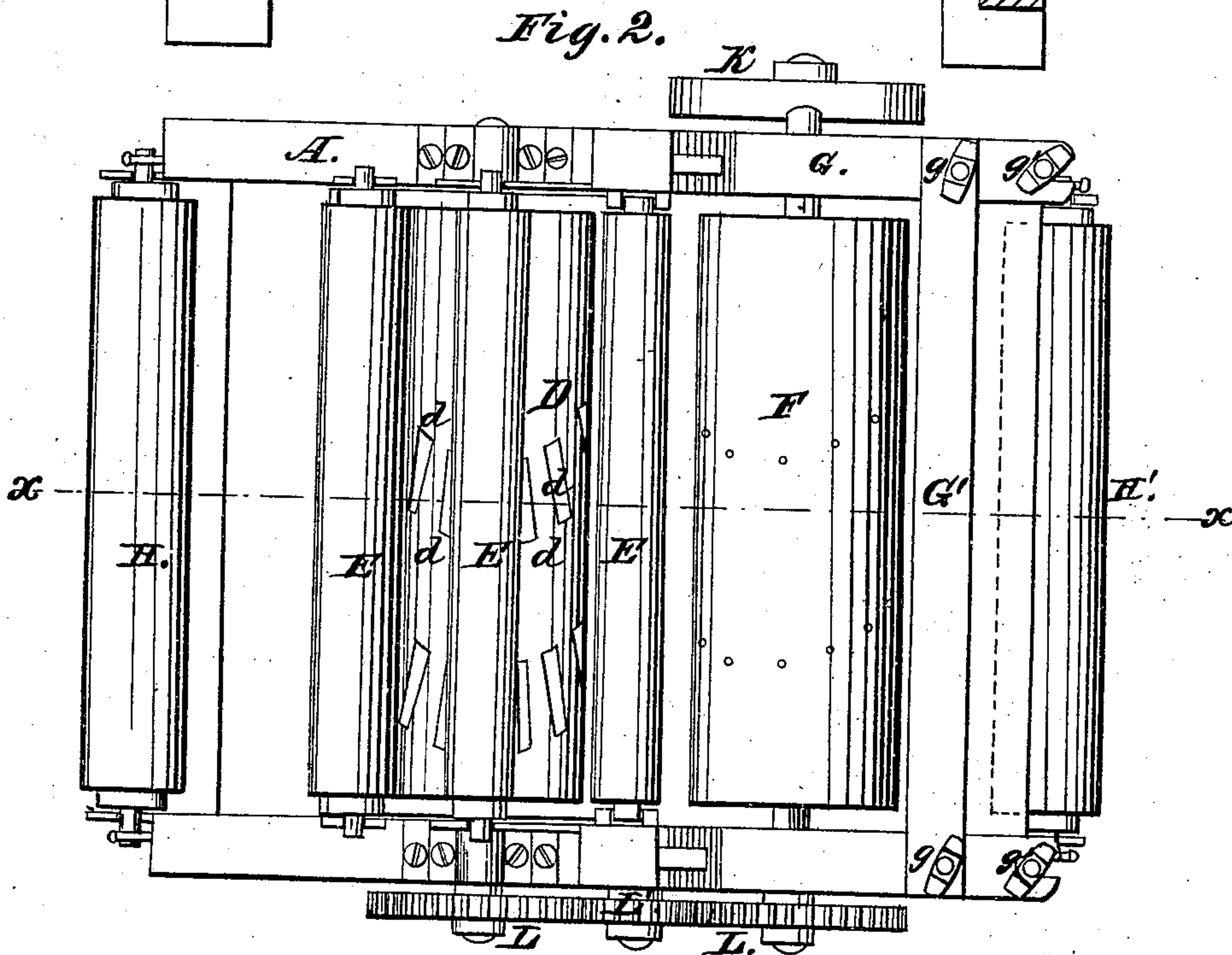
