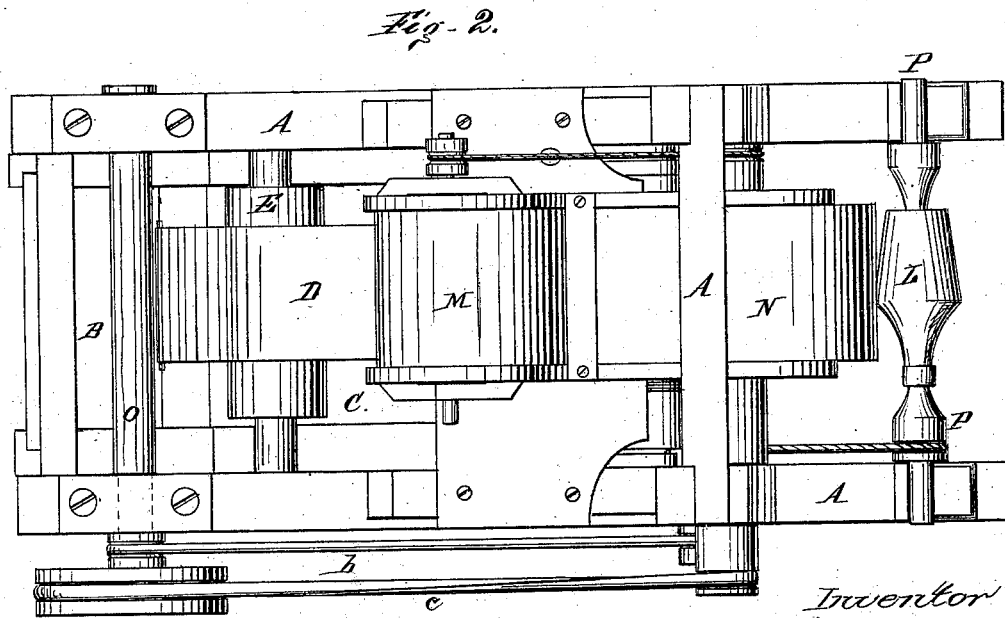
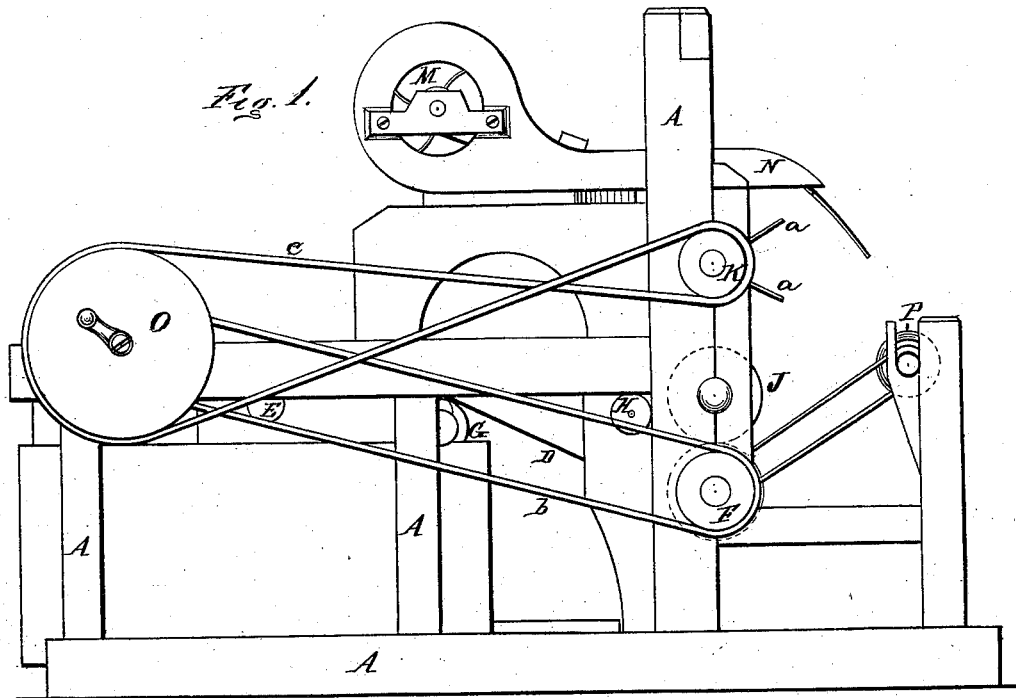


I. JENNINGS.

Paper-Pulp Distributors for Coating Articles.

No. 198,887.

Patented Jan. 1, 1878.



Witnesses
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James H. Hicks

Inventor
Isaac Jennings
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Fig. 3.

