

No. 752,993.

PATENTED FEB. 23, 1904.

L. H. McCARTNEY.
WALL PAPER DRYING MACHINE.
APPLICATION FILED MAY 12, 1903.

NO MODEL.

2 SHEETS—SHEET 1.

Fig. 1^a

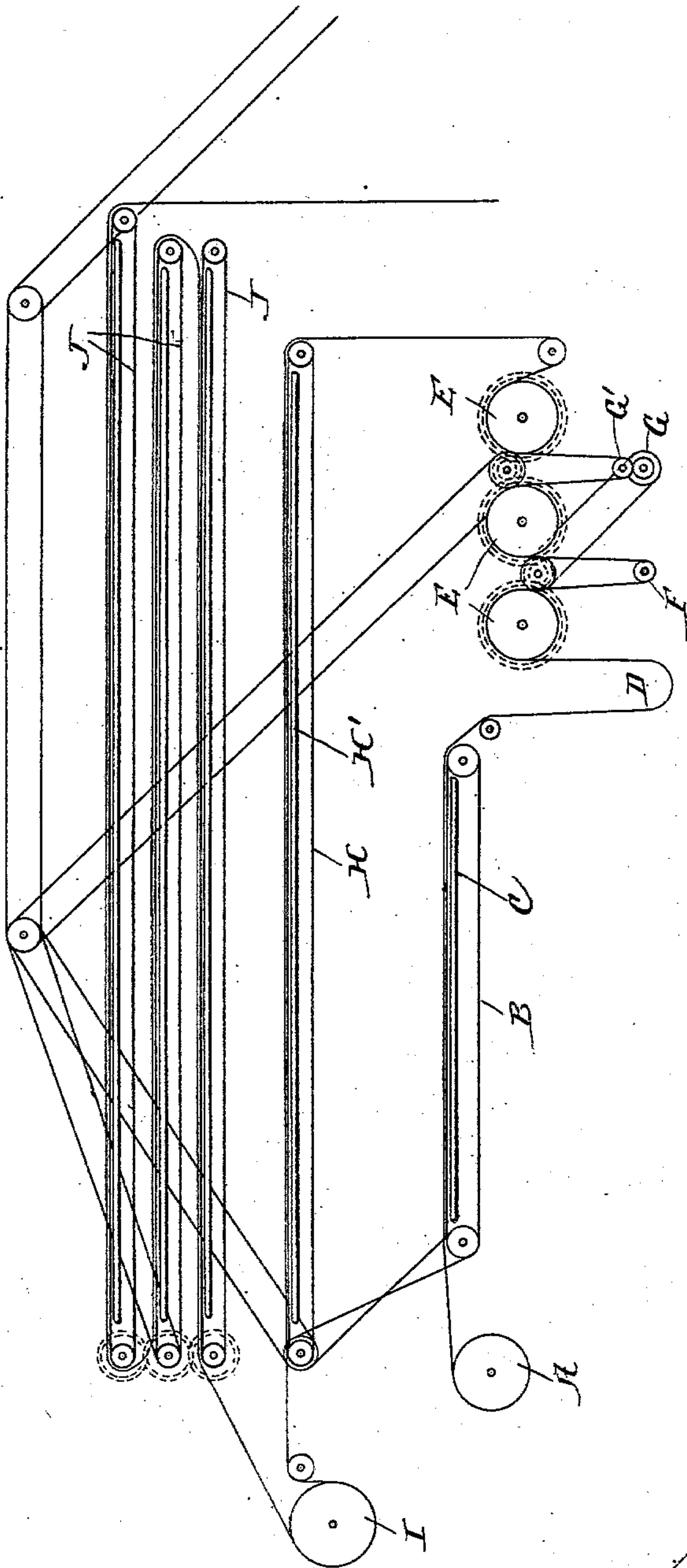
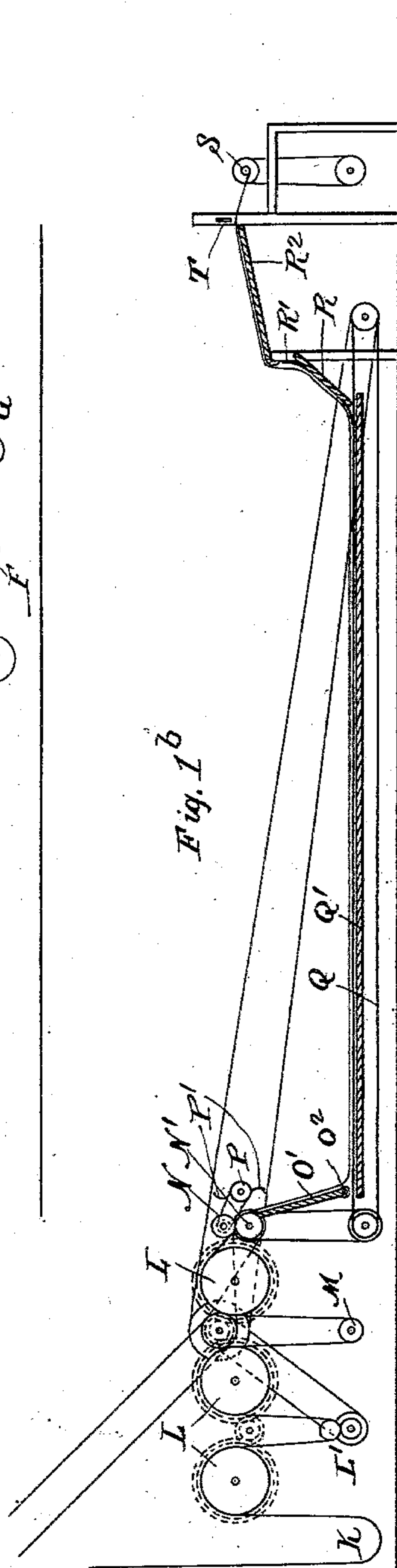


