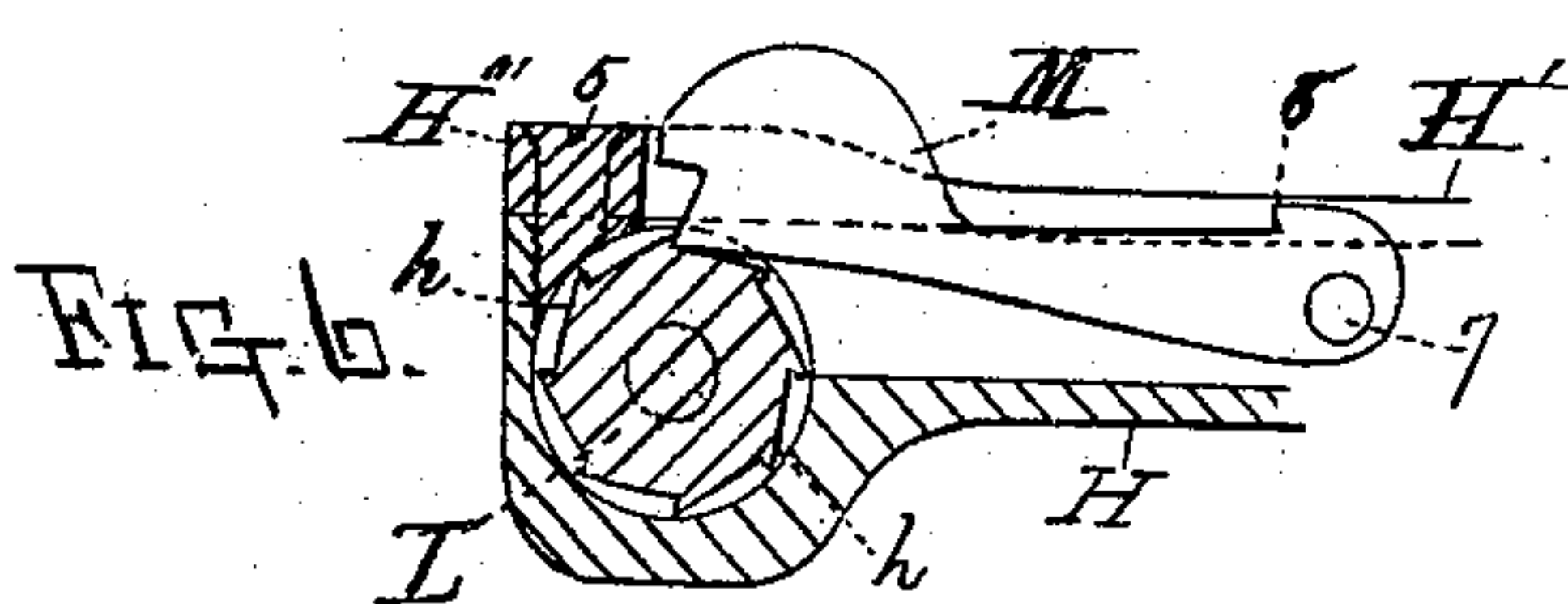
