

(No Model.)

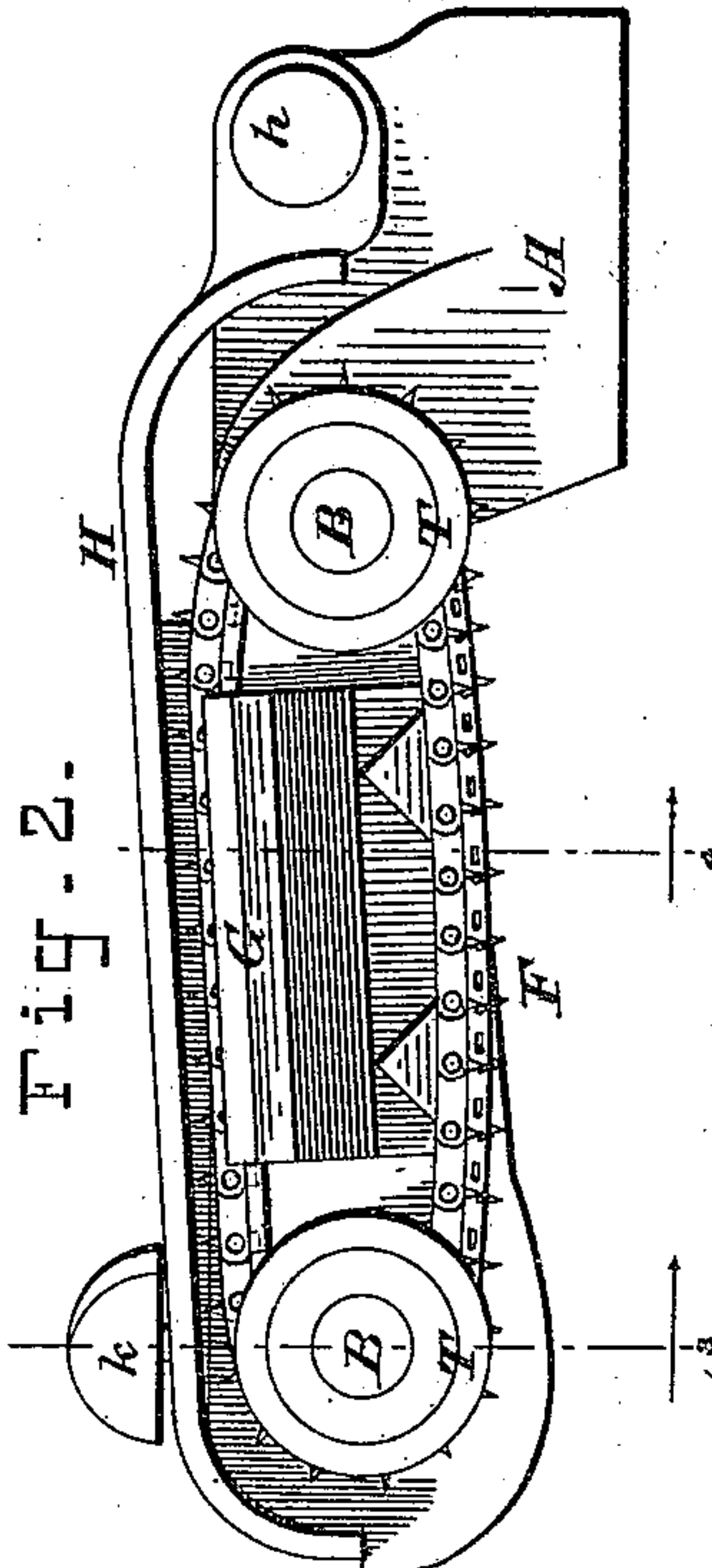
