

(No Model.)

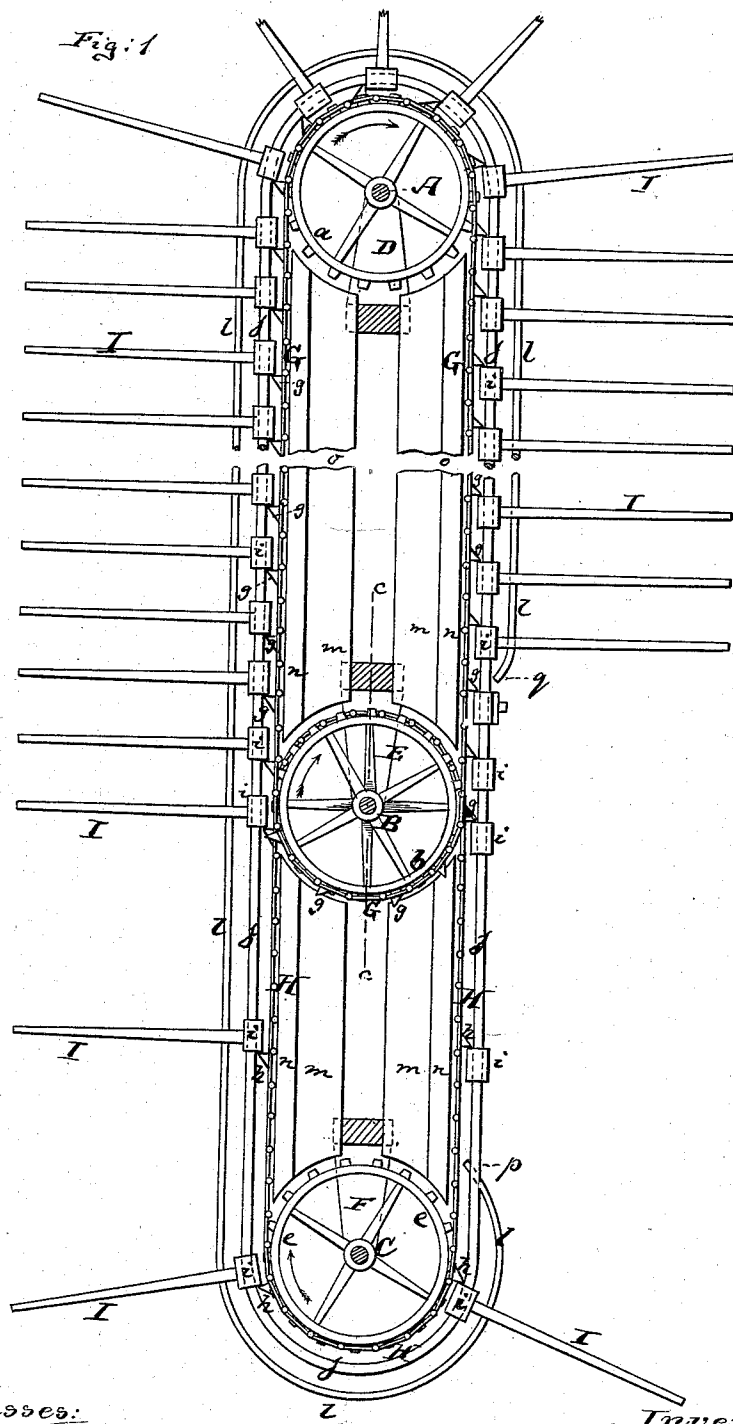
2 Sheets—Sheet 1

H. HILBERS.

APPARATUS FOR DRYING WALL PAPER.

No. 257,703.

Patented May 9, 1882.



Witnesses:
John C. Turnbridge
Henry F. Parkh.

