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3,394,697

FIREPLACE HEATING SYSTEM

Filed June 12, 1967

Fig. 1

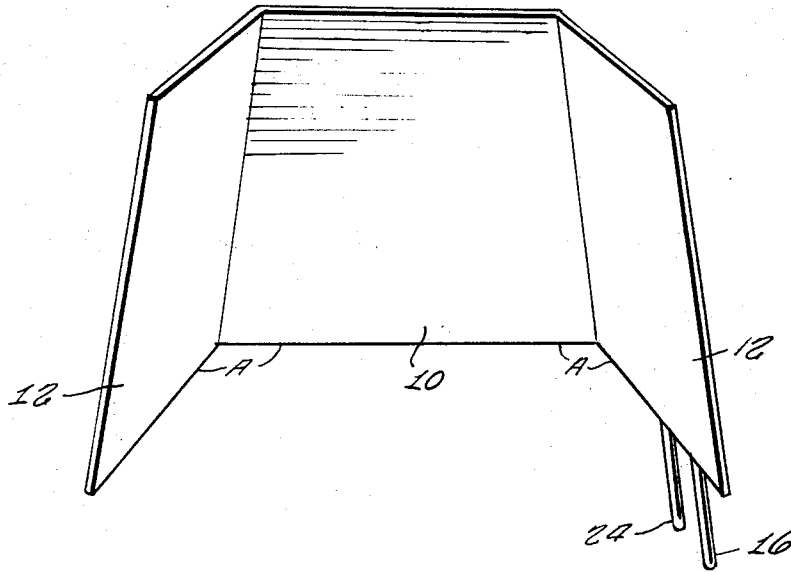
