

No. 679,608.

Patented July 30, 1901.

F. O. DUFFY.
LOOM TEMPLE ROLL.

(Application filed Mar. 21, 1901.)

(No Model.)

Fig 1

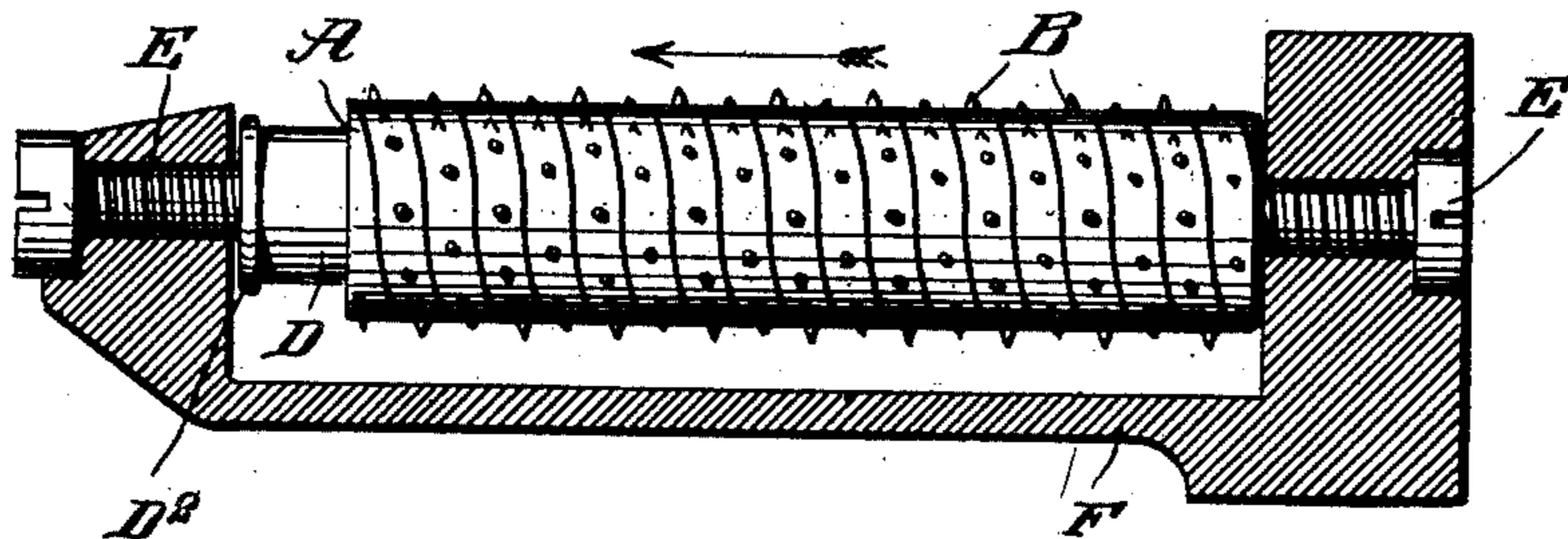


Fig 2