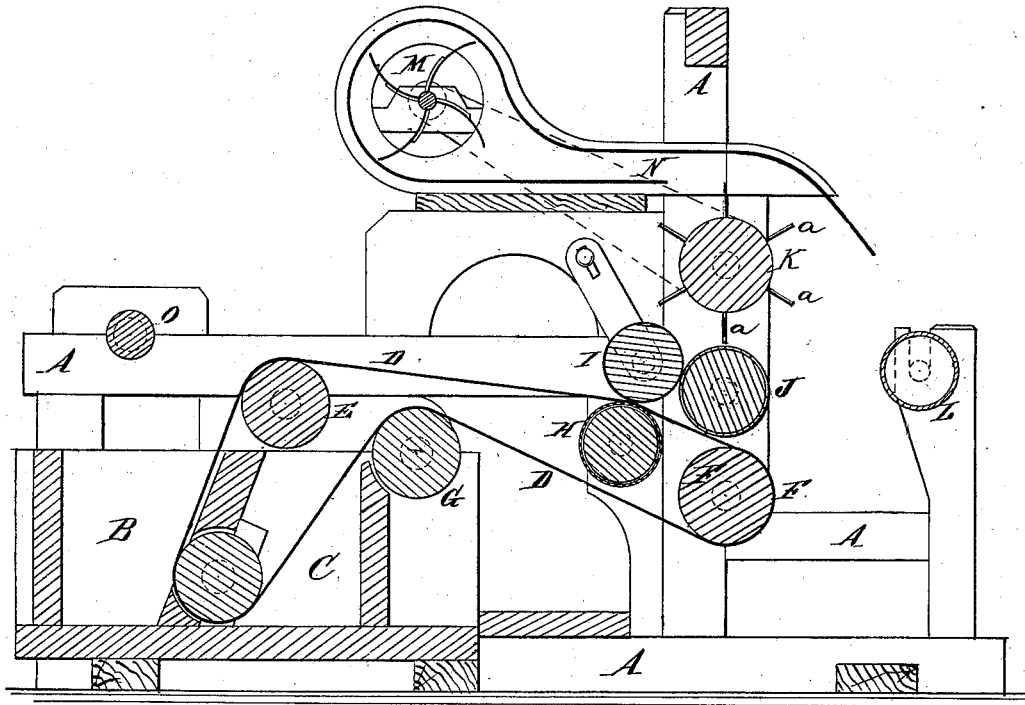
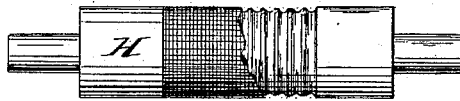


Fig. 4.



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ISAAC JENNINGS, OF FAIRFIELD, CONNECTICUT.

IMPROVEMENT IN PAPER-PULP DISTRIBUTERS FOR COATING ARTICLES.

Specification forming part of Letters Patent No. **198,887**, dated January 1, 1878; application filed November 3, 1877.

To all whom it may concern:

Be it known that I, ISAAC JENNINGS, of Fairfield, in the county of Fairfield and State of Connecticut, have invented certain Improvements in Paper-Pulp Distributers, of which the following is a specification:

This invention is designed to secure the more perfect application and distribution of paper-pulp upon surfaces to which it may be advantageously applied.

One part of the said invention consists in the combination, with a wire-cloth, or its equivalent, for gathering the pulp, of one or more transferring-rollers, or its or their equivalent, and a picker adapted to take the pulp from the said transferring-roller and throw it upon the surface or article to be covered, substantially as hereinafter more fully set forth.

Another part of the said invention consists in the combination, with the wire-cloth, or its equivalent, and a transferring-roller, or its equivalent, and a picker for throwing the pulp upon the surface to be covered, of a second or secondary roller to receive the pulp from the roller which transfers it from the wire-cloth and delivers it to the picker, substantially as hereinafter more fully set forth.

Another part of the said invention consists in the combination, with the said wire-cloth, or its equivalent, and the said picker, of a revolving holder for holding the articles to be covered, and having its axis parallel, or substantially so, to the axis of the said picker, substantially as hereinafter more fully set forth.

Referring to the accompanying drawings, Figure 1 is a side view of my improved machine. Fig. 2 is a plan of the same. Fig. 3 is a vertical longitudinal section of the same, taken through the center of the machine. Fig. 4 is a detail view of the pervious roller herebefore mentioned, a portion of the covering being broken away to show the construction of the roller underneath the said covering.

