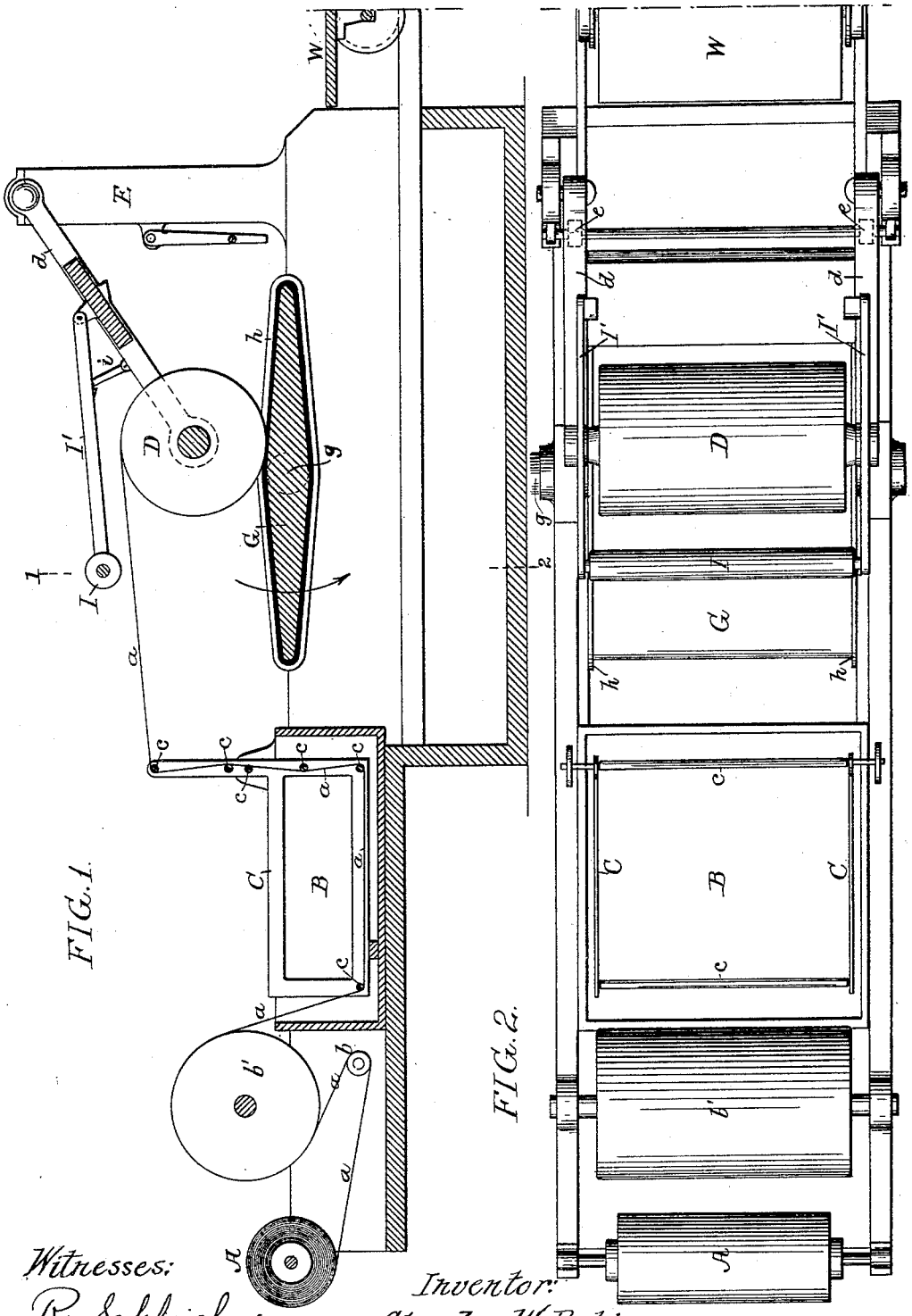
(No Model.) 2 Sheets—Sheet 1.

C. W. ROBINSON.

MACHINE FOR MAKING PARCHMENTIZED FIBER.

No. 459,258. Patented Sept. 8, 1891.



Witnesses:
R. Schleicher.
Murray C Boyer

Inventor:
Charles W. Robinson
by his Attorneys.
Howson & Howson

THE NORRIS PETERS CO., PHOTO-LITHO., WASHINGTON, D. C.

(No Model.) 2 Sheets—Sheet 2.

C. W. ROBINSON.

MACHINE FOR MAKING PARCHMENTIZED FIBER.

