No. 717,117. Patented Dec. 30, 1902.

J. W. PHAIL.

ROLLER FOR PAPER OR OTHER FABRICS.

(Application filed Mar. 3, 1902.)

(No Model.)

Fig. 1.

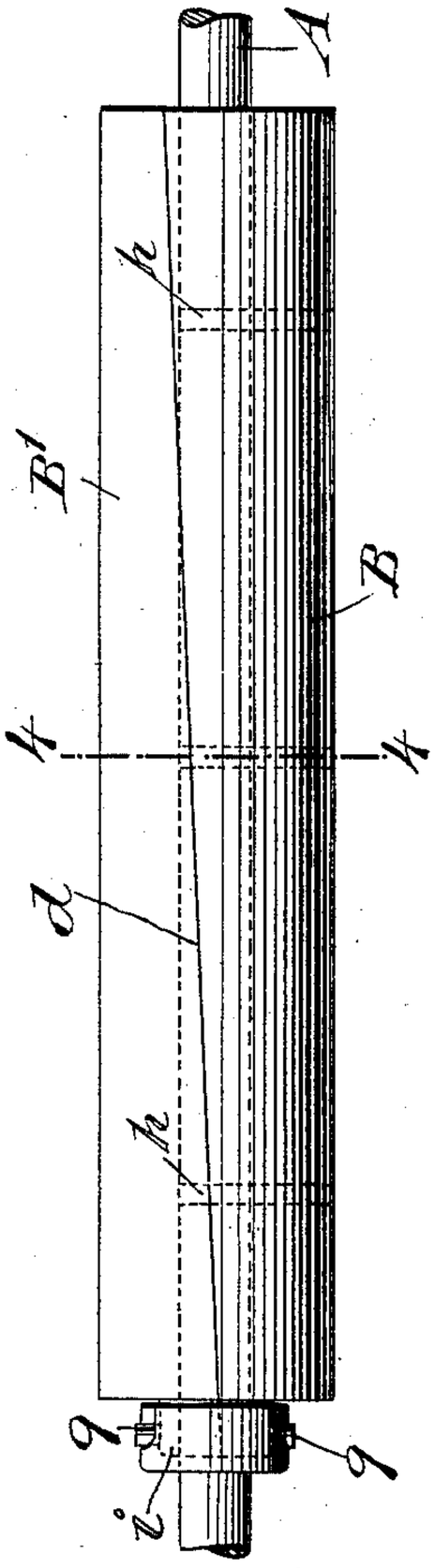


Fig. 2.

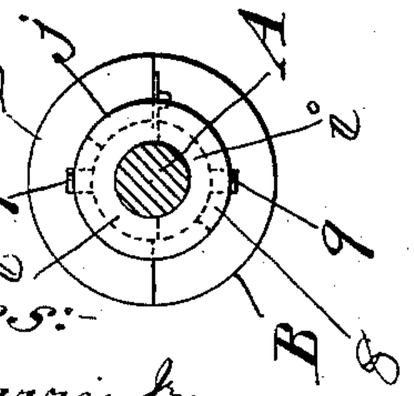


Fig. 3.

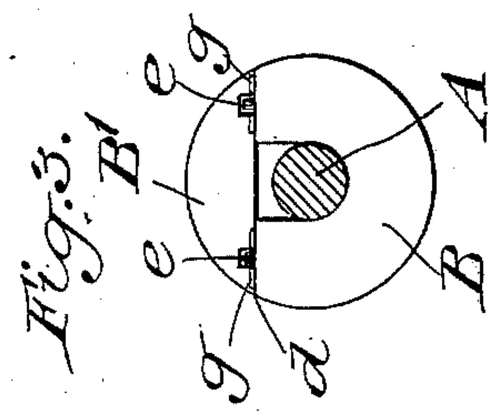


Fig. 4.

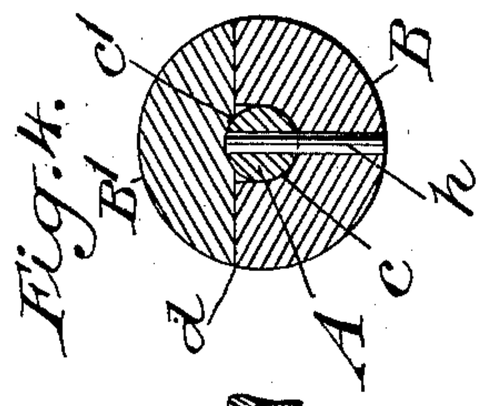


Fig. 5.