A A is the frame of the machine, which frame may be of any convenient construction. B is the pulp-vat, and C is the vacuum-box, which may be of any construction adapted to the purpose, and similar to those now in use. D is a wire-cloth, such as is used in paper-making, and which extends from the pulp-

tank over the roller E, to and over the roller F, from which it returns over the roller G, and through the vacuum-box into the pulp-tank, as represented in the drawings. H is a pervious roller, over which the wire-cloth D runs, which pervious roller is preferably made by turning grooves in it and covering it with wire-cloth, though longitudinal grooves or other depressions might answer instead of the circumferential grooves; or perhaps felt or some other substance might be substituted for the wire-cloth, and possibly a dandy-roll made particularly strong might answer in place of this grooved roller covered with wire-cloth; but the construction I have described I deem the best. Immediately above this pervious roller H, I arrange a roller, I, in such a manner that it shall press upon the pulp and cause a portion of its moisture to be discharged through the covering of the pervious roller H. I also prefer to make this roller I a transferring-roll as well, in which case it must be made of a material which will take the pulp from the wire-cloth D, and to this end it may be of wood or of wood covered with felt. The said roller I, being made to transfer the pulp from the wire-cloth to itself, is also made to transfer the pulp from itself to the roller J, which should be covered on its operative part with metal, tin being regarded as preferable.

K is a cylinder provided with spring-teeth *a*, to take the pulp from the roller or cylinder J, and throw it upon the object or article to be coated with pulp. This picker K is run with sufficient speed to give considerable centrifugal force, sufficient to throw the paper-pulp upon the article to be covered, which article may be supported in any convenient position for that purpose.

L represents a bottle supported between two parts of a shaft, P, to be covered, and in the proper position for that purpose, though various devices, according to circumstances or the choice of the user, may be employed for supporting the article to be covered; or it may be held by the hand, though for covering round surfaces a device which will give rotation to the article is quite advantageous. In covering bottles, a chuck grasping the neck of the bottle and constructed to be revolved would prob-

ably be quite satisfactory. In covering round surfaces, the article should be slowly revolved, and this is provided for in the present machine by a belt running from the roller F to the shaft upon which the bottle is supported.

M is a rotary fan-blower, having a spout or trunk, N, through which it drives a stream of air into contact with the pulp thrown by the picker K, so as to drive it promptly from the teeth *a* of the said picker, and discharge it upon the article to be covered with pulp, and give it such direction as will secure its proper lodgment on such article. O is the driving-shaft, from which belts *b* and *c* run over pulleys on the roller F and the picker K, to give motion to the wire-cloth and picker, the belt *c* being crossed to give the proper direction of motion to the picker.

The covering of the roller J with metal is important in accomplishing two purposes: first, that the metal surface takes the pulp more readily from the roller I than wooden or other surfaces would do; and, second, that the metal surface better withstands the action of the teeth of the picker.

The arrangement of the shaft P with its axis parallel to the shaft of the picker has the advantage of giving a better distribution to the pulp than if the two shafts were at right angles to each other.

It is possible that a common cylinder, such as is used to take up the pulp in ordinary paper-making machines, might be substituted for the wire-cloth, and I suppose that a couching-felt might be used instead of the roller I, for couching the paper; but I prefer the construction already described.

If desirable, two shafts in the same axial line, and arranged to slide longitudinally, and each provided with a suitable chuck to hold a bottle, can be substituted for the shaft P, so that a bottle, when covered, can be slid along out of the way and another slid into its place without the delay of taking one bottle out of

the chuck and putting another in. Various other devices might also, doubtless, be used for the same purpose, and different holding devices adapted to the work required might be used for different articles.

For covering long cylindrical surfaces, or other long surfaces, the shaft P may be made to slide either automatically or by hand, so as to bring all parts of the surface into position to be covered, and in this way long coverings of paper may be thrown upon wooden cylinders, and afterward dried thereon, when the latter will shrink away from the covering, and in this way napkin-rings and other similar devices may be made by afterward properly finishing these cylindrical coverings for the purpose intended, and cutting them up into proper lengths.

I claim as my invention—

1. The combination, with a wire-cloth, or its equivalent, for gathering the pulp from the vat, of one or more transferring-rollers, or its or their equivalent, and the picker adapted to take the pulp from the said transferring-roller and throw it upon the surface or article to be covered, substantially as hereinbefore set forth.

2. The combination of the wire-cloth, or its equivalent, the transferring or couching roller which takes the pulp from the said wire-cloth, the picker for throwing the pulp upon the surface to be covered, and an intermediate roller between the said picker and the said couching-roll, to receive the pulp from the couching-roll and deliver it to the picker, substantially as hereinbefore set forth.

3. The combination, with the said wire-cloth and picker, of a revolving holder, the axial line of which is arranged substantially parallel to the axis of the picker, substantially as hereinbefore set forth.

ISAAC JENNINGS.

Witnesses:

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THOS. P. HOW.