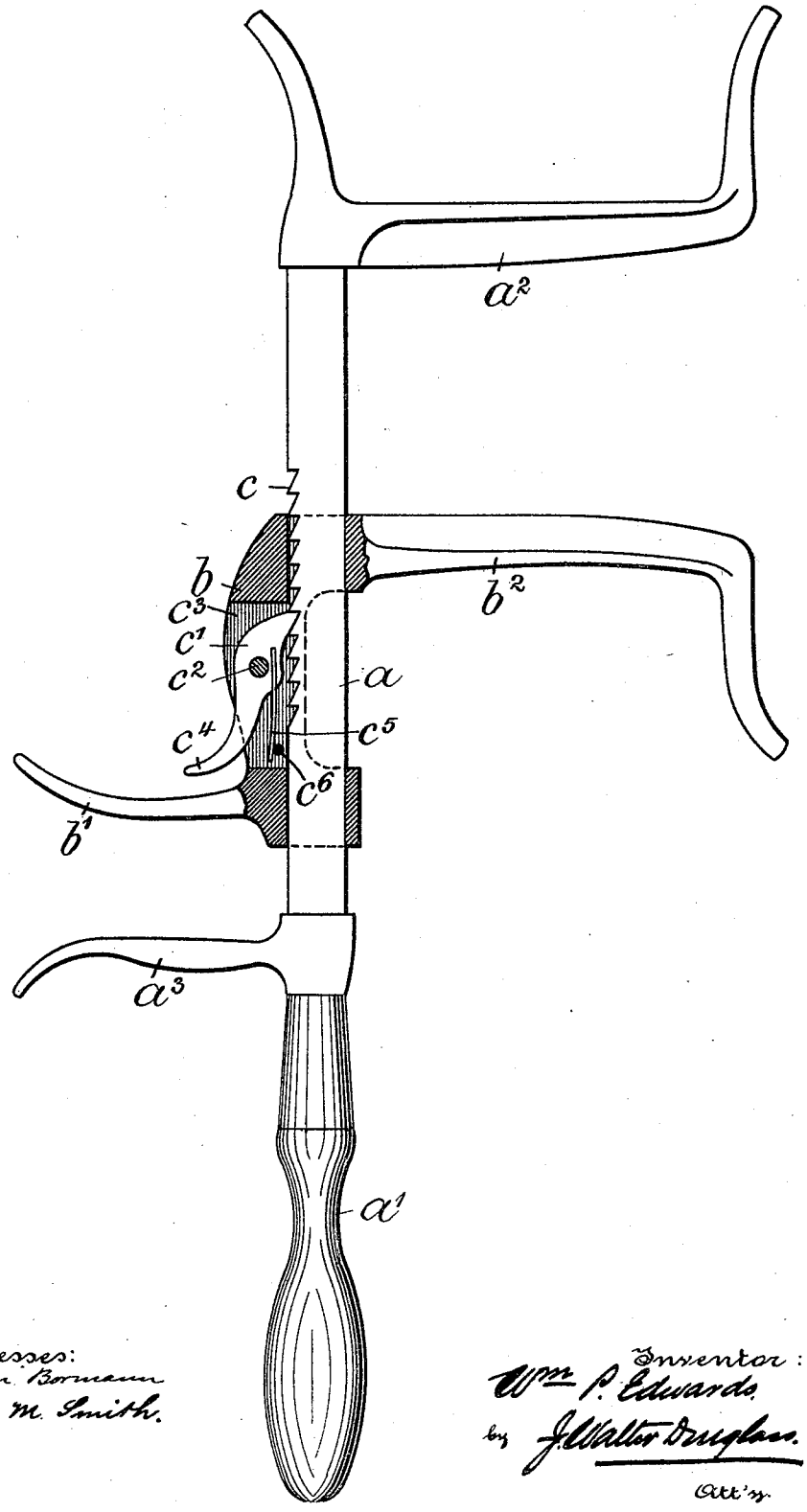
(No Model.)

W. P. EDWARDS.

VETERINARY MOUTH OPENER.

No. 457,911. Patented Aug. 18, 1891.



Witnesses:
Hermann Bornamn
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Att'y.

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UNITED STATES PATENT OFFICE.

