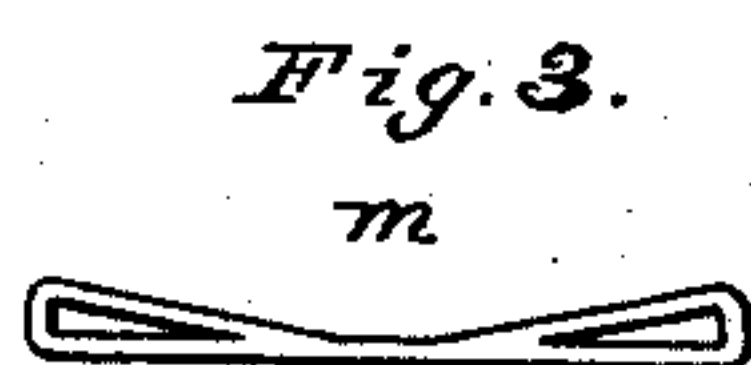
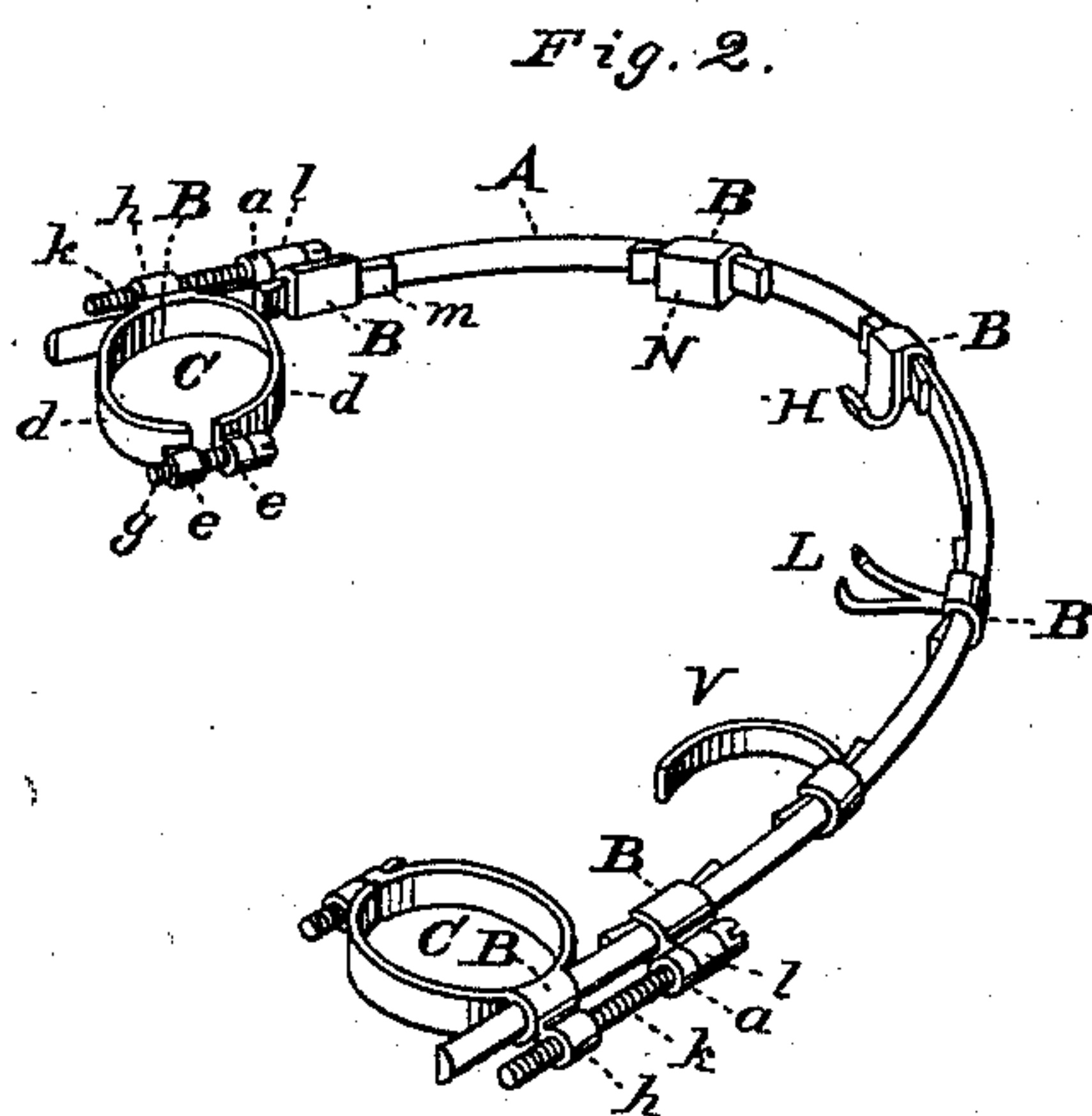
