

(No Model.)

C. J. HATCH.  
LOOM TEMPLE.

No. 484,364.

Patented Oct. 11, 1892.

Fig. 1.

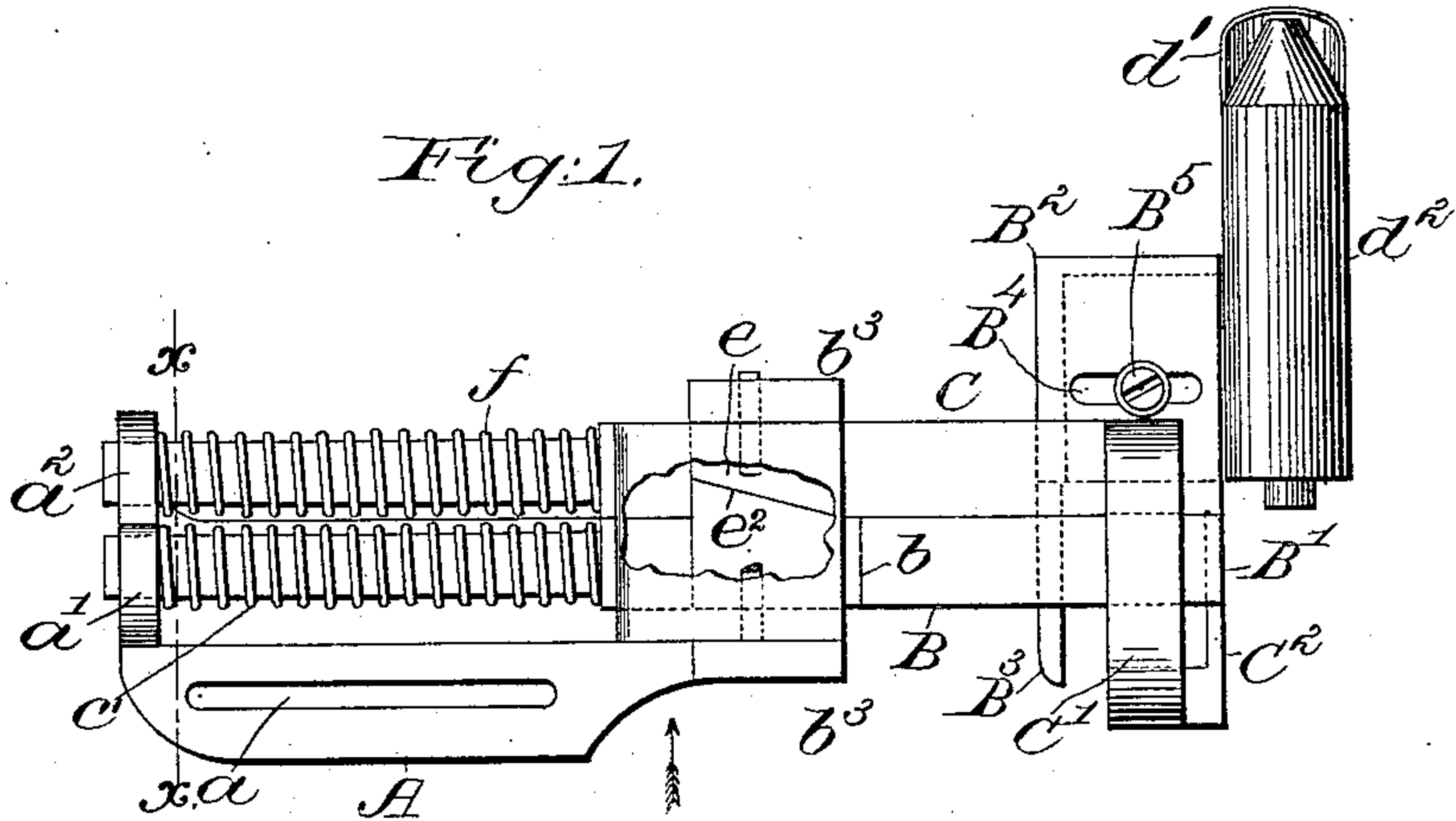


Fig. 2.

