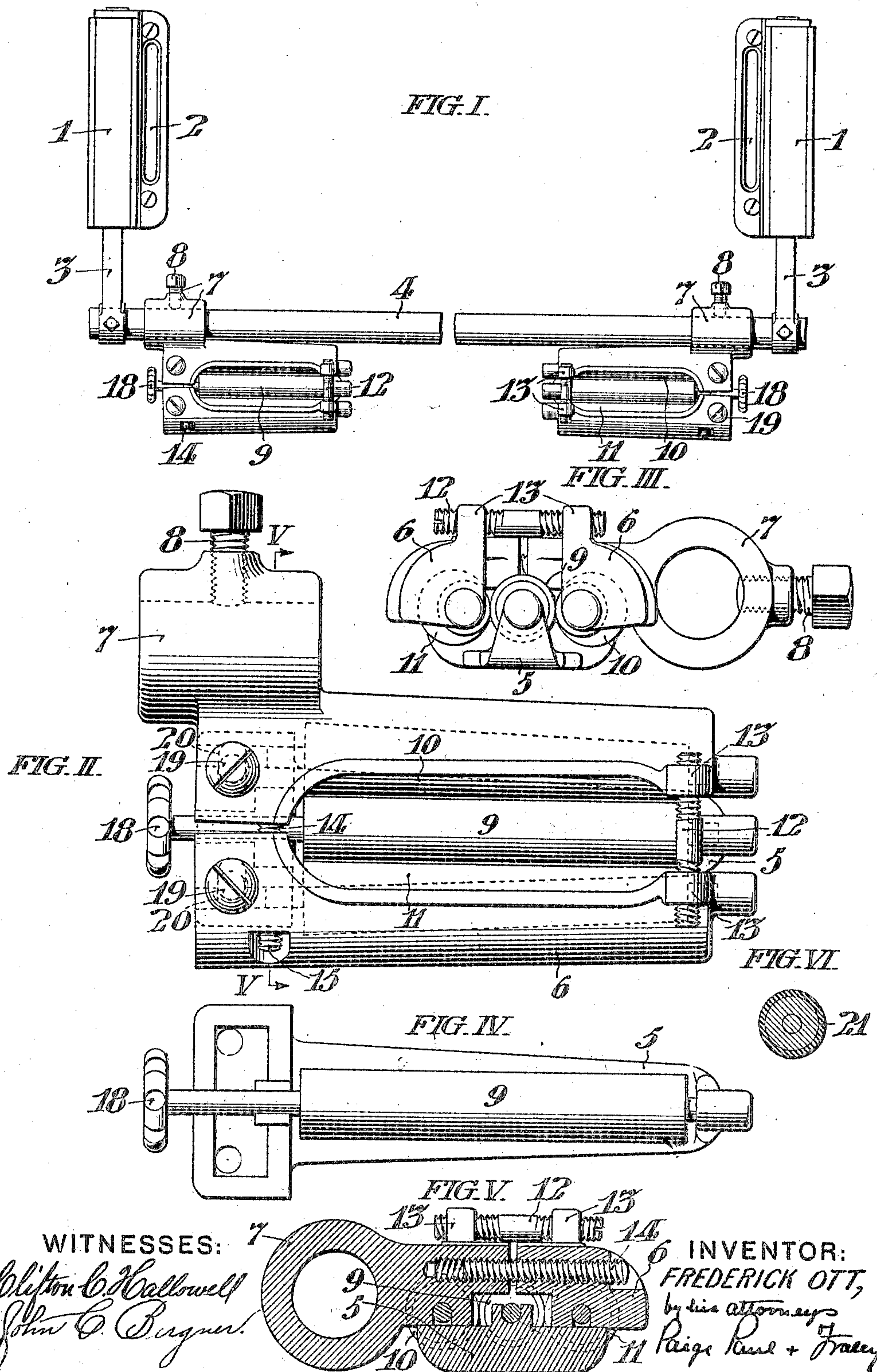


No. 817,334.

PATENTED APR. 10, 1906.

F. OTT.
TEMPLE FOR LOOMS.
APPLICATION FILED SEPT. 3, 1904.



UNITED STATES PATENT OFFICE.

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TEMPLE FOR LOOMS.

No. 817,334.

Specification of Letters Patent.

Patented April 10, 1906.

Application filed September 3, 1904. Serial No. 223,175.

To all whom it may concern:

Be it known that I, FREDERICK OTT, of Woonsocket, in the State of Rhode Island, have invented certain new and useful Improvements in Temples for Looms, whereof the following is a specification, reference being had to the accompanying drawings.

In the weaving of very fine fabric difficulty is experienced in the use of loom-temples in which the temple-rollers are fitted with pointed teeth or corrugations. This is especially the case in the weaving of fine open fabric, such as gauze, where the threads are liable to be displaced by the pin-points of the ordinary temples now in use.

According to my invention I avoid the use of pin-points or corrugations in the temple-rollers altogether and accomplish the requisite lateral stretching of the woven fabric for which the temple is designed by means of the shape of the rollers and the position in which they are placed. In an application filed by me on the 1st day of December, 1903, Serial No. 183,323, I have described an adjustable loom-temple having this end in view heretofore invented by me. My present application is an improvement upon the loom-temple therein shown, the improvements having relation to the method of constructing, mounting, and adjusting the rollers in the temple.

