No. 871,400. PATENTED NOV. 19, 1907.

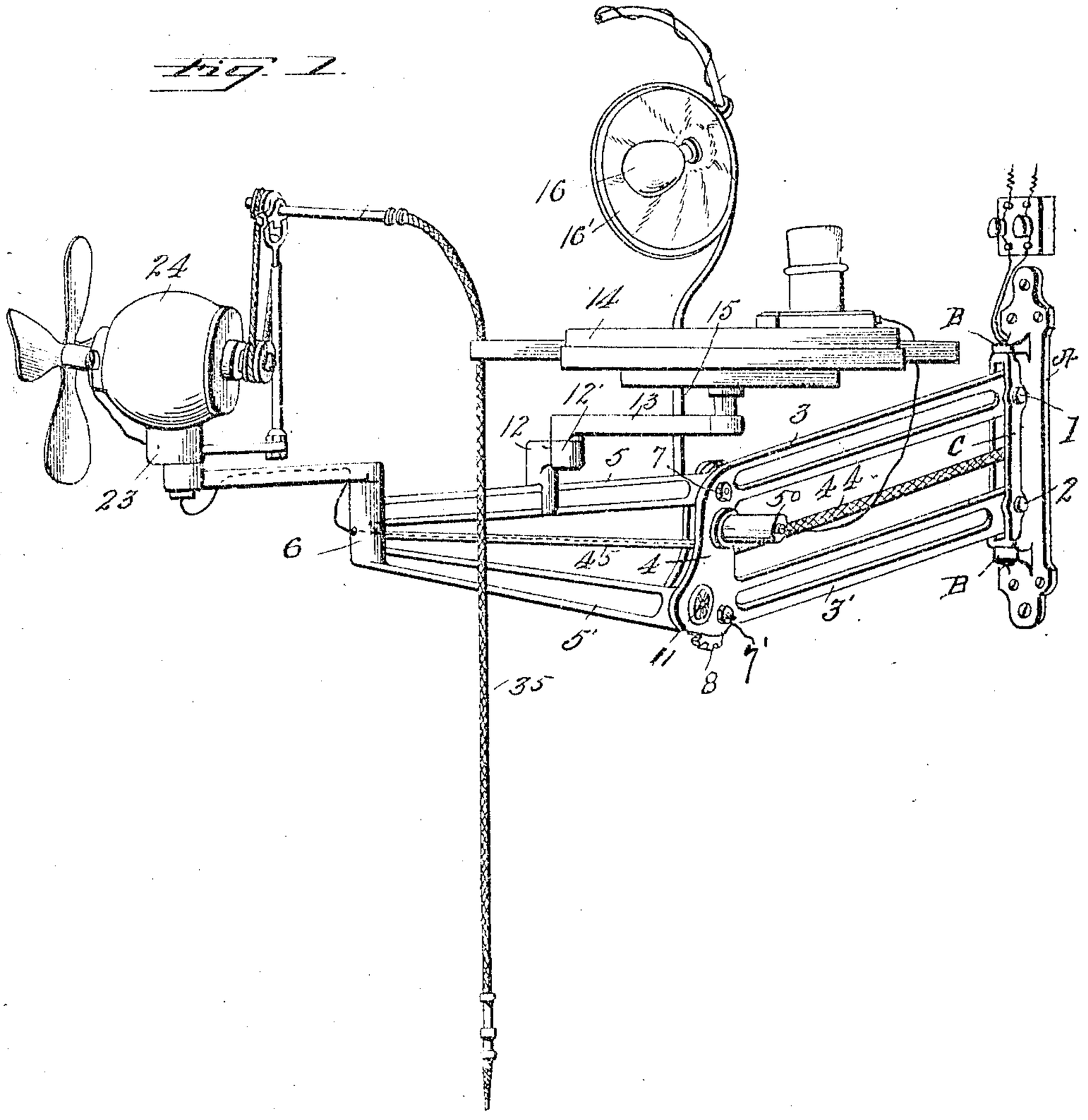
G. HALL.

COMBINATION DENTAL BRACKET.

APPLICATION FILED JAN. 18, 1906.

2 SHEETS—SHEET 1.

Fig. 1.



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2 SHEETS—SHEET 2.

