

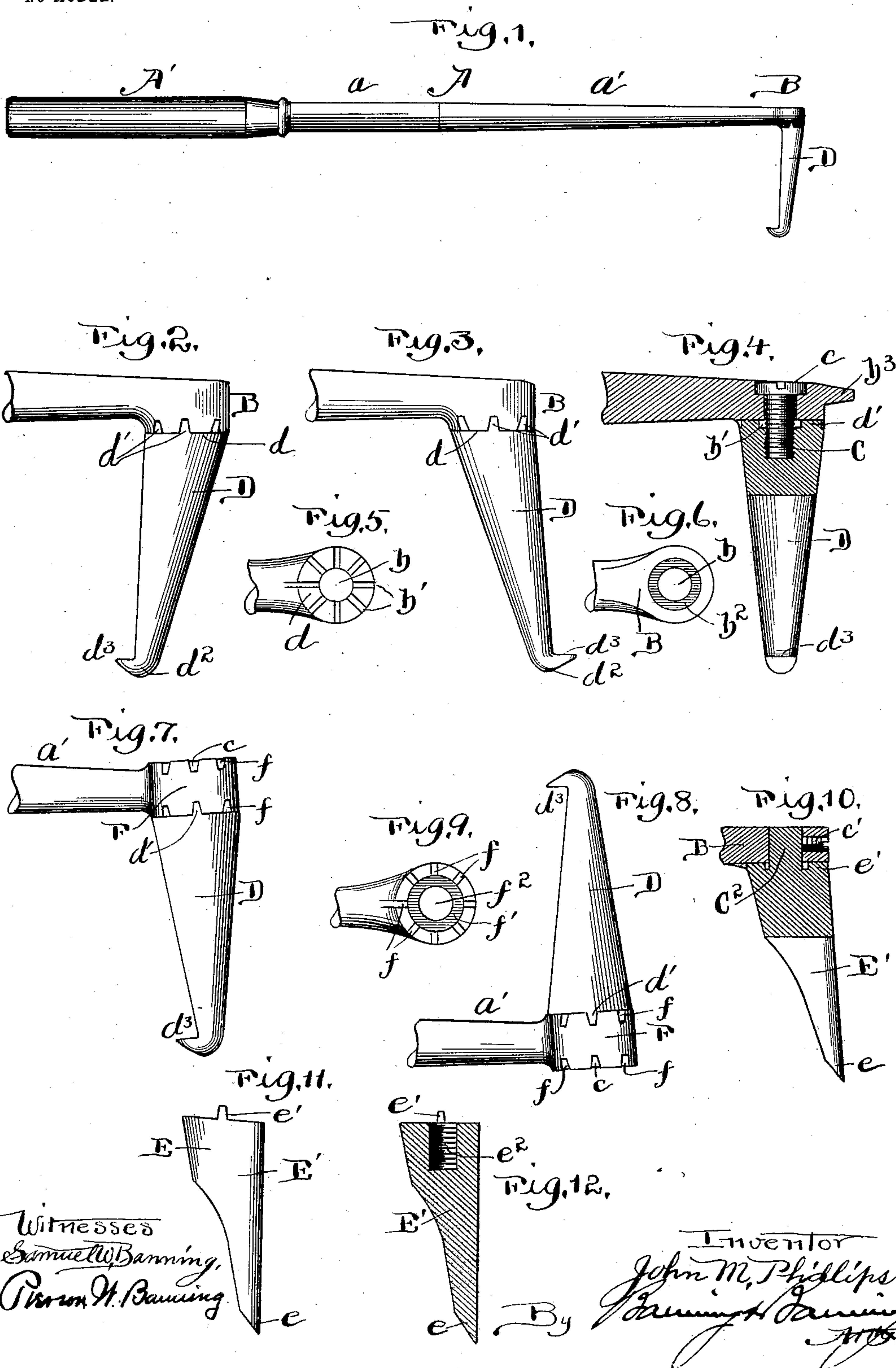
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J. M. PHILLIPS.
VETERINARY DENTAL INSTRUMENT.

APPLICATION FILED FEB. 18, 1903.

NO MODEL.



UNITED STATES PATENT OFFICE.

JOHN M. PHILLIPS, OF ST. LOUIS, MISSOURI.

VETERINARY DENTAL INSTRUMENT.

SPECIFICATION forming part of Letters Patent No. 735,580, dated August 4, 1903.

Application filed February 18, 1903. Serial No. 144,012. (No model.)

