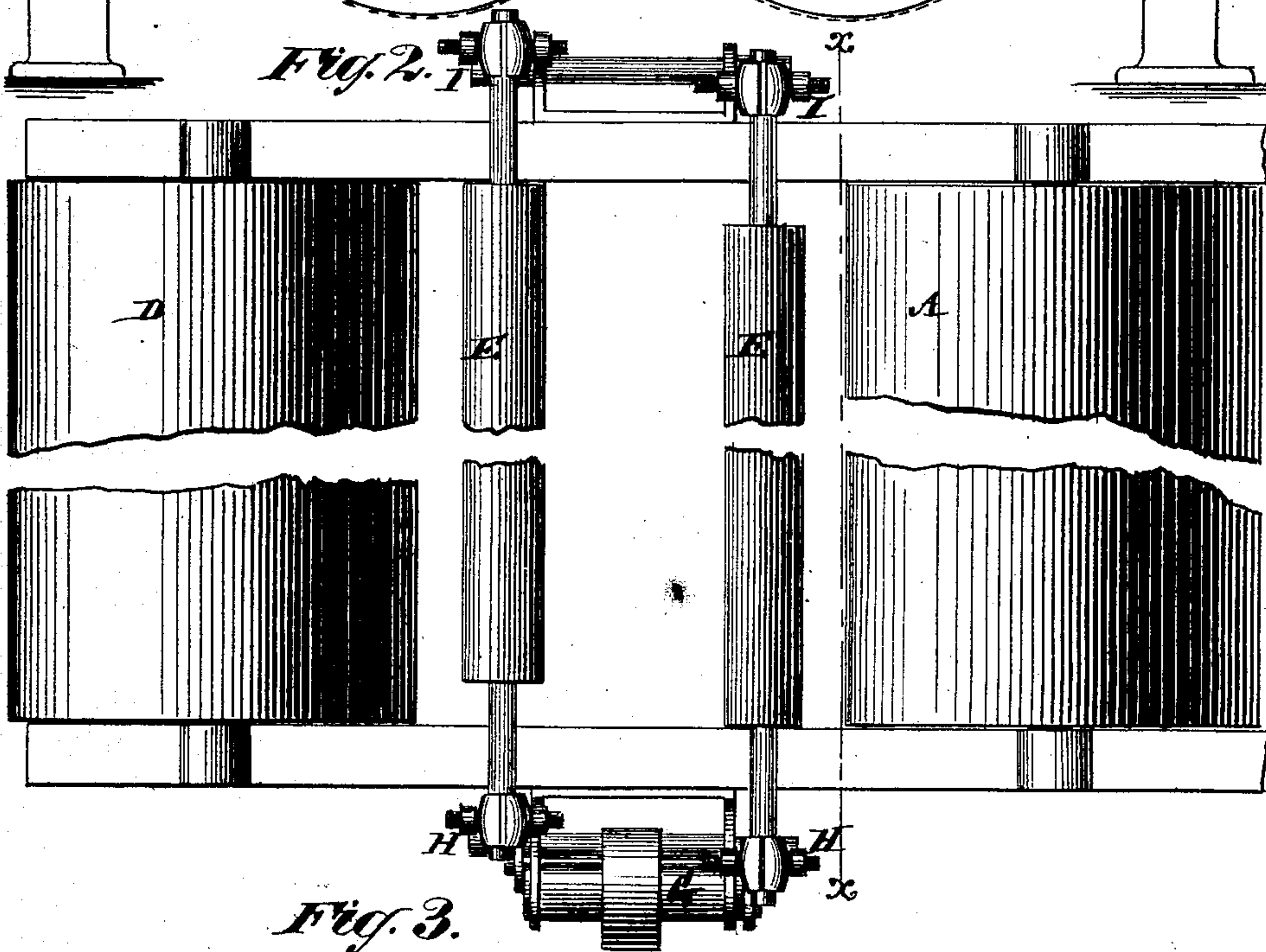
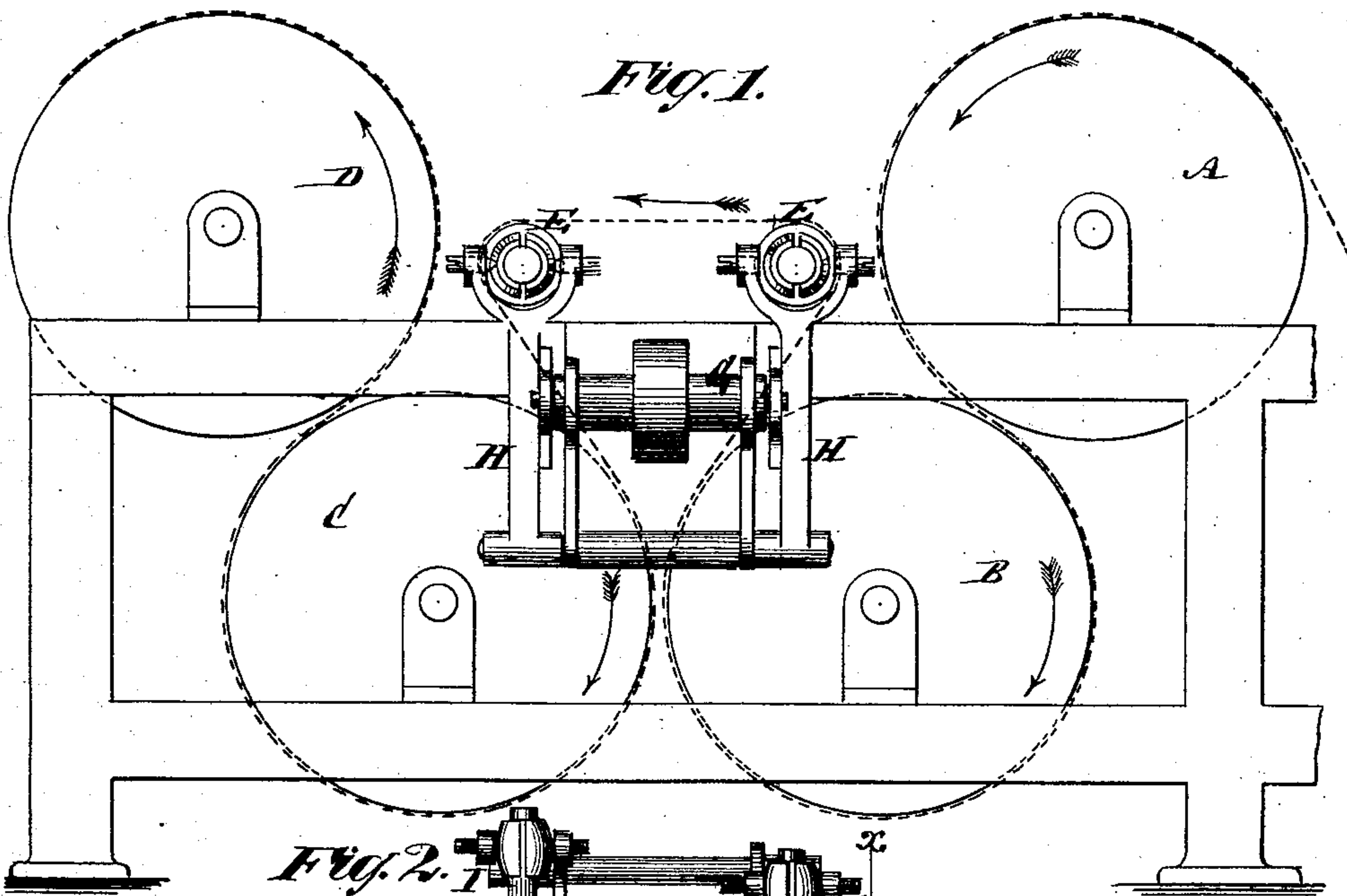