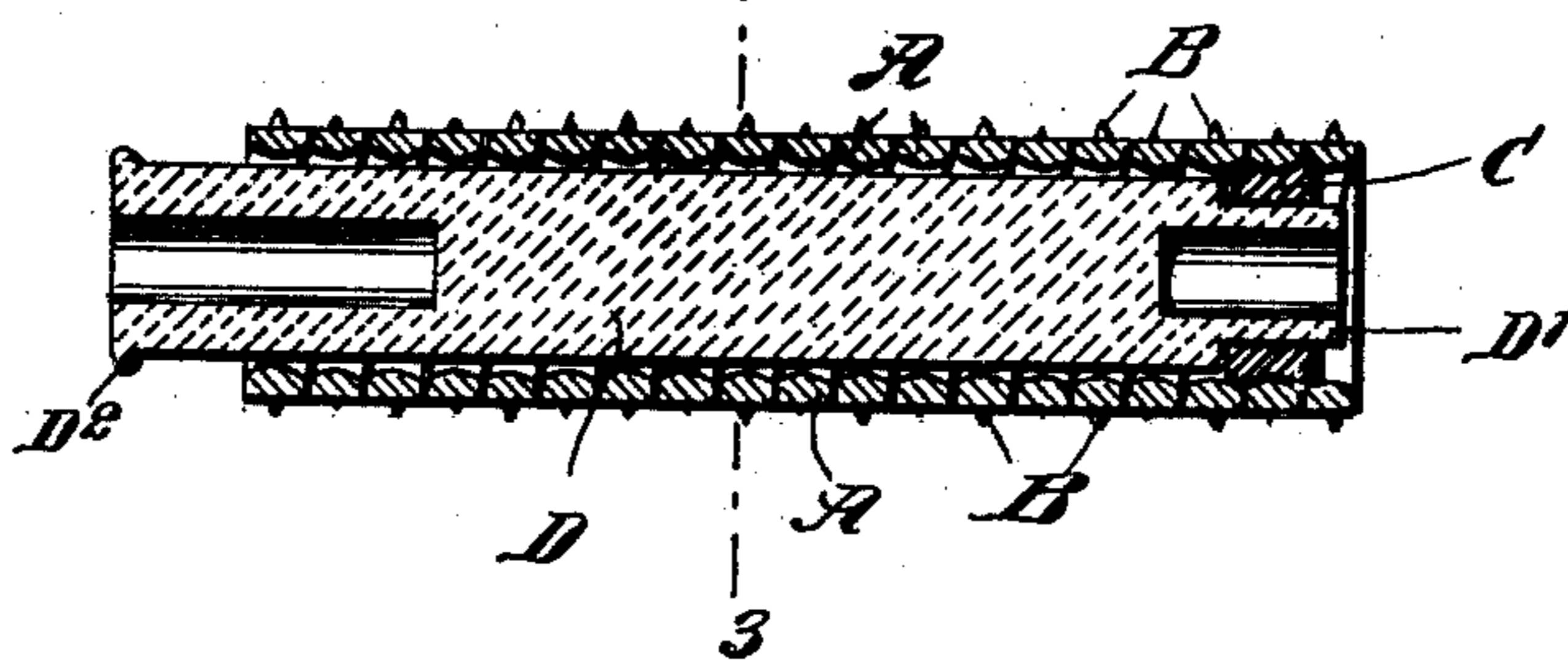
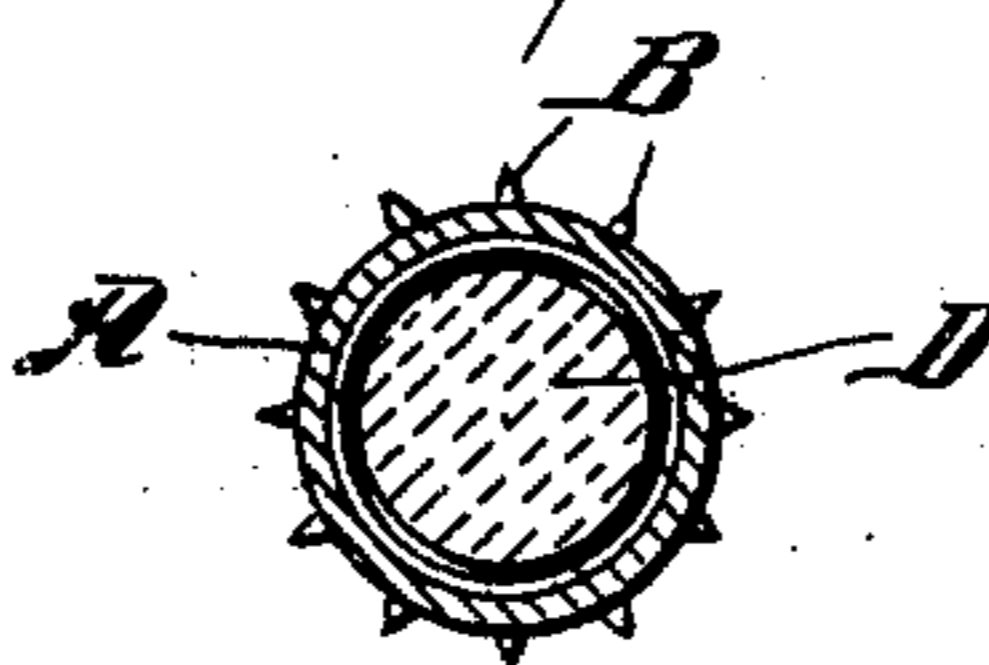


Fig 3



WITNESSES:

H. Walker
H. G. Hoster

INVENTOR

Frank O. Duffy

BY

Mum

ATTORNEYS

UNITED STATES PATENT OFFICE.

