

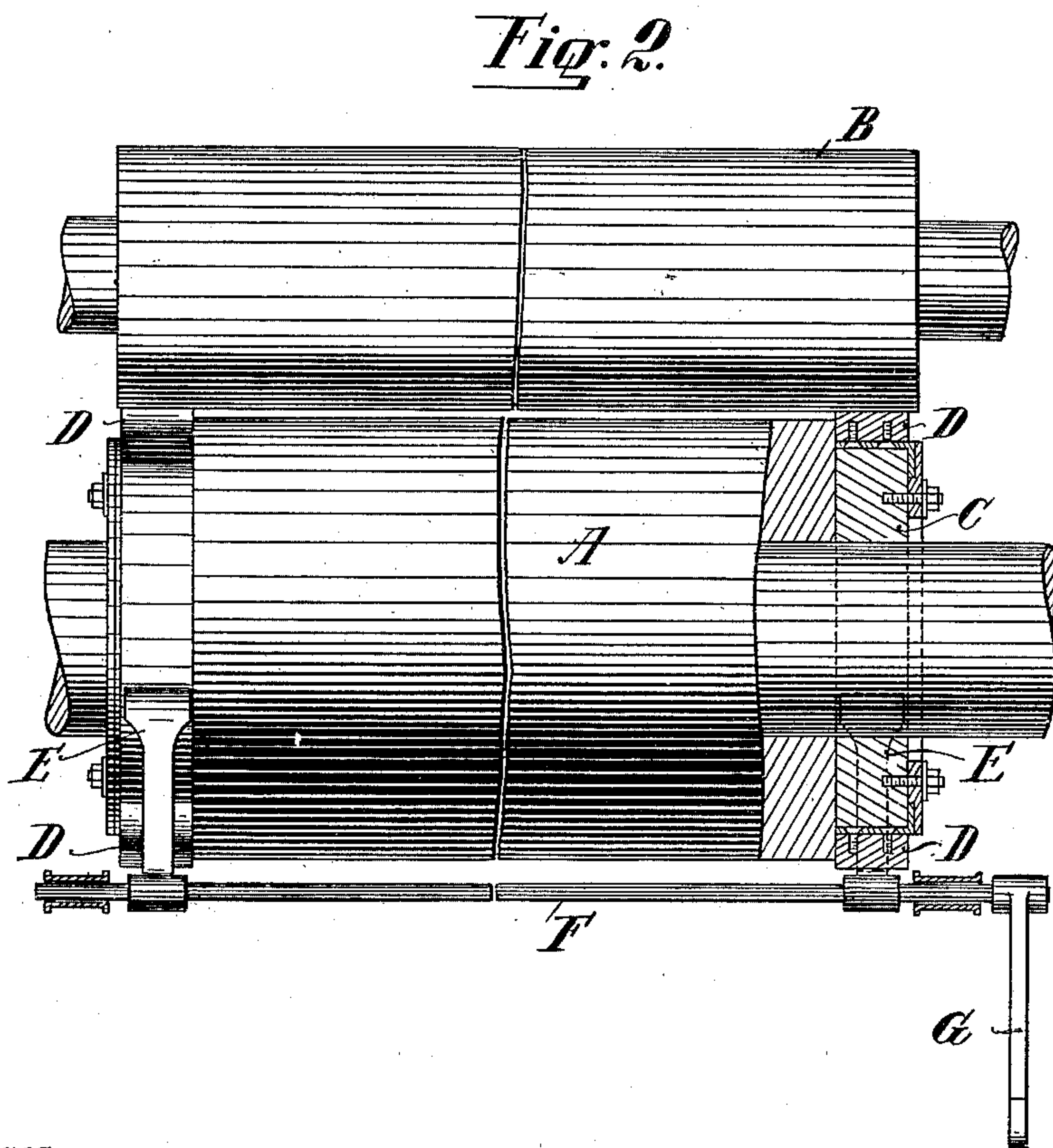
