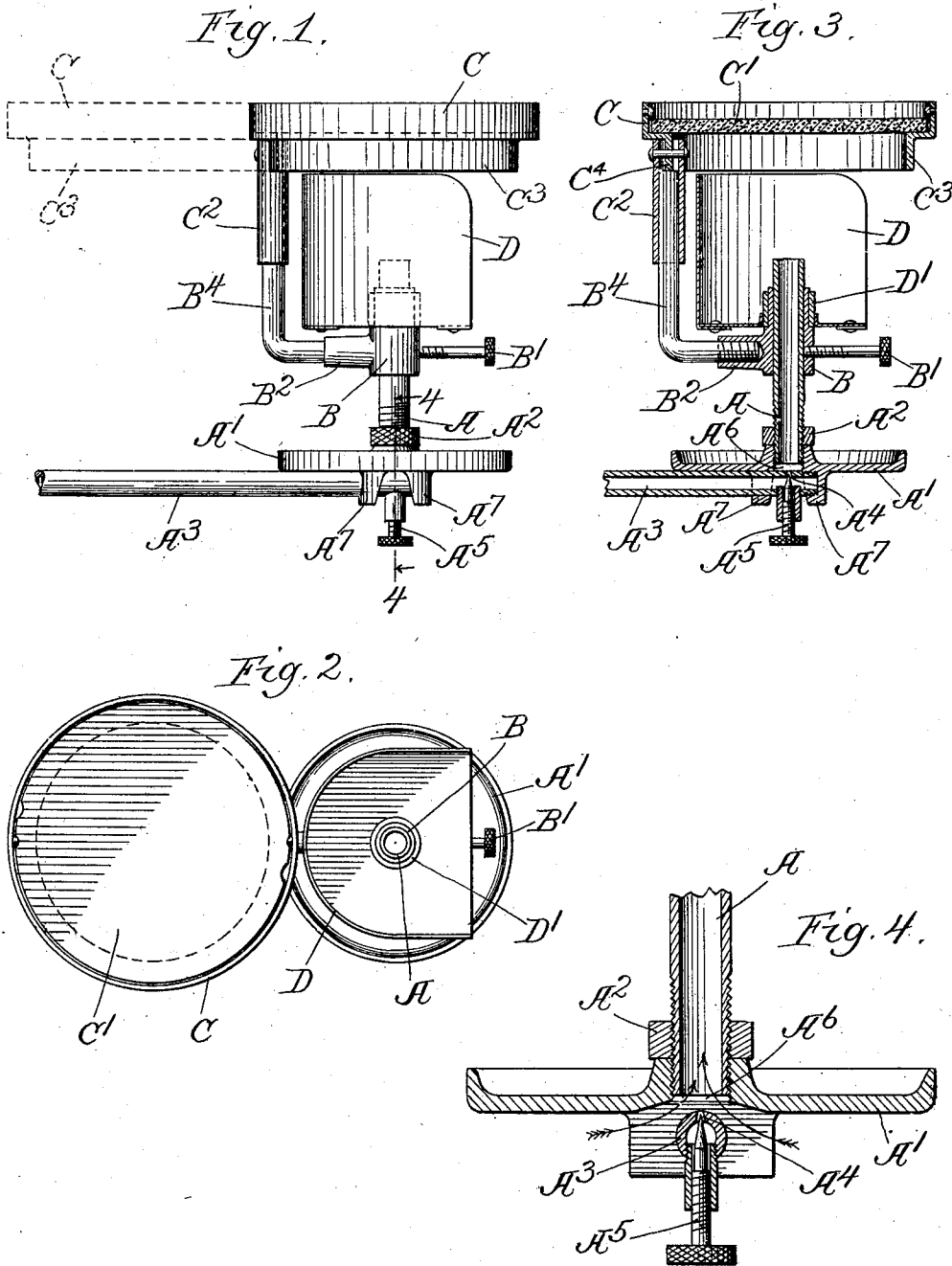


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HEATING DEVICE.

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979,043.

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UNITED STATES PATENT OFFICE.

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HEATING DEVICE.

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Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, THEODORE SMITH, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented a certain new and useful Improvement in Heating Devices, of which the following is a specification.

My invention relates to improvements in heating devices, and attachments therefor, and has for its object to provide a new and improved device of this description.

My invention is illustrated in the accompanying drawings, wherein—

Figure 1 is a view of a device and attachments embodying my invention; Fig. 2 is a plan view of the device shown in Fig. 1 with the annealing disk moved out of the way; Fig. 3 is a vertical section through the device shown in Fig. 1; Fig. 4 is a sectional view taken on line 4—4 of Fig. 1.

Like letters refer to like parts throughout the several figures.