To all whom it may concern:

Be it known that I, JOHN M. PHILLIPS, a citizen of the United States, residing at St. Louis, in the State of Missouri, have invented certain new and useful Improvements in Veterinary Dental Instruments, of which the following is a specification.

The object of this invention is to produce an instrument particularly designed for the removal of decayed portions of horses' teeth, especially in those portions of the mouth which it is impossible to reach by means of forceps, and the invention is peculiarly adapted for the removal of shells which lie in close proximity to the adjoining teeth and which must be forced therefrom in order to admit of their removal.

The invention is so arranged that the operating parts may be adjusted or moved to suit the conditions to each particular case, and although the instrument is capable of withstanding a very considerable strain, it is not by reason of that fact at all unwieldy, but is capable of quick manipulation and effective use.

The invention consists in the features of construction and combination of parts hereinafter described and claimed.

In the drawings, Figure 1 is a side elevation of the entire device with one of the adjustably-reversible hooks in position; Fig. 2, a view of the head of the instrument, showing the hook inwardly adjusted; Fig. 3, a similar view showing the hooks outwardly adjusted; Fig. 4, a similar view, partly in section, with the hook adjusted in sidewise relation; Fig. 5, a view of the contacting or lower face of the head; Fig. 6, a similar view of the upper face of the head; Fig. 7, a modified form of head with the hook arranged upon its lower face; Fig. 8, a similar view of the hook arranged on its upper face; Fig. 9, a view of one of the faces of the head of Figs. 7 and 8; Fig. 10, a sectional view of a modified form of securing mechanism, and Figs. 11 and 12 views of reversible wedges adapted for use with the heads of this invention.

As shown, the invention is constructed with a rod A, preferably formed of two sections a and a' , screw-threaded or otherwise secured together, the latter being tapered toward its outer end, and the arm is pro-

vided with a handle A' for the hand of the operator. The outer section a' of the arm terminates in a round head B, provided in its center with a smoothly-cut circular hole b , extending transversely through the head. The lower or contacting face of the head in the construction shown in Figs. 1 to 6 is formed in the same plane as the arm and is provided with a series of radially-extending grooves or slots b' of any suitable number, cut into the head a sufficient distance to insure a firm contact, and in the upper face of the head is an annular recess b^2 of larger diameter than the hole, adapted to receive the head c of a screw-threaded bolt or pin C for securing the several tools to the head in a firm and rigid manner and at the same time permit of their ready and easy adjustment to different positions to meet the requirements of each individual case.

The tools, as shown, are two in number, a hook and a wedge, although it is obvious that others of different formation might be employed without departing from the spirit of the invention. In use the wedge is intended to loosen the shell or tooth to be removed and force it from contact with the adjoining teeth, after which it may be removed by means of the hook. In order to allow of the adjustment of the hooks and wedges, the same are formed as follows: The hook D (illustrated in Figs. 1 to 8) is formed with a tapered body and flat contacting face d , which may be cut at right angles to the body, as in Figs. 7 and 8, or at an oblique angle thereto, as in Figs. 2, 3, and 4, and in use it is advisable to have a series of such hooks with contact-faces of different angle in order to enlarge the scope of adjudgment of the invention. With a single hook, however, cut at an oblique angle, as shown in Figs. 2, 3, and 4, a considerable variety of adjustment may be had.

The hooks are provided on their contacting faces with upwardly-projecting lugs or ears d' , two in number, as shown, although the number may be varied, if so desired. These lugs or ears are suitably spaced to enter the recesses in the head, and the hook is provided with screw-threaded recesses d^2 , into which may be screw-threaded the bolt or pin C after the ears have been entered into the selected recesses, firmly securing the hook to the head

at any desired angle thereto. As shown in Fig. 2, the hook has been turned to have an inward projection, while in Fig. 3 the same hook has been given an outward projection by reason of the oblique angle of its contacting face. The hook is of tapered formation and terminates in a rounded end d^2 , provided with a flat shoulder or ledge d^3 at substantially right angles to the body, which in conjunction therewith constitutes the hook. The wedge E, as shown, is similarly formed with respect to its contact-face, and consists of a body E' of substantially the same diameter as the head of the arm to which it is adapted to be attached, and the body is tapered at its lower end and terminates in a blunt point e for insertion between the teeth to be separated. The wedge is provided with ears or lugs e' , similar to the ears or lugs d' , and is provided with a screw-threaded recess e^2 for the insertion therein of the screw-threaded pin or bolt C, as hitherto described. The wedge of Fig. 11 is provided with an obliquely-formed contacting face, while that of Fig. 12 is at right angles to the body. The adjustment of the wedges may be changed in the same way as the adjustment of the hooks in order to meet the requirements of their use.