Fig. 2

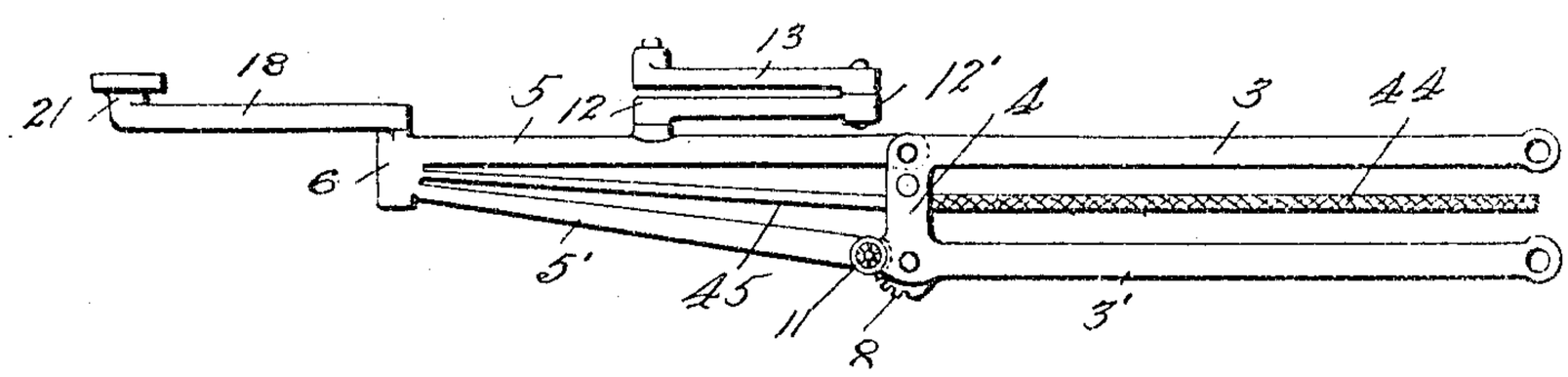


Fig. 3

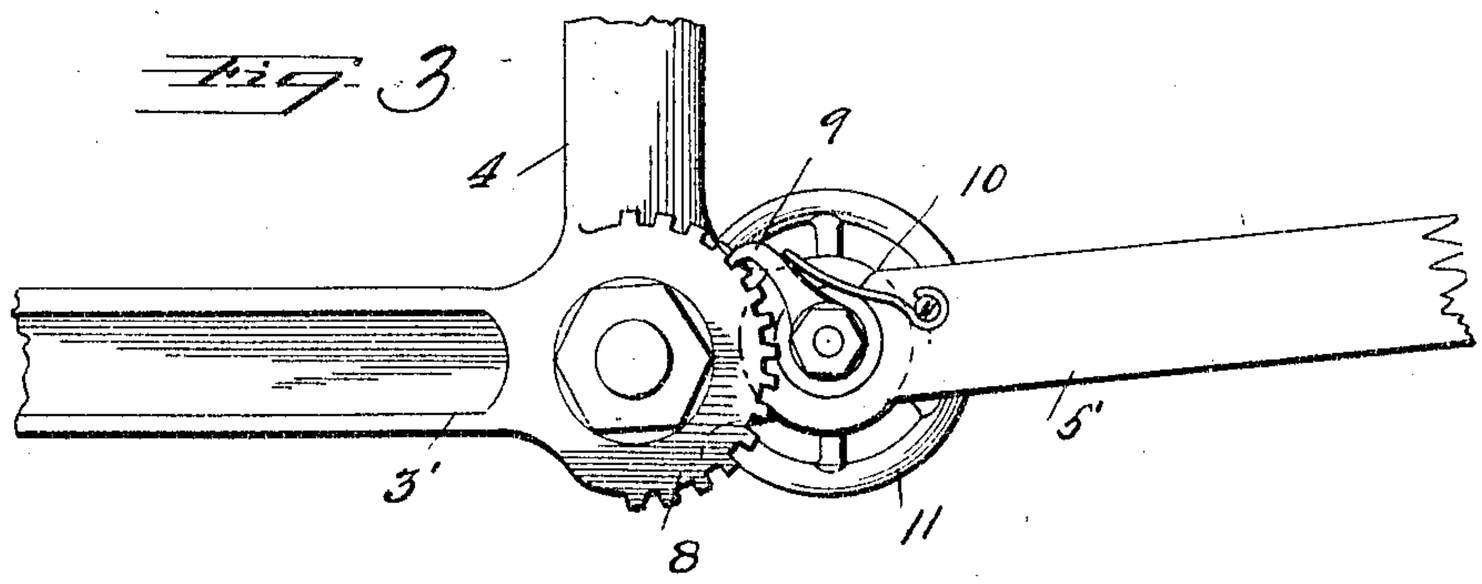
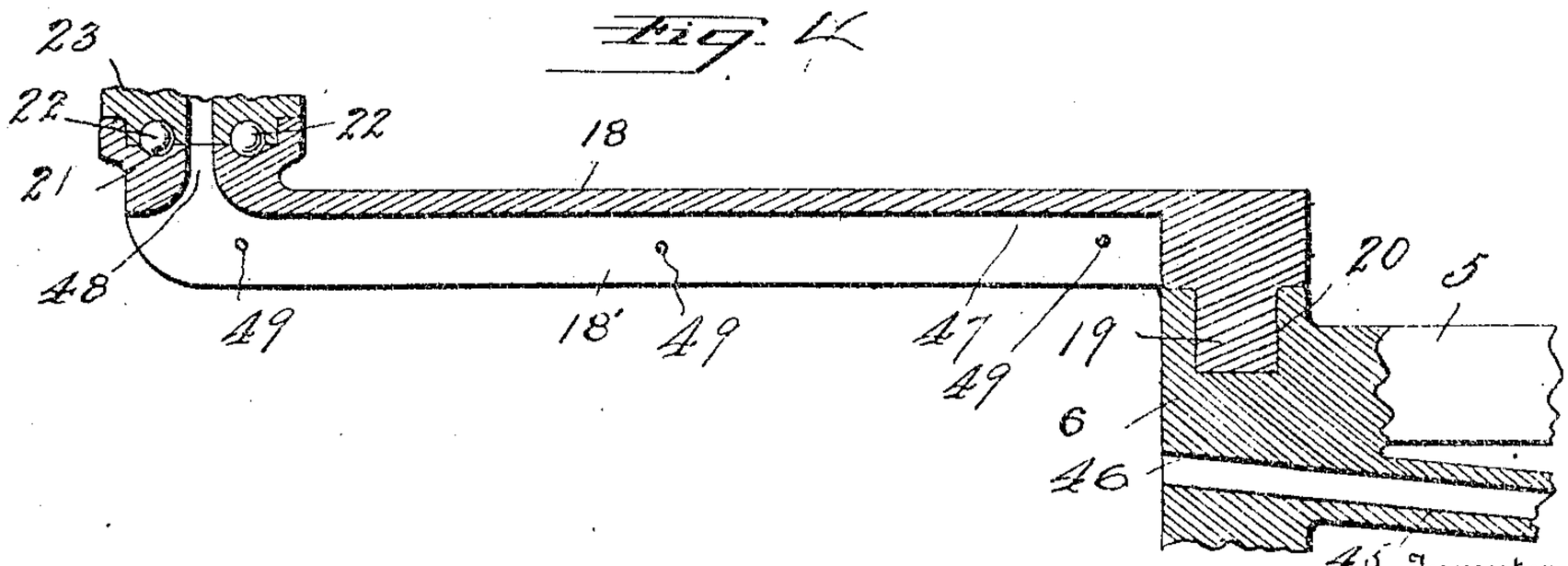