FRANK O. DUFFY, OF NEW BEDFORD, MASSACHUSETTS.

LOOM TEMPLE-ROLL.

SPECIFICATION forming part of Letters Patent No. 679,608, dated July 30, 1901.

Application filed March 21, 1901. Serial No. 52,170. (No model.)

To all whom it may concern:

Be it known that I, FRANK O. DUFFY, a citizen of the United States, and a resident of New Bedford, in the county of Bristol and State of Massachusetts, have invented new and Improved Loom Temple-Rolls, of which the following is a full, clear, and exact description.

The object of the invention is to provide a new and improved loom temple-roll arranged to properly feed the cloth lengthwise and to hold it extended widthwise without danger of tearing the cloth when a lateral strain or pull is exerted on the cloth.

The invention consists of novel features and parts and combinations of the same, as will be fully described hereinafter and then pointed out in the claims.

A practical embodiment of the invention is represented in the accompanying drawings, forming a part of this specification, in which similar characters of reference indicate corresponding parts in all the views.

Figure 1 is a side elevation of the improvement with the support for the roll in section. Fig. 2 is a sectional side elevation of the roll, and Fig. 3 is a transverse section of the same on the line 3 3 in Fig. 2.

Loom temple-rolls are secured to a loom-frame or other part of the loom to engage opposite sides of the cloth and keep the latter extended in the direction of its width and to the fullest extent possible. As most all kinds of cloth have a tendency to shrink or narrow up while the weft is being beaten in by the reed, it is almost impossible to keep the cloth sufficiently extended widthwise without danger of tearing or marking it up to such an extent as to make the cloth defective and unsalable, and this is especially the case with temple-rolls having points or teeth projecting from the peripheral surface of the solid body. When such temple-rolls are used, it is evident that only a few of the innermost teeth really do the holding of the cloth, and in case of a heavy lateral strain the cloth is torn or injured. With my improved temple-roll presently to be described in detail I overcome the difficulty by constructing the roll so that it will yield laterally in proportion to and in the direction of the strain and with an equal strain on all the projecting teeth or points

engaging the fabric, so that the latter is not likely to be torn or punctured.

The temple-roll consists of a body A made in the shape of a coil-spring, the convolutions normally lying close to each other, the outer face of the spring being turned over to form a cylindrical body, as is plainly shown in the drawings. The points or teeth B for engaging or holding the cloth are preferably struck up integrally from the body A, and the outer end of the body is provided with an interior collar or flange C, engaged by the reduced end D' of a core D, made cylindrical and formed at its ends with supports or bearings engaged by screws E, held in the frame or support F for the temple-roll. By the arrangement described the core D abuts against the inner end of the collar C, fixed in the outer end of the body A, so that the spiral spring forming the body A is free to open when a pull is exerted lengthwise of the roll or laterally in the direction of the width of the cloth, so that the convolutions of the spiral spring open up according to the power of the strain. The inner end of the core D is formed with an external flange D² for limiting the opening-up movement of the spiral spring forming the body A of the temple-roll. Now it is evident that when the device is in position on the loom the teeth or points B engage the cloth and hold the same properly extended widthwise, and in case of shrinking or narrowing of the cloth the pull exerted on said points or teeth causes the body A to yield laterally in the direction of the width of the cloth, the convolutions of the spring opening up to a degree corresponding to the power of the pull or strain. It will be seen that the pull or strain exerted on the different teeth or points engaging the cloth is equal, so that the liability of tearing the cloth or otherwise injuring the same is reduced to a minimum.

The reason all the teeth in the roll take hold alike of the whole length of the roll is that when the first layers of the spiral spring receive the pull they yield and the next layer takes up the pull, and so on through all the convolutions of the spring.

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

1. A loom temple-roll having a body, and

cloth-engaging devices thereon, the body being held at one end against lateral movement, and arranged to yield laterally from the fixed end in the direction of the length of the roll
5 and widthwise of the cloth, as set forth.

2. A loom temple-roll having a body formed of a spiral spring held against movement at one end, and cloth-engaging devices on the peripheral surface of said spiral spring, and
10 adapted to engage the cloth, so that a pull

exerted by the latter on said devices, causes the convolutions of the spring to open, as set forth.

In testimony whereof I have signed my name to this specification in the presence of 15 two subscribing witnesses.

FRANK O. DUFFY.

Witnesses:

ERNEST J. A. MICHAUD,
ALFRED M. BESSETTE.