UNITED STATES PATENT OFFICE.

FRANK BARLOW SCHUYLER, OF BERKELEY, CALIFORNIA.

GAS HEATING-FURNACE.

1,204,703.


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To all whom it may concern:

Be it known that I, FRANK BARLOW SCHUYLER, residing at Berkeley, county of Alameda, State of California, have invented certain new and useful Improvements in Gas Heating-Furnaces, whereof the following is a specification.

My invention relates to the art of heating for tempering various articles but for the purpose of this application I shall refer same as particularly applicable to wagon springs or the like, and has for its object to provide in this class of devices, new and useful means for giving springs of either straight or curved forms the required degree of heat without burning them.

With this object in view, my invention consists in a new and useful gas heating furnace, having a frame made of suitable material, as iron, with legs suitably stayed and braced; a chamber supported on said legs in which are means for holding the springs and burners for directing heat against the surfaces of the springs; a separate compartment in said chamber for warming springs; means for introducing mixed air and gas into said burners including flexible and adjustable fixable pipes in combination with deflectable parts in said chamber for accommodating curved springs.

It also consists in the novel parts, combinations and arrangements set forth in the following description and as will be particularly pointed out in the appended claims, and illustrated in the accompanying two sheets of drawing, of which—

Figure 1, is a front elevation, partly in perspective and partly broken away of my new and improved gas heating furnace; Fig. 2, is an end elevation partly in section; Fig. 3, is a top plan view with a portion of the cover removed; Fig. 4, is a detail view enlarged partly in section of the burner on one side of the spring, showing also the spring, holding means and means to regulate the space between the spring and the burner; Fig. 5, is also a detailed view of my adjustable burner fixture, and Fig. 6, is also a detail plan view of part of the burners and a straight spring in position as it appears in the furnace for actual practice, also showing in dotted line the position of the burners when the spring is of the curved form. The same symbol of reference marks the same part in whichever view said part may appear.

Referring now to the drawing, 1 is a frame of suitable material preferably of angle iron having legs 2 braced as by the braces 3. On said frame a chamber 4 is supported having vent holes 5, air inlets 6, and a door 7 for inserting and withdrawing the springs. The chamber is divided into two compartments, A and B, one above the other, the former for heating the springs, the latter for merely warming them. Supports 8 for sustaining springs to be warmed are provided.

Within the compartment A, burners 9, 10, and 11 are arranged on both sides of the spring, the holes in which are staggered as at a, d, in Fig. 4, in which one of said holes is shown in full lines and one in dotted lines, thereby showing that they are not in the same vertical plane. There are also devices for holding the springs in position which consist in pins 12 extending through the floor of the furnace adapted to secure the lower side edge of the spring 13, and adjustable bolts 14 supported on the burners engaging the faces of the spring for holding the burner at proper distance from the spring to be heated. Connected with said burners are devices for introducing mixed air and gas, consisting of pipe 15 for admitting air, the pipe 16 for admitting gas, the mixing chamber 17, and the flexible pipes 18.

The flexible pipes are adjustably supported on the square rod 19 by the bracket 20, to which they are connected by the spring clips 21, the bracket being fixable in position on the rod by the screw 22. The rod 19 is secured to a contiguous part of the frame of the apparatus. The utility of the flexible pipes appears when it is desired to heat curved springs. In such case the burners are deflected toward the position shown in dotted lines, Fig. 6, to accommodate the curve in the spring 13.

Having thus described my invention and believing I have produced useful and novel improvements in the art to which it pertains let it be understood that I do not wish to be limited to the exact construction and arrangement of the several parts composing the same as many changes can be made without departing from the spirit thereof, but

What I claim and desire to secure by United States Letters Patent is:

1. In a device for heating a vehicle spring, removable pins for holding said spring in
an adjusted position, a burner for heating said spring, bolts adjustably mounted on said burner engaging said spring and adapted to regulate the space therebetween.

2. In a heating device of the character described, removable pins for holding material to be heated, a vertically and horizontally adjustable burner provided with bolts adjustably secured thereon and projecting therefrom engaging said material and adapted to regulate uniformly the space between said material and the burner.

3. In a device for heating vehicle springs, a base, a chamber mounted on said base, means in said chamber for holding said springs in an adjusted position, a burner for heating said springs and adjustable means on said burner engaging said springs adapted to regulate the space between said springs and burner.

4. In a device of the character described, a furnace comprising a frame, a two vertically disposed compartment chamber supported thereby, one of said compartments provided with removable bars adapted to support springs for preliminarily warming and the other adapted for heating the springs, said latter compartment provided with adjustable burners arranged to project heat on both sides of said springs, adjustable means for supporting said springs on their side edges, and means for introducing mixed air and gas to said burners.

5. A gas heating device comprising a frame, a chamber supported thereby having a lower and an upper vertically disposed compartment, removable means in said upper compartment for supporting springs to be warmed, and adjustable burners in the lower compartment for heating said springs, and means for introducing mixed air and gas into said burners.

In testimony that I claim the foregoing I have hereto set my hand in the presence of witnesses, this fifth day of May, 1913.

FRANK BARLOW SCHUYLER.

Witnesses:
E. M. EDMONDS,
D. B. RICHARDS.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D.C."