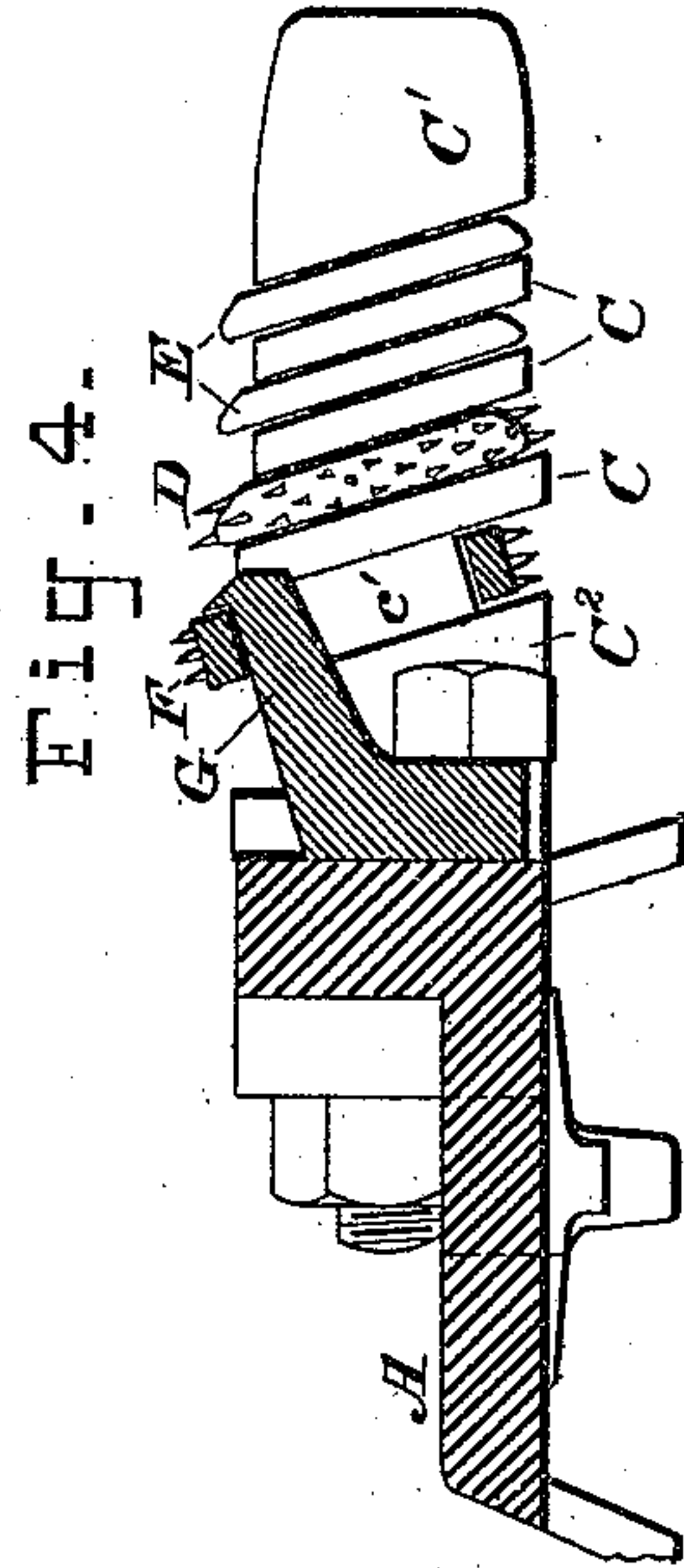