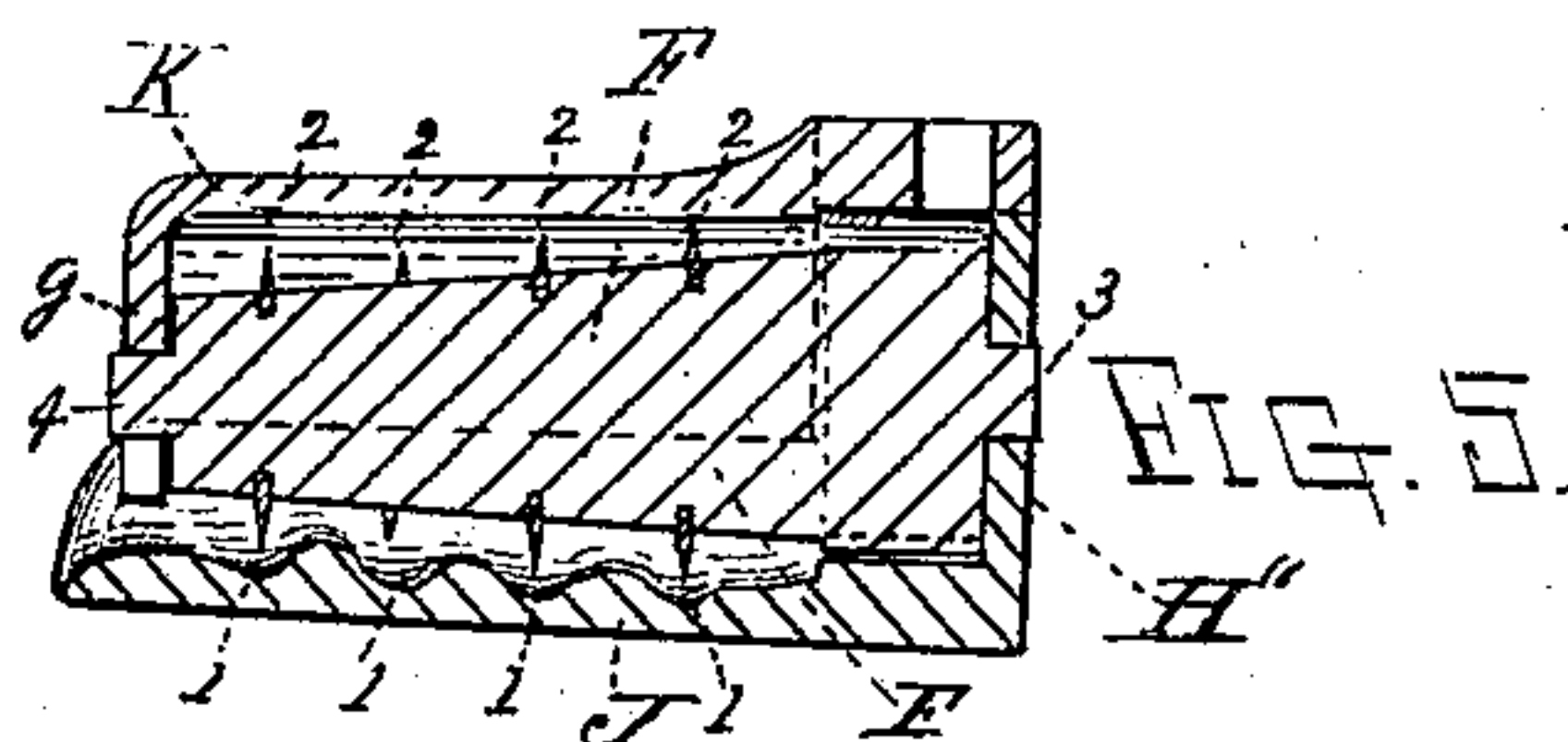