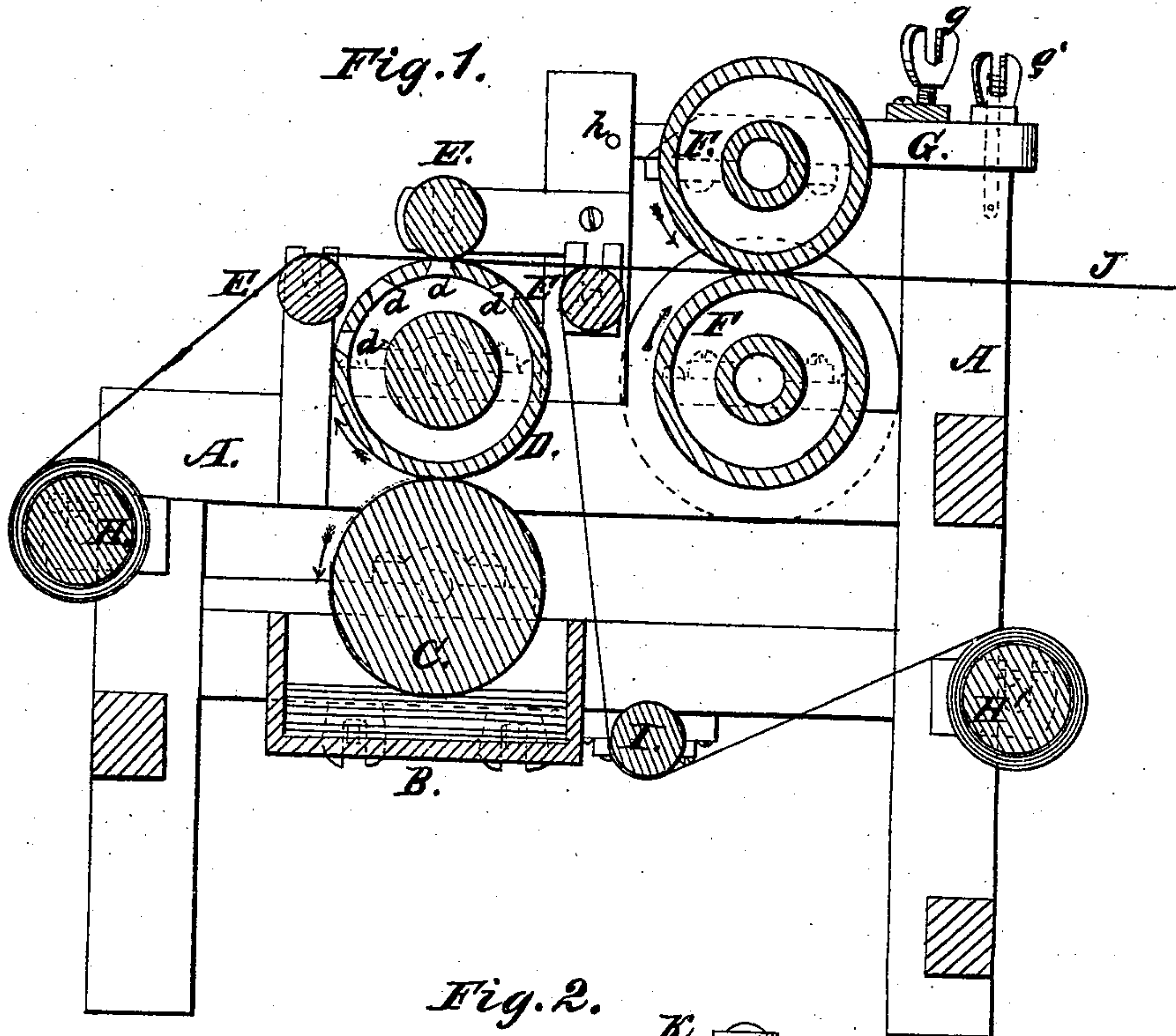


