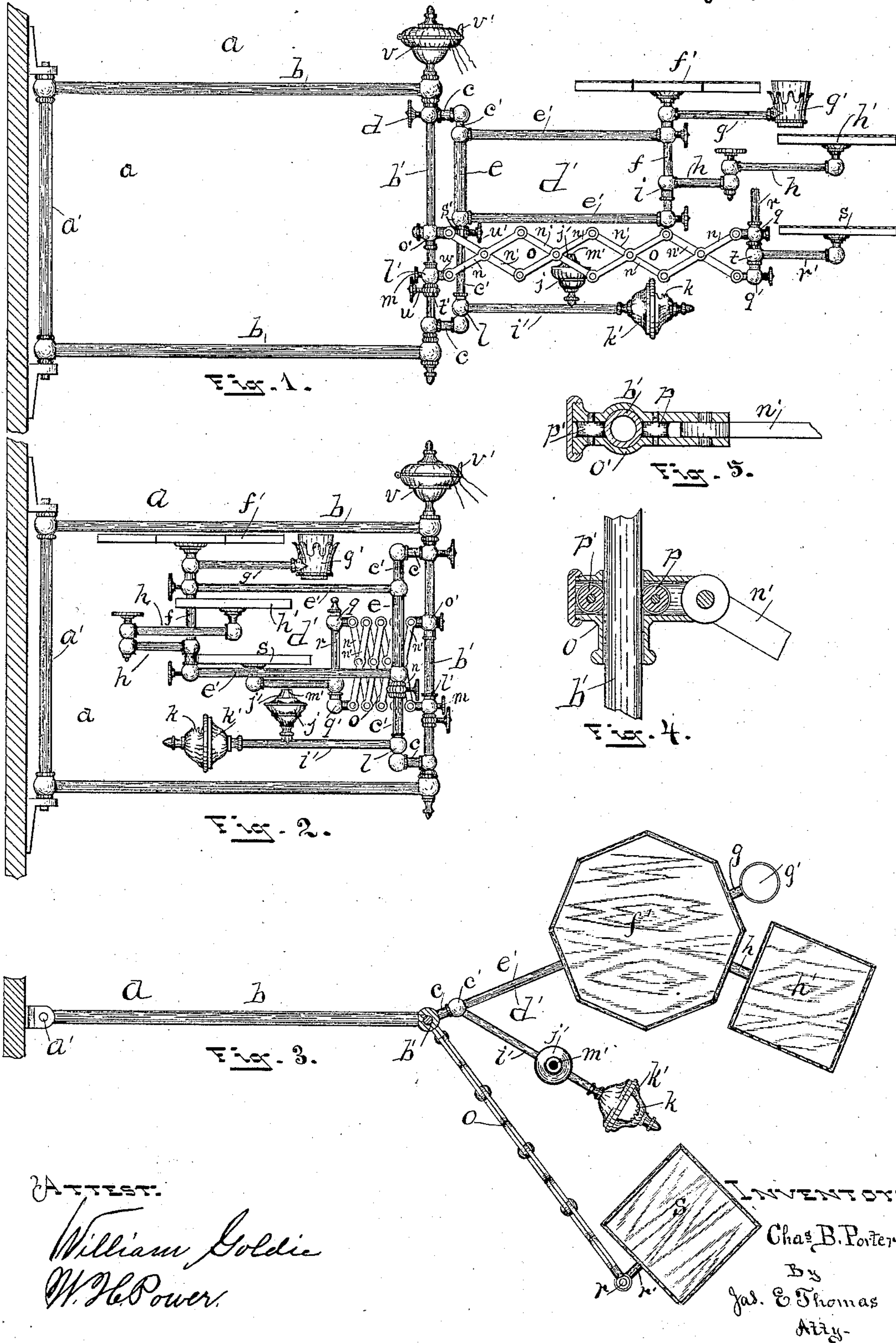


(No Model.)

C. B. PORTER.
DENTAL BRACKET.

No. 365,859.

Patented July 5, 1887.



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UNITED STATES PATENT OFFICE.

CHARLES B. PORTER, OF BAY CITY, MICHIGAN.

DENTAL BRACKET.

SPECIFICATION forming part of Letters Patent No. 365,859, dated July 5, 1887.

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To all whom it may concern:

Be it known that I, CHARLES B. PORTER, a citizen of the United States, residing at Bay City, in the county of Bay and State of Michigan, have invented certain new and useful Improvements in Dental Brackets; 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 the letters and figures of reference marked thereon, which form a part of this specification.

15 This invention relates to improvements in dental brackets, and is designed to hold the tools and accessories of dental work in a position to be easily obtainable when a patient is being operated upon.