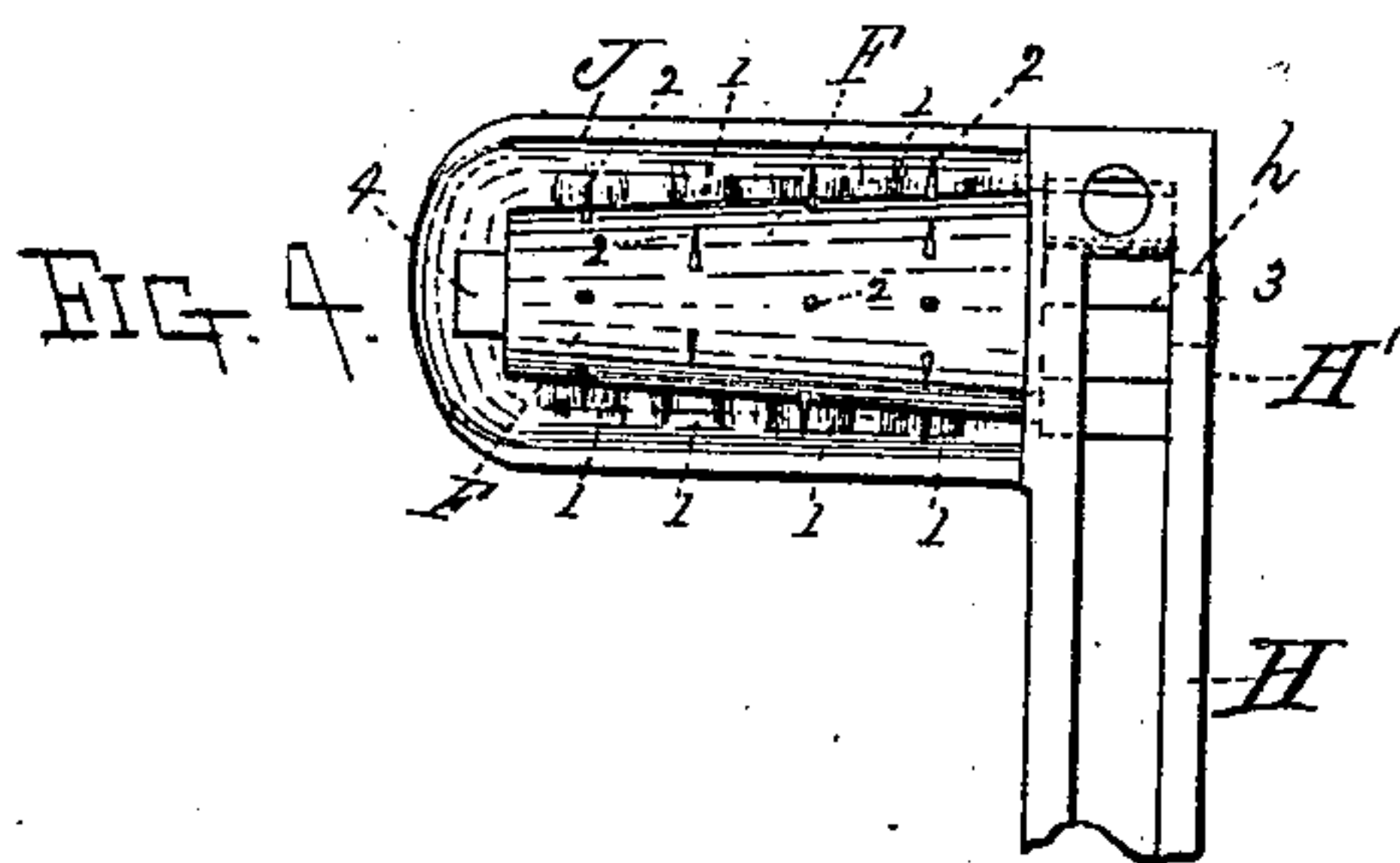
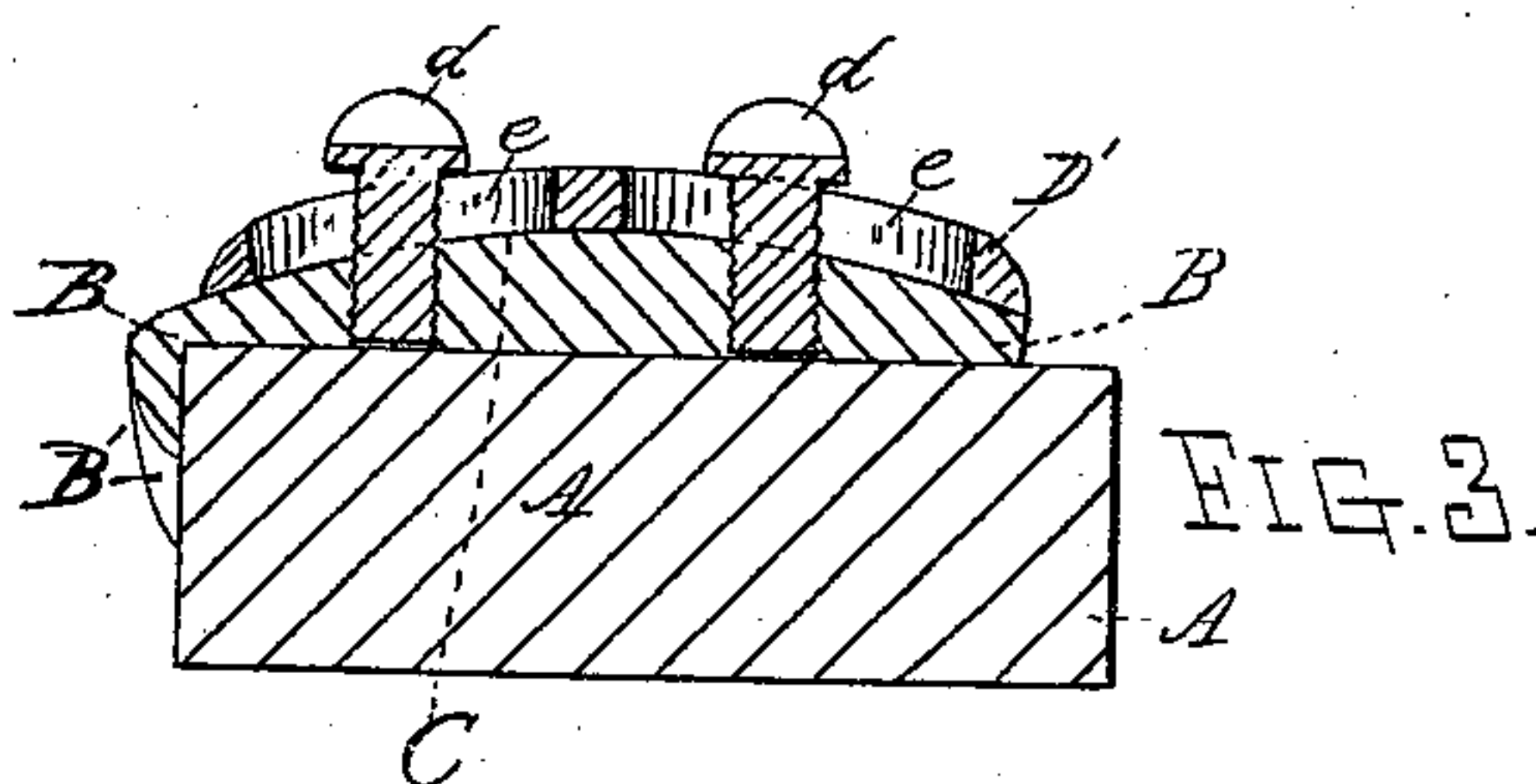