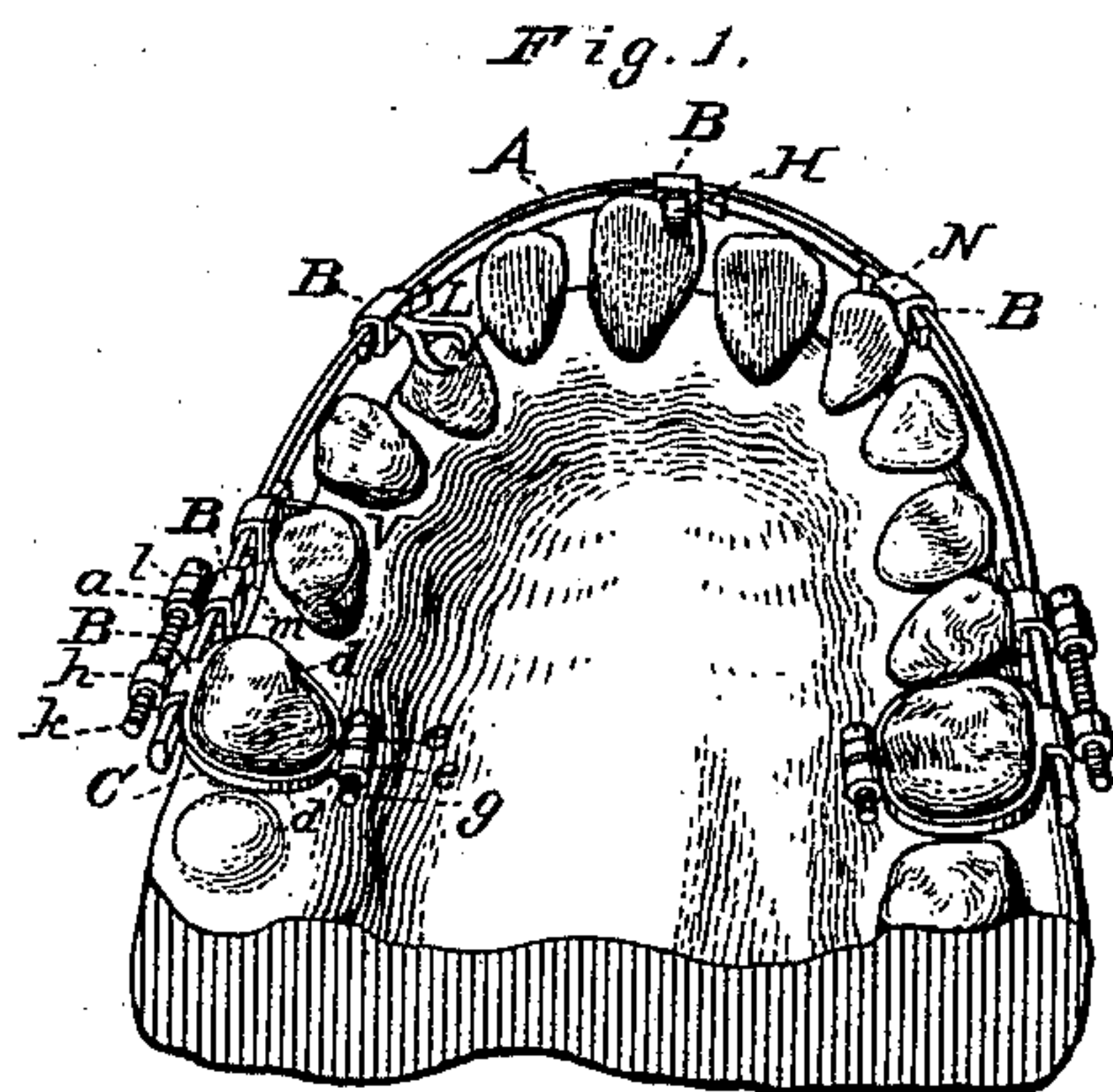


