(No Model.)

2 Sheets—Sheet 1.

W. S. HOW.

BRACKET.

No. 313,937. Patented Mar. 17, 1885.

Fig. 1.

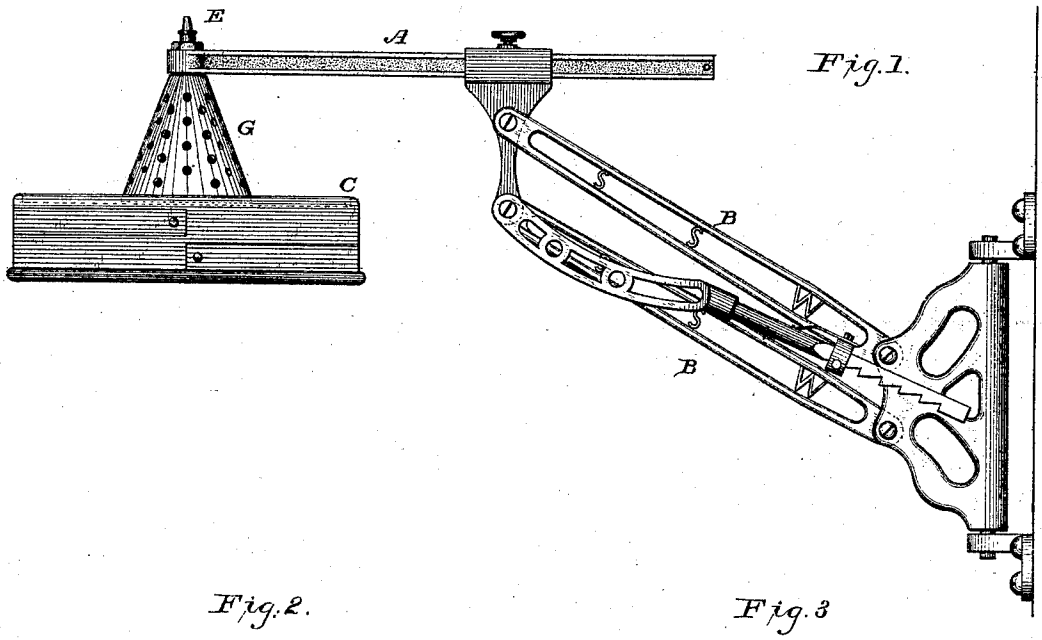


Fig. 2.

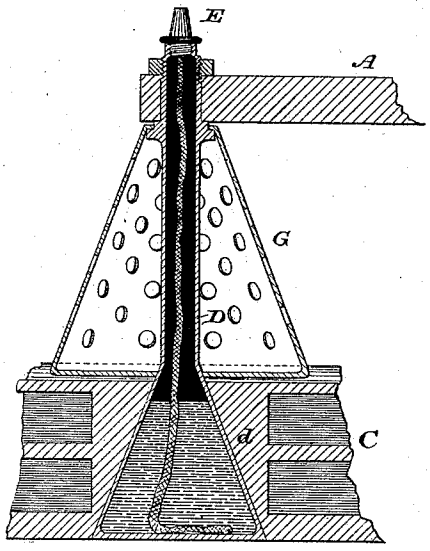
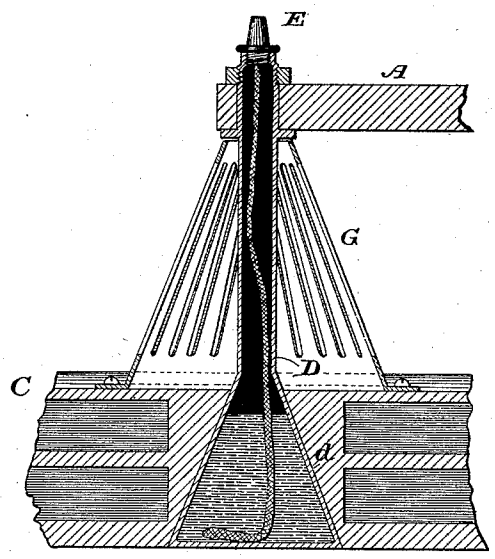


Fig. 3



WITNESSES.

Wm. A. Skinkle.

H. W. Elmore.

INVENTOR

Woodbury S. How,

By his Attorneys.

Baldwin, Hopkins & Peyton.

N. PETERS, Photo-Lithographer, Washington, D. C.

(No Model.)

2 Sheets—Sheet 2.

W. S. HOW.

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Fig. 4.