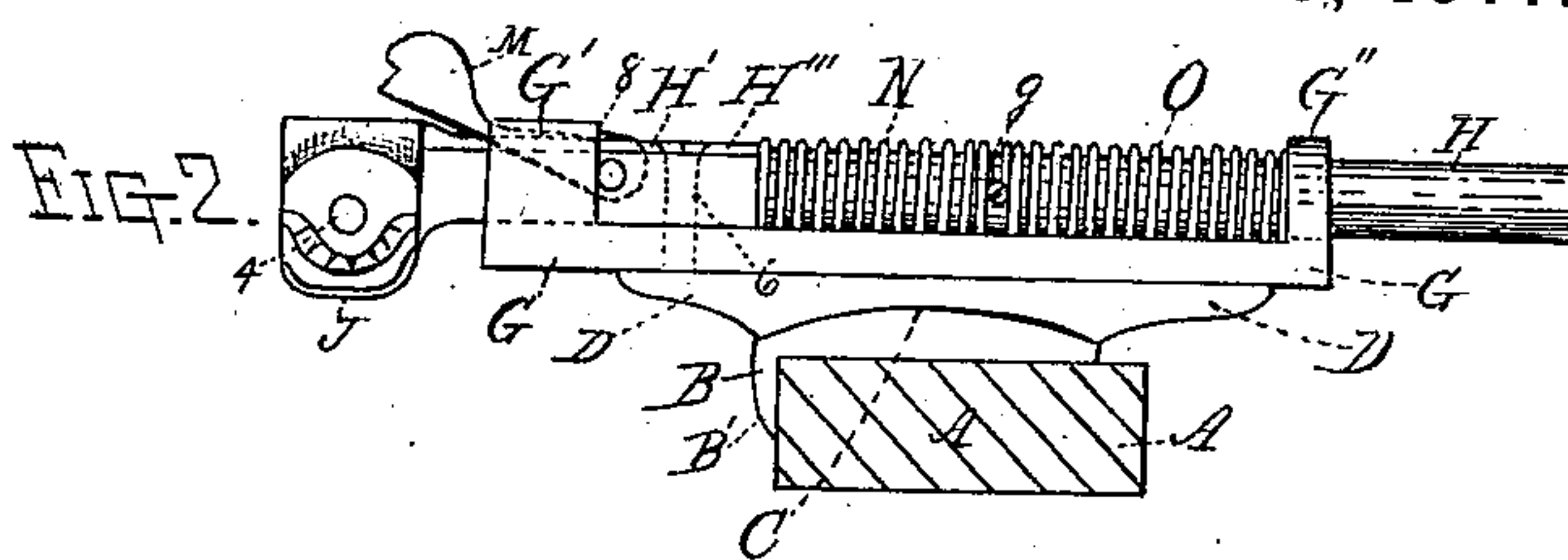