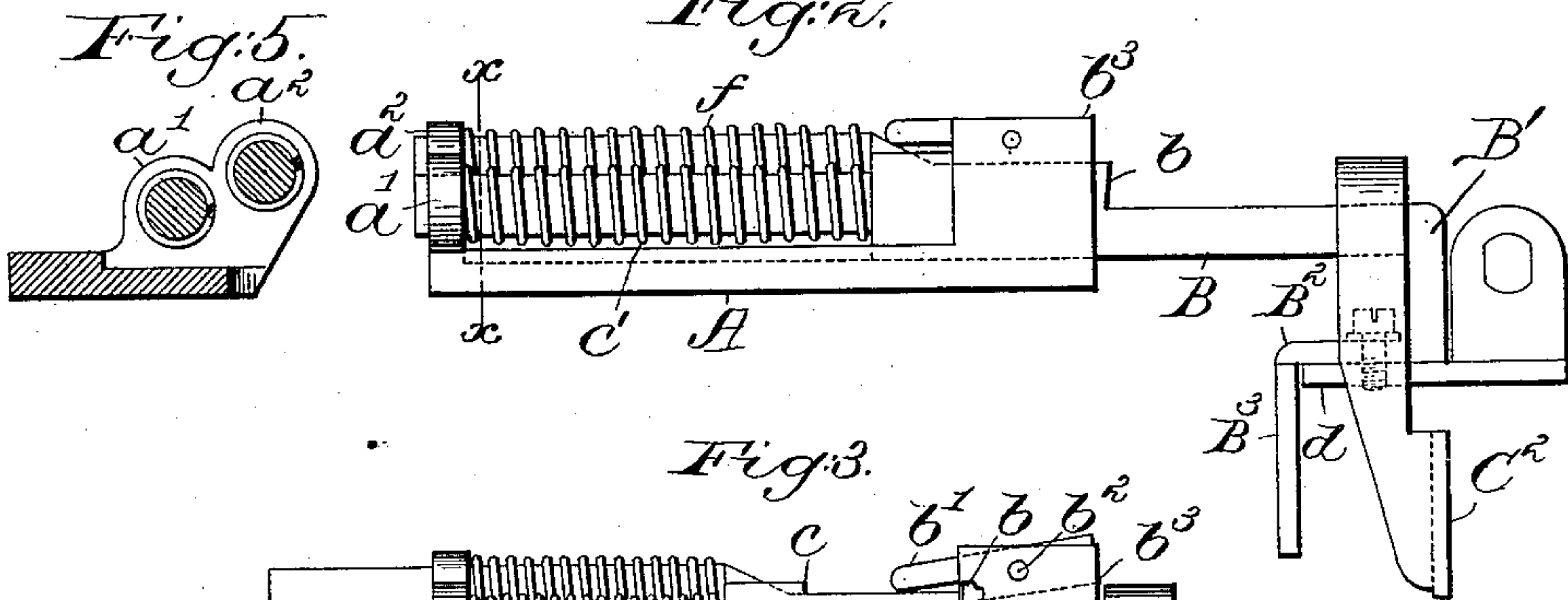


Fig. 3.