If desirable, the head of the arm or lever may be formed at an angle thereto, as in Fig. 7, in which case the head F is provided with two contacting faces in parallel relation, as shown, each of the faces being provided with radially-extending grooves f and an annular recess f' , surrounding a smooth round hole f^2 , extending through the head. By having two contacting faces in parallel relation the adjustment of the parts may be doubled, for the reason that one of the faces will give the operating-tool a backward throw, while the other will give the same operating-tool a forward throw. The head of Figs. 7 and 8 may be used with the same tools hitherto described, having contacting faces at right angles to the plane of the body or at an oblique angle thereto. The head is provided with a recess in each side thereof, so that the securing pin or bolt may lie flush with the head into which-ever side it is inserted.

If so desired, the securing pin or bolt may be dispensed with and a post or stud C^2 employed, as shown in Fig. 10, in which case a set-screw c' is inserted through the head to contact with the stud or post and hold the hook securely in place. In other respects the tools and securing-head are similar to those already described.

In some cases it will be found advisable to have a short finger b^3 , extending forwardly from the head in order to contact the next adjoining tooth, to effect a leverage for the withdrawal of the tooth, to be operated upon. Such an arrangement is shown in Fig. 4, although it is plain that it might be applied to the heads of Figs. 2 or 7 without departing from the spirit of the invention.

Although the invention has been described

with considerable particularity, it is plain that the parts may be varied considerably without changing the character of the invention and that other tools than those herein described might be employed provided they were adjustably arranged in a manner substantially similar to that described and adapted to be reversed in order to permit of their adjustment.

What I claim as new, and desire to secure by Letters Patent, is—

1. In a veterinary dental instrument, the combination of an arm or lever terminating in a securing-head provided with a screw-threaded hole passing therethrough and having a tapered body provided with a screw-threaded hole extending downwardly thereinto and having an upper contact-face at suitable angular relation to the body, and a pin passing through the hole in the securing-head and into the hole in the body of the tool to hold the tool into firm contact with the securing-head and allow of its adjustment in relation thereto, substantially as described.

2. In a veterinary dental instrument, the combination of an arm or lever provided on its end with a handle and terminating in a securing-head provided with a hole extending therethrough and provided on its contacting face with a series of radially-extending grooves or recesses, a tool having a contact-face at suitable angular relation to the body and provided with ears or lugs adapted to enter the grooves or recesses in the head, and a screw-threaded bolt or pin passing through the hole in the head and screw-threaded into the tool, substantially as described.

3. In a veterinary dental instrument, the combination of an arm or lever terminating in a securing-head, a forwardly-projecting finger extending from the securing-head and having a hole extending therethrough, a flat or contact face on the securing-head provided with a series of grooves or recesses radially extending from the hole, a tool having a contact-face at suitable angular relation to the body, lugs or ears on the contact-face adapted to enter the grooves or recesses in the head, and a pin or stud passing through the hole in the head for securing the tool thereto, and holding the ears or lugs into the grooves or recesses, substantially as described.

4. In a veterinary dental instrument, the combination of an arm or lever terminating in a securing-head having angular relation to the arm or lever and provided with a hole extending therethrough, contacting faces on both sides of the securing-head, grooves or recesses in the contacting faces radially extending from the hole therein, a tool provided with a flat contacting face at suitable angular relation to the body, ears or lugs on said contact-face, and a pin or stud passing through the securing-head for securing the tool thereto, and the ears or lugs within the grooves or recesses, substantially as described.

5. In a veterinary dental instrument, the

combination of an arm or lever terminating
in a securing-head having an angular relation
to the arm or lever and provided with a hole
extending therethrough, contacting faces on
5 both sides of the securing-head each contact-
ing face having therein an annular recess sur-
rounding the hole and grooves or recesses ra-
dially extending therethrough, a tool provided
with a contacting face provided with a screw-
10 threaded recess therein and having a suitable
angular relation to the body of the tool, ears

or lugs on the contact-face, and a screw-
threaded pin or bolt provided with a head and
passing through the hole in the securing-head
to enter the recess in the tool and have the 15
head of the bolt lie within the annular recess
in the securing-head, substantially as de-
scribed.

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Witnesses:

WALKER BANNING,
OSCAR W. BOND.