

(No Model.)

E. WISHART.
TOOTH SEPARATOR.

No. 545,754.

Patented Sept. 3, 1895.

Fig. 1.

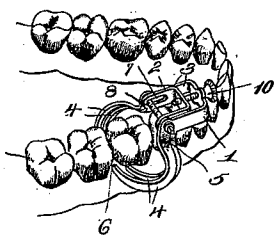


Fig. 2.

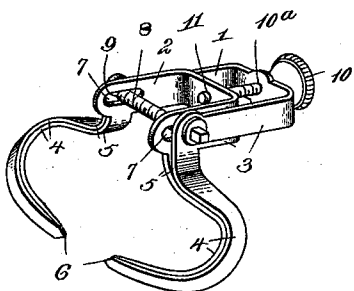


Fig. 3.

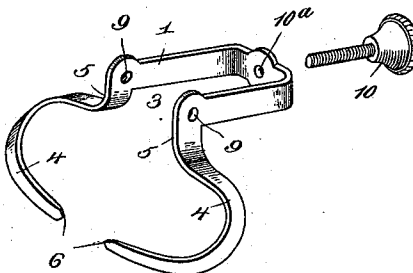
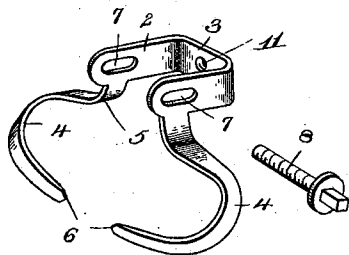


Fig. 4.



Inventor

Witnesses

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UNITED STATES PATENT OFFICE.

EDWARD WISHART, OF PHILADELPHIA, PENNSYLVANIA, ASSIGNOR TO THE
S. S. WHITE DENTAL MANUFACTURING COMPANY, OF SAME PLACE.

TOOTH-SEPARATOR.

SPECIFICATION forming part of Letters Patent No. 545,754, dated September 3, 1895.

Application filed October 31, 1894. Serial No. 527,555. (No model.)

To all whom it may concern:

Be it known that I, EDWARD WISHART, a citizen of the United States, residing at Philadelphia, in the county of Philadelphia and State of Pennsylvania, have invented a new and useful Tooth-Separator, of which the following is a specification.

This invention relates to tooth-separators, and it has for its object to provide a new and useful dental instrument of this character that shall provide simple and positive means for separating or spreading apart teeth to any desired extent, to facilitate certain dental operations.

To this end, therefore, the main and primary object of the present invention is to provide a separating-instrument for teeth, adapted for use in connection with any teeth in the mouth, while at the same time being capable of an easy application and manipulation, and when in its applied position will not interfere with the edges of proximal cavities.

With these and other objects in view, which will readily appear as the nature of the invention is better understood, the same consists in the novel construction, combination, and arrangement of parts hereinafter more fully described, illustrated, and claimed.

In the drawings, Figure 1 is a perspective view of a separator constructed in accordance with this invention shown in its applied position on the teeth. Fig. 2 is a perspective view of the separator with the jaws thereof closed. Fig. 3 is a detail in perspective of the larger outer jaw of the separator and the main adjusting-screw disconnected therefrom. Fig. 4 is a similar view of the smaller separator-jaw showing the width-regulating screw adjacently disposed.

Referring to the accompanying drawings, 1 2 designate a pair of duplicate registering-jaws, the jaw 2 being smaller than the jaw 1, and adapted to substantially work within the said outer jaw 1 during the manipulation of the instrument. The said duplicate registering-jaws 1 and 2 are provided with intermediate U-shaped body portions 3, from the opposite ends or extremities of which U-shaped body portions 3 are extended the opposite reversely-disposed semi-elliptical claw-arms 4. The reversely-disposed semi-elliptical

claw-arms 4 of the separator-jaws are disposed below and at an obtuse angle to the intermediate U-shaped body portions 3 of said jaws, and are provided with the straight right-angularly disposed portions 5, that connect with the U-shaped body portions 3 at substantially right angles thereto, thereby completing a shape of instrument that allows the reversely-disposed claw-arms to be readily slipped over and between the teeth to be separated, while the intermediate U-shaped body portions of the jaws will lie against the crown of the teeth, entirely out of the way of the operator during the operation.