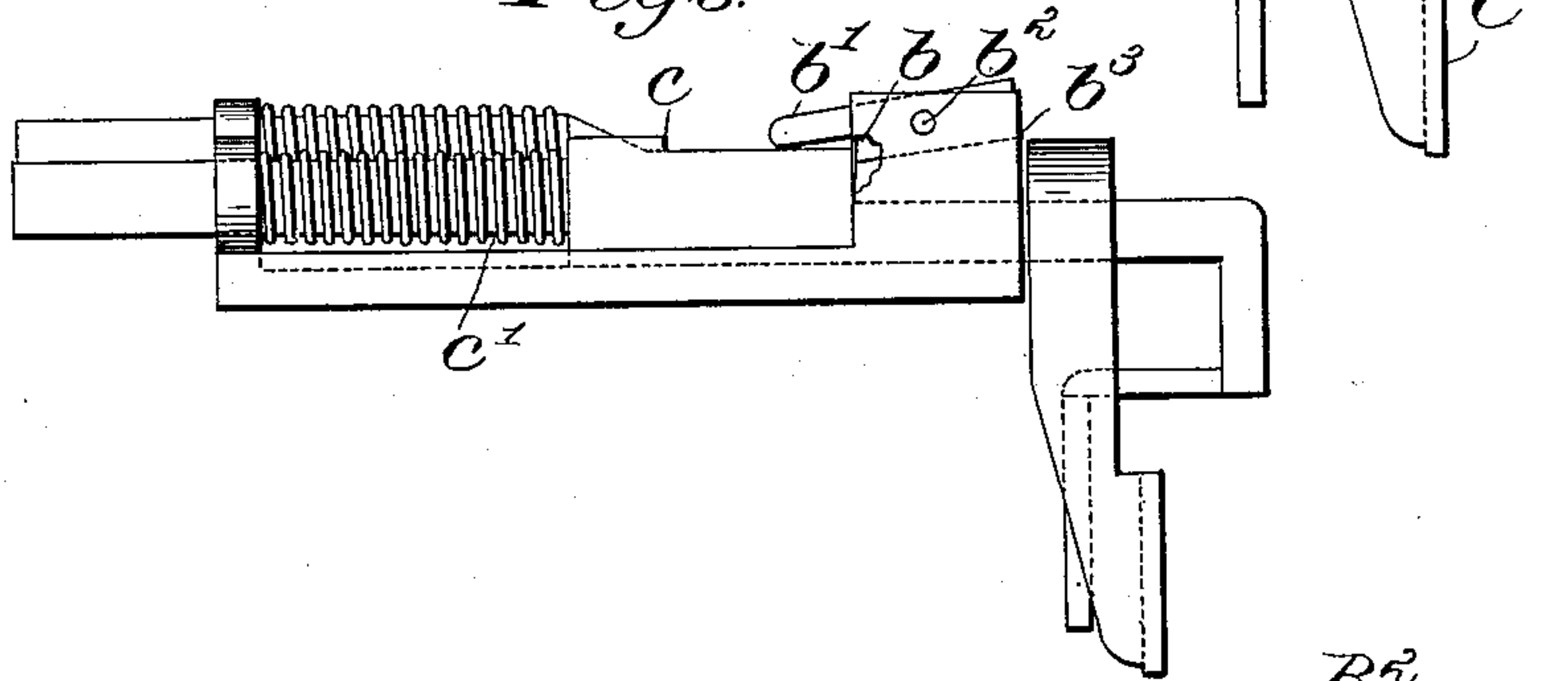
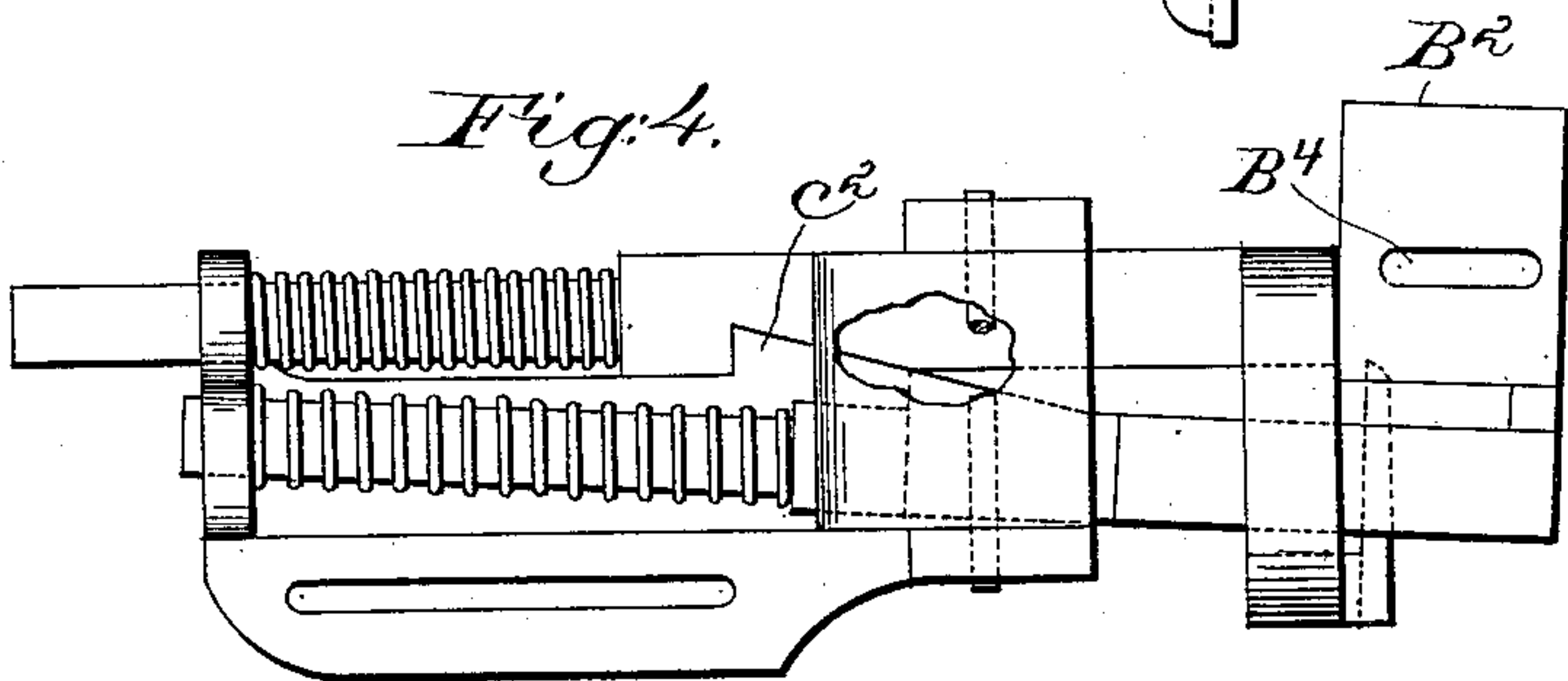