J. W. WHITE.

MACHINE FOR MANUFACTURING WEBBING FOR LADIES' FANS.

2 SHEETS--SHEET 1.



Witnesses

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MACHINE FOR MANUFACTURING WEBBING FOR LADIES' FANS.

2 SHEETS—SHEET 2.

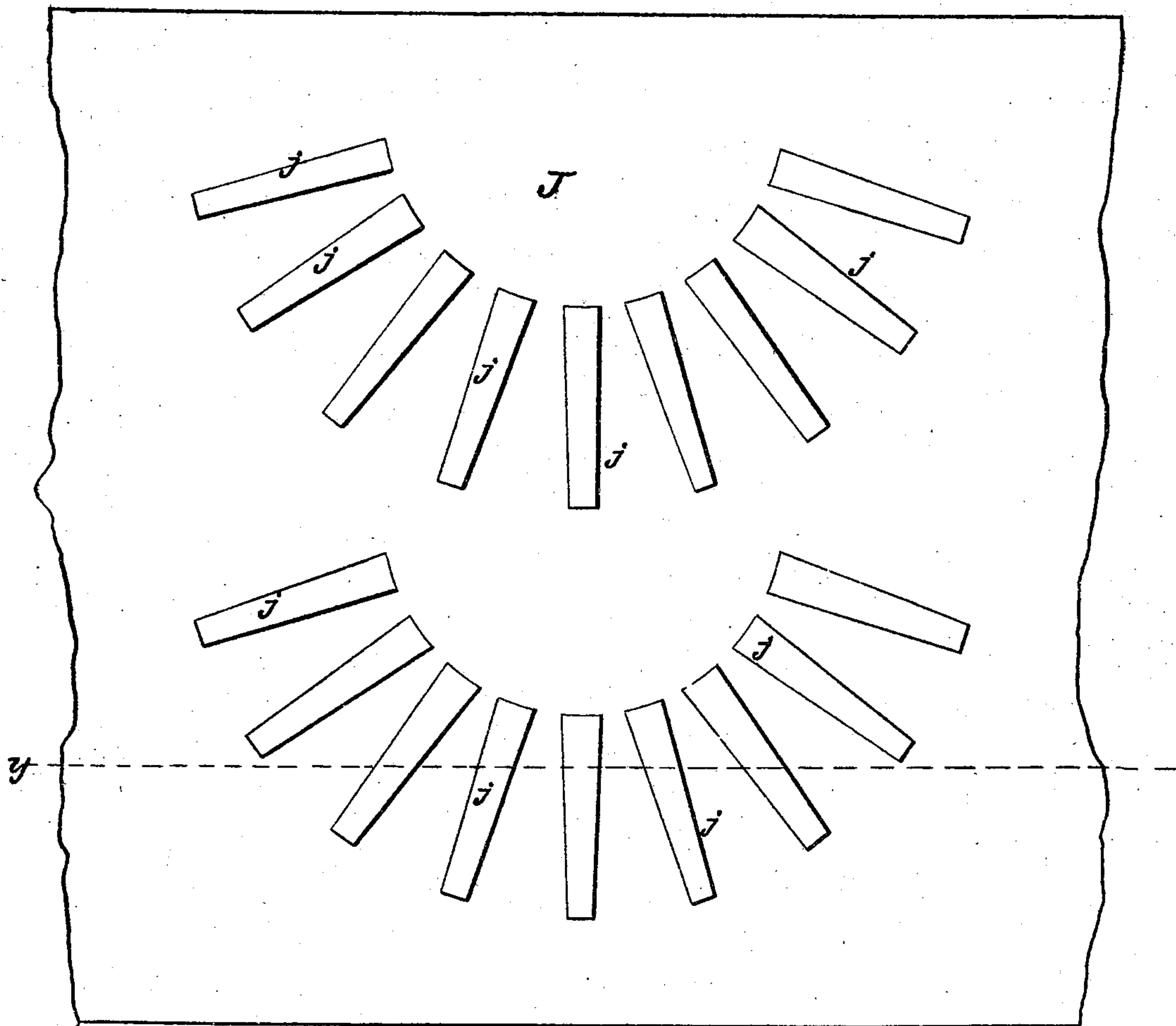
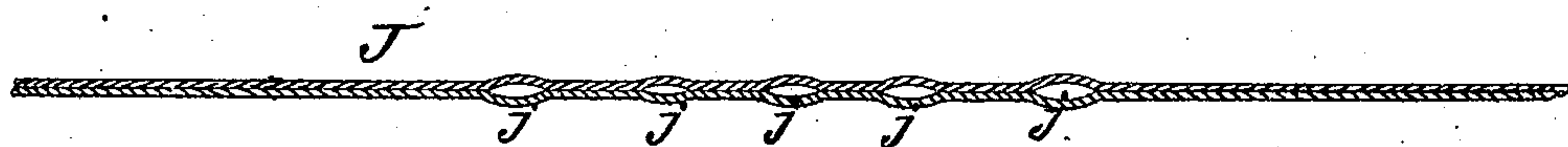


Fig 4.



Witnesses

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by
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United States Patent Office.

JOSEPH W. WHITE, OF WEYMOUTH, MASSACHUSETTS.

Letters Patent No. 90,711, dated June 1, 1869.

IMPROVED MACHINE FOR MANUFACTURING WEBBING FOR LADIES' FANS.