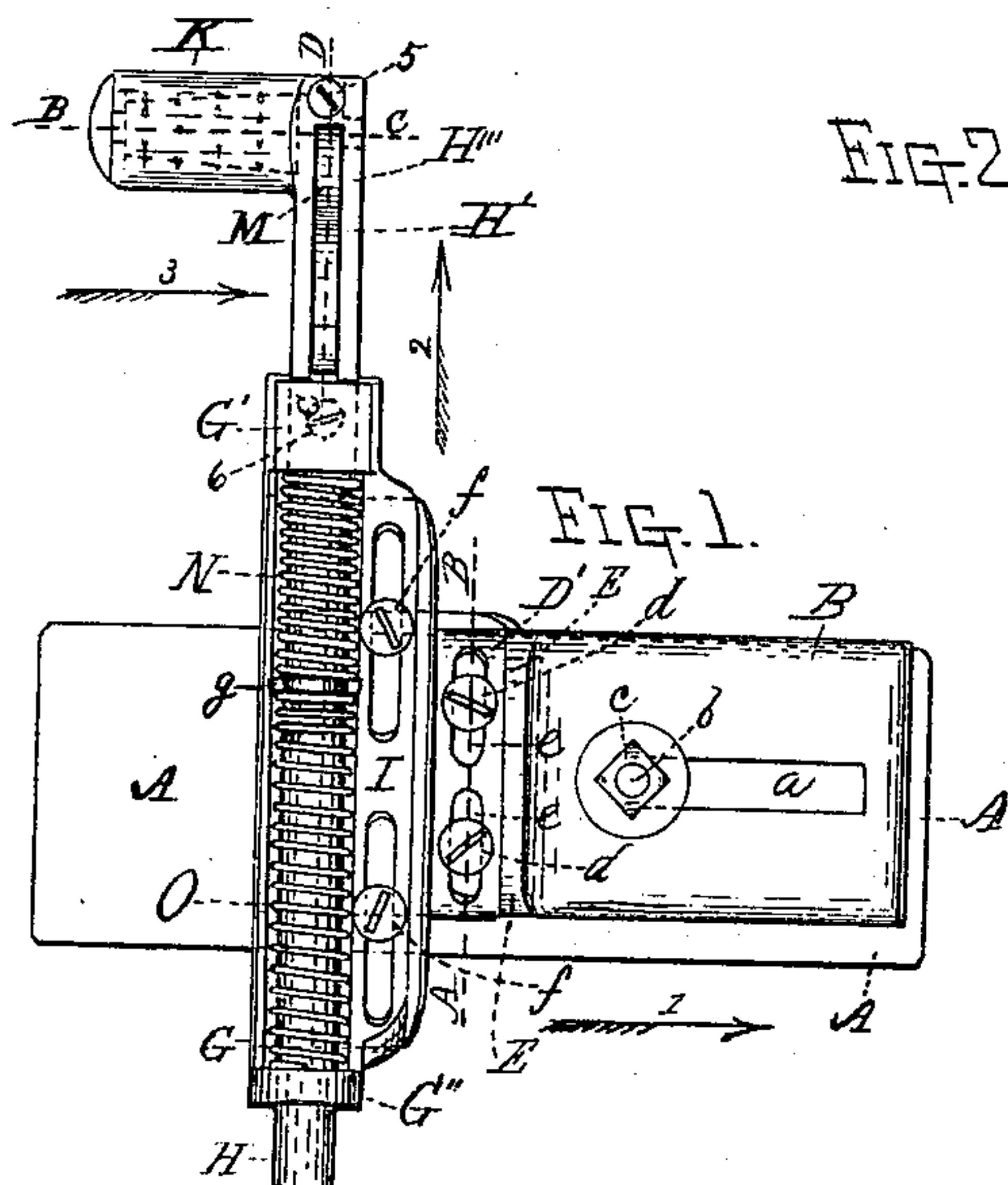


