

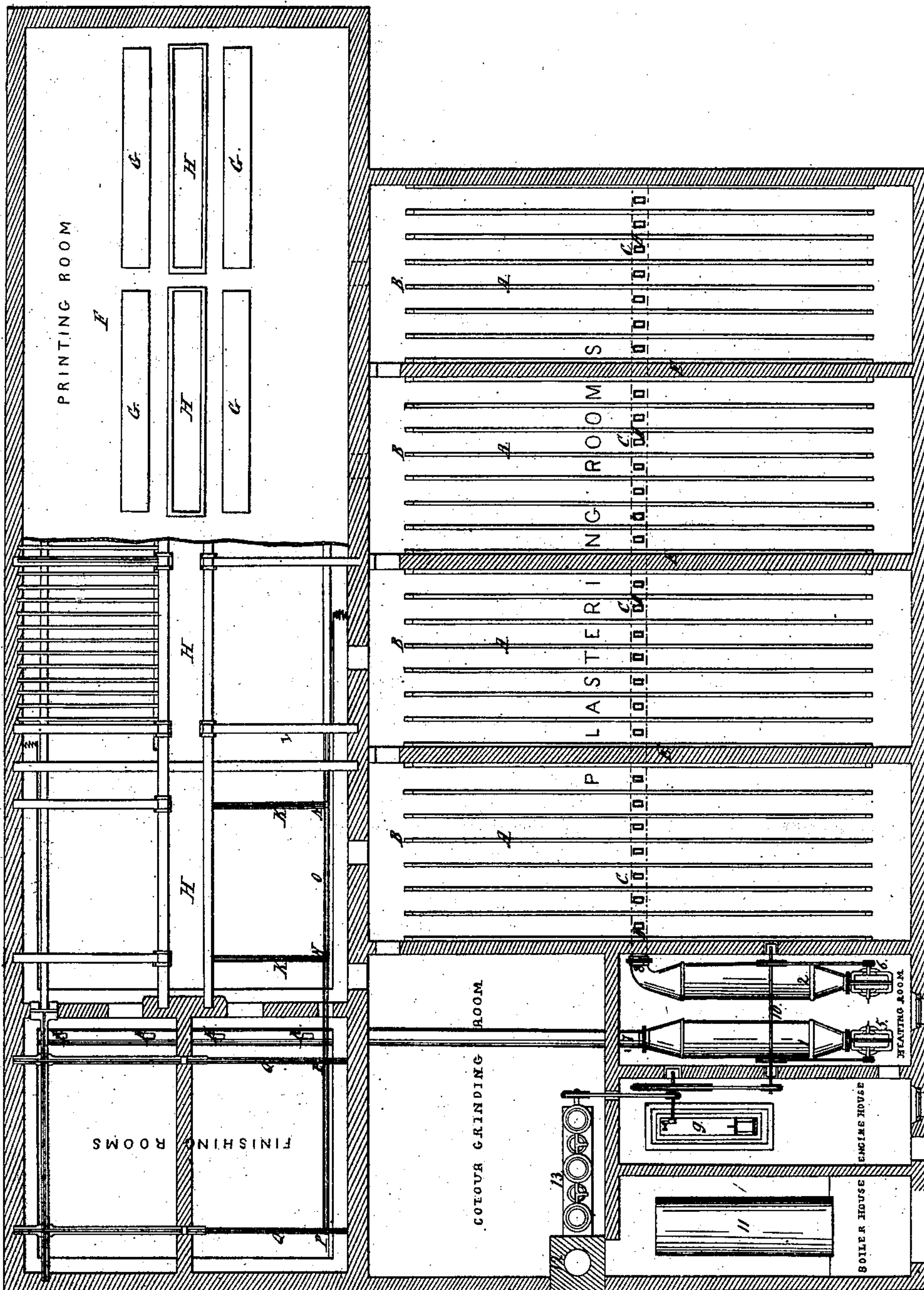
J. & W. Neems.

Making Floor Oil-Cloth.

N^o 93,776.

Patented Aug. 17, 1869.

Fig. 1.