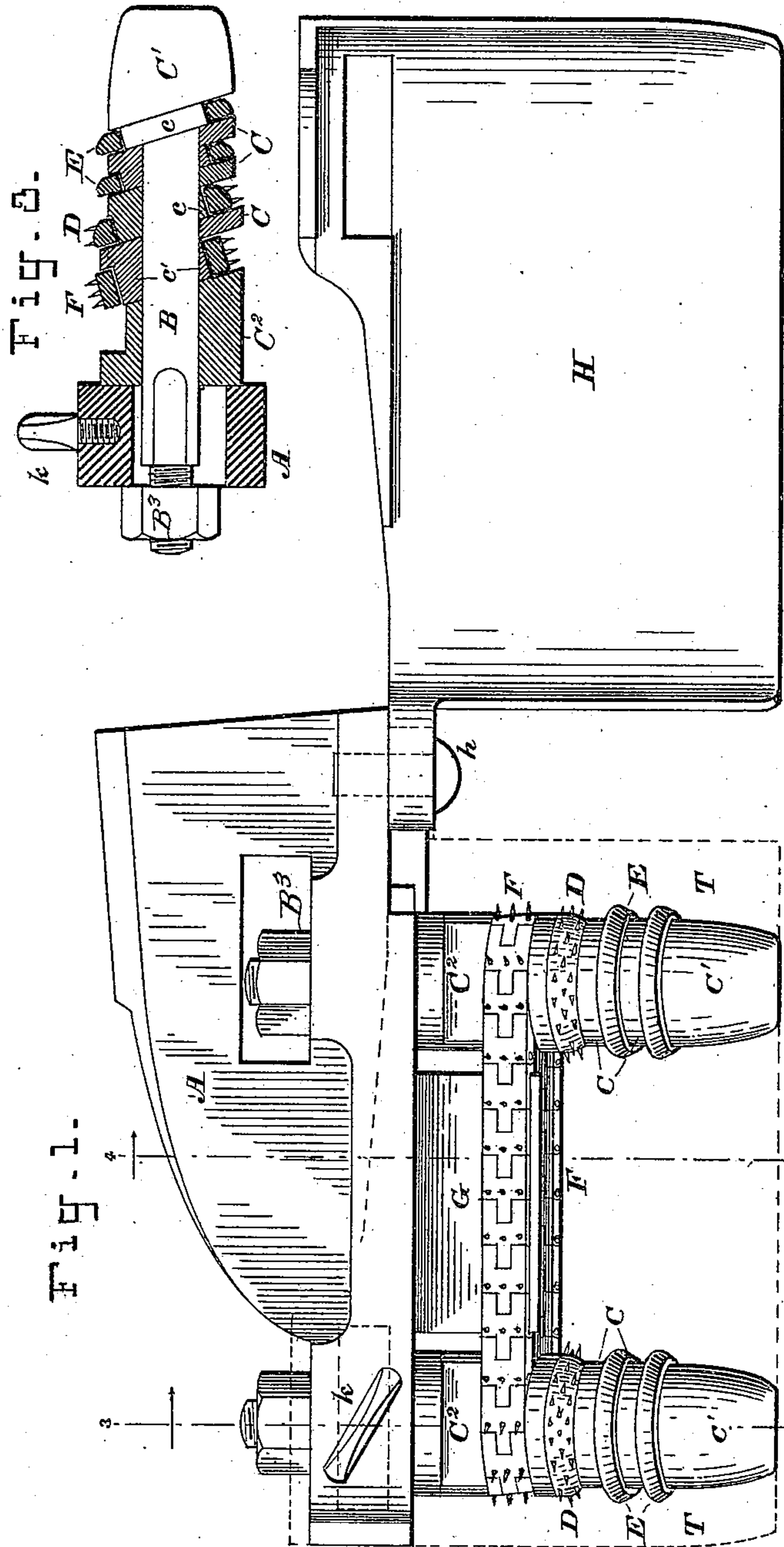
2 Sheets—Sheet 1.