20 The invention consists in the general construction, arrangement, and combination of the parts of the device, as I hereinafter more fully describe and claim; and the objects of the invention are to form a convenient and handy device for holding the tools to be used in operating in dentistry or surgery in a manner that whenever a set of instruments are needed to be used in one portion of the operation they can be swung into position and the set used for a former portion of the operation can be swung back and away from the operator, and when not in use that can be folded to occupy but a small space and can at once be extended into position again without extra trouble of handling and placing the different sets of dental or other instruments at each stage of the operation.

My improved device is illustrated in the accompanying drawings, in which—

40 Figure 1 is a side view of my improved dental bracket secured to the wall and in an extended position. Fig. 2 is a view of the same in a closed position. Fig. 3 is a top view of Fig. 1, showing the parts in different positions. Fig. 4 is a vertical sectional detail of a detached portion carrying friction-rollers, hereinafter described. Fig. 5 is a horizontal section of the same.

50 *a* represents a frame, consisting of the vertical piece *a'*, hinged to the wall of the office in a convenient position and provided with ex-

tended arms *b*, to the outer end of which is secured the vertical standard *b'*.

c are short upper and lower arms, having an opening on their inner ends, through which is passed the standard *b'*; and *c'* is a vertical standard secured to the outer ends of the arms *c*, and is of a proper length to hold the arms just beneath and above the connection of the standard *b'* with the arms *b*, and allow the arms and standard *c'* to swing upon the standard *b'* to any position, and the connection of the upper arm *c* is provided with a clamping-screw, *d*, with which to secure the arms and standard *c'* in any desired position.

65 *d'* is a smaller frame, consisting of the vertical sleeve *e*, passed upon the standard *c'*, and with its upper and lower ends provided with the upper and lower extended arms, *e'*, to the outer end of which is secured the vertical standard *f*. This standard *f* extends above the upper arm for a short distance, and is provided with a revolving table, *f'*, and below the table is pivotally connected to the standard *f* an arm, *g*, which extends to a part beyond the table *f'*, and is provided with a holder, *g'*, within which is placed a glass for water or a spirit-lamp, and may be swung to any convenient position around the table *f'*.

80 *h* is a horizontal arm, which is provided on one end with a short sleeve, *i*, through which is passed the standard *f*, and to the outer end of the arm is pivoted a revolving table, *h'*. This arm is provided with one or more pivoted joints, as desired, which allows the table *h'* to be placed in any desired position from the patient; and the connecting-sleeve *i* may be raised or lowered upon the standard *f*, the weight of the extended arm and table *h'* holding the piece *i* in any desired position on the standard. A collar, *s'*, is placed upon the standard *c'*, below the frame *d'*, and is held in a desired position by a clamping-screw, *u'*, and the frame resting upon this collar may then be swung to any position without moving vertically. Below the frame *d'* is secured by a short sleeve, *l*, one end of the swinging arm *i'*, and upon the central portion of this arm is a cotton holder or cup, *j*, having a lid, *j'*, provided with a central opening, through which the cotton protrudes in a manner to be easily caught by the fingers or

with an instrument; and to the outer end of the arm i' is secured a waste-cotton holder or cup, k' , provided with an opening having upon its edge the teeth k , upon which the cotton used in an operation may be removed from the instrument by catching the cotton upon the teeth k' and withdrawing the instrument therefrom, and the cotton then drops within the cup k' . The sleeve l allows the arm to be raised to any desired position upon the standard c' . The sleeve being short, it binds against the standard by the weight of the arm and cups, which prevents the sleeve from sliding downward, so that a free swinging movement and also a vertical movement are obtained for the arm and cotton-holders, which remain in position without extra fastening.

l' is a connecting-piece placed upon the lower portion of the standard b' , and is provided with a clamping-screw, m , and a portion, w , of this piece is pivoted to the lower end of one of the diagonal pieces n of a lazy-tongs or zigzag arm, o .

o' is a connecting-piece sliding upon the standard b' , and is provided with the rollers p and p' in front and rear of and bearing against the standard, as shown in detail in Figs. 4 and 5, and to a portion extending in front of the roller p is pivoted one end of the piece n' of the zigzag arm o . By means of these rollers p and p' a free and easy sliding movement of the piece o' upon the standard is obtained, so that when the arm o is extended or receded the piece o' is moved vertically by the diagonal piece n' without catching or binding against the standard.

The arm o may consist of any number of the pieces n and n' pivoted together, and to the outer end of the pieces are pivoted the pieces q and q' , and a vertical standard, r , is passed through the upper piece, q , and into the lower piece, q' , and when the arm is being extended or receded the piece q slides upon the standard r , and is provided with rollers p and p' , if desired, in the same manner as the piece o' , the movement and operation of the pieces o' and q being the same.