Witnesses.
George Edward
Alexander Mylie

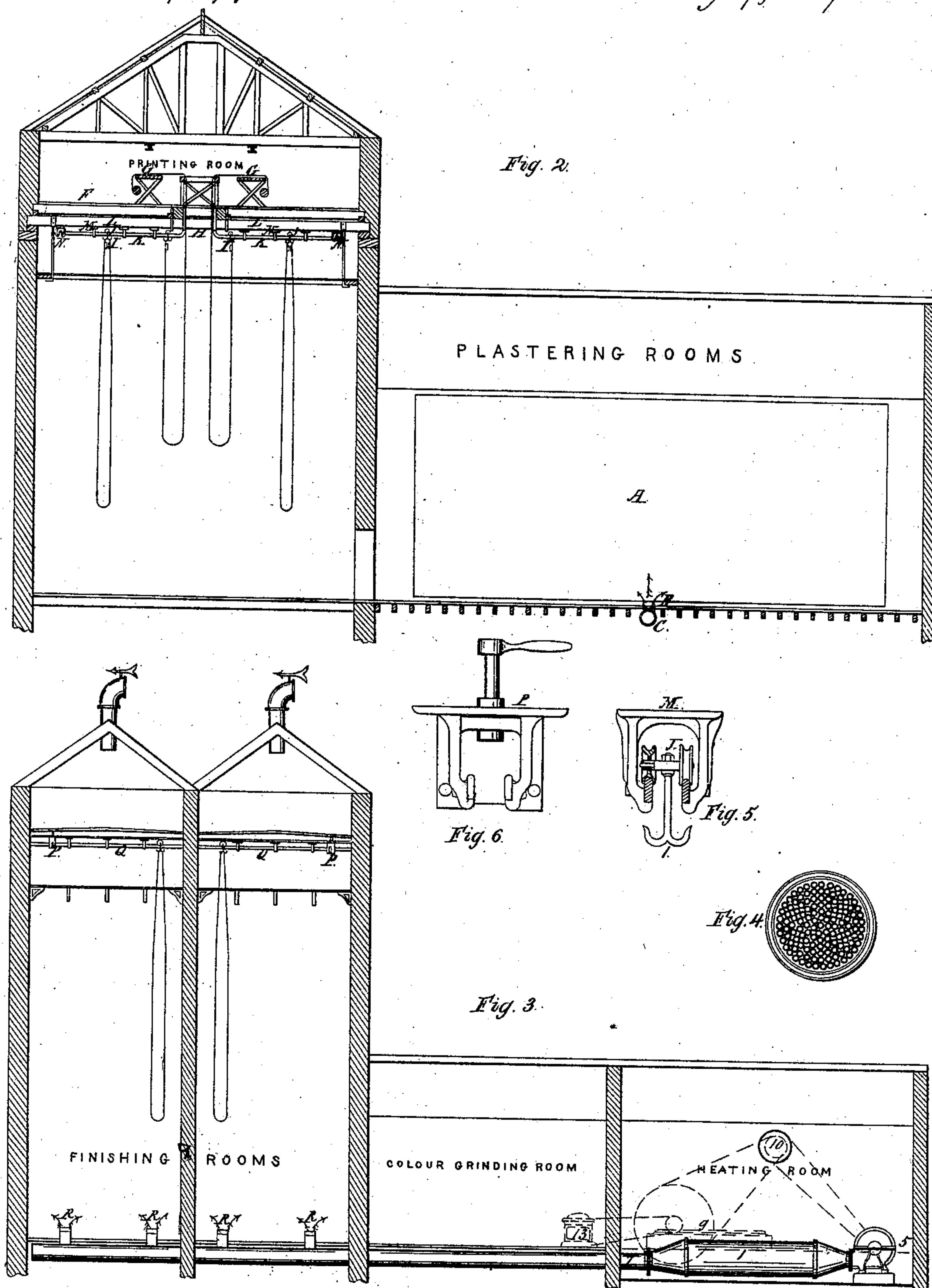
Inventor.
John Neems
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Inventor
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JOHN WEEMS AND WILLIAM WEEMS, OF JOHNSTONE, GREAT
BRITAIN.

Letters Patent No. 93,776, dated August 17, 1869.

IMPROVEMENT IN THE MANUFACTURE OF FLOOR OIL-CLOTHS.

The Schedule referred to in these Letters Patent and making part of the same.

To all whom it may concern:

Be it known that we, JOHN WEEMS and WILLIAM WEEMS, both of Johnstone, in the county of Renfrew, and Kingdom of Great Britain, engineers, have invented Improvements in the Manufacture and Treatment of Floor and other Oil-Cloths and Coverings, with printed or plain surfaces; and we do hereby declare that the following is a full and exact description thereof.

This invention comprises improvements in the system of arrangements and apparatus for manufacturing floor and other oil-cloths and coverings, with printed or plain surfaces, and for producing them in a more rapid, economical, and superior manner, than heretofore; and in order that our said invention, and the manner of performing the same, may be properly understood, we have hereunto appended two sheets of explanatory drawings, representing a manufactory embodying our improvements, reference being had to the letters and numerals marked thereon, the same reference-letters and numerals indicating the same or corresponding parts in all the figures.