G. HARLING.

LOOM TEMPLE.

No. 355,818.

Patented Jan. 11, 1887.



WITNESSES:
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Arthur Browne

INVENTOR:
George Harling.
By his Attorneys,

Burke Braser & Connell

(No Model.)

G. HARLING.

2 Sheets—Sheet 2.

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Fig. 8.

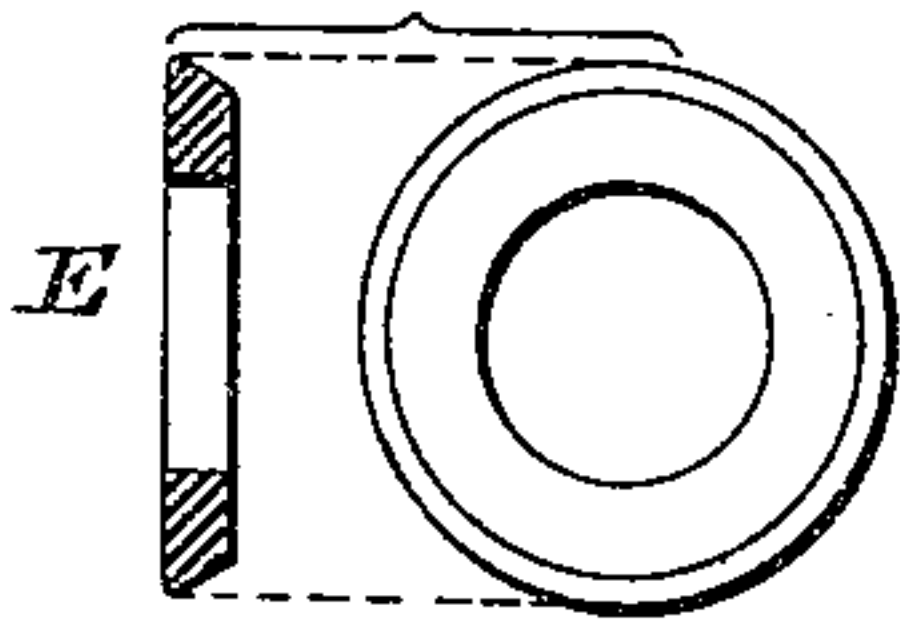


Fig. 7.

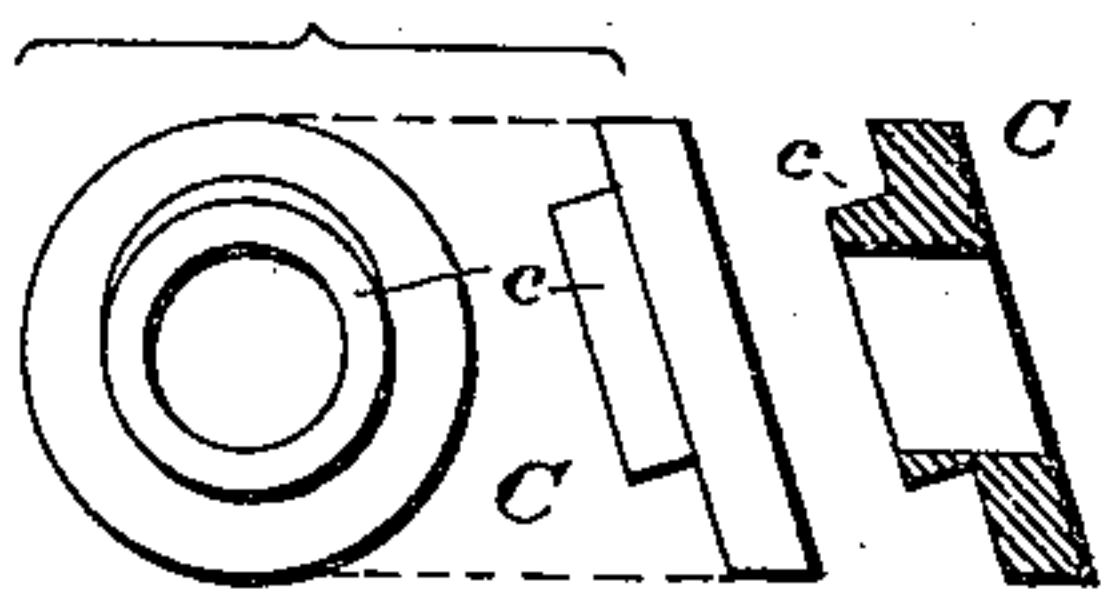


Fig. 6.



Fig. 5.