Fig. 4



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UNITED STATES PATENT OFFICE.

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COMBINATION DENTAL BRACKET.

No. 871,400. Specification of Letters Patent. Patented Nov. 19, 1907.

Application filed January 18, 1906. Serial No. 296,608.

To all whom it may concern:

Be it known that I, GEORGE HALL, a citizen of the United States, residing at Lima, in the county of Allen and State of Ohio, have invented certain new and useful Improvements in Combination Dental Brackets, of which the following is a specification.

This invention relates to improvements in combination dental brackets and has for its object to provide an appliance, adapted for use in certain professions, such as dentistry, which will be conveniently located upon a support, as for instance a window frame, or part of a room wall, and which may be adjusted to suitable heights. The device is compact and flexible in construction and simple and efficient in its manipulation, and provides a convenient accessory for those engaged in the above named profession.

The invention embodies a wall bracket of usual construction provided with pivoted extensions, which are adjustable to a variety of positions, and these extensions are adapted to support the appliances required in the practice of the work of dentistry, such as a swinging table, water heater, motor, fan, light attachment, and machine for operating the instruments in practice.

A system of electric wiring is provided throughout the device for furnishing power to the operating parts, heat to the water heater, and light to the lamp attachment.

The invention further consists in certain novel features of construction and combinations and arrangements of parts as hereinafter described, more particularly pointed out in the claims, and as illustrated in the accompanying drawings.

The accompanying drawings illustrate one example of the physical embodiment of the invention, constructed according to the best mode I have so far devised for its practical application.

Referring to the drawings: Figure 1 is a perspective view of the complete invention, shown as supported from a suitable position. Fig. 2 is a side elevation of the operating parts of the bracket. Fig. 3 is a broken detail view, enlarged, as seen from the rear side of Fig. 2, showing the adjustable connecting means of the parts comprising the bracket. Fig. 4 is a sectional view of extreme outer extension of the bracket, or the motor supporting arm, showing the provision for carrying the concealed electric wires.