Fig. 1^b



Witnesses:

H. B. Hallock.
L. H. Morrison

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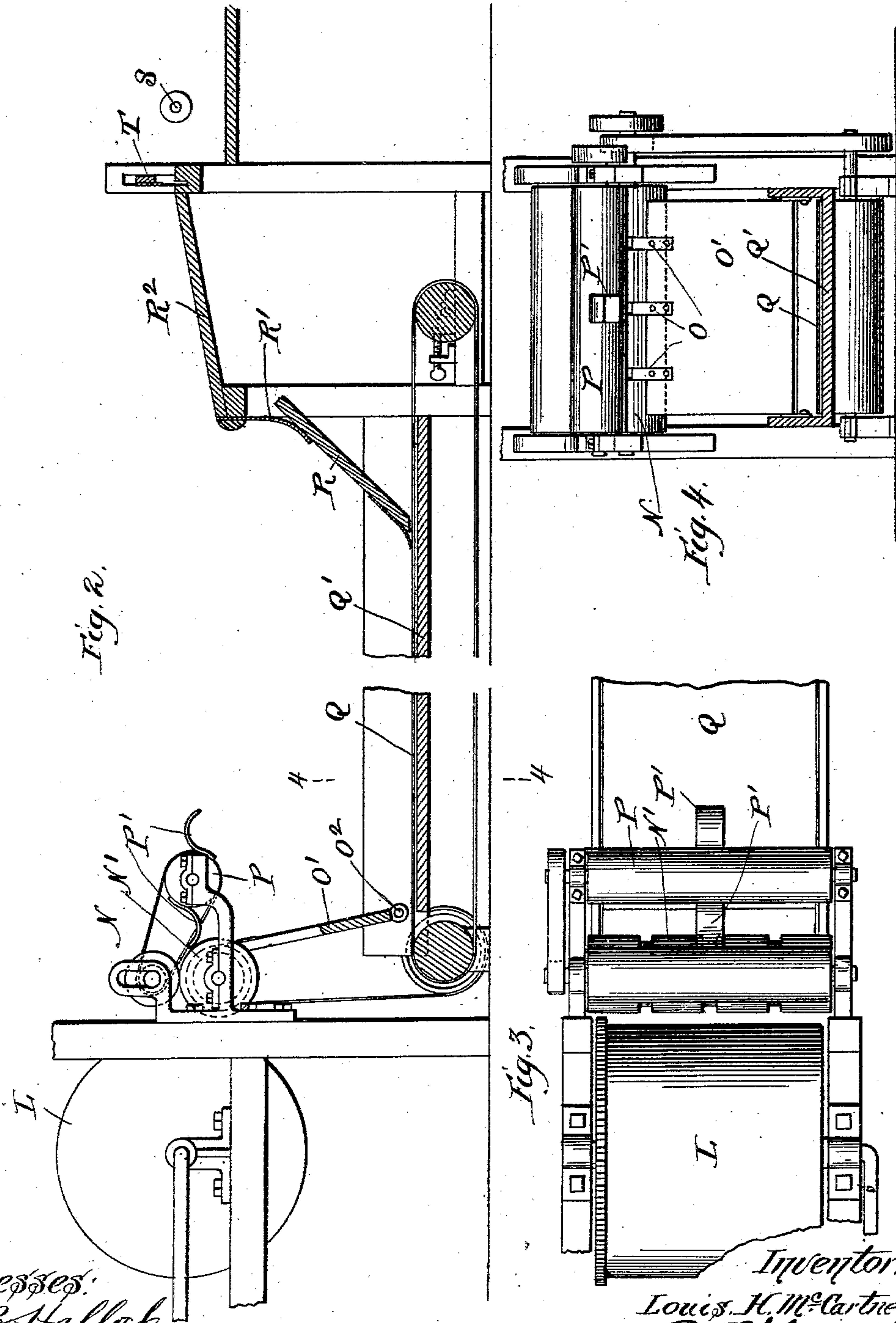
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Witnesses:
H. B. Hallack
L. H. Morrison