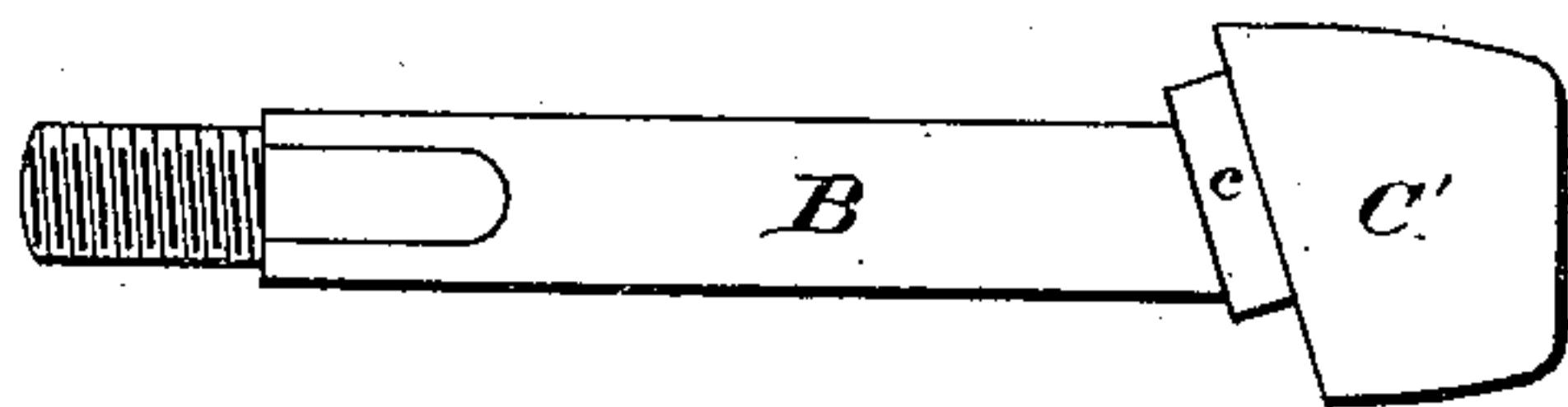


Fig. 10.

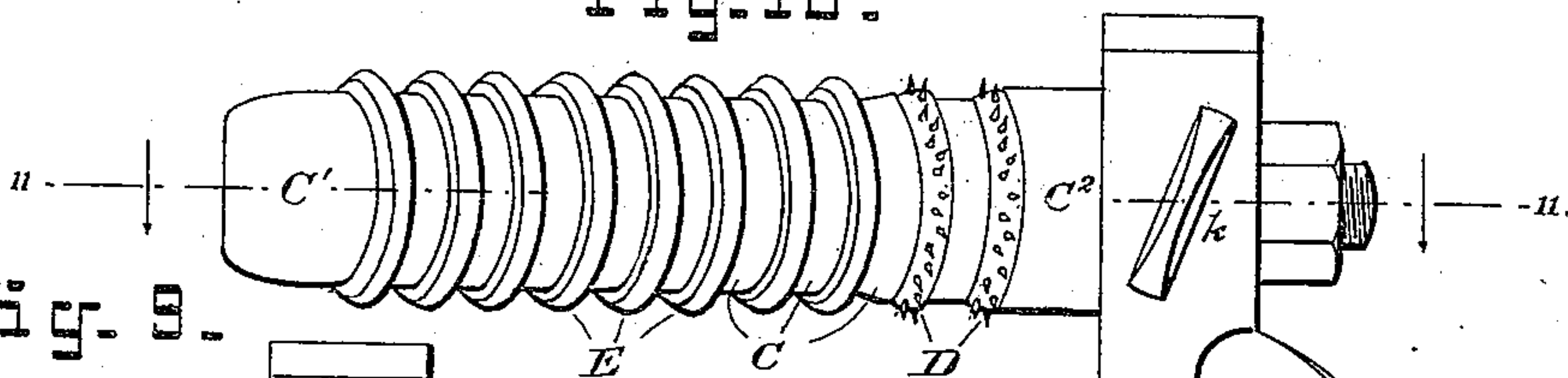


Fig. 9.