In the accompanying drawings, Figure I is a plan view of a pair of temples as they are mounted upon the breast-beam of the loom, the intermediate portion of the temple-bar being broken away. Fig. II is a plan view, on an enlarged scale, of the left-hand temple shown in Fig. I. Fig. III is an inner end view of the same. Fig. IV is a plan view of the lower jaw of the temple-head. Fig. V is a transverse sectional view taken on the line V V in Fig. II. Fig. VI is a transverse sectional view through one of the rollers of the temple.

Referring to Fig. I, the casing 1 is provided with a slotted flange 2 for attachment to the breast-beam of the loom. The shank 3 projects from the end of the casing 1, subject to the tension of a coiled spring contained within said casing. The shanks 3 3 are at opposite sides of the loom and carry between them the temple-bar 4, upon which both temples

are adjustably secured in proper relation to the fabric which is being woven in the loom.

Each temple consists of a lower jaw 5 and an upper jaw 6. The upper jaw carries a projecting lug 7, through which the temple-bar 4 passes, adjustment thereon being effected by a set-screw 8, set in said lug. Within appropriate bearings formed in the lower jaw rests a cylindrical roller 9. The upper jaw 6 has bearings for two conical rollers 10 and 11. When the jaws are placed in proper juxtaposition, the cylindrical roller 9 fits snugly between the two conical rollers 10 and 11, the axes of the three rollers being in substantially the same horizontal plane, as best shown in Figs. III and V, and the surface of the rollers being contiguous.

To accomplish the accurate adjustment of the tension between the rollers, the upper jaw 6 is divided lengthwise into two separate pieces or members, each of which comprises bearings for one of the conical rollers. The inner ends of these members are united by the shaft 12, having oppositely-threaded ends received within threaded apertures in the lugs 13 13, formed one on the upper side of each of the members of the upper jaw 6. By the rotation of said shaft 12 the inner ends of the conical rollers may be moved toward or away from each other. Similarly the outer ends of the two members of the upper jaw are connected by a shaft 14, having oppositely-threaded ends which are received within threaded apertures formed in the outer ends of both members, so that by its rotation the outer ends of the two conical rollers may be advanced toward or away from each other, for which purpose the exposed extremity of the shaft 14 may be provided with a screw-slot 15.

It is convenient to cause the axle of the cylindrical roller 9 to project from the outer end of the temple, where it may be provided with a thumb-head 18.

The two jaws 5 and 6 are set together by means of screws 19 19, entering the lower jaw 5 and passing through the slots 20 20 in the upper jaw 6, so directed as to permit the adjustment of the parts of the upper jaw when said screws 19 are loosened.

The direct contact of the jaws occur only at the outer end. Otherwise they are sepa-

rated by sufficient space to permit the free passage of the fabric between said jaws, the course of the fabric being under the two conical rollers 10 and 11 and over the cylindrical roller 9.

For the purpose of handling fabric of the sort for which these temples are devised it is necessary that the rollers be clothed with or made of a material capable of exerting firm pressure upon the fabric as it passes around the rollers, and yet incapable of distorting, crimping, twisting, or breaking the fabric. I have found rubber to be the best material adapted for this purpose. Either the entire roller may be made of rubber or preferably it may be formed with a core of wood or other suitable material and a surface of rubber 21, as shown in Fig. VI. For this purpose I use a piece of soft-rubber tubing of the proper length and stretch it over the core.

By employing rubber rollers and accurately adjusting the pressure of their contiguous surfaces by such means as I have described it is possible to so adjust the temple as to enable it to handle the most delicate gauze material, imparting to it the proper amount of material pull without the slightest injury.

It will be observed that although the rotation of the shafts 12 and 14 only serve in the first instance to regulate the distance between the outermost rollers, yet by reason of the yielding nature of the clothing of the rollers any inequality of pressure at one point or another will be distributed and an exceedingly delicate adjustment of the pressure to which the fabric is subjected secured.

I claim—

1. In a loom-temple, the combination of three contiguous rollers with their axes set in

the same horizontal plane, each roller being provided with a surface of soft rubber, and means for adjusting the relation between the two outermost rollers in the line of the plane in which the three rollers lie, substantially as set forth.

2. In a loom-temple, a lower jaw carrying a cylindrical roller; an upper jaw divided into two members each carrying a conical roller; means for adjusting the distance between the two members of the upper jaw; and means for uniting the two jaws so as to bring the axes of the three rollers in a plane parallel to the fabric, substantially as set forth.

3. In a loom-temple, the combination of three rollers having their axes substantially in the same horizontal plane, and each provided with a clothing of soft rubber; a lower jaw by which the middle roller is carried; an upper jaw divided into two members each carrying one of the outermost rollers; and independent means for adjusting the distance between the two members of the upper jaw at both of their extremities whereby the distance between the outermost rollers may be accurately adjusted with corresponding regulation of the pressure between the rollers, any inequality of pressure at one point being distributed by the yielding nature of the clothing of the rollers, substantially as set forth.

In testimony whereof I have hereunto signed my name, at Philadelphia, in the State of Pennsylvania, this 27th day of August, 1904.

FREDERICK OTT.

Witnesses:

JAMES H. BELL,
E. L. FULLERTON.