Upon the standard r , and between the pieces q and q' , is placed a short sleeve, t , having a horizontal arm, r' , extending from one side, and to the outer end of this arm is pivotally secured a table, s , for holding dental instruments and appurtenances.

The zigzag arm o may be moved to any desired height and secured by a collar, t' , and clamping-screw u , and may then be swung to any position horizontally and there secured by the clamping-screw m .

The table s may be raised, if desired, by sliding the sleeve t upward upon the standard to any desired position, where it will remain, the weight of the table binding the short sleeve t upon the standard, and it may be then swung in either direction.

The zigzag arm allows the table s to be placed in any position to or from the stand-

ard, or to be folded within the frame a , as shown in Fig. 2.

Upon the upper portion of the standard b' is placed a thread-holder, v , in which are a number of pins supporting spools of thread, and a short blade, v' , forms a thread-cutter and is secured to the holder in a convenient position, so that thread of various sizes is always at hand and ready for the operator.

It is not necessary to attach all of the portions of this device to the frame a , as some classes of work do not require so many devices or changes; and the frame may be used without the zigzag arm and supply the wants of very many operators, and other portions not needed may be left off, if desired.

When the device is operated without the arm c , the frame d' is supported directly by the standard b' , and the standard c' , not then required, is removed with the arms c . When any portion of the device is not needed for use, it may be swung to the position shown in Fig. 2 and only the portion desired swung outward. This allows the instruments for one operation—such as for filling—to be placed upon one of the tables and swung into position for use, and the instruments for other operations are swung back within the frame a , so that this arrangement allows the instruments to be always ready at hand and out of the way when not in use; and when no portion of the bracket is required for use the parts are closed in the manner shown in Fig. 2, and the frame a is then swung against the wall and occupies but a very small space.

I do not confine my invention entirely to placing the attachments in the position shown, as some operators may require the arms and tables in different positions, and the parts would operate in a similar manner if placed in different positions; but

What I claim as my invention is—

1. The combination, in a dental bracket, of the frame a , hinged by one end to the rigid support, with a vertical standard, c' , hinged to the outer end of the frame a by the short arms c , a sleeve, e , sliding upon the standard c' and provided on each end with horizontally-extending arms e' , a vertical standard, f , secured to the outer ends of the arms, and with its upper end extending above the arms, and a table, f' , upon the upper end of the standard, substantially as herein set forth.

2. The combination, in a dental bracket, of the frame a , hinged by one end to a rigid support, and provided upon the upper outer portion with a thread-holder, v , with a smaller frame, d' , hinged to the outer free end of the frame a , and provided with a vertical adjustment, a table, f' , above and supported upon the outer end of the frame d' , an arm, g , below the table, and hinged to the outer end of the frame d' by one end, and provided on its opposite end with a cup-holder, g' , and an arm, h , hinged to the outer standard, f , of the frame d' by one end, and provided with a table, h' ,

on its opposite end, substantially as herein set forth.

3. The combination, in a dental bracket, of the vertical frame *a*, hinged to a rigid support, with an arm, *i'*, hinged by a sliding sleeve to the outer vertical standard of the frame, and provided with a cotton-holder, *j*, secured to the middle portion of the arm, and provided with a lid, *j'*, having an opening, *m'*, and a waste-cotton holder, *k'*, upon the outer end of the arm, and having the teeth *k* on its upper edge, substantially as and for the purpose herein set forth.

4. The combination, in a dental bracket, of an arm, *i'*, hinged to a supporting-piece by one end, with a cotton-holder, *j*, secured to the middle portion of the arm, and provided with a lid, *j'*, having an opening, *m'*, and a waste-cotton holder, *k'*, upon the outer end of the arm, and having the teeth *k* upon its upper edge, substantially as and for the purpose herein specified.

5. The combination, in a dental bracket, of the vertical frame *a*, hinged by one end to a

rigid support, with a zigzag arm, *o*, hinged to the outer vertical standard, *b'*, by the piece *l'*, pivoted to its lower inner end, and by the sliding piece *o'*, pivoted to the upper inner portion of the arm, and provided with the friction-rollers *p* and *p'*, a vertical standard, *r*, and a table, *s*, secured to the outer end of the arm, substantially as and for the purpose set forth.

6. The combination, in a dental bracket, of the zigzag arm *o*, hinged at its inner end to a vertical standard by the sliding piece *l'*, pivoted to the part *n* of the arm, with a piece, *o'*, sliding upon the standard, and provided with the friction-rollers *p* and *p'*, and pivoted to the upper inner end of the piece *n'* of the arm, substantially as and for the purpose herein set forth.

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

CHARLES B. PORTER.

Witnesses:

J. E. THOMAS,

W. H. POWER.