W. H. PALMER, Jr.

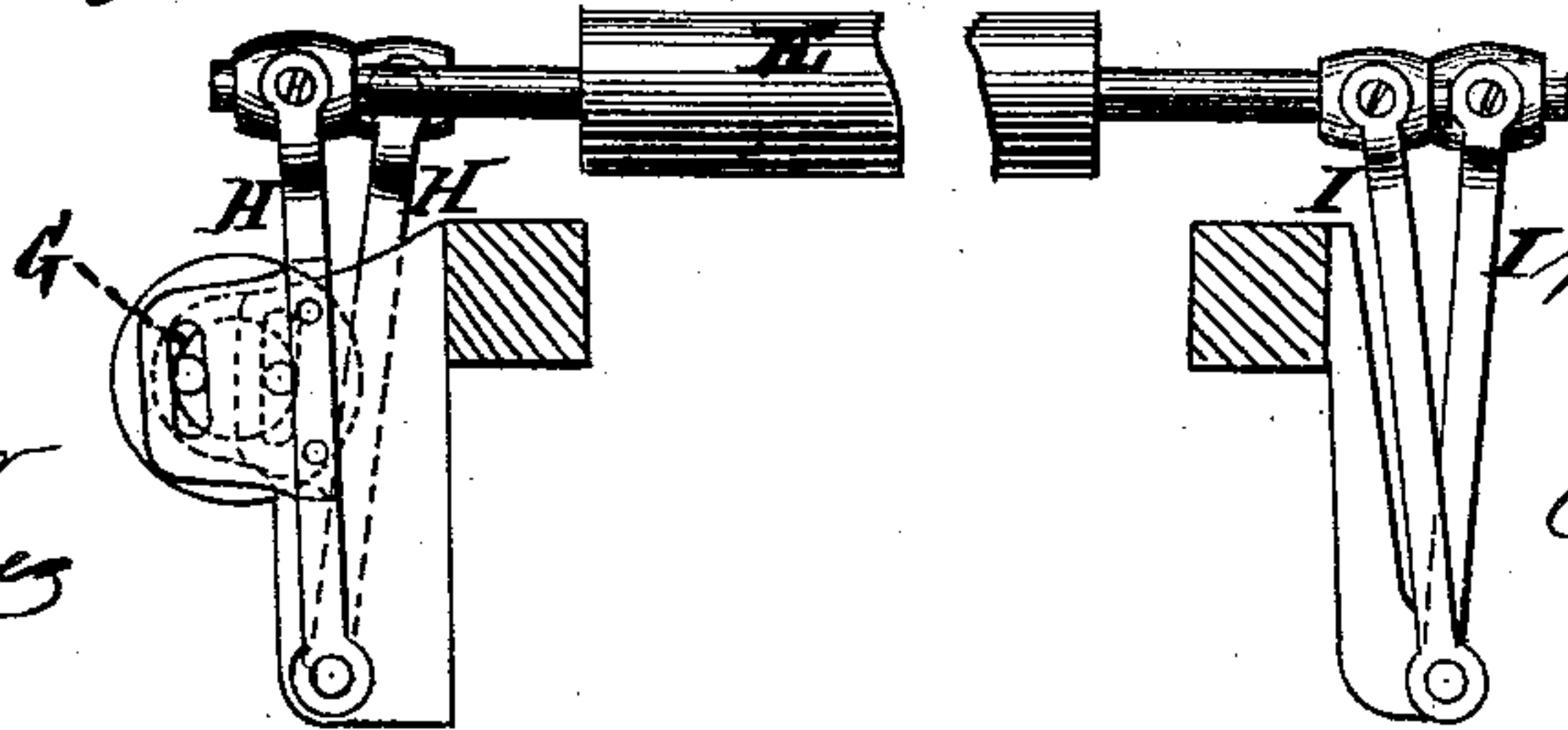
Mechanism for Drying Sized Fabrics.

