

(No Model.)

F. M. KELLY.
CURTAIN FIXTURE.

No. 280,833.

Patented July 10, 1883.

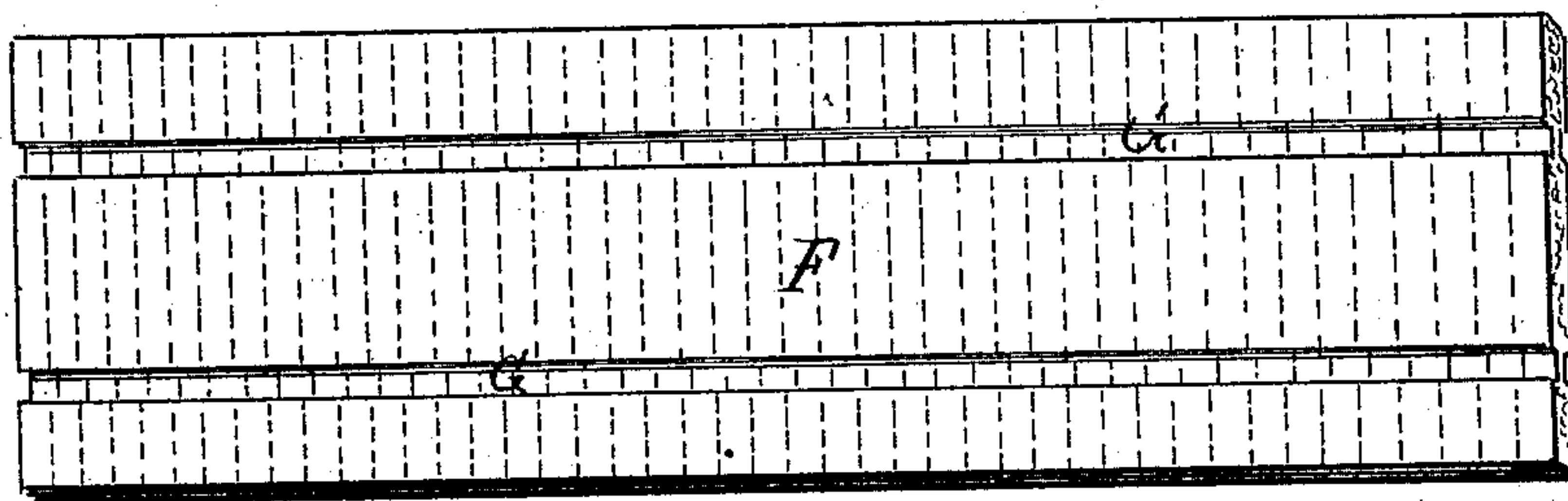


Fig. 1.

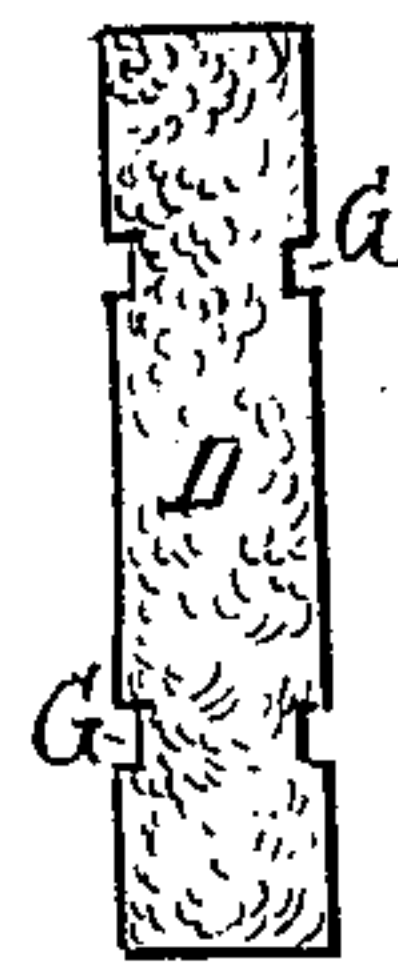


Fig. 2.

