a casing adapted to receive and deliver the article, a moisture supplying mechanism mounted in the path of the article, means actuated by the thickness or "ply" of the article during passage, for controlling the supplying mechanism and means for continuing said action after the article has passed the first mentioned means, said means being actuated by the article.

4. In a dampening machine, the combination of a support, a moisture supplying mechanism supported thereby, means for controlling the supplying means operated by the article, and means for continuing the operation of the supplying means after the article has passed the first actuating means, said moisture supplying mechanism being intermediate of both of said means.

5. In a dampening machine, the combination of means whereby the articles are subjected to the spraying of moist mist upon opposite sides simultaneously, preparatory to a final moistening, and means for finally moistening the article.

6. In a dampening machine, the combination of means for preliminarily moistening the article, said preliminary moisture being under pressure and sprayed upon opposite sides of the article and means for receiving, finally moistening and delivering the article.

7. In a dampening machine, the combination of a preliminary moistening device, having moisture under pressure which is adapted to be sprayed and having spraying means therein regulated by the article to be moistened, and final moistening means adapted to receive the article from said device.

8. In a dampening machine, the combination of a moisture supplying means, means for controlling the supply actuated by the article to be moistened, and another means adapted to receive the article and be actuated thereby to continue the moistening operation and deliver the article.

9. In a dampening machine, the combination of a hopper, a preparatory moisture supplying means carried thereby, means for controlling the supply regulated by the article to be moistened, and means for receiving the article, and delivering the same, said last mentioned means being controlled by the article to continue the moistening action after the article has passed the first controlling means.

10. In a dampening machine, the combination of a preparatory moistening device, employing moisture under pressure which is sprayed and supplying it upon opposite sides of the article, and means for receiving, compressing and finally moistening the article.

11. In a dampening machine, the combination of a preparatory moistening device, employing moisture under pressure and spraying it upon opposite sides of the article simultaneously, of an endless belt or moistening apron of absorbent material adapted to receive the article after the same has received its preparatory moistening, means for supplying water to said apron, and a compressing means operating in conjunction with said apron.

12. In a dampening machine, the combination of a hopper, a moisture supplying means carried thereby, means carried by the hopper actuated by the article to be dampened for controlling the supply as the article enters the hopper, and means controllable by the article to continue the supply after the article has been released by the first mentioned means.

13. In a dampening machine, the combination of a hopper, a moisture supplying means carried thereby, means carried by the hopper actuated by the article to be dampened for controlling the supply as the article enters the hopper, means controllable by the article to continue the supply after the article has been released by the first mentioned means, and means for receiving and finally dampening the article after it leaves the hopper.

14. In a dampening machine, the combination of a hopper, a moisture supplying means carried thereby, means carried by the hopper actuated by the article to be dampened for controlling the supply as the article enters the hopper, means controllable by the article to continue the supply after the article has been released by the first mentioned means, and an endless delivery and moistening belt adapted to receive the article after it has left the hopper.

15. In a dampening machine, the combination of a hopper, a moisture supplying means carried thereby, means carried by the

hopper actuated by the article to be dampened for controlling the supply as the article enters the hopper, means controllable by the article to continue the supply after the article has been released by the first mentioned means, and a final moistening, compressing and delivery means for receiving the article from the hopper.

16. In a dampening machine, the combination of a hopper having an enlarged receiving end and reduced delivery end, means for preparatorily moistening the article carried by the hopper, and adapted to spray moisture under pressure upon both sides of the article to be moistened and means for receiving the article from the hopper and finally moistening the same.

17. In a dampening machine, the combination of means for spraying moisture simultaneously upon two surfaces of the article as it passes therebetween, and an auxiliary means for continuing the action of the moisture supplying agent after the article has passed the first controlling means.

18. In a dampening machine, the combination of a support, a moisture supply, a valve to control the same, a stationary sprayer connected to said supply, and a pivoted frame connected to the support and in engagement with the valve; whereby when the article to be dampened depresses the frame the valve is opened and the moisture is sprayed upon the article.

19. In a dampening machine, the combination of a double sprayer adapted to supply the moistening agent upon opposite sides of the article to be dampened, means actuated by the article to be dampened for controlling the supply of the moistening agent, and an anxiliary means for continuing the dampening action after the article has passed the first controlling means.

20. In a dampening machine, the combination of means for supplying moisture upon opposite sides of the article to be dampened as it passes therebetween, means controlled by the article to control said supply, and an auxiliary means for continuing the action of the moisture supplying agent after the article has passed the first controlling means.

21. In a dampening machine, the combination of means for supplying moisture upon opposite sides of the article to be dampened as it passes therebetween, means controlled by the article to control said supply and an auxiliary means for continuing the action of the moisture supplying agent after the article has passed the first controlling means, said agent being supplied proportionately to the thickness of the article to be dampened.