LOOM-TEMPLE.

No. 188,538.

Patented March 20, 1877.



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# UNITED STATES PATENT OFFICE.

ALFRED PORTER AND JOHN A. CLARK, OF MANCHESTER, NEW HAMPSHIRE.

## IMPROVEMENT IN LOOM-TEMPLES.

Specification forming part of Letters Patent No. 188,538, dated March 20, 1877; application filed December 2, 1876.

*To all whom it may concern:*

Be it known that we, ALFRED PORTER and JOHN A. CLARK, both of the city of Manchester, county of Hillsborough, and State of New Hampshire, have invented certain new and useful Improvements in Temples for Looms; and we do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawings, forming a part of this specification, and in which—

Figure 1 represents a top or plan view of our improved temple. Fig. 2 represents a side view, looking in direction of arrow 3, Fig. 1. Fig. 3 represents, upon an enlarged scale, a section taken on line A B, Fig. 1, looking in direction indicated by arrow 1 of the same figure. Fig. 4 represents, also upon an enlarged scale, a top or plan view of the lower jaw and burr or temple roll of our improved temple, the upper jaw or cap being removed to show the other parts more fully. Fig. 5 represents, also upon an enlarged scale, a central longitudinal section through the jaws and burr-roll of the temple on line B C, Fig. 1, looking in direction indicated by arrow 2 of the same figure; and Fig. 6 represents, also upon an enlarged scale, a section taken on line C D, Fig. 1, looking in direction of arrow 3 of the same figure.

To enable those skilled in the art to which our invention belongs to make and use the same, we will proceed to describe our said invention more in detail.

In the drawings, the part marked A represents a section of the front beam of the loom, over which the cloth passes as it is woven, and upon each end of said beam is arranged a metallic metal piece, B, provided with a slot, *a*, whereby, by means of the bolt *b* and nut *c*, said metal piece B can be set nearer to or farther from the outer end of the breast-beam A. Metallic piece B is provided with a flange, B', to fit against one edge of the breast-beam A, as indicated in Figs. 2 and 3. It is also provided with a circular or curved slot, C, to receive the temple-stand D, the rear part D' of which fits against a flange, E, upon the metallic part B, and to which part temple-stand D is secured by means of the screw-bolts *d d*, which pass through slots *e e* in the part D',

and screw into the part D, as indicated in Figs. 1 and 3.

By these arrangements the temples, at each edge of the web, can be adjusted toward or from each other, and they can also be rocked back and forth on curved seats C C, and then secured in position, so as to cause the ends of the temples, carrying the conical burr-rolls F, to stand at a greater or less elevation, as may be desired.

The part marked G is the temple-frame, in which the temple-rod H is fitted to work back and forth, the front part H' being made in rectangular shape, to fit a rectangular hole in the guide-loop or bearing part G', while the rear end of the temple-rod or stem H is made round to pass through a corresponding hole in the loop or guide part G'' of frame G. By this mode of construction the temple-rod or stem H can move back and forth in its guides or loop-bearings G' G''. The former bearing, being rectangular, retains the stem in its proper relative position and from all rotating motion.