I have illustrated in the drawings a heating device which may be used for various purposes, and which is particularly adapted to be used by dentists. In the device illustrated, the stem or tube A of the burner is adjustably mounted in a perforated holding disk, A¹, and a lock nut, A², is associated with said tube and adapted to lock it against movement. A pipe, A³, leads to the source of gas supply and projects beneath the tube A substantially parallel to the disk, said pipe being provided with an opening A⁴ located just below the tube. The disk A¹ is provided with two separated projections, A⁷, which act as supports for the tube A³. A needle valve, A⁵, is located opposite the opening A⁴ and is screw threaded into a portion of the pipe A³ so that it can be moved to adjust the size of the opening A⁴ in any degree. Between the pipe A³ and the tube A and the projections A⁷ are air admission openings A⁶ through which air is admitted to the burner; the amount of air passing to the burner is regulated by loosening the lock nut A² and adjusting the tube A. If the tube A is lowered the air space will be decreased, and the quantity of air passing to the burner reduced, while, on the other hand, if the tube is raised the air space will be increased. It will be seen that any desired adjustment of the air space may thus be secured.

Associated with the tube A of the burner

is a supporting device adapted to support certain attachments for the burner. This supporting device comprises a sleeve, B, adapted to be slipped over the tube and provided with a set screw, B¹, by means of which it may be fastened in any desired position along the length of the tube. The sleeve B is provided with a hollow threaded projecting part B² into which is screw threaded the end of an angular piece B⁴ which extends outwardly and then upwardly.

Rotatably mounted upon the piece B⁴ is an annealing device comprising a frame C and an annealing disk C¹. A hollow part or sleeve C² is attached to the annealing device and is adapted to be received upon the end of the angular piece B⁴ said sleeve provided with an obstruction which engages the end of the supporting device and limits its downward movement. The annealing device is preferably provided with a downwardly projecting flange C³ to hold in the heat. As shown in the drawing the end of the supporting device B⁴ is engaged by the obstruction C¹ (see Fig. 3). The annealing device may be rotated about the part B⁴ and it may be raised and lowered by means of the set screw B¹.

Associated with the tube A is a wind shield, D, which is open at one side, as shown in Fig. 2. The bottom of this wind shield is provided with an opening into which fits a short sleeve, D¹, said sleeve adapted to fit over the end of the sleeve B of the supporting device, said sleeve being provided with shoulders upon which the wind shield is supported. This wind shield may be rotated so as to have the open part in any desired position, and it may be raised and lowered by means of the set screw B¹. It will further be seen that the sleeve B may be rotated about the tube A for adjustment by loosening the set screw B¹. The lock nut A² prevents the movement of the part A during the manipulation of the supporting device for the annealer and wind shield. By means of this construction I am enabled to produce a neat and compact device wherein the disk or laterally projecting part on the angular piece B⁴ is carried, not by an external device for this purpose, but by the tube through which the heating material is conducted to the igniting point.

I claim:—

1. The combination with a burner of a

wind shield, adapted to shield the burner, a supporting frame mounted above said burner, a supporting device adjustably mounted on the burner to which said shield and frame are connected so that they can both be adjusted with relation to the burner without changing their relative position, both said frame and said shield rotatably carried by said supporting device the supporting frame and wind shield having separate connections with said supporting device.

2. A burner comprising a gas tube, an adjustable supporting device surrounding said tube comprising a sleeve having an opening through which the tube passes, said sleeve adapted to be moved to various positions on the tube, and means for fastening the sleeve to the tube at any desired point, and an angular piece projecting from said sleeve, an annealing device removably and rotatably mounted upon said angular projecting part and adapted to be moved to one side to leave the space above the burner open.

3. A burner comprising a gas tube, an adjustable supporting device surrounding said tube comprising a sleeve having an opening through which the tube passes, said sleeve adapted to be moved to various positions on the tube, and means for fastening the sleeve to the tube at any desired point, and an angular piece projecting from said sleeve, an annealing device removably and rotatably mounted upon said angular projecting part, a wind shield rotatably mounted upon said supporting sleeve and located between the lower part of the angular projecting part and the annealing device.

4. A burner comprising a tube, a pipe beneath the tube leading to the source of gas supply and provided with a valve controlled opening beneath the tube, an air space between said tube and pipe adapted to be adjusted by adjusting the position of the tube, a lock nut on said tube for holding it in position, an adjustable supporting device on

the tube comprising a sleeve with a right-angled projecting part connected therewith, and an annealing device mounted upon said angular projecting part.

5. A heating device comprising a tube through which the material is conducted to the igniting point, a supporting device supported upon said tube, a laterally projecting part pivotally mounted upon said supporting device and adapted to be moved into position over said tube or out of the way at one side of said tube, said laterally projecting part provided with a hollow sleeve which fits down over the end of the supporting device, said sleeve provided with an obstruction which engages the end of the supporting device and limits its downward movement.

6. A heating device comprising a tube through which the heating material is conducted to the igniting point, a sleeve surrounding said tube, an angular piece projecting from said sleeve, a laterally projecting part rotatably mounted upon said angular piece and projecting over the tube, said laterally projecting part adapted to be moved to one side so as to leave the space above the tube free, said laterally projecting part provided with a hollow sleeve which fits down over the end of the supporting device, said sleeve provided with an obstruction which engages the end of the supporting device and limits its downward movement.

7. A heating device comprising a tube through which the material is conducted to the igniting point, a supporting device carried by said tube and adjustable longitudinally therealong, a laterally projecting part movably mounted upon said supporting device and adapted to be moved in a plane at right angles to said tube into and out of line with said burner.

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