22. In a dampening machine, the combition of means adapted to project the moisture supplying agent upon two surfaces of the article, a valve for controlling the supply of the agent thereto, and means actuated by the article to be dampened for controlling the valve and supplying the moisture to the article as it passes between the projecting means.

23. In a dampening machine, the combination of means adapted to project the moisture supplying agent upon two surfaces of the article, a valve for controlling the supply of the agent thereto, means actuated by the article to be dampened for controlling the valve and supplying the moisture to the article as it passes between the projecting means, and an auxiliary means for holding the valve open controlled by the article to be moistened after the same is disengaged from the first valve actuating means.

24. In a dampening machine, the combination of a support, a revolving member having stationary journals, another revolving member adapted to contact the same and so mounted as to be separated from the first member by the article to be dampened as it passes between said members, and means for spraying the moistening agent to the article to be dampened actuated by the second mentioned member as the members are separated by the articles.

25. In a dampening machine, the combination of a support, two revolving members mounted in the same plane and having stationary journals upon the support, two independent revolving members in contact therewith, one of each of the last revolving members adapted to be separated successively by the article to be dampened, as it passes between each respective pair of members and means for supplying moisture to the article to be dampened operated successively by said members, as they are separated, and situated intermediate and apart from the two stationary journaled members and adapted to act upon the article to be dampened as its passes from one pair to the other pair of the members.

26. In a dampening machine, the combination of a support, a pair of rollers having stationarily mounted journals carried by the support, a roller pivotally mounted to the support and adapted to be in contact with one of the stationarily mounted rollers, another roller pivoted in the opposite direction and in engagement with the other remaining stationarily journaled roller, and means for supplying moisture to the article to be dampened actuated by the first mentioned pivoted roller and held operable by the last mentioned pivoted roller.

27. In a dampening machine, the combination of a support, a moisture supply, means connected with said supply for supplying moisture to the article dampened, means for controlling said supply to the last mentioned means, means operably connected to said last mentioned means actuated by the article to be dampened, and another

means actuated by the article to be dampened to continue the supply after the article has passed the first mechanism actuated thereby.

28. In a dampening machine, the combination of a support, means for projecting a moistening agent upon the article to be dampened, a valve for controlling the supply thereof, means for actuating the valve operated upon by the thickness of the article to be dampened, and another means operated upon by the thickness of the article to be dampened to continue the opening of the valve after the article has passed the first mentioned actuating means.

29. In a dampening machine, the combination of a support, means for projecting moisture upon the article to be dampened, a valve for controlling the supply of the moistening agent to said means, means actuated by the article to be dampened to control the valve, and another means actuated by the article for holding the valve open to continue the supply of moisture after the article has passed the first actuated means.

30. In a dampening machine, the combination of a support, a supply, means for projecting moisture upon the article to be moistened, a valve intermediate of the supply and said means, pivoted means controlled by the thickness of the article to be dampened for actuating the valve to supply moisture proportionately to the thickness of the article, and another pivoted means for holding the valve open and to continue the moistening action after the article has passed the first pivoted means.

31. In a dampening machine, the combination of a support, a pair of rollers carried thereby and adapted to receive motion in the same direction, another pair of rollers adapted to contact said first mentioned rollers and receive motion therefrom, a pivoted frame, one to each of the last mentioned rollers carried by the support and adapted to operate independently of each other, and a moisture supplying means intermediate of the last pair of rollers adapted to be controlled by said frames, the action thereof being regulated by the thickness of the article to be dampened as it passes between the stationary journaled and pivoted rollers.

32. In a dampening machine, the combination of a support, two rollers arranged in parallel and carried by the support, two frames pivoted to the support in opposite directions, a roller carried by each frame and adapted to be held in contact one with each of the other rollers, means mounted intermediate of the first two rollers adapted to supply moisture to the article as it passes between one pair to the other pair of rollers, and a valve actuated by said pivoted frames for controlling the supply of moisture to the article to be dampened.

33. In a dampening machine, the combination of a support, two rollers arranged in parallel and carried by the support, two frames pivoted to the support in opposite directions, a roller carried by each frame and adapted to be held in contact one with each of the other rollers, means mounted intermediate of the first two rollers adapted to supply moisture to the article as it passes between one pair to the other pair of rollers, and a valve actuated by said pivoted frames for controlling the supply of moisture to the article to be dampened, the first pivoted frame actuating the valve to start the flow of the moistening agent and the second frame holding the valve open after the article has passed the roller of the first pivoted frame.

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

DAVID PELTON MOORE.

Witnesses:

J. MAE WRIGHT,

MAY E. MOORE.