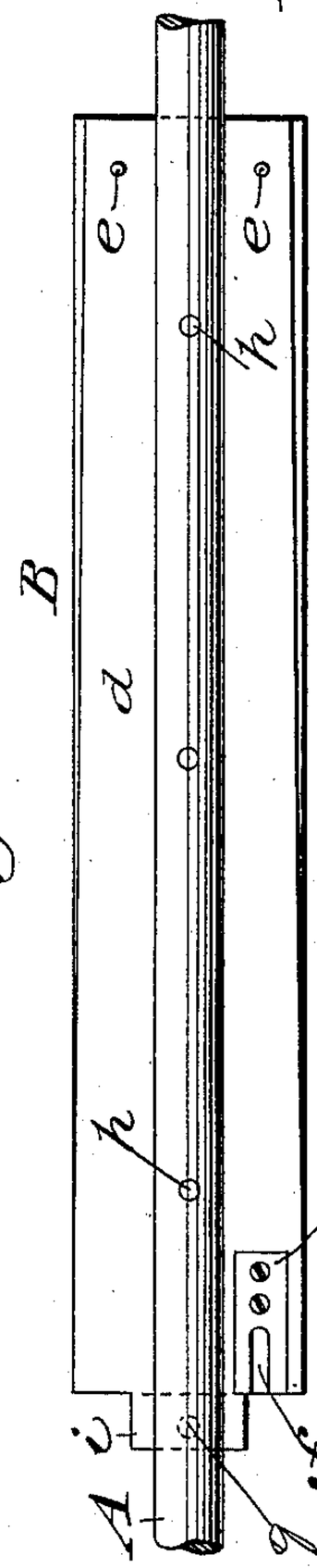


Fig. 6.

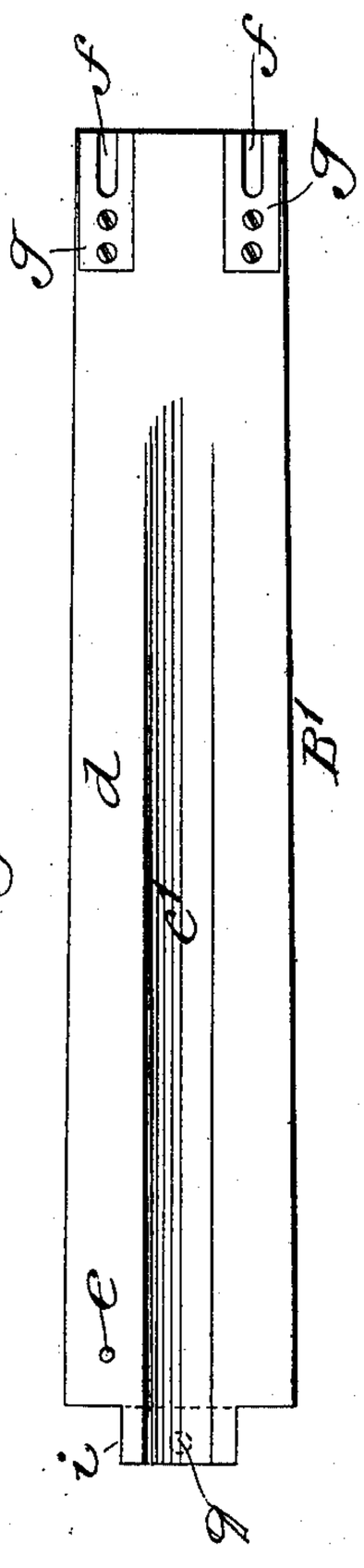
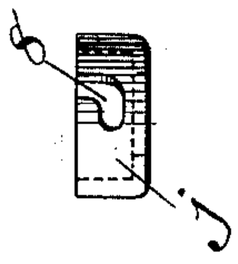


Fig. 7.



Witnesses:-
George Barry Jr.
Henry Thieme

Inventor:-
John W. Phail
by attorneys
Brown & Lawrence

UNITED STATES PATENT OFFICE.

JOHN W. PHAIL, OF NEW YORK, N. Y., ASSIGNOR TO C. B. COTTRELL & SONS COMPANY, OF NEW YORK, N. Y., AND STONINGTON, CONNECTICUT, A CORPORATION OF NEW JERSEY.

ROLLER FOR PAPER OR OTHER FABRICS.

SPECIFICATION forming part of Letters Patent No. 717,117, dated December 30, 1902.

Application filed March 3, 1902. Serial No. 96,392. (No model.)

To all whom it may concern:

Be it known that I, JOHN W. PHAIL, a citizen of the United States, and a resident of the borough of Manhattan, in the city and State of New York, have invented a new and useful Improvement in Rollers for Paper or other Fabrics, of which the following is a specification.