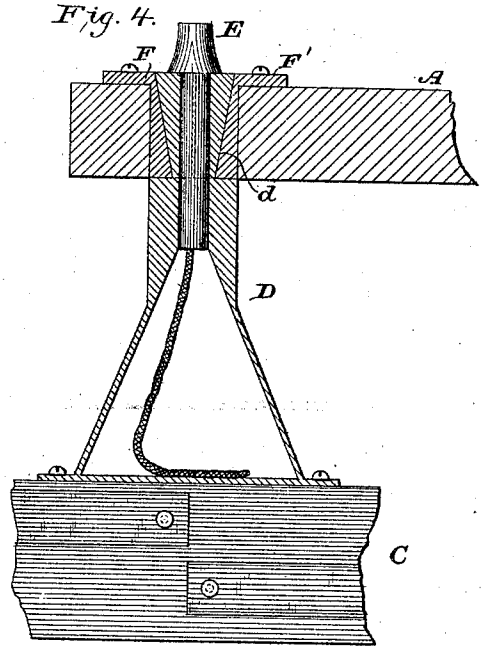


Fig. 5.

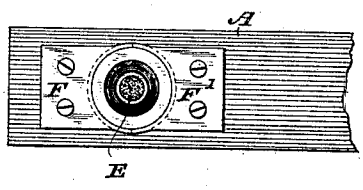


Fig. 6.

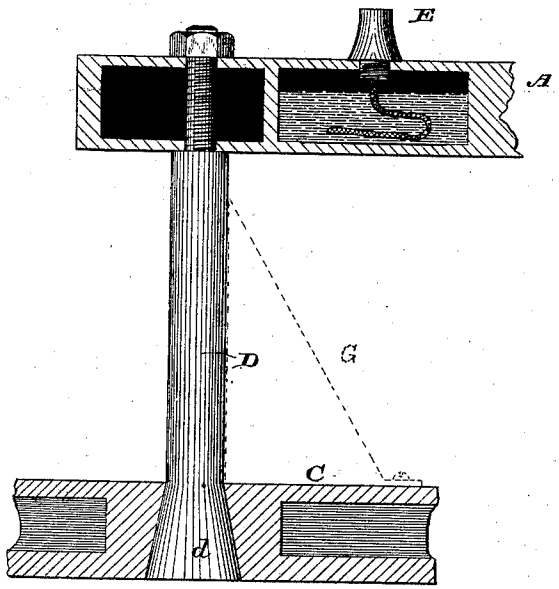
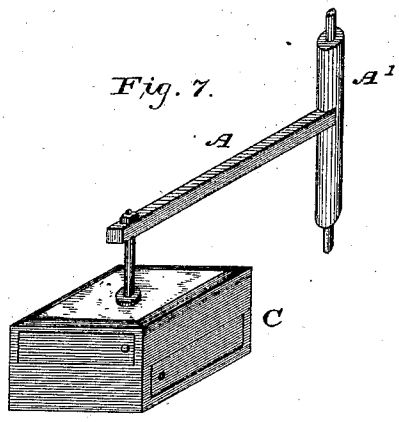


Fig. 7.



WITNESSES,
Wm A. Skinkle
H. W. Gilmore.

INVENTOR
Woodbury S. How,
By his Attorneys,
Baldwin, Hopkins & Peyton.

N. PETERS. Photo-Lithographer. Washington, D. C.

UNITED STATES PATENT OFFICE.

WOODBURY S. HOW, OF CINCINNATI, OHIO, ASSIGNOR TO THE S. S. WHITE DENTAL MANUFACTURING COMPANY, OF PHILADELPHIA, PA.

BRACKET.

SPECIFICATION forming part of Letters Patent No. 313,937, dated March 17, 1885.

Application filed December 1, 1882. (No model.)

To all whom it may concern:

Be it known that I, WOODBURY S. HOW, of Cincinnati, in the county of Hamilton and State of Ohio, having invented certain new useful Improvements in Brackets, of which the following is a specification.

My invention relates more especially to brackets particularly adapted for the use of dentists; and its object is to suspend or hang the table or tray from the arm or support which carries it, whereby the table or tray is capable of being brought much nearer to the patient when seated in the chair, and consequently to the operator, than is the case with brackets which support the table or tray above the bracket arm or support.

In the usual form of dental brackets the arm or support for the table or tray, being beneath it, prevents the table from being brought close to the patient and to the operator, so as to permit ready use of the table, the table, if brought near to the patient, being liable to be struck by the movements of the patient in the chair, causing delay and annoyance to the operator in his work.

Another object of my invention is, in addition to having a hanging or suspended table, to provide a rack outside the table and above it for holding the implements or tools of the operator.

The subject-matter claimed herein as of my invention will be first fully described, and then particularly recited at the close of the specification.

In the accompanying drawings I have shown my improvements as embodied in the best way now known to me. Some of my said improvements may be used without the others and in brackets differing from those shown.

Figure 1 is a view in elevation of one form of my improved hanging bracket, the suspended table or tray having a vertical adjustment, by reason of pivoted parallel arms while maintained in a horizontal position, and also capable of a longitudinal movement or extension by means of a sliding arm carried by a frame at the outer end of said parallel arms, the bracket being also given a horizontal swinging movement, by reason of a crane-plate to which the inner ends of the parallel arms are pivoted. Fig. 2 is a vertical section through the suspended table and tool-rack, the latter being capable of rotation around its support independently of the table; and Fig. 3 is a similar view showing the tool-rack as fastened to the table so as to rotate therewith. Fig. 4 is a partial vertical section through another modification of my apparatus, the table being shown as suspended from an arm by means of a tubular connection and a cone-journal arrangement at the upper end of said connection. Fig. 5 is a plan view of said last-mentioned suspension devices. Fig. 6 is a longitudinal section through the supporting-arm and table, showing more particularly a receptacle in said arm, to contain oil by which to feed the usual dentist's lamp; and Fig. 7 is a view in perspective of a simple horizontal supporting-arm from which a table or tray is suspended.