(No Model.)

J. J. R. PATRICK.
DEVICE FOR REGULATING TEETH.

No. 382,897.

Patented May 15, 1888.



WITNESSES.

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JOHN J. R. PATRICK, OF BELLEVILLE, ILLINOIS.

DEVICE FOR REGULATING TEETH.

SPECIFICATION forming part of Letters Patent No. 382,897, dated May 15, 1888.

Application filed July 30, 1887. Serial No. 245,731. (No model.)

To all whom it may concern:

Be it known that I, JOHN J. R. PATRICK, a citizen of the United States, resident at Belleville, in the county of St. Clair and State of Illinois, have invented certain new and useful Improvements in Devices for Regulating Teeth; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to letters or figures of reference marked thereon, which form a part of this specification.

Figure 1 of the drawings is a representation of this invention, and is a perspective view of the devices applied to teeth. Fig. 2 is a perspective view, and shows the reverse side of the different devices on the bow-spring. Fig. 3 is an edge view of one of the wedges.

This invention has relation to means for regulating teeth; and it consists in the construction and novel combinations of parts, as hereinafter set forth.

The object of the invention is to provide means which are at once simple, cleanly, and easily applied for regulating or bringing to proper position teeth which have grown in an irregular manner.

In carrying out this invention I employ a bow-spring, A, of arched form, similar to that indicated in Letters Patent No. 274,367, which were granted to me on the 20th day of March, 1883.

Slides B, having apertures conforming to the sectional shape of the spring, are slipped thereon, and are designed to be adjusted to proper position thereon by sliding them, their position being fixed or secured after adjustment by means hereinafter described. These slides carry the devices which engage the teeth.

C indicates the adjustable loop bands or clamps, which are secured to the molar or rear teeth, and whereby fixed bearings are obtained for the action of the spring, whose elasticity gives it when so secured the power of continuous pressure, which is so essential in rectifying the position of a tooth.

The loop-band C consists of two branches, *d*, provided with end lugs, *e*, which are perforated for the passage of the tangent clamp-screw *g*. One of the lugs *e* has its perforation

threaded to engage the screw. The bearing-slide B of this loop-band is formed with a lug, *h*, having a threaded perforation to engage an adjusting-screw, *k*, which extends parallel to the leg of the arched spring, its neck having its bearing in a lug, *l*, of a second slide B, which is secured in position after adjustment by the double-wedge device *m*. This double wedge is made thin or ribbon-like in its middle portion and increases in thickness toward its ends. It is passed through the slide B before the latter is slipped on the bow-spring, after which it cannot escape, and is easily operated to secure the slide against movement in either direction, according to requirement, the double wedge being pushed in the direction opposite to that of the tension desired to be established. On the parallel screw *k* is fixed a collar, *a*, next the lug *l*, so that when the bearing-slide having said lug *l* is secured by its wedge, and the loop bands or clamps C are fixed on the molars chosen for points of purchase, the tension of the bow-springs may be increased or lessened, according to requirement, from time to time by turning the parallel screws *k*. These loop-clamps are made small enough, so that when adjusted to the rear teeth they can be drawn tight around the same by means of their clamp-screws.

Some of the slides B are made without lugs, and are adjustable in proper positions for action on the teeth, and when so adjusted are fixed by means of the double wedges hereinbefore described. Such slides are provided with pressure-arms, as at V.

For the purpose of grasping a canine tooth a slide B is provided with a bifurcated or branched arm, L, the branches of which gradually spread outward from the body of the slide and curve inward at their ends, as indicated, and slides B, having hooks H, may be employed to engage the ends of teeth to draw them outward or turn them, and other slides are re-enforced on their faces, as at N, to form bearings for the front of a tooth to press it backward. These slides are designed to be fixed after adjustment by means of double wedges, as hereinbefore described. When, however, the teeth project in a general way, the arched bow itself should be brought to bear on them, as it will exert its pressure in such a

manner that there will be more uniformity in the result attained, and the teeth will be established on a satisfactory line of curvature.

It will be observed that the tension of this dental bow-spring is not lost during the adjusting operation.

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

10 1. A dental arched spring for regulating teeth, provided with an adjusting-screw extending lengthwise of the leg of the spring, engaging a bearing attached to the bow, and a threaded lug on the loop-band, substantially
15 as specified.

2. The combination, with a dental bow-spring, of an adjustable clamp having a threaded perforation, an adjustable slide-bearing, and an adjusting-screw extending parallel to the leg
20 of the bow-spring, substantially as specified.

3. The combination, with a dental bow-

spring, of the open loop C, secured by the clamp-screw *g* and adjusted by the screw *k*, substantially as specified.

4. The combination, with a dental bow- 25 spring, of a branched loop-clamp having a clamp-screw, a bearing-slide having a double-wedge fastening, and a regulating-screw, substantially as specified.

5. The combination, with a dental bow-spring 30 and its slides, bearing attachment, and regulating devices, of the double-wedge fastenings, each consisting of a thin or ribbon form middle portion increasing in thickness toward the ends, substantially as specified. 35

In testimony whereof I affix my signature in presence of two witnesses.

JOHN J. R. PATRICK.

*Witnesses:

HUGO E. WAUGELIN,
PHIL GASS.