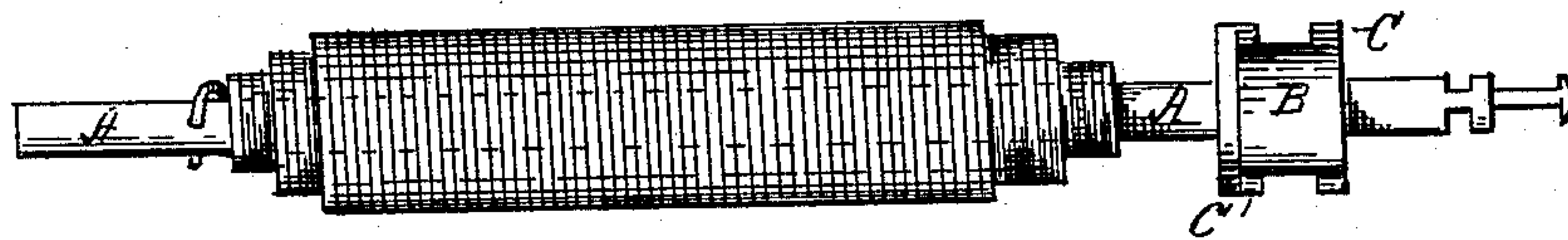


Fig. 3.

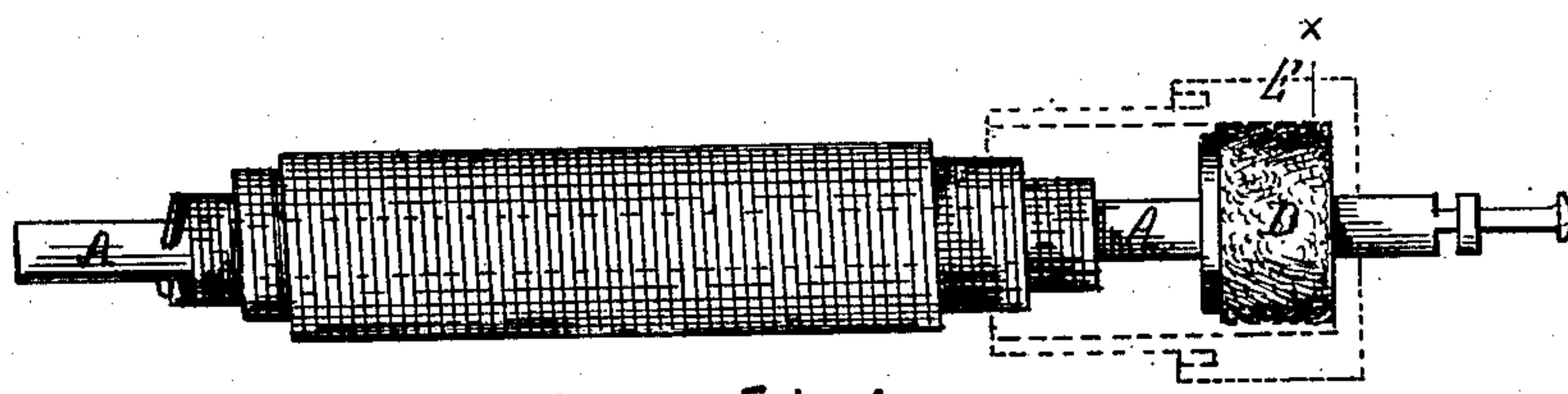


Fig. 4.

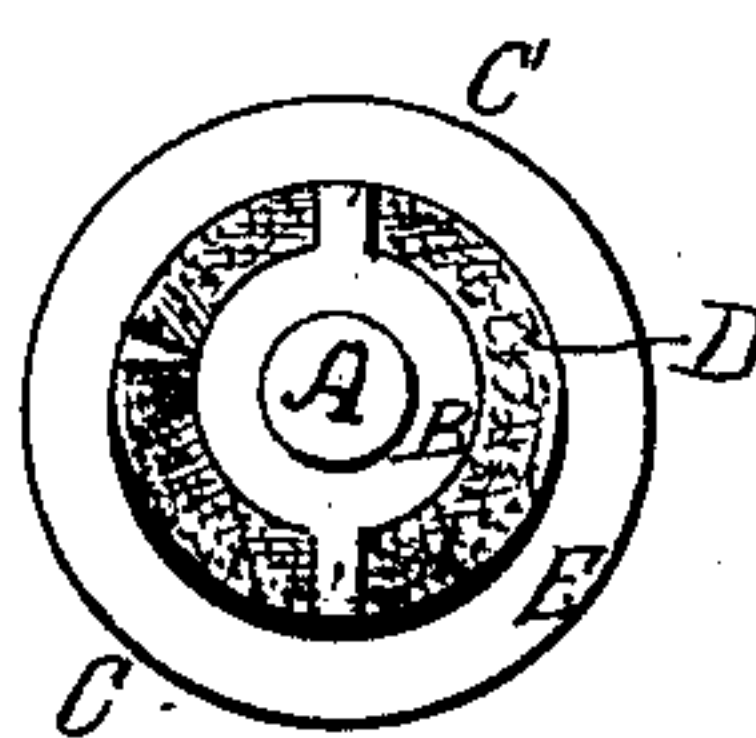


Fig. 5.