The object of this invention is to obtain and provide a roller which may be easily removed from a roll of paper or other fabric rolled upon it. For this purpose the body of the roller having running through it a spindle or shaft is divided lengthwise obliquely across its axis in two separable semicylindrical sections; and the invention consists in the combinations of such separable sections and means for securing them together and to their shaft or spindle, all as hereinafter described and claimed.

In the accompanying drawings, Figure 1 is a longitudinal view of a roller embodying my invention. Figs. 2 and 3 are opposite end views of said roller. Fig. 4 is a transverse section in the line 4 4 of Fig. 1; Fig. 5, a longitudinal view of the shaft and one of the two separable sections of the body; Fig. 6, an inside longitudinal view of the other separable section. Fig. 7 represents a collar for retaining the two sections of the body in proper longitudinal relation to each other.

A designates the shaft, and B B′ designate the body, made of any suitable material and divided lengthwise obliquely across its axis into the two semicylindrical sections B and B′. The shaft is inserted between these sections into a central bore *c c′*, which is formed partly in one section and partly in the other, and it passes entirely through both and projects through both ends of the body in order to facilitate the handling of the roller and a heavy roll of paper or fabric that may be contained thereon. The division between said sections is made obliquely to the axis, as shown by the line *d* in Fig. 1, to facilitate the withdrawal of one section from the roll of paper or fabric a short distance, and thereby permit the loosening and withdrawal of the whole roller.

To provide for keeping the two faces of the joint *d* between the two sections B B′ in proper relation to each other, dowel-pins *e* are shown secured in each section and enter longitudinally-arranged slots *f* in plates *g*, countersunk into the other section. These slots, the outer ends of which are open to the end of the body, permit the longitudinal movement of one section relatively to the other to allow one to be withdrawn from the roll of fabric, and thereby leave the other loose enough to be withdrawn therefrom. The inner ends of said slots are closed and so arranged that they and their respective dowel-pins serve as stops to insure the proper longitudinal relation of the two sections when they are put together to receive the roll of fabric. To secure the two sections in proper longitudinal relation to each other, they are turned down smaller at one end, as shown at *i* in Figs. 1, 2, 5, and 6, to receive a collar *j*, in which are two angular slots 8, forming a bayonet connection with two pins 9, projecting from the parts *i*.

The section B′ is intended to be removable from the shaft, the section B being fixedly attached to the latter by transverse pins *h*, inserted through said section and the shaft.

For receiving the roll of fabric the two sections of the roller-body are placed together upon the shaft, as shown in Fig. 1, and secured together as may be necessary. When the required or desired length of fabric has been rolled upon the body and the roll requires to be removed therefrom, force is applied either by a blow or by pressure to the small end of that section of the body B′ which is capable of moving lengthwise upon the shaft to drive back the said section far enough to loosen both sections within the roll sufficiently to permit the shaft and whole roller-body to be easily drawn out.

It will of course be understood that if any device—such, for example, as the collar *j*—should be applied outside of the roller-body to secure its sections together such device should be removed or displaced before attempting to drive or draw back the removable roller-section.

What I claim as my invention is—

1. A circular roller consisting of a body which is divided lengthwise obliquely across its axis into two semicylindrical sections and

a shaft passing through both of the sections and projecting through the ends thereof, one of said sections being fixedly attached to said shaft and the other movable lengthwise thereon, substantially as herein described.

2. A roller consisting of a shaft and an attached body divided lengthwise obliquely to its axis in two sections from the inner face of one of which projects one or more dowel-pins and in the inner face of the other of which are one or more longitudinal slots open at one end of the body for the entrance and withdrawal of said dowel pin or pins, substantially as herein described.

3. A roller consisting of a shaft and an attached body divided lengthwise obliquely to its axis in two sections on the inner face of one of which is a projection, and in the inner face of the other of which is a slot for the reception of said projection, the inner end of said slot being located to serve as a stop to said projection for the purpose of insuring the proper operative longitudinal relation of the two sections, substantially as herein described.

4. A roller consisting of a shaft, a body which is divided lengthwise obliquely to its axis into sections which are fitted to the shaft separably from each other and a portion of which at one end is of reduced diameter and has external projections one on each section, and a ring applied on said reduced portion and containing slots which form a bayonet connection with said projections for securing said sections together upon the shaft in proper longitudinal relation to each other, substantially as herein described.

In testimony that I claim the foregoing as my invention I have signed my name, in presence of two witnesses, this 28th day of February, 1902.

JOHN W. PHAIL.

Witnesses:
FREDK. HAYNES,
GEORGE BARRY, Jr.