The base or support A of the bracket is secured by suitable means, such as screws, at the proper height, upon a solid support, and this base piece is provided with lugs B, B, in which the vertical member C is pivoted, thus providing a laterally swinging movement of the member C, and also the entire apparatus supported thereon. The swinging member C is provided with two bolts 1, 2, which support the frame arms 3 3′. These arms are formed at their outer ends with a box 4, which box forms the pivotal support for the bracket arms 5, 5′, which are formed at their converging ends with an integral head 6, the bracket arms being pivoted thereto at 7, 7′ respectively.

As seen more clearly in Fig. 3, the frame bar 3′ pivotally connected to the frame or bracket 5—5′ is provided with a ratchet head 8 to which the bracket arm 5′ is adjustably held by the pawl 9, which is held to position by a spring 10, said pawl being fast on the axle of the wheel 11 provided for conveniently turning the pawl out of engagement with the ratchet when it is desired to adjust the height of the bracket arms 5 and 5′, thus providing for a vertical adjustment of the said arms. A head 12, is formed preferably integral with the arm 5′ and pivotally supports, through the medium of the seated head 12′, an arm 13 on which arm 13, the table 14 is in turn pivotally supported, as usual. An electric light 16, may be supported on the boxing 4, on the rod 15, if so desired, and this light may be provided with the usual reflector 16′. The table may also serve as a support for the water heater 17 and any other such articles as necessary.

As seen more clearly in Fig. 4, the extension arm 18 is formed with side flanges 18′ providing an open construction, for a purpose to be described, and said arm is formed with a depending lug or pintle 19, adapted to be seated in a socket 20 of the head 6 wherein it is free to turn. A recessed head 21 is formed at the extreme end of the extension 18 and is adapted to receive the balls 22 to form a ball bearing connection between head 21 and the base 23 of an electric motor 24. As shown in Fig. 1, this motor may be used for running a fan or serve the function of driving the dental engine. I do not claim this motor and its driving connections as part of my invention, so it need not be further described here.

Throughout the device I carry electric wires to furnish power light and heat, and these wires are carried through a flexible tube 44 between the frame bars 3 and 3′, through the box 4, and the power conducting wire is carried through the metal tube 45 and out through the opening 46 in the head 6, up into and through the conduit 47 formed in the extension arm 18, through the aperture 48 of the head 21 and so to the motor. Rods or cross pins 49 may be introduced through the conduit 47 to support the wire if desired. The lighting wire is carried from the box 4 through the hollow standard 15 and out at its upper end, and from thence connected with the light appliance. The heating wire is connected by an attachment 50 to the box 4 and receives current from the wires within the flexible tube 44.

It will be observed from the above description taken with the drawings that the bracket arms 5 5′ are vertically adjustable; the motor carrying extension 18 is movable in a horizontal plane to the desired position for operation; the pulley head is provided with a spring support which insures a uniform and regular connection by cable between the wheels 36 and 38 and obviates vibration between the parts of the machine.

Having thus fully described my invention, what I claim as new and desire to secure by Letters Patent is:

1. A dental bracket comprising a base, a vertical hollow frame member pivoted thereto capable of lateral swinging movement, horizontal parallel frame arms having their ends engaged in the hollow vertical member and bolts passing through said vertical member to secure the arms therein, the outer ends of the frame arms terminating in a hollow box, bracket arms pivoted in said hollow box, the converging ends of the bracket arms terminating in a supporting head, the lowermost parallel frame bar provided at its outer end with a ratchet head, a wheel pivoted in the lowermost bracket arm, a pawl on the axle of said wheel to engage the ratchet head, and a spring to hold the pawl in proper engagement therewith.

2. A dental bracket comprising a base, a vertical frame member pivoted thereto, horizontal frame arms having their ends engaged in the vertical member, the outer ends of the frame arms terminating in a hollow box, bracket arms pivoted in said hollow box, the converging ends of the bracket arms terminating in a supporting head, and pawl and ratchet mechanism on the frame bars and bracket arms to hold the members in adjustable relation.

3. A dental bracket comprising a base, a vertical frame member pivoted thereto, horizontal frame arms having their ends engaged in the vertical member, the outer ends of the frame arms terminating in a hollow box, bracket arms pivoted in said hollow box, the converging ends of the bracket arms terminating in a supporting head and a motor support arranged on said head, pawl and ratchet mechanism on the frame bars and bracket arms to hold the members in adjustable relation, and a table pivotally mounted upon the bracket arms.

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

GEORGE HALL.

Witnesses:
TOBIAS H. FOLTZ,
JACOB CUSTER.