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

To all whom it may concern:

Be it known that I, JOSEPH W. WHITE, of Weymouth, in the county of Norfolk, and State of Massachusetts, have invented a new and improved Machine for Manufacturing Webbing for Ladies' Fans; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, making part of this specification, in which—

Figure 1, sheet 1, is a section, taken longitudinally through one form of the improved machine, in the vertical plane indicated by red line *xx* in fig. 2.

Figure 2, sheet 1, is a plan view of the machine.

Figure 3, sheet 2, shows a portion of the finished webbing.

Figure 4, sheet 2, is a section through fig. 3, taken in the course indicated by red line *yy*, fig. 3.

Similar letters of reference indicate corresponding parts in the several figures.

This invention relates to certain novel improvements on machinery which is designed for cementing together two pieces of paper or woven material, so as to leave radial spaces, for the reception of the frame of a lady's fan.

My improved machine is designed for producing this fan-stock or webbing by a continuous or rolling operation, so that the work can be performed neatly, and with great facility, as will be hereinafter explained.

To enable others skilled in the art to understand my invention, I will describe the best means known to me for carrying it into effect.

In the accompanying drawings—

A represents a frame, which is adapted for containing and supporting the several parts which are adapted for producing the fan-stock or webbing.

B is a tank, for containing dextrine, or other glutinous or cementing-fluid, which trough is arranged beneath a cylinder, C, so that the periphery of the latter shall dip into the fluid in the trough, carry up this fluid, and supply it regularly to the periphery of a roller, D.

This roller D may be made hollow, and through or into it oblong slots, *dd*, are made, of a length and width to correspond to the size of the spaces required to be left between two pieces of paper or other material which are cemented together, as will be hereinafter explained.

These oblong spaces *d* are also arranged in radial lines, corresponding to the positions of the frame or sticks of a fan when opened, as shown in fig. 2, or in any other suitable manner.

Any number of sets of these slots or grooves may be arranged upon the roller D, according to the length of the roller, and the length and number of the slots or grooves in each set.

Above the cylindrical roller D, and arranged in

suitable journal-boxes, having their supports upon the frame A, are three loosely-turning cylindrical rollers, E, between the middle one of which, and the roller D, one sheet of the fan-material passes while receiving cement from the surface of said roller D, on such parts of it as do not pass over the slots or grooves *d*.

The sheet thus cemented is drawn from the roller H, between rollers E and D, and, after receiving cement, it is drawn onward between calendering-drums F F, where it receives the other sheet, drawn from rollers H' I E, and is cemented to this sheet, so as to form a single webbing, having spaces, *jj*, left between the two sheets, as indicated in figs. 3 and 4.

For the purpose of smoothing, and causing a perfect adhesion of the two pieces of material, the rollers F are heated in a suitable manner, so as to dry or partially dry the cemented material while it is being pressed between them.

The uncemented sheet, or that sheet which does not pass over the roller D, is carried from the roller H, beneath the roller I, over roller E; thence over the lower one of the calendering-rollers F, beneath the sheet which receives cement from roller D, as clearly shown in fig. 1.

The rollers C D F F are rotated in the direction indicated by the arrows in fig. 1, so that both sheets of the fan-material are fed through the machine in the same direction, and at the same rate of speed.

Instead of leaving uncemented those portions of one sheet of the material which are to form the pockets *j*, as above described, the entire surface of one sheet may be coated with cement, by passing it over the surface of the roller C, after which the pockets are left, by using the grooved or slotted roller D, in the place of the upper calendering-roller F, which would be removed.

Under such arrangement of the rollers, the two sheets composing the webbing would be calendered between rollers D F, and caused to adhere at every part, except those parts which passed beneath the slots or spaces *d*.

I prefer the plan first described, of leaving the material uncemented at *j*, by arranging the slotted roller D over, or so as to work with the cementing-roller, although I do not confine my invention to this arrangement.

For what are termed feathered fans, the uncemented portions need not be arranged in radial lines, as above described, and as shown in sheet 2; but any arrangement found best adapted for economizing material may be adopted.

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

1. The combination of the slotted roller D with a cement-supplying roller, C, in a machine for producing fan-webbing, substantially as described.

2. The combination of calendering-rollers with a roller, D, which is slotted or grooved, substantially as described.

3. In a machine adapted for producing fan-webbing, the printing of one of the sheets with a cementing-

substance on its way to heated calendering-rollers, substantially as described.

4. A roller, D, which is slotted or grooved, substantially as and for the purpose described.

JOSEPH W. WHITE.

Witnesses:

A. A. ELLSWORTH,

A. S. WHITE.