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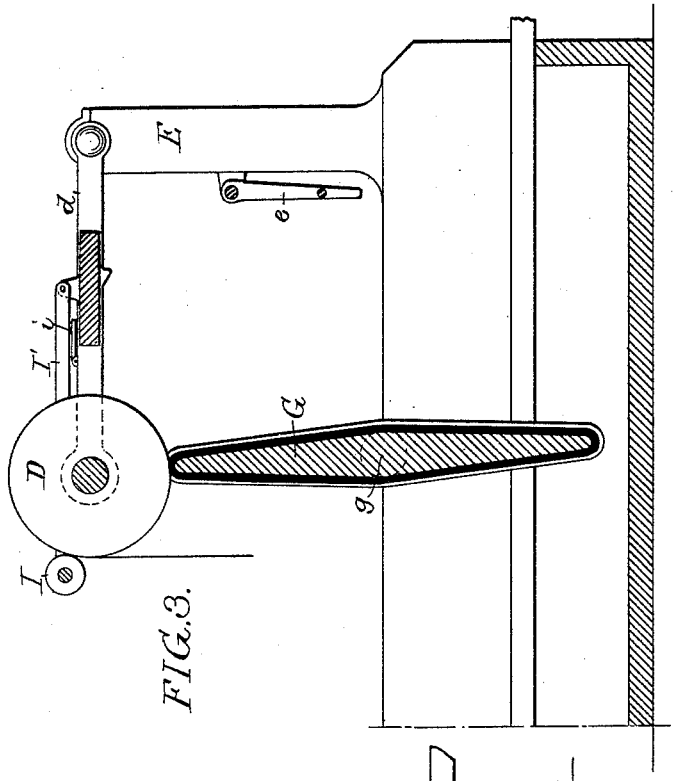

FIG. 3.

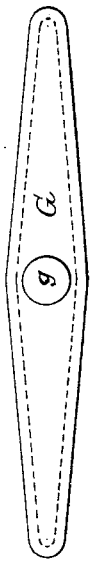

FIG. 6.

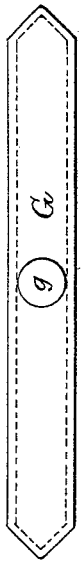

FIG. 7.

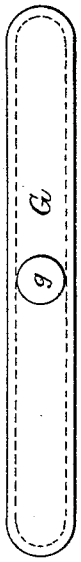

FIG. 8.

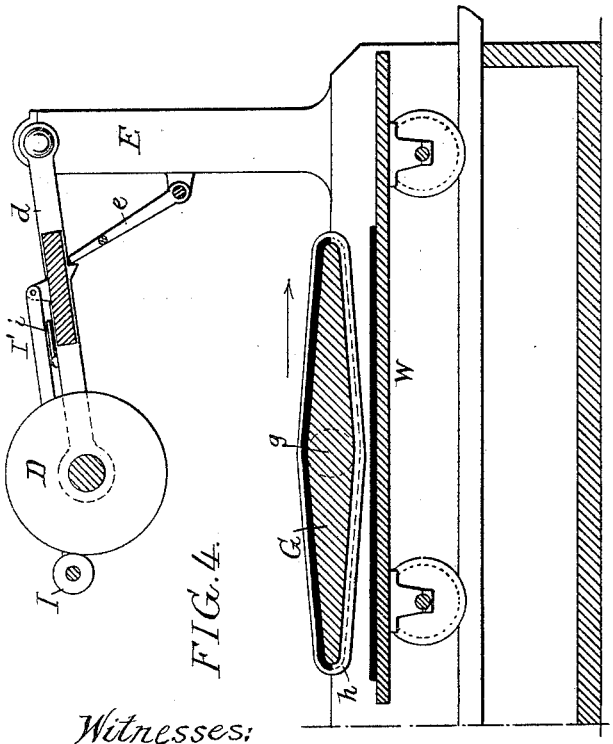

FIG. 4.

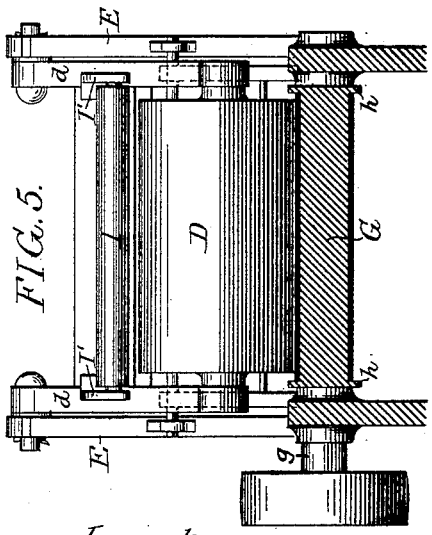

FIG. 5.

Witnesses:
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UNITED STATES PATENT OFFICE.

CHARLES W. ROBINSON, OF WILMINGTON, DELAWARE, ASSIGNOR TO THE KARTAVERT MANUFACTURING COMPANY, OF SAME PLACE.