By

Inventor.
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UNITED STATES PATENT OFFICE.

LOUIS H. McCARTNEY, OF PHILADELPHIA, PENNSYLVANIA, ASSIGNOR TO
QUAKER CITY WALLPAPER COMPANY, OF PHILADELPHIA, PENNSYLVANIA.

WALL-PAPER-DRYING MACHINE.

SPECIFICATION forming part of Letters Patent No. 752,993, dated February 23, 1904.

Application filed May 12, 1903. Serial No. 156,739. (No model.)

To all whom it may concern:

Be it known that I, LOUIS H. McCARTNEY, a citizen of the United States, residing at Philadelphia, county of Philadelphia, and State of Pennsylvania, have invented a certain new and useful Improvement in Wall-Paper-Drying Machines, of which the following is a specification.

My invention relates to a new and useful improvement in wall-paper-drying machines, and has for its object to provide a drying-machine which will take up much less floor-space than the machines now in general use and will allow the wall-paper to be taken directly from the drying-machine and rolled into rolls.

With these ends in view this invention consists in the details of construction and combination of elements hereinafter set forth and then specifically designated by the claims.

In order that those skilled in the art to which this invention appertains may understand how to make and use the same, the construction and operation will now be described in detail, referring to the accompanying drawings, forming a part of this specification, in which—

Figure 1^a is a diagrammatical view of the forward portion of the machine, showing the course the paper would take in going through the same. Fig. 1^b is a similar view to Fig. 1^a; showing the rear portion of the machine; Fig. 2, an enlarged longitudinal section through the last section of the machine; Fig. 3, a plan view of the nip-roller and beating-down roller at the last end of the machine; Fig. 4, a section on the line 4 4 of Fig. 2.

Wall-paper-drying machines now in general use extend for a comparatively great distance in a straight line and take up considerable floor-space, and the paper is taken from the drying-machine and wound upon a reel, and then it is necessary to wind the paper into rolls from the reel. In my improved machine the paper is rolled direct into rolls from the drying-machine, and thereby does away with an intermediate operation.

A represents the coating-machine, from which the paper comes direct to the drying-

machine and first passes over a movable endless canvas belt B, which is heated underneath by a steam-coil C. The paper then passes downward to form a loop, as represented at D, then upward over the first of a series of steam-heated drums E and before passing to the next drum passes downward around an idle pulley F, then up over the next steam-drum and down and between the nip-rollers, which consist of a driven roll G and a weighted idle roll G' above the same, and between these two the paper passes, and these nip-rollers are for the purpose of regulating the speed of the paper, so as to hold the same taut. From these nip-rollers the paper passes upward and around the last drum, and then after passing over an idle roller it passes upward and over an endless canvas belt H, which is heated by a steam-coil H', and from there passes around to the printing-machine I and from there passes over a series of endless canvases J, arranged one above the other, each canvas belt being heated by a steam-coil arranged underneath the upper run of the canvas. The paper from these canvases then passes downward and forms a loop K, then up and over the first of a series of steam-drums L, and before passing to the next steam-drum the paper passes downward and between the nip-rollers L', and between each succeeding steam-drum the paper passes downward and around an idle roll M, and from the last steam-drum the paper passes between the nip-rollers N. The lower or driven roller N' of the nip-rollers is grooved annularly, and in this annular groove lie the fingers O, secured flush with a board O', which extends downward at a slight angle and is hinged at the point O'. Thus the paper passing from between the nip-rollers will pass downward along the board O', the fingers O preventing the paper from being carried around the roller N'. P is a driven roller provided with two or more rubber clappers P', which are adapted to strike the paper as it passes from between the nip-rollers N and beat the paper downward, so as to prevent the same from passing around the upper nip-roller. The paper in

