

(No Model.)

J. W. IVORY.
TEETH SEPARATOR.

No. 511,619.

Patented Dec. 26, 1893.

Fig. 1.

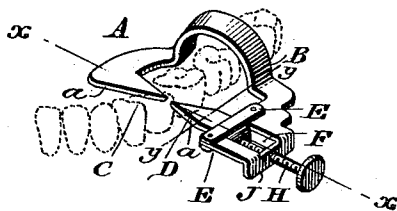


Fig. 5.

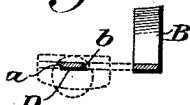


Fig. 2.

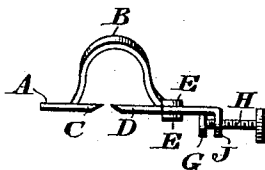


Fig. 3.

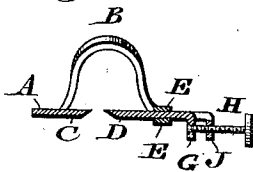
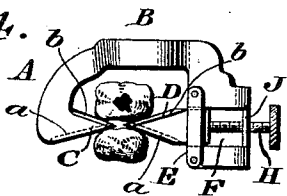


Fig. 4.



WITNESSES:

P. H. Hagler.
L. Douville

INVENTOR

James W. Ivory.
BY John A. Fiedler
ATTORNEY.

UNITED STATES PATENT OFFICE.

JAMES W. IVORY, OF PHILADELPHIA, PENNSYLVANIA.

TEETH-SEPARATOR.

SPECIFICATION forming part of Letters Patent No. 511,619, dated December 26, 1893.

Application filed May 11, 1891. Serial No. 392,311. (No model.)

To all whom it may concern:

Be it known that I, JAMES W. IVORY, a subject of the Queen of Great Britain, residing in the city and county of Philadelphia, State of Pennsylvania, have invented a new and useful Improvement in Teeth-Separators, which improvement is fully set forth in the following specification and the accompanying drawings.

My invention consists of a teeth separator formed of a frame having stationary and movable points, the stationary point being continuous of the arched or bowed frame of the separator, and the movable point being supported on said frame, thus providing an easily applied, simply constructed and inexpensive device for the purpose intended.

Figure 1 represents a perspective view of a teeth separator embodying my invention. Fig. 2 represents a side elevation thereof. Fig. 3 represents a section thereof on line *x, x*, Fig. 1. Fig. 4 represents a plan view thereof. Fig. 5 represents a transverse section on line *y, y*, Fig. 1.

Similar letters of reference indicate corresponding parts in the several figures.

Referring to the drawings:—A designates a frame having a single bow or arch B, so as to be readily set over the teeth, the portion of the frame at both sides of the base of said bow extending laterally therefrom; one end having an inwardly projecting point C integral therewith, opposite to which is a movable point D whose bearings are on the other end of said frame, said point D being fitted between the guiding pieces E which are secured to the frame adjacent to the walls of the slot F in the frame A, said point D also carrying the lip G which plays in said slot and which has swiveled to it the screw H whose bearings are on the portion J of the frame, it being evident that by the rotation of the screw the point D may be moved to or from the point C.

The ends or lateral projections of the frame are separated, having an open space between them, so that the points can more readily be separated for the admission of the tooth than if two arches, one on each side of the point, or a continuous frame were employed.

The operation is as follows: The device is located so that the points enter between the teeth to be separated, or bear against any desired tooth, and the screw is so rotated that the points are advanced toward each other so as to exert a wedging action between the teeth, or a pressure against a desired tooth, and thus a separation or pressure is effected in a reliable and powerful manner, it being noticed that the device is of simple, inexpensive and durable construction, and is provided with a single bow. After the work is performed, the screw is rotated in a reverse direction, whereby the points recede from the place of application with evident results. The sides of the points are beveled as most clearly shown in Figs. 4 and 5, the bevels of each point extending on the side farthest from the bow inwardly from top to bottom, and on the side nearest to the bow outwardly from top to bottom, or in other words, the bevel of the first named side is at the expense of the outside lower border as at *a*, while that of the other side is at the expense of the inside upper border as at *b*, whereby when the points are advanced by the action of the screw, they conform to the sides of the teeth so as to cause a dovetailing of the said sides with the teeth, thus preventing the rocking or tilting of the bow of the instrument in the way of the dental operation. The power exerted on the sides of the points forces the bow toward and upon the contiguous teeth. The greater the force exerted by the screw, the tighter will be the binding action of the bow on said teeth, thus avoiding the annoyance incident to said rocking or tilting of the instrument, for as the dentist adjusts the instrument to the teeth, the bow is placed in contact therewith, and as said teeth are unyielding the instrument thus remains immovably in contact with the teeth while the operation is in progress.

The bow is comparatively rigid, whereby it does not yield or spread from the force produced by the action of the screw on the points, while the latter are separating the teeth. Furthermore, as but one rigid bow is provided and that being located laterally from the points, room is afforded for better-operating facilities on the teeth. It will also be seen

that the instruments may be made rights and
lefts, so that any ordinary teeth may be sep-
arated by such devices.

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

A teeth separator consisting of a frame
formed of a single arch with laterally-extend-
ing ends, one of said ends having the point C
10 integral therewith, guiding pieces secured to
the frame adjacent to a slot therein, a mov-

able point fitting between the said guiding
pieces, and having a depending lip G, and
an operating screw swiveled to said lip and
having a bearing on the portion J of the frame, 15
said parts being combined substantially as
described.

JAMES W. IVORY.

Witnesses:

JOHN A. WIEDERSHEIM,
A. P. JENNINGS.