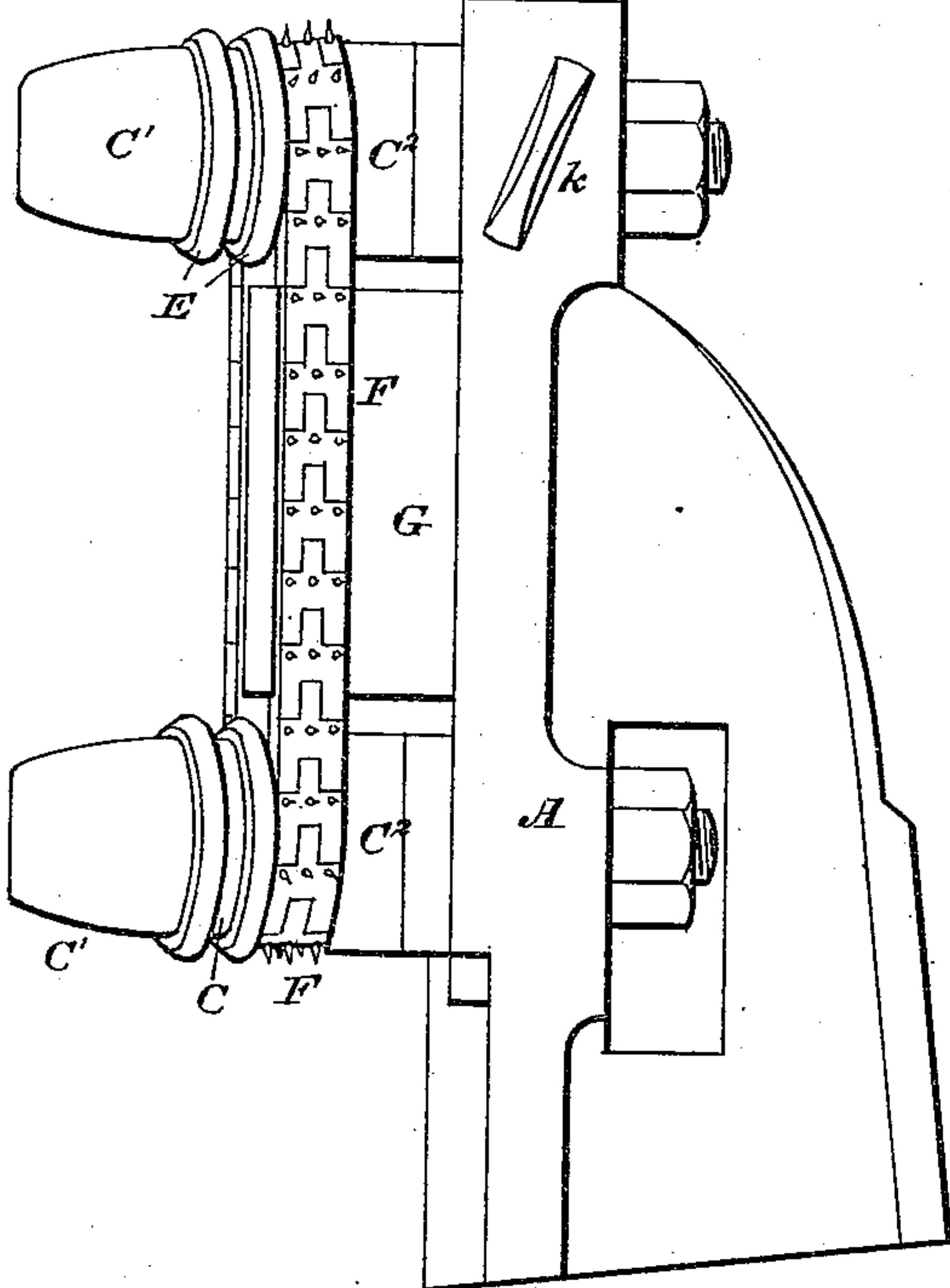
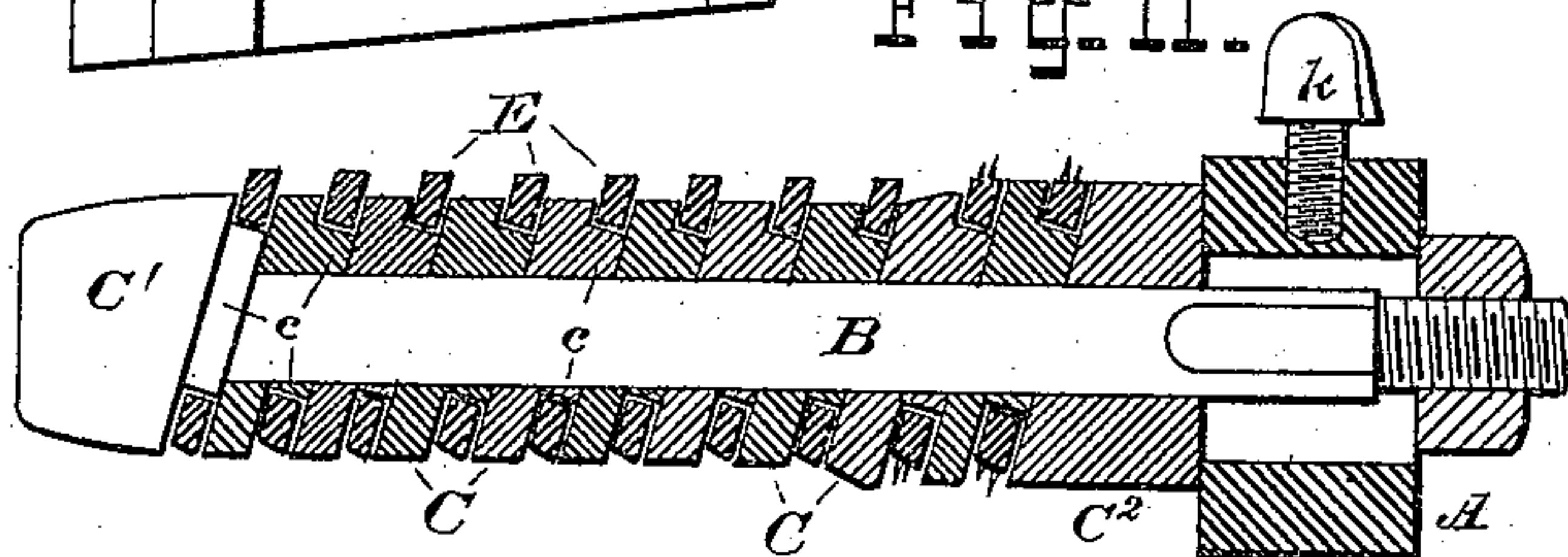