WILLIAM P. EDWARDS, OF PHILADELPHIA, PENNSYLVANIA.

VETERINARY MOUTH-OPENER.

SPECIFICATION forming part of Letters Patent No. 457,911, dated August 18, 1891.

Application filed June 29, 1891. Serial No. 397,817. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM P. EDWARDS, a citizen of the United States, residing at the city of Philadelphia, in the county of Philadelphia and State of Pennsylvania, have invented certain new and useful Improvements in Veterinary Spectrums or Devices for Openings Animals' Mouths, of which the following is a specification.

My invention relates in general to devices for opening animals' mouths, comprising a standard having fixed and movable or sliding bits, and more particularly to certain improved means for securing or locking the movable bit to and releasing or unlocking the same from the standard.

The principal object of my present invention is to provide a device or instrument for opening animals' mouths, having simple, convenient, and efficient means for positively and expeditiously locking the device or instrument in an open position and for permitting the same to rapidly return to a normal or closed position.

In the present invention use is made of a toothed rack and a spring latch for locking and unlocking the sliding or movable bit of a device for opening animals' mouths, and to which end the invention consists of the improvements hereinafter described, and pointed out in the claim.

The nature and characteristic features of the invention will be more fully understood from the following description, taken in connection with the accompanying drawing, forming part hereof, illustrating a device or instrument for opening animals' mouths containing or embodying my improvements.

In the drawing, a is a standard terminating in a handle a' and provided with a fixed bit a^2 and a hand-lever a^3.

b is a traveler adapted to be shifted up and down upon the standard a and provided with a hand-lever b' and a bit b^2.

In use the bits a^2 and b^2 are brought together and inserted into the mouth of an animal. The mouth of the animal is then forced open by separating the bits b^2 and a^2, as shown in the drawing. This result may be readily accomplished by drawing the levers b' and a^3 together by means of the hand or in any other preferred manner.

In practice it is frequently necessary or desirable to retain the animal's mouth in an open position in order to perform a surgical or dental operation therein. This result has heretofore been accomplished in various ways. For example, by employing a device provided with a set-screw mounted in the traveler b and adapted to engage the standard a, and also by forming a nut upon the interior of the traveler b and a thread upon the standard a. However, these appliances were not altogether satisfactory in use, because the set-screw was difficult to adjust and frequently slipped and because the threaded standard required an excessive expenditure of time in opening and closing the animal's mouth. In my invention the standard a is provided with a toothed rack c and the traveler b is provided with a spring-latch c', so that the latch c' automatically engages the rack c, and thus locks the bits a^2 and b^2 in an open position. Moreover, the bit b^2 may be permitted to return rapidly to its normal position by the simple operation of releasing the spring-latch c'. Of course the spring-latch c' may be constructed in various ways. However, I will proceed to describe the construction of the spring-latch as illustrated in the drawing and in such form as in practice has been found efficient.

In the drawing, the latch c' is supported by means of a pivot c^2 in a recess or slot c^3, formed in the traveler b. This latch c' is provided with a handle c^4 for lifting it out of range of the teeth of the rack c.

c^5 is a spring interposed between the latch c' and a pin c^6, ranging transversely of the recess or slot c^3 in order to cause the working extremity of the latch to normally engage the teeth of the toothed rack c.

The mode of operation of the hereinabove-described rack and spring-latch is as follows: When the bit b^2 is shifted downward, the spring-latch c' engages the teeth of the rack c and thus prevents any accidental retrograde or upward movement of the bit b^2. However, the bit b^2 may be instantly released by the simple operation of pressing the handle c^4 of the latch c', whereupon the working extremity of the latch c' is lifted out of range of the teeth of the rack c, so that the two bits a^2 and b^2 may be rapidly forced together by

the contraction or closing of the mouth of the animal.

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

In a device for opening animals' mouths, a standard provided with a bit, a hand-lever and a rack, a traveler provided with a bit, a hand-lever and a recess, a catch pivoted in said recess and provided with a handle, and a spring for actuating said latch, substantially as and for the purposes set forth.

In witness whereof I have hereunto set my signature in the presence of two subscribing witnesses.

WILLIAM P. EDWARDS.

Witnesses:
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RICHARD C. MAXWELL.