Inventor:
Henry Hilbers
by his attorneys
Brienne & Bette

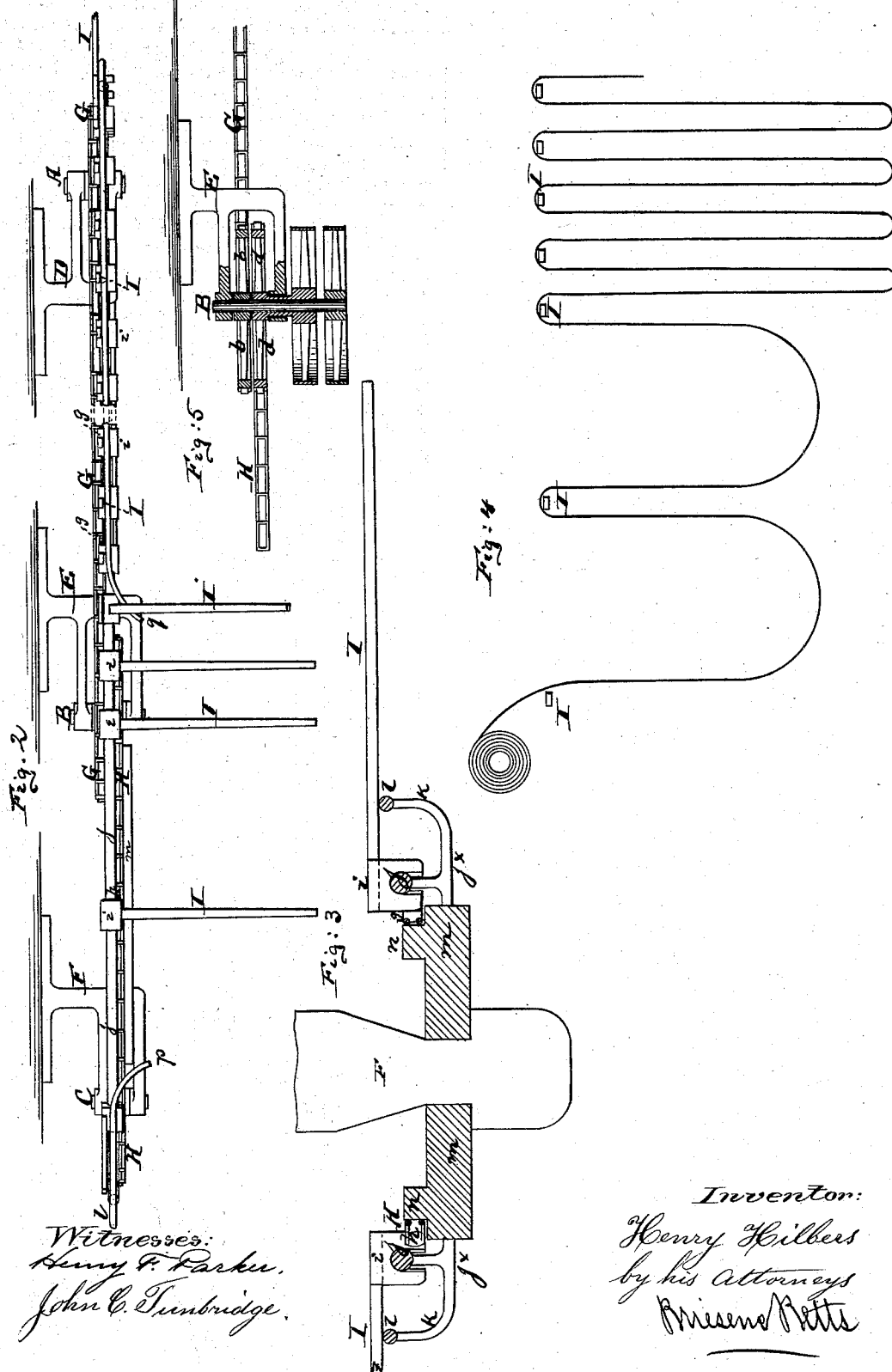
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UNITED STATES PATENT OFFICE.

HENRY HILBERS, OF FLUSHING, NEW YORK.

APPARATUS FOR DRYING WALL-PAPER.

SPECIFICATION forming part of Letters Patent No. 257,703, dated May 9, 1882.

Application filed March 22, 1882. (No model.)

To all whom it may concern:

Be it known that I, HENRY HILBERS, of Flushing, in the county of Queens and State of New York, have invented an Improved Apparatus for Drying Wall-Paper, of which the following is a specification.

Figure 1 is a plan or top view, partly in horizontal section, of my improved apparatus for drying wall-paper. Fig. 2 is a side view of the same; Fig. 3, a vertical cross-section thereof on an enlarged scale. Fig. 4 is a diagram showing how the wall-paper is suspended while being dried. Fig. 5 is a vertical longitudinal section on the line *c c*, Fig. 1.

The object of this invention is to produce a machine on which wall-paper or other paper or fabric can be dried immediately after the colors have been applied thereto.

To this end the invention consists in combining festoon-carriers with endless belts or chains, and with apparatus for moving said chains and for holding the festoon-carriers in the horizontal position, and with means for dropping these carriers into vertical position when the paper that is suspended from them has been properly dried. The entire apparatus is intended to be suspended from ceiling-brackets, so as to clear the floor and keep the paper or fabric to be dried entirely free from contact with the floor and away from the danger of being soiled by dust or otherwise.

The invention consists, also, in the new arrangement of parts hereinafter more fully described.