Fig. 4.



Witnesses.

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# UNITED STATES PATENT OFFICE.

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## LOOM-TEMPLE.

SPECIFICATION forming part of Letters Patent No. 484,364, dated October 11, 1892.

Application filed September 7, 1891. Serial No. 404,965. (No model.)

*To all whom it may concern:*

Be it known that I, CHARLES J. HATCH, of Augusta, county of Kennebec, State of Maine, have invented an Improvement in Loom-Temples, of which the following description, in connection with the accompanying drawings, is a specification, like letters on the drawings representing like parts.

It is a great desideratum in weaving many classes of fabric to keep the ends stretched during the operation of beating the weft or filling into the shed, so as to prevent the contraction of the fabric in width.

This invention has for its object to overcome this liability of the cloth contracting, and I accomplish it by imparting to the loom-temple a movement in a lateral direction preparatory to moving it forward as the filling is being beat in during the forward beat of the lay.

My invention therefore consists, essentially, in the combination, with a loom-temple head and its carrier, of a vibrator which is acted upon by the advancing lay or some part moving in the same direction or substantially in unison therewith before the lay effects in usual manner the backward movement of the temple, the said vibrator imparting a lateral motion to a limited extent to the temple-head as the lay approaches the filling to beat the same into the shed, the temple-head thus moved laterally prior to the usual backward movement of the same serving to hold the goods stretched widthwise substantially at the cloth-making point when the reed meets the filling in the shed.

Figure 1 is a plan view of a temple and vibrator embodying my invention. Fig. 2 is a side elevation thereof, looking in the direction of the arrow, Fig. 1. Fig. 3 is a like elevation showing the vibrator and temple-bar pushed back. Fig. 4 is a plan view similar to Fig. 1, the vibrator having been pushed back and having moved the temple-carrier laterally, the head of the temple being, however, omitted from Fig. 4 to save space upon the drawings; and Fig. 5 is a section in the line  $x$ , Fig. 1.

I have chosen to illustrate my invention as applied to that class of temple wherein the head is mounted upon a sliding carrier. So

in the drawings A represents a temple-stand having suitable bearings  $a'$   $a^2$ , not only for the temple-carrier B, but also for the vibrator C. The stand referred to has a slot  $a$  to receive a set-screw or bolt by which to confine the stand in place in usual manner upon the breast-beam.

In practice the carrier B will have a projection or shoulder  $b$ , against which may engage the inner end of the cap or locking device  $b'$ , pivoted at  $b^2$  between the ears  $b^3$ , when the carrier is pushed entirely back by hand and the temple is to be held out of operation. The carrier has a second shoulder or projection  $c$ , which abuts against the inner end of the cap  $b'$  when the carrier is in its normal position forward, due to the pressure of the spring  $c'$  about its shank.

The carrier B herein represented has a wedge-like projection or cam-surface  $e^2$ , and the distance between the ears  $b^3$  is enough in excess of the width of the carrier B and the shank of the vibrator to permit the carrier to have a lateral movement from the position Fig. 1 to the position Fig. 4.