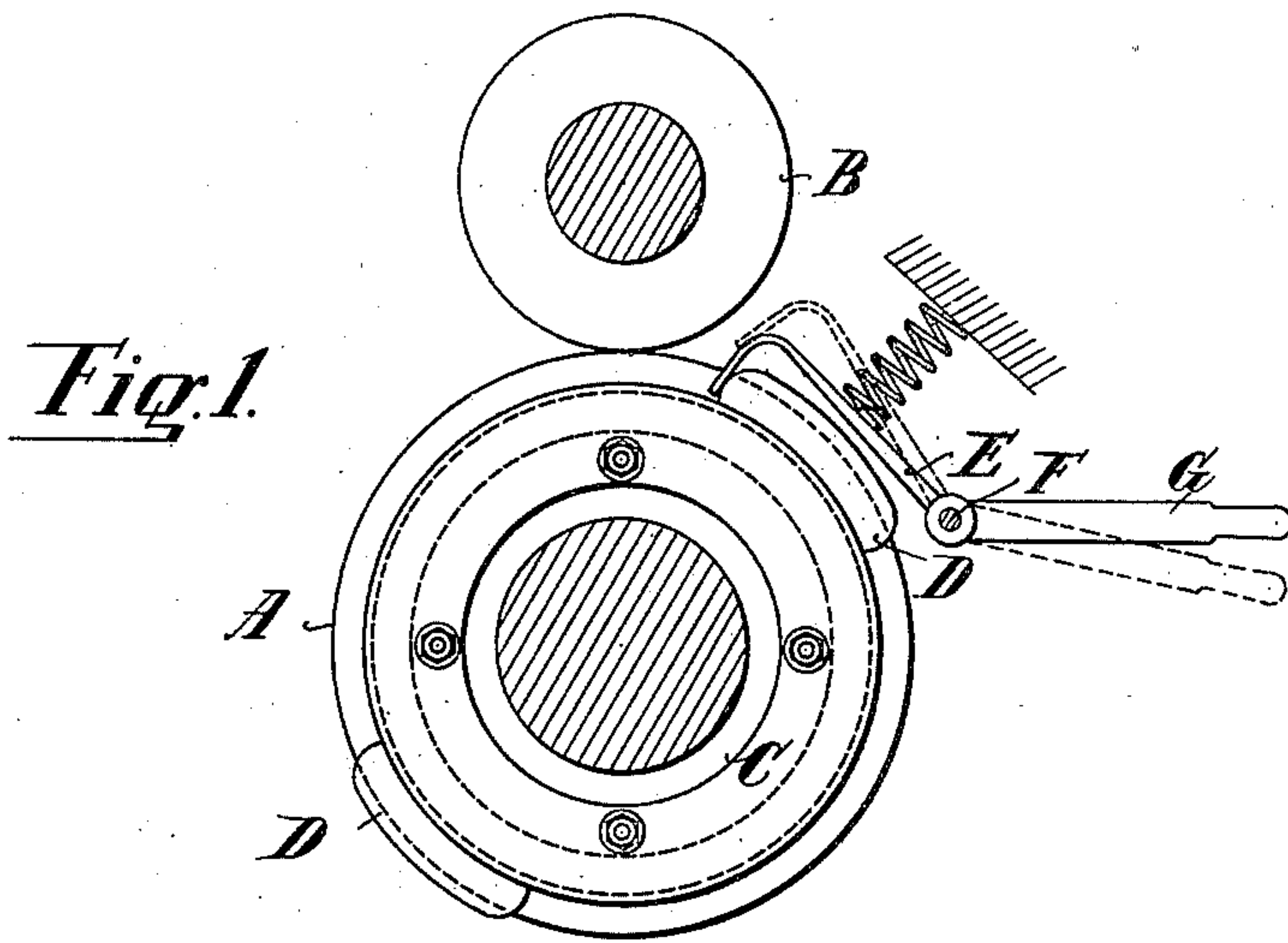
No. 701,511.