Frame G is fastened to the part D by means of screw-bolts *f f*, passing through slots in the projecting part I of frame G, and by means of which slots and screw-bolts the temple can be set forward or back, as occasion may require. Projecting laterally from the inside of the rectangular end of stem or temple-rod H is a concave jaw, J, provided with a series of parallel grooves, 1, in which the rows of teeth 2 on the conical burr-roll F enter as said roll revolves. The journals 3 4 of burr-roll F are supported, the former in the part H'' of the temple-rod or stem H, and the latter in the downwardly-projecting portion *g* of the cap or upper jaw K. Said upper cap or jaw, in this instance, forms a part of the slotted piece H''', which is secured to and forms a part of the rectangular end of temple-rod or stem H, said slotted part H''' being secured to the other part of temple-rod H by means of screws 5 and 6, the latter being shown by dotted lines in Fig. 1. The base of burr-roll F is formed with a ratchet-wheel part, L, a slot or hole being formed in the side of the rectangular part H', to receive the ratchet-wheel part L of the burr-wheel F. A pawl, M, is pivoted at 7 in a slot in the rectangular part H', to take into



the ratchet-teeth *h* of the ratchet-wheel L, as fully indicated in Fig. 6 of the drawings. The base of pawl M is provided with a ratchet-tooth, 8. (See Fig. 6.)

From the foregoing description it will be seen that the selvages of the cloth will be drawn a little more taut than at the inner points of the burr-wheels; consequently the edges of the web of cloth, as it is woven, are not allowed to be loose and slack, thereby causing imperfect selvages. Then, again, by the action of pawl M, the burr-rolls F cannot turn back, but are held in place as the cloth is woven sufficient to pass one tooth, *h*, and these teeth may be made finer or coarser, as preferred.

Upon the temple-rod or stem H are arranged two spiral springs, N and O, a pin, *g*, being inserted between their inner ends in the rod H. The outer end of spring N presses against the shoulder of the rectangular part H' of rod H, while the outer end of spring O presses against the loop-guide G'' of the part G. By this arrangement of said springs the temple-rod or stem H will be retained in the position shown in Fig. 1 when at rest and not acted upon by said springs; but when pressure is applied to its front end spring O will contract and allow the rod, with its temple, to move back; but as soon as said force is removed the action of spring O will force the rod or stem back to its normal position. Then, again, when force is applied in the opposite direction, spring N will contract, and allow the rod and the temple to move forward; but the action of spring N, as soon as the force ceases to act, will throw the rod back to its normal position again. We have produced, therefore, a temple centrally supported, but capable of moving forward or back during the operation of weaving by means of a spring action; consequently the strain on the cloth and the warp-threads is quite even and easy, and not such as to tend to either tear the cloth or break the threads. If preferred, pin *g* may be made adjustable, so as to enable the operator to adjust the tension of one or both of said springs.

By making the concavity of the lower jaw or part J with a series of grooves, 1, in which the burr-teeth 2 enter as they revolve, the cloth is retained upon said teeth, and is not liable to slip off; consequently the cloth is always retained in a uniform and perfect manner.

It sometimes happens in mending threads, or in "picking out," that it is convenient to have the jaws or parts J K held back; and for this purpose pawl M is provided with a catch, 8, so that the attendant, by simply pushing temple-rod H back, as shown in Fig. 2, and raising pawl M so that its catch 8 will strike against the rear edge of guide-loop G', the parts will be retained in position, as shown in Fig. 2, until the attendant forces pawl M down, when spring O will force the parts forward, as shown in Fig. 1.

Having described our improvements in loom-templates, what we claim therein as new and of our invention, and desire to secure by Letters Patent, is—

1. The combination of the curved temple-supporting piece D with the curved seat B and one or more holding and adjusting screws, *d*, substantially as and for the purposes set forth.

2. The combination of pawl M, provided with projection 8, with temple-rod H and frame G, substantially as and for the purposes set forth.

3. The combination of the curved temple-supporting piece B, the curved seat D, the frame G, and the temple-rod H, substantially as shown and set forth.

4. The combination, with temple-rod H and its frame G, of the springs N and O and pin *g*, substantially as and for the purposes set forth.

ALFRED PORTER.  
JOHN A. CLARK.

Witnesses:

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C. W. STANLEY.