Fig. 11.



WITNESSES:

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UNITED STATES PATENT OFFICE.

GEORGE HARLING, OF LOCKWOOD, NEAR HUDDERSFIELD, ENGLAND.

LOOM-TEMPLE.

SPECIFICATION forming part of Letters Patent No. 355,818, dated January 11, 1887.

Application filed September 2, 1885. Serial No. 175,970. (No model.)

To all whom it may concern:

Be it known that I, GEORGE HARLING, a subject of the Queen of Great Britain, residing in Lockwood, near Huddersfield, England, have invented certain new and useful Improvements in Loom-Temples, of which the following is a specification.

This invention relates to barrel-templates for looms. Such templates have heretofore been made with a central stud or fixed spindle, a series of oblique washers arranged thereon formed with eccentric hubs, and a series of rotary rings or wheels studded with pins mounted on the eccentric hubs. As the woven fabric passes over the templates on opposite sides of the loom it is engaged by the pins or teeth on the rings, and the obliquity of the latter is such that the fabric is stretched laterally to a uniform extent, as is well understood.

My present invention consists, first, in the construction of such templates with toothless rings of sufficient diameter to project beyond the intervening washers, either in place of or in combination with the toothed rings. These rings are arranged in inclined planes, and are eccentric, like the toothed rings, but differ from the latter in projecting on the side of their eccentricity beyond the washers, so that their angles or edges may engage the fabric and distend it.

My invention also consists, secondly, in the combination of two temple-barrels with a chain stretched between them, having pins or teeth for engaging the selvage of the fabric, and passed over inclined eccentric bosses or washers on the studs. This construction is preferred whenever it is necessary to keep the fabric distended for several inches of its width.

Figure 1 of the accompanying drawings is a plan of a loom-temple embodying both features of my invention, the cover or shield being turned back to expose the working parts. Fig. 2 is an end elevation looking from the middle of the loom, the cover or shield being in place. Fig. 3 is an elevation, partly in vertical transverse mid-section, cut on the line 3 3 in Figs. 1 and 2; and Fig. 4 is a vertical transverse section cut on the line 4 4 in these figures. Fig. 5 is a plan of the stud removed. Fig. 6 is a horizontal section of one of the washers re-

moved. Fig. 7 includes a plan and side view thereof, and Fig. 8 includes a side view and section of one of the cloth-distending rings. The remaining three figures illustrate modifications.

A is the bracket for attaching the temple to the frame of the loom. B B are the studs or spindles fixed in said bracket. C C are the inclined washers, which are clamped together on said studs. D D are the toothed rings. E E are the plain distending-rings, and F is the toothed chain.

The chain-temple consists in general of two distinct temple-barrels, T T, both mounted on one bracket A, and connected by a chain, F. Each of the temple-barrels T consists of the stud B, with alternate inclined washers C C, and plain rings E E, a toothed ring, D, and inclined bosses for the chain to pass over.