Witnesses.

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FRANK M. KELLY, OF WATERTOWN, ASSIGNOR OF ONE-HALF TO CHARLES W. BASSETT, OF NEWTON, MASSACHUSETTS.

CURTAIN-FIXTURE.

SPECIFICATION forming part of Letters Patent No. 280,833, dated July 10, 1883.

Application filed May 14, 1883. (No model.)

To all whom it may concern:

Be it known that I, FRANK M. KELLY, a citizen of the United States, residing at Watertown, in the county of Middlesex and State of Massachusetts, have invented certain new and useful Improvements in Curtain-Fixtures; and I do hereby declare that the same are fully described in the following specification, and illustrated in the accompanying drawings.

10 This invention is in the nature of an improvement upon that for which Letters Patent No. 154,400 were granted August 25, 1874, to A. H. Knapp. Said Knapp invention provided for spring-balance curtain-fixtures friction-bearings of simple felt; and this invention has gone into extensive use, the bearings being cut or punched in rings from sheets or strips of very heavy and firm felt, and employed within the cavity of the roller, or of the bracket, or both. This plan, while producing an admirable bearing, involves great waste of an expensive material, since the pieces punched out of each ring and the material remaining after the rings have all been cut from the sheet constitute a large percentage of the whole, and, as waste, are of comparatively little value. The punches required are also numerous and costly and demand frequent grinding, while the item for labor is otherwise very considerable. The present improvement dispenses with these punches and avoids the waste incident to their use, together with much of the labor involved in the former plan; and the invention consists in the herein-described process of forming such bearings and in the article thereby produced, as will be explained. The roller-spindle has an enlargement of soft metal cast upon it to hold stationary the felt bearing in position to support and act frictionally upon the bore of the tubular roller, or of its cap. Upon this soft-metal lugs or projections are formed to hold the felt in place during rotation of the roller, and corresponding recesses are formed in the felt placed thereon. The felt is applied in the form of a flat strip cut from the end of a long narrow piece of the material, which piece is thick enough for the width of the bearing, and wide enough for the length of such bear-

ing—that is, so that the strip cut will extend entirely around the soft-metal enlargement, to which it is held by the lugs on it entering recesses in the felt, and by the bore of the roller or cap surrounding and pressing with friction upon it.

The drawings illustrate this method of forming the felt strips for bearings and their application to the spindle, Figure 1 showing a piece of the thick felt grooved on each side and near each edge, and Fig. 2 representing a strip cut from the end thereof, of suitable dimensions for a bearing, the recesses (to fit the lugs) having been formed by a saw or planer, making continuous grooves before the piece is sliced into bearing-strips. Fig 3 represents the spindle with its soft-metal enlargement, and Fig. 4 the same with the felt strip applied. Fig. 5 is a transverse section through the bearing at *x x*.

A is the spindle; B, the soft-metal cast thereon, with lugs or shoulders C. D is the felt bearing-strip wrapped about the part B and held in place by the projections C, and also by the walls of the tubular roller E, which keep the strip D from straightening out when the parts are put in position for use. The peculiar qualities of the felt as a friction-bearing are quite as available under this construction as in the form of solid rings set forth in the Knapp patent.

The piece of felt (lettered F in the perspective view, Fig. 1) is, as stated, as thick as the width of the bearing, as wide as the length of the strip D forming the bearing, and of any convenient length. Grooves G are formed therein by saws or planers, and the piece is then cut transversely into strips D by a sharp reciprocating or rotary cutter.

I claim as my invention—

1. The herein-described process of forming friction-bearings from a flat piece of felt, consisting in grooving such piece longitudinally, so as to form retaining-notches, and cutting said piece transversely and crosswise of said grooves into strips, each adapted to be interposed as a friction-bearing between the spindle and the roller, substantially as set forth.

2. A felt-bearing formed as a straight strip

(in distinction from a ring) and held in its curved position on the spindle by the surrounding walls of the spring-chamber, substantially as set forth.

- 5 3. A friction-bearing for curtain-rollers, the same consisting of a strip of felt wrapped around the spindle, or an enlargement thereof, and held in position by the bore of the roller, or its cap, and by lugs which prevent its move-

ment around and lengthwise of the spindle, so substantially as set forth.

In testimony whereof I hereto affix my signature in presence of two witnesses.

FRANK M. KELLY.

Witnesses:

CHARLES W. BASSETT,
A. H. SPENCER.