The paper in

passing down the board O' then passes onto an endless canvas belt Q, which passes over a board Q'. The paper then passes by an inclined board R at the other end and over a rubber apron R', and then over a table R² to the rolling-shaft S and is rolled into a roll, and when the roll contains the required number of yards the knife T descends and cuts off the paper, and then a new roll is started.

The reason I can roll the paper directly from the machine is that by causing the paper to descend over the board O' and along the canvas belt Q and then up and over the table R², and if the paper should issue from the drying-machine with a greater speed than the roll could take it up so as to roll it tightly the paper will back up or fold upon itself and the reel may take it as it requires, and when the paper issues from the machine more slowly the rolling-machine will catch up in its work. It will be seen that by constructing a machine in this manner a much less floor-space is required for the same than in the machine now in general use.

Of course I do not wish to be limited to the exact construction here shown, as slight modifications could be made without departing from the spirit of my invention.

Having thus fully described my invention, what I claim as new and useful is—

1. In combination with a wall-paper, coating, printing and rolling machine, a wall-paper-drying machine, consisting of an endless heated belt over which the paper passes from the coating-machine, a series of heated drums over which the paper passes from this endless belt, idle pulleys, the paper passing downward between each drum and around said idle pulleys, an endless heated belt over which the paper then passes to the printing-machine, a series of heated endless belts arranged one above the other over which the paper then passes, a series of heated drums around which the paper then passes, idle pulleys, the paper passing downward between each drum and around said idle pulleys, nip-rollers between which the paper then passes, an inclined board guiding the paper downward from the nip-rollers, an endless belt over which the paper then passes, an upward inclined board and table over which the paper then passes to the machine for rolling the paper in rolls and cutting the same off, as specified.

2. In combination with a wall-paper, coating, printing and rolling machine, a drying-machine for wall-paper, consisting of a heated endless belt over which the paper passes from the coating-machine, the paper then passing downward to form a loop, a series of heated drums, the paper then passing upward and over the first of said drums, then over each

succeeding drum, idle rolls located below the drums, the paper passing downward and around said idle rolls before passing to the next succeeding drum, a driven roll located below one of the idle rolls and in contact with the paper, an endless heated belt arranged above the drums and first-named belt over which the paper then passes to the printing-machine, a series of endless heated belts arranged one above the other and over the last-named heated belt over which the paper passes successively from the printing-machine, the paper then passing downward to form a loop, a series of heated drums, the paper passing upward and over the first of said series, idle rolls journaled below the drums, the paper passing downward and around said idle rolls before passing to the next succeeding drum, a driven roll located below one of the idle rolls and in contact with the paper, a driven roll over which the paper passes from the last of the heated drums, a weighted roll lying on top of the paper passing over the driven roll, an inclined board down which the paper then passes, an endless belt arranged horizontally along which the paper then passes, an upward inclined board and table over which the paper then passes to the rolling-machine, as specified.

3. In combination with a wall-paper-drying machine, the wall-paper-rolling machine, a driven roll over which the paper passes from the drying-machine, a weighted idle roller lying on top of the paper passing over the driven roller, a series of annular grooves formed in the driven roller, a board hinged at its lower end, fingers secured to the board and flush with its outer surface and extending above its upper edge, said fingers lying within the annular grooves, a driven roller arranged in juxtaposition to the roller having the annular grooves, a series of rubber clappers or wings secured to this roller and adapted to rotate so that the clappers will come in contact and beat down the paper and prevent the same from passing around the weighted roller, an endless belt over which the paper passes from the hinged board, a board located underneath the upper run of said endless belt, an inclined board located near the other end of the endless belt upward over which the paper is adapted to pass, an inclined table over which the paper passes to the rolling-machine, as specified.

In testimony whereof I have hereunto affixed my signature in the presence of two subscribing witnesses.

LOUIS H. McCARTNEY.

Witnesses:

MARY E. HAMER,
L. W. MORRISON.