No. 163,801.

Patented May 25, 1875.



*Fig. 3.*



Witnesses

John Becker  
Fred. Haynes

Wm H Palmer Jr  
Cyhus Horner  
Browne Allen



# UNITED STATES PATENT OFFICE.

WILLIAM H. PALMER, JR., OF MIDDLETOWN, CONNECTICUT, ASSIGNOR TO  
HERBERT F. PALMER, OF NEW YORK, N. Y.

## IMPROVEMENT IN MECHANISMS FOR DRYING SIZED FABRICS.

Specification forming part of Letters Patent No. **163,801**, dated May 25, 1875; application filed  
April 3, 1875.

*To all whom it may concern:*

Be it known that I, WILLIAM H. PALMER, Jr., of Middletown, in the county of Middlesex and State of Connecticut, have invented a new and useful Improvement in Apparatus for Drying Sized and Dressed Fabrics; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawing, which forms part of this specification, and in which—

Figure 1 represents a side elevation of a drying apparatus in part constructed in accordance with my invention. Fig. 2 is a plan of the same, and Fig. 3 a vertical transverse section on the line *x x*.

This invention relates to the manufacture of sized or dressed fabrics of various kinds, having what is known as an elastic finish; and consists in a combination, with the drying-cylinders, over or round which the sized or dressed fabric is pressed after it comes from the tentering and straightening apparatus, of one or more longitudinally reciprocating or traversing cylinders, arranged either above, below, or between the drying-cylinders, or certain of them, and round which traversing cylinders the fabric is passed for the purpose of breaking or preventing adhesion of the size or dressing material of the warp and weft at their places of intersection. Such improvement will be found particularly applicable to the manufacture of mosquito-netting and other gauze-like fabrics, but is not restricted to any particular kinds of fabrics.

In the drawing, A B C D represent certain of the drying-cylinders of a drying apparatus, such as used in the manufacture of sized or dressed fabrics of various kinds, and round which the cloth or fabric, as it comes from the tentering and straightening apparatus, is

passed. E E are supplementary cylinders, of which there may be any number—that is, one, two, or more—arranged either above, below, or between the ordinary drying-cylinders, so that the fabric, in its travel through the drying apparatus, passes over or round said cylinders E E. These supplementary cylinders E E have a longitudinally reciprocating or traversing motion in a transverse direction relatively to the passage of the fabric through the apparatus—as, for instance, by means of a revolving crank-shaft, G, made to vibrate swinging arms H H, which, together with corresponding arms I I on the opposite side of the machine, carry the cylinders E E. Said cylinders may, if desired, also be drying-cylinders, and either be of a perforated or close construction. They may also either be free to independently rotate on their respective axes, or be positively rotated by means of gearing, as in the case of the usual driven drying-cylinders A B C D.

It is the longitudinally reciprocating or traversing motion, however, of the cylinders E which operates to break the adhesion caused by the size at the intersection of the warp and weft, which serves to give the elastic finish to the fabric, as the latter, in its passage through the apparatus, travels round said cylinders.

I claim—

The combination, in a machine for drying sized or dressed fabrics, of rotary drying-cylinders and one or more rotary cylinders having a longitudinal reciprocating motion, the whole being constructed to operate substantially as and for the purpose herein described.

W. H. PALMER, JR.

Witnesses:

E. W. N. STARR,  
FRANK F. STARR.