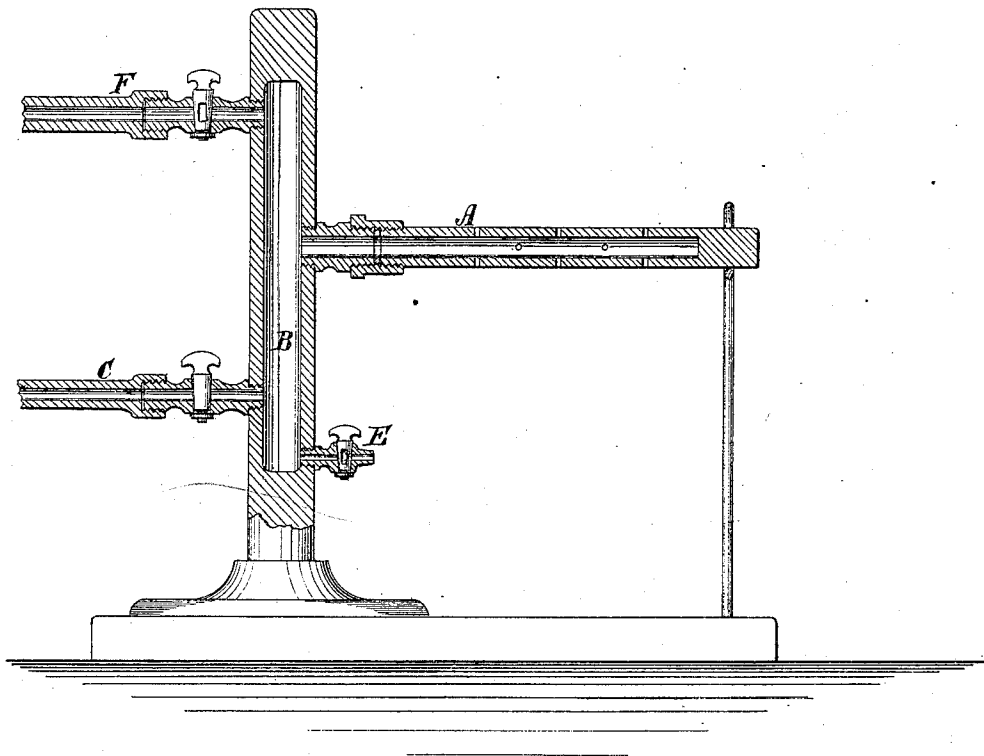


N. P. AKIN.

Improvement in Cloth-Drying Machines.

No. 131,586.

Patented Sep. 24, 1872.



Witnesses:

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UNITED STATES PATENT OFFICE.

NELSON P. AKIN, OF PHILMONT, NEW YORK.

IMPROVEMENT IN CLOTH-DRYING MACHINES.

Specification forming part of Letters Patent No. 131,586, dated September 24, 1872.

To all whom it may concern:

Be it known that I, NELSON P. AKIN, of Philmont, in the county of Columbia and State of New York, have invented a new and useful Improvement in Drying Cloth, of which the following is a specification:

My invention consists in subjecting cloth to steam and hot air treatment, or hot air alone, for economizing time in drying it after it is washed, to remove the oil, &c., it contains when it comes from the loom, which I do by means of a perforated hollow cylinder, whereon the goods to be heated are wound, which cylinder is mounted on a stand or support adapted for the application of the steam and hot air by being forced into said hollow cylinder and through the cloth, said cylinder being provided with both a steam-pipe connection, with a steam-generator, and a hot-air pipe connection, with an air-condenser; the object being to subject the cloth first to the steam treatment for vaporizing the water contained in it, and then follow up the steam with air so heated by compression or otherwise that it will rapidly expel the moisture remaining after the steam is shut off; or the steam may be dispensed with and the air alone used; but I prefer to use both.

The drawing is a sectional elevation of apparatus such as I propose to employ in carrying out my invention.

A represents the perforated steam-cylinder used for steaming and drying the cloth which is wound around it, and the steam and air forced into the cylinder and out through the small holes through the cloth. This cylinder is supported on the vertical hollow stand B, having a steam-pipe connection, C, and the

escape-cock E for the water of condensation. Said stand is also provided with an air-pipe, F, through which to force air by means of a condensing pump or engine of any suitable kind, as soon as the steam is shut off, to drive off the remaining moisture more quickly than it would be expelled by the heat resulting from the steam.

In this way I economize greatly in the time over any known process of drying, or by drying with either steam or air alone; for, if steam alone were used, the vapor left after the steam was shut off would be expelled slowly by the resulting heat; and if hot air alone is used the time required to vaporize the water in the cloth will be greater than is required for it to be done by steam; but the hot air may be used with good results alone, where steam cannot readily be applied; and I propose to use it either in connection with the steam treatment or not. The application of the heated air may be made in different ways, but I prefer the apparatus here shown.

This improved process is more particularly intended for the treatment of tubular-knitted goods, but is applicable to all kinds of cloth.

Having thus described my invention, I claim as new and desire to secure by Letters Patent—

A cloth-drying apparatus, consisting of a perforated cylinder, A, stand B, steam-pipe connection C, and air-pipe connection F, all substantially as specified.

NELSON P. AKIN.

Witnesses:

T. B. MOSHER,
GEO. W. MABEE.