Patented June 3, 1902.

L. SCHREINER.
CALENDERING MACHINE.

(Application filed Oct. 1, 1901.)

(No Model.)



Witnesses
Hugo Hommer
Fritz Uebe.

Inventor.
Ludwig Schreiner

UNITED STATES PATENT OFFICE.

LUDWIG SCHREINER, OF BARMEN-RITTERSHAUSEN, GERMANY.

CALENDERING-MACHINE.

SPECIFICATION forming part of Letters Patent No. 701,511, dated June 3, 1902.

Application filed October 1, 1901. Serial No. 77,202. (No model.)

To all whom it may concern:

Be it known that I, LUDWIG SCHREINER, a subject of the German Emperor, residing at Barmen-Rittershausen, Germany, have invented certain new and useful Improvements in and Connected with Calendering-Machines, of which the following is a description, reference being had to the accompanying drawings, forming a part thereof.

The known devices for passing seams between the rollers in calendering fabrics necessitate relieving the pressure, an operation which consumes time and is liable to damage the machinery when a high pressure is used.

If the calendering-machine is so constructed that several fabrics or parts of the same fabric are passing between different rollers, a relief of the pressure produces irregularities in the goods which have been avoided hitherto only by gluing the pieces of fabric together instead of seaming them. Even in this case passing double layers between the paper or cotton rollers of high-pressure machines is detrimental.

The present invention relates to a device by which goods with the usual seams may be passed between calendering-rollers, even at high pressure, without damaging these, notwithstanding that the pressure is maintained the while. The arrangement is such that a flat cam-surface on one of a pair of rollers comes between the two rollers at the moment that the seam is about to pass, thus separating them by a few millimeters until the seam is through. For this purpose one of the rollers is provided with rings, which are loosely mounted concentric with the roller, but are carried around with the latter by friction enhanced, if necessary, by interposed springs.

Each ring has two cam-surfaces on its periphery set to balance each other. At the point where the cam-surface is about to pass between the rollers is a detent which normally prevents the ring from revolving with the roller by engaging with the cam-surface. Two such rings, one at each end of the roller, generally suffice, and the detents may be normally held in position by spring-pressure and raised to liberate the rings by a rocking lever common to both.

An example of the invention is shown in the accompanying drawings, in which—

Figure 1 is an end view of a pair of calendering-rollers, Fig. 2 being a plan, partly in section, in which the upper roller has been turned through an angle of ninety degrees around the lower one to show the cam-surfaces and the space produced by them between the rollers.

A is the lower, and B the upper, calendering-roller.

C is a ring mounted on the axis at one end of the lower roller.

D D are the two cam-surfaces, balancing each other.

E is a spring-urged detent mounted on the rocking bar F, which carries also the corresponding detent at the other end of the roller. By pressing the lever G both detents are raised together, liberating the rings, which are now carried around by friction, so that one of each pair of cams passes between the rollers and separates them to allow the seam to pass. The detents are then let fall to detain the rings by engaging with the following cams.

Having thus described my invention, the following is what I claim as new therein and desire to secure by Letters Patent:

1. In a calendering-machine, the combination of the two calendering-rollers and means for separating one roller from the other, said means comprising a cam, a friction drive connection between said cam and one of the rollers and means for holding said cam against rotation with the roller, substantially as described.

2. In combination, the two rollers, a ring having frictional connection with one roller to be driven thereby, a cam on the ring and means for normally holding the cam and ring against rotation with the roller, said cam being arranged to separate the rollers, substantially as described.

3. In combination, the two rollers, a ring driven by friction from one roller, a cam carried by the ring to separate the rollers and a detent for holding the ring and cam normally against rotation, substantially as described.

4. In combination, the rollers, a friction-ring at each end thereof, a cam on each ring for separating the rollers and detent means for normally holding the rings against rotation, substantially as described.

5. In a calendering-machine, in combination with one of the calendering-rollers, two lifting-cams, two rings carrying the cams and frictionally mounted on each end of the roller, and two detents, arranged and operating substantially as and for the purpose set forth.

6. In a calendering-machine, in combination with one of the calendering-rollers, a cam-ring frictionally held at each end thereof and a spring-detent and hand-lever, arranged and operating substantially as and for the purpose set forth.

7. An appliance for separating the rollers of a calendering-machine during the passage of a seam between them without relieving the

pressure of the lifted roller upon the other rollers, the said appliance comprising a ring C carrying a pair of cam-surfaces D and being frictionally mounted on each end of one of the rollers A, and a spring-detent E, rock-ing-shaft F and hand-lever G, arranged and operating substantially as and for the purpose set forth.

In witness whereof I have hereunto set my hand in presence of two witnesses.

LUDWIG SCHREINER.

Witnesses:

HUGO MOMMER,
FRITZ NEBE.