The carrier B has its end toward the lay turned down, as at  $B'$ , and the said downturned end has a plate or shelf  $B^2$ , having a heel  $B^3$ , the said plate  $B^2$  having a suitable hole, as  $B^4$ , (see Figs. 1 and 4,) to receive a screw  $B^5$ , which enters a plate  $d$ , forming part of the usual pod  $d'$ , which receives within it the usual temple-roll, (not shown,) the said temple-roll being inclined between the pod and the cap  $d^2$ . The upright or cap and the roll constitute the temple-head, and the said head may be of any usual construction, the spring  $c'$  acting normally to keep the said temple-head pressed forward toward the lay in usual manner.

The shank of the vibrator C is herein represented as cut away to leave a cam-surface  $e$ , which when the lay is in its backward position farthest from the cloth-making point contacts with the inclined face of the cam  $e^2$  of the carrier B. The vibrator has a laterally-extended arm  $C'$ , which in the present instance of my invention crosses the carrier B, and the said arm  $C'$  has a downwardly-extended lip  $C^2$ , which lip by or through the action of the spring  $f$ , surrounding the shank



of the vibrator, is normally kept standing in advance of the heel B<sup>3</sup>, co-operating with the temple-carrier.

Assuming the parts to be in the position represented in Figs. 1 and 2 and that the selvages of the fabric being woven are in usual position between the upright and the temple and that the lay is moving forward, now as the lay continues to move forward and the reed approaches the fell the lay first strikes the projection C<sup>2</sup> and causes the vibrator to be moved in such direction—in the present instance in the same direction in which the lay is traveling—as to cause the cam-surface *e* of the temple head-carrier to move the said carrier aside from the position shown in Fig. 1 into the position Fig. 4, which movement causes the temple-head to be carried laterally, so that the cloth engaged by the temple-head is stretched at or near the fell preparatory to the reed striking the filling laid in the shed. It is understood that the temple-head will be moved backwardly by the lay in usual manner; but the temple-head will not be started backwardly by the lay until after the vibrator has received its movement to move the temple-head laterally to stretch the cloth, the horizontal movement of the temple-head at right angles to the breast-beam taking place while the temple-head carrier is held moved aside laterally by the vibrator.

I am aware that it has been proposed to employ a temple composed of calliper-like arms connected by a vertical pivot located at the front side of the breast-beam, one of said arms having a rest or plate covered with leather on which is laid the woven cloth, the other or movable arm having at its side edge a series of pins or teeth to enter the fabric at some distance from the selvage, the two toothed arms of the two temples at opposite sides of the loom being connected by links to a push-bar adapted to be acted upon by the lay at a forward stroke thereof to thus close the temple on and stretch the fabric, said temples once closed on the fabric being kept closed thereon and the fabric being kept fully stretched while about an inch of cloth is woven, more or less. In my invention the temple is in the form of a toothed roll arranged between a pod and a guard. The roll always engages the fabric to and across the selvage and moves with the lay at each forward and backward stroke, thus obviating friction of the reed on the warps.

It will be noticed in this my invention that the lateral movement of the temple is effected prior to the forward movement thereof and not during the said forward movement. Should the lateral movement of the temple be effected during the forward movement instead of preparatory to said movement, it would not be possible to keep the fabric being woven distended to as great width as when the lateral movement precedes the forward movement.

Having described my invention, what I claim, and desire to secure by Letters Patent, is—

1. The temple-stand adapted to be fixed to the breast-beam and the roller-temple having the shank mounted in bearings in said stand and surrounded by a spiral spring to yield to the lay at each forward stroke thereof and adapted to act continuously on and stretch the cloth from selvage to selvage, combined with a vibrator having a projection located normally nearer the lay than the usual heel of the temple-bar and a spring co-operating with the vibrator, the combination being and operating substantially as described, whereby the lay is made at each forward beat to first act upon and move the vibrator to vibrate the roller-temple and stretch the cloth and then slide the temple-bar in advance of it as the reed beats the weft in at the fell, the springs returning the temple-bar and vibrator into their normal position as the lay is moved away from the fell.

2. The temple-stand, its bearings, and the carrier provided with an incline or cam projection and having a heel, combined with a vibrator having an inclined or cam face to co-operate with the cam or incline on the temple-head carrier and having a heel and suitable springs to normally keep the said heels separated, whereby one may be operated in advance of the other, thereby enabling the vibrator to first receive movement to actuate the temple-head carrier in a lateral direction, substantially as described.

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

CHARLES J. HATCH.

Witnesses:

F. J. DUTCHER,  
LEWIS SELBING.