Figure 1 is a plan.

Figure 2, sectional end elevation of printing-room, and side elevation of plastering-rooms; and

Figure 3, sectional end elevation of finishing-rooms and color-grinding room, and side elevation of heating-room.

The cloths A, or fabrics to be treated, are stretched upon the frames B, in the plastering-rooms, in the usual manner, and receive their first coating of paint, or other material.

A current of steam-heated air is then admitted into the rooms, from the pipe or conduit C, through the regulating air-distributors or registers D, and, by this means, a uniform temperature can be maintained, and the drying proceeds in a rapid and continuous manner.

The desired number of coatings may be put on one or both sides, and dried, in this way producing a superior body and finish.

The plastering-room may be divided by partitions, E, as shown, into separate apartments, and while the drying is proceeding in one apartment, the process of coating may be going on in another.

The coating of the cloths being completed, they are then wound upon a roller, and removed to the printing-floor F, in the printing-room, and arranged on the printing-tables G, where they receive the printed impressions on their surface.

When printed, they are attached to a baton or strip of wood, and lowered through the open space H, on the swivel-hooks I, suspended from the wheel-carriages J.

These carriages are hung upon the transverse rails K, which are fixed to the beams L by hangers M.

The printed cloths are moved, by means of the wheel-carriages, along the transverse rails K, until they arrive at the turn-tables N, where the carriages are turned round until the wheels are in line with the longitudinal rails O. The cloths are then run right along the longitudinal rails, until within the finishing-rooms, and, by means of the turn-tables P, they are placed on the transverse rails Q, and in this manner the finishing-rooms are filled with printed cloths.

The openings, through which the cloths pass into the finishing-rooms, are provided with closing-doors.

A current of steam-heated air is now admitted into the finishing-rooms by the regulating air-distributors or registers R, and the desired temperature maintained under the control of the operator; and, by this system of treating the cloths, they are dried and confirmed with a brilliancy of color, purer finish, and lustrous surface of an elastic and lasting nature.

The apparatus, shown in heating-room, for the production of the steam-heated air for drying, consists in having a cylindrical iron case, 1 and 2, filled with small tubes, running through it longitudinally, and fixed in metal ends, as shown at Figure 4, end view.

Steam, direct from a boiler, or the exhaust steam from a high-pressure steam-engine, is introduced into the cylindrical iron case.

The external surface of the tubes being thus surrounded by heat, cold air is forced, by the fan 5 and 6, through the interior of the tubes, which air becomes heated on its passage, and is conveyed, through conduits or pipes, 7 and 8, to the plastering-factory and finishing-rooms, and therein distributed, as hereinbefore described.

The steam-engine, and countershaft for driving the fans, are shown at 9 and 10, and the steam-boiler, for generating the steam, at 11; boiler-chimney, 12; color-grinding mills, 13.

Figure 5 shows an end elevation of the rails K and hangers M, and the wheel-carriages J, with swivel-hooks I.

Figure 6 shows a side elevation of the turn-tables P.

The printing-tables G, in the printing-room, may be arranged near the side walls, and the cloths may be hung in the open space H, which, in this case, would be enlarged, and the transverse rails might be fixed overhead, and one line of longitudinal rails in the centre, communicating with the finishing-room or rooms; or, the printing-tables may be otherwise arranged to suit the circumstances, without departing from the essential features of this part of our invention.

The plastering-room, printing-room, and finishing-

room, may be separate or combined, and the system, in whole or in part, is applicable to old as well as new factories.

We prefer to employ the heating-apparatus for steam-heated air, as described, but any other mode of producing currents of steam, or other heated air, may be used; and any other blowing-machine or exhausting-apparatus may be employed in lieu of a fan; and the currents of heated air may be drawn through the apparatus, instead of being forced.

Having now described, and particularly ascertained the nature of our said invention, and the manner in which the same is or may be carried into effect, we wish it to be understood that we do not confine or restrict ourselves to the precise details or arrangements which we have had occasion to describe and delineate, as many variations may be made therefrom, without departing from the main or essential features thereof.

What we claim, and desire to secure by Letters Patent, is—

The manufacture and treatment of floor and other oil-cloths and coverings, with printed or plain surfaces, in the improved modes of treatment by currents of steam, or other heated air, and arrangements and apparatus for moving the cloths, and in apparatus for the production of the currents of steam-heated air, either separately or combined together, substantially as described.

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Witnesses:

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