The separator-jaws 1 and 2 are constructed of flat metal strips of steel or other suitable metal, and the claw-arm portions 4 are slightly twisted, as illustrated in the drawings, in order that the points of said arms may enter fairly between the teeth to be separated, and it will be noted that the adjacent ends of the reversely-disposed claw-arms of both jaws terminate in points 6, that engage between the teeth to be separated, and the points of the opposite claw-arms are spaced from each other in order to engage at opposite sides of the teeth to be separated, as will be easily understood.

The opposite side portions of the intermediate U-shaped body portion 3 of the inner separator-jaw 2 are provided with the longitudinally-disposed slots 7, that are adapted to receive a regulating-screw 8, that engages in opposite aligned perforations 9, formed in the ends or extremities of the U-shaped portion of the jaw 1, and one of said perforations 9 is threaded so as to be engaged by the threads of the screw 8. The screw 8 not only limits the movement of the inner separator-jaw 2, but by its adjustment provides means for adjusting the width of both separator-jaws to vary the distance between the opposed or oppositely-located points 6, so that the separator can be fitted on any tooth in the human mouth, to provide for the separation of teeth that are jammed together or are too close to admit of any dental operations therebetween.

A main adjusting thumb-screw 10 is arranged to work through an opening or perforation 10^a in the closed end of the U-shaped body portion of the jaw 1, and is adapted to

engage in the threaded opening 11 in the closed end of the U-shaped body portion of the jaw 2, that works inside of the U-shaped body portion of the jaw 1, as already referred to. In operation, when the separator-jaws have been adjusted to the proper width by means of the screw 8, the jaws are closed together by manipulating the screw 10, so that the claw-arms 4 of the jaw 2 will lie within and flat against the claw-arms of the jaw 1, and the points of both sets of claw-arms will therefore lie together. The opposite points of the closed claw-arms are then engaged between the teeth to be separated at opposite sides of such teeth, and it is then simply necessary to manipulate the screw 10 to carry the claw-arms of the two jaws apart and thereby secure the desired separation of the teeth.

Changes in the form, proportion, and the minor details of construction may be resorted to without departing from the principle or sacrificing any of the advantages of this invention.

Having thus described the invention, what is claimed, and desired to be secured by Letters Patent, is—

1. In a tooth separator, a pair of duplicate different sized separator jaws one registering within the other and both having opposite reversely-disposed pointed arms adapted to engage between teeth, and means for adjusting the arms of the two jaws to and away from each other, substantially as set forth.

2. In a dental separator, a pair of duplicate different sized separator jaws working one within the other and provided with opposite reversely-disposed pointed arms, means for adjusting the width of both jaws, to vary the distance between the oppositely located points

of said arms and separate means for adjusting the pointed arms of both jaws to and away from each other substantially as set forth.

3. In a dental separator, a pair of duplicate jaws having opposite reversely-disposed claw-arms adjustable to and away from each other, and means for adjusting the width of both jaws, to vary the distance between the oppositely located points of the floor arms, substantially as set forth.

4. In a dental separator, a pair of duplicate registering separator jaws working one within the other and having intermediate U-shaped body portions and opposite reversely-disposed semi-elliptical pointed claw arms projected from one side and the extremities of said U-shaped body portions at an obtuse angle to the latter, the U-shaped body portion of the outer jaw being provided in its closed end with an opening or perforation and in its ends or extremities with perforations, one of which is threaded, and the U-shaped body portion of the inner separator jaw being provided in its opposite sides with slots, a regulating screw engaged in the perforations in the ends of the U-shaped body portion of the outer jaw and passed through the slots of said other U-shaped body portion, and an adjusting thumb screw engaging the closed ends of both U-shaped body portions to provide for a separation of said claw-arms, substantially as set forth.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in the presence of two witnesses.

EDWARD WISHART.

Witnesses:

R. S. REED,

H. KLEINSMITH.