MACHINE FOR MAKING PARCHMENTIZED FIBER.

SPECIFICATION forming part of Letters Patent No. 459,258, dated September 8, 1891.

Application filed April 6, 1891. Serial No. 387,745. (No model.)

To all whom it may concern:

Be it known that I, CHARLES W. ROBINSON, a citizen of the United States, and a resident of Wilmington, New Castle county, Delaware, have invented certain Improvements in Machines for Making Parchmentized Fiber, of which the following is a specification.

The object of my invention is to so construct a machine for winding fiber sheets in the manufacture of parchmentized fiber as to overcome certain objections to the machines now employed, and this object I attain in the following manner, reference being had to the accompanying drawings, in which—

Figure 1 is a longitudinal sectional view of my improved machine. Fig. 2 is a plan view. Figs. 3 and 4 are views showing the winding elements of the machine in different positions. Fig. 5 is a transverse section on the line 1 2, Fig. 1; and Figs. 6, 7, and 8 are views showing different styles of formers on which the fiber can be wound.

Heretofore sheets of fibrous material for the manufacture of parchmentized fiber have been wound upon a cylinder or drum until the prescribed thickness has been reached, after which the sheet is severed and the cylindrical web thus formed upon the drum is cut from end to end and spread out flat. I have found, however, that when the web is thick the outer surface of said cylindrical web is so much greater in diameter than the inner surface of the same that when the web is flattened out the shorter side is strained, while the long side buckles, and in the further treatment of the web this buckling becomes very apparent; and the object of my invention is to substantially overcome this buckling and stretching of the material.

In Figs. 1 and 2, A represents the roll of fibrous material, usually paper, which is drawn from the roll in the form of a sheet *a*, the latter passing over a series of rolls *b b'*, into the bath B, around a frame C therein, against and around guides *c*, above the bath, and thence to and around the delivery-roller D, which is hung from the frame E by arms *d*, this roll serving to guide the paper onto the former G, which is adapted to bearings in the side frames of the machine and is driven in any suitable manner, a belt-wheel or gearing being applied to one of its trunnions *g*. The former G is in the present instance very nearly flat, being preferably slightly larger at the center than at the ends, which are rounded. At each edge of the former is a rim *h*, which serves to properly guide the sheet *a*. As the former G is turned on its axis the sheet of fiber is wound around it, the roller D rising and falling so as to follow the shape of the former. Hence the sheet of fiber is pressed upon the former by the roller and the admission of air between the layers of fiber is prevented. After the required thickness of web is attained the sheet *a* is cut and a roller I, hung to an arm I', pivoted to the arm *d*, is allowed to drop by removing a prop *i*, which normally supports said arm I'. The roller I therefore assumes the position shown in Fig. 3 and rests upon the sheet *a*, so as to hold the end of the sheet against the roller D and keep it under tension at the end of the wind, so as to prevent the last layer from being loose. The roller D is then raised clear of the former G and propped up by the arm *e*, as shown in Fig. 4, so that free access can be had to the web wound upon said former. The web is then cut at each end, as shown in Fig. 4, and a truck W is run under the former and the under piece of web allowed to drop onto said truck, as shown in said figure, after which the truck is removed and another truck inserted, or if the truck is of sufficient length it can be so moved as to receive the top layer of fiber, which is drawn off from the former in the direction of the arrow, Fig. 4.

It will be understood that different shapes of formers may be used. For instance, as shown in Figs. 1 and 6, the surface of the former is slightly tapered, while in Fig. 7 I have shown a former with flat faces and beveled ends, and in Fig. 8 I have shown a flat former with rounded ends.

By the above-described machine I am enabled to wind the web of fiber to almost any thickness and yet avoid any material stretching or buckling of the web.

I claim as my invention—

1. In a machine for winding a web of chemically-treated fiber, the combination of the guide-rolls, a tank for the treating-liquor, guides therein for the web of fiber, a flat

former, and a roller adapted to press the fiber upon the former as the latter is revolved, substantially as described.

2. The within-described former, upon which to wind the web in the process of manufacturing parchmentized fiber, said former being flat, substantially as and for the purpose described.

3. The combination of the frame, the flat former mounted therein, mechanism for rotating said former, and a pivoted bearing-roller adapted to rest upon the fiber as it is wound upon the former and free to rise and fall with the former as it is revolved, substantially as described.

4. The combination of the former, the bearing-roller, a pivoted arm carrying said roller, a retaining-roller, and an arm carrying such roller, said retaining-roller bearing relation to the bearing-roller, substantially as described.

5. The combination of the flat former, edge flanges thereon, mechanism for revolving said former, and a bearing-roll adapted to rest on the former, substantially as set forth.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

CHARLES W. ROBINSON.

Witnesses:

D. W. MASTERS,

HENRY J. CRIPPEN.