In the drawings, the letters A, B, and C represent three vertical shafts, that are respectively hung in brackets D, E, and F, which are fastened to the ceiling of the room in which the machine is to be used; but posts standing on the floor may be used instead of the brackets. The shafts A and B carry pronged wheels *a* and *b*, respectively, around which is laid a chain, G, so that when rotary motion is imparted to either of these shafts by suitable means—say by pulley attached to the shaft B—the chain G will be revolved in the direction of the arrow shown in Fig. 1. Directly below the wheel *b* is loosely fitted around the shaft B another pronged wheel, *d*, and on the shaft C is fitted a pronged wheel, *e*, and around these two wheels *d* and *e* is laid another endless chain, H, which, when rotary motion is imparted to the wheel *d*

by a pulley or otherwise, as indicated in Fig. 5, will cause the belt or chain H to revolve in the direction of the arrow shown in Fig. 1. The chains G and H have outwardly-projecting buttons or lugs *g* and *h*, respectively, which are intended to move the festoon-carriers I. These festoon-carriers are rods of wood or other material, (more clearly shown in larger size in Fig. 3,) every such rod being attached to a block, *i*, that is hollowed out on its lower side to fit over a rod, *j*, that is rigidly attached to the brackets D E F by means of braces *j*^{*}, springing therefrom, as is more clearly shown in Fig. 3. The rod *j* is preferably a tube, so as to be light, but may be a solid rod of circular cross-section. The braces *j*^{*} are also provided with outwardly-projecting arms *k*, that carry another guide-rod, *l*, on which the festoon-carriers I rest during their motion. The carrying-rod *j* is an endless rod, extending around the wheel *a* and around the wheel *e* and straight along the sides of the apparatus, as is clearly shown in Fig. 1, so that the festoon-carriers may be moved continuously by the chains G and H around the whole apparatus. The chain G is between the wheels *a* and *b*, guided in the straight direction, if desired, and supported on the beams *m*, that are rigidly suspended from the brackets D and E, said beams having upwardly-projecting ribs *n* (see Fig. 3) for further guidance of the chain. The blocks *i* of the festoon-carriers extend down far enough to be within reach of the projections *g* of the chain G and of the projections *h* of the chain H, as is indicated on the left-hand side of Fig. 3. The chain G is in practice very much longer than the chain H, and Fig. 1 shows the parts partly broken away at *o* to indicate that the chain G and all the appurtenances are much longer in fact than they are represented to be, whereas the chain H is not broken away in said figure. In fact, in practice the distance between the shafts B and C will be about twelve feet, while the distance between the shafts A and B will be about thirty-five or forty feet, or more. The outer supporting-rod, *l*, is not continuous, but begins at a point, *p*, opposite, or nearly opposite, the pulley *e*, and ends at the point *q*, opposite, or nearly opposite, the pulley *b*. Whenever the chain H, moving in the direction of the arrow which is shown in Fig. 1, pushes one of the blocks *i* as far as the end *p* of the rod *l*, the attendant swings the carrier I up into a hori-

zontal position, so as to rest it upon the rod *l*; or said festoon-carrier may be lifted upon the rod *l* by a stationary cam or inclined plane, so as to dispense with the services of an attendant. The chain *H* has its lugs or projections *h* much farther apart than are the lugs *g* of the chain *G*, and it follows that the festoon-carriers *I*, while they are moved by the chain *H*, are farther apart than are the festoon-carriers while moved by the chain *G*, which is clearly indicated by the respective positions of the festoon-carriers in Fig. 1. Now, as is shown in Fig. 4, the paper to be dried is taken from the printing apparatus and placed over the festoon-carriers *I* while the same are under the influence of the chain *H*—that is to say, while they are far apart—thus holding the paper in larger festoons while it is still quite wet, but by the time that the festoon-carriers are taken along by the chain *G* and brought more closely together, as shown on the right-hand side of Fig. 4, the paper has already been sufficiently dried to allow of the contraction of the festoons, as indicated in the same figure, and it is then carried along by the festoon-carriers under the influence of the chain *G* until the paper has been quite dried, when it will be delivered to receiving-rollers on the dropping of the carriers off the rod *l* at the point *q*.

It is evident that many features of my invention can be utilized by the use of but a single chain *G*, and also that more than two chains can be combined on the plan described with the same series of festoon-carriers.

I claim—

1. In apparatus for drying paper or other fabric, the traveling festoon-carriers *I*, combined with the guiding-rail *j*, and with one or more moving chains, *G* *H*, and supporting-rail *l*, substantially as and for the purpose specified.
2. The combination of the beams *m*, brackets *j*^{*}, and extensions *k* with the rail *j*, supporting-rail *l*, festoon-carriers *I* and their blocks *i*, and with one or more chains for moving the festoon-carriers, substantially as specified.
3. The apparatus for drying paper or other fabric, consisting of series of traveling festoon-carriers, which are combined with the supporting-rail *l*, to be dropped automatically when they reach the end of said rail, substantially as specified.
4. The combination of the chain *G*, having closely-set projections *g*, with the chain *H*, having more widely set projections *h*, and with the festoon-carriers *I* and apparatus for supporting the same, substantially as herein shown and described.
5. The festoon-carrier *I*, adapted to be moved by belt or chain and combined with the round rod *j*, on which it can slide and be swung into vertical or into horizontal position, substantially as herein shown and described.

This specification of my invention signed this 9th day of March, 1882.

HENRY HILBERS.

Witnesses:

SAML. R. BETTS,
WILLIAM H. C. SMITH.