The stud B has a head, C', the outer end of which is beveled or cut in an inclined plane, and is formed against this face with an eccentric boss, c, in the same inclined plane, all as best shown in Fig. 5. Over the stud is slipped one of the rings E, shown separately in Fig. 8. Then an inclined washer, C, (shown in Figs. 6 and 7,) is slipped on. This washer has also an eccentric boss, c. Then another ring E, is put on, and then another washer. A toothed ring, D, having a peripheral surface which is the frustum of a cone and studded with radial teeth or pins, is then put on, followed by another washer, C, of slightly larger diameter than the others, and having a thicker boss, c'. This last boss forms the bearing for the chain E. Then a thick washer, C², is put on, the outer end of which is inclined to conform to the other washers C C, while its inner end is cut square across in a plane perpendicular to the axis of the stud. The stud is then passed through the hole in the bracket A and secured by a nut, B². Before both studs are thus attached to the bracket the chain F is slipped over them, lying on the inclined eccentric bosses c' c' of the two barrels. A guide-piece, G, is bolted to the bracket A, and forms a support for the upper side of the chain, keeping it from sagging downward or being strained inward by the pull on the cloth.

The washers C C are all clamped tightly to-

gether and remain stationary, while the rings D and E and the chain F are free to turn on them, the spaces between the washers outside of their eccentric bosses *c c* being wide enough to make a loose fit with the rings and chain.

It is characteristic of my invention that the plain rings E E are sufficiently large relatively to the washers C C and are set sufficiently eccentric to cause their peripheries to project beyond the washers on their eccentric side. This is preferably accomplished by turning the washers C C to less diameter between the plain rings than has been customary with the washers used with toothed rings. The rings E E, because of their projection, indent the cloth, so that their angles are enabled to grip the same and distend it as it passes over them. This distention results from their inclined position, the same as with the toothed rings. The fabric is thus distended with fewer rings and is less punctured. The plain rings are also less costly than the toothed rings and are less liable to injury.

The chain F, by passing over the inclined bosses *c' c'*, assumes an oblique position, like the rings, so that as soon as its teeth or pins engage the fabric the continued travel of the chain stretches the fabric, and it is then held stretched by its selvage while the chain is traveling from one barrel, T, to the other.

H is the usual cover or shield, which is pivoted to the bracket A at *h*, and when in position is fastened by the thumb-screw *k*, as usual. It is omitted from Figs. 3 and 4.

Fig. 9 illustrates a modified form of my invention, which differs from the construction just described in that the toothed ring D is omitted. The two temple-barrels T T are used, with the toothed chain F and with two plain rings, E E, on each barrel.

Figs. 10 and 11 show a construction of single-barrel temple, the chain being omitted. I have here shown two toothed rings, D D, and eight plain rings, E E.

The projecting eccentric plain rings intro-

duced by my invention may be used alone or in combination with toothed rings.

I claim as my invention—

1. A barrel-temple consisting of a stud and inclined washer, combined with a rotative toothless ring mounted eccentrically and projecting beyond the washer on the side of its eccentricity, whereby its projecting edge is adapted to engage the fabric, substantially as set forth.

2. A barrel-temple consisting of a stud, inclined washers thereon having eccentric bosses, and rotative toothless rings mounted on said eccentric bosses, confined between the washers, and projecting on the side of their eccentricity sufficiently beyond the washers to enable them to indent and grip the fabric, substantially as set forth.

3. A barrel-temple consisting of a stud, inclined washers thereon, a rotative toothed ring mounted eccentrically, and rotative toothless rings mounted eccentrically between the washers and projecting beyond the washers on the side of their eccentricity, combined substantially as set forth.

4. A temple consisting of the combination of two temple-barrels, T T, a bracket, A, to which they are connected, and a toothed chain, F, stretched between the two barrels and arranged on inclined bosses, substantially as set forth.

5. A temple consisting of the combination of two temple-barrels, T T, a bracket, A, a chain, F, and toothless rings E E, mounted eccentrically on the barrels in inclined planes and projecting on the side of their eccentricity sufficiently to engage the fabric, substantially as set forth.

In witness whereof I have hereunto signed my name in the presence of two subscribing witnesses.

GEO. HARLING.

Witnesses:

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