A horizontal arm, A, which may be a sliding rod movable endwise in a frame carried at the outer ends of pivoted parallel arms B B, by which a vertical movement is given to said arm A, has suspended from its outer end a table or tray, C.

The device by which the table is hung or suspended may be a tubular rod, or connection, D, for instance, as shown in Figs. 2, 3, and 4, the lower portion of which is enlarged or expanded, so as to constitute a receptacle for oil or other burning-fluid to supply, by means of the usual wick, the burner E of the lamp. In Figs. 2 and 3 the lower end of this tubular rod D has a tapering or conical enlargement, *d*, and the table or tray is provided with a corresponding seat to fit said tapered end and be supported thereby, and also be capable of rotating around it as a pivot. The table or tray is thus given the capability of being rotated horizontally to facilitate the work of the dentist, independently of the arm A, from which it is hung or suspended.

In Fig. 4 the arrangement is somewhat different. In that case a tubular rod is fixed at its lower or larger end to the table or tray, while the upper end is provided with a cone-journal or pivot, *d*, to fit a corresponding seat or socket in the outer end of the arm A, so as to be capable of turning, to enable the table or tray to be rotated horizontally, as before mentioned. The socket in which the said cone-journal is

fitted to turn may be composed of two parts or sections, F F', as clearly shown in Fig. 5.

In Fig. 6 the receptacle or vessel for holding the oil by which the lamp is fed is shown as formed in the arm A, said arm being made hollow in a well-known way. In this instance the table or tray is hung or suspended from the arm A by a solid rod, D, having the cone-journal *d* at its lower end, around which the table is free to be rotated.

In Fig. 7 an arm, A, is shown as projecting from a simple pivoted crane-plate, A', the table or tray being hung or suspended at the outer end of said arm, and being capable of rotation around the suspending or hanging rod D.

Between the suspended table or tray and the arm A, I prefer to mount a rack, G, and either fix it to the table, so as to rotate therewith around the suspension connection or rod D, as shown in Fig. 3, or give it the capability of independent rotation around said rod D, as shown in Fig. 2. This rack may be provided with holes or sockets for the reception of the usual engine burrs or bits used with the ordinary dental engine; or it may be provided with longitudinal grooves or seats or other form of holder for the ordinary hand-tools—such as pluggers, &c.—used by the dentist in his daily operations. This rack may be made in two or more parts, so as to be easily fitted around the rod D, and a portion of it may have the holes or sockets for the burrs or bits of the dental engine, while another portion may have suitable seats or holders for other forms of instruments, such as the hand-tools before mentioned.

The great advantage of my improved suspended or hanging bracket is that it permits the table or tray to be brought close up to the patient while seated in the chair without danger of being disturbed by the patient in his movements, as would be the case if the usual form of bracket were brought correspondingly close.

The arm or support A of the bracket is mounted at its inner end (opposite that which carries the table or tray) upon the wall or other suitable support by means of a pivotal or crane-plate connection, as shown in Figs. 1 and 7, whereby said arm or support is given a horizontally-swinging capacity to enable the suspended table or tray C to be readily brought near to or moved away from the patient or operator.

I do not claim herein the parallel-arm arrangement for giving vertical adjustability to the table or tray, nor the extensible-arm arrangement; nor do I limit myself to any particular construction of table or tray, but one having the usual drawers is preferred; nor need the coned or tapered connection between the table and arm or support therefor be used. Other equivalent connections may be employed. The coned or tapered pivotal connection for the table is, however, preferable, as the table is kept in its adjusted position around such a connection until positively moved. A plain pivotal connection would enable the table to turn too freely unless otherwise provided against.

I claim as my invention—

1. The combination of an arm or support with a table or tray suspended therefrom by means of a central swiveling or turning connection extending from the upper surface of said table or tray, substantially as described.

2. The combination, substantially as hereinbefore set forth, of an arm or support, a table or tray hung or suspended from said support, and a coned or tapered turning-connection between said support and said table.

3. The combination of a support, a connection for a table or tray connected therewith, and a tool-rack fitted to said connection, so as to be capable of being turned relatively to said support, substantially as described.

4. The combination, substantially as hereinbefore set forth, of a support, a table or tray connected to and suspended beneath said support, so as to be capable of being rotated, and a tool-rack fitted to the connection between the support and table, to steady the turning movements of said table, substantially as described.

In testimony whereof I have hereunto subscribed my name this 7th day of September, A. D. 1882.

WOODBURY S. HOW.

Witnesses:
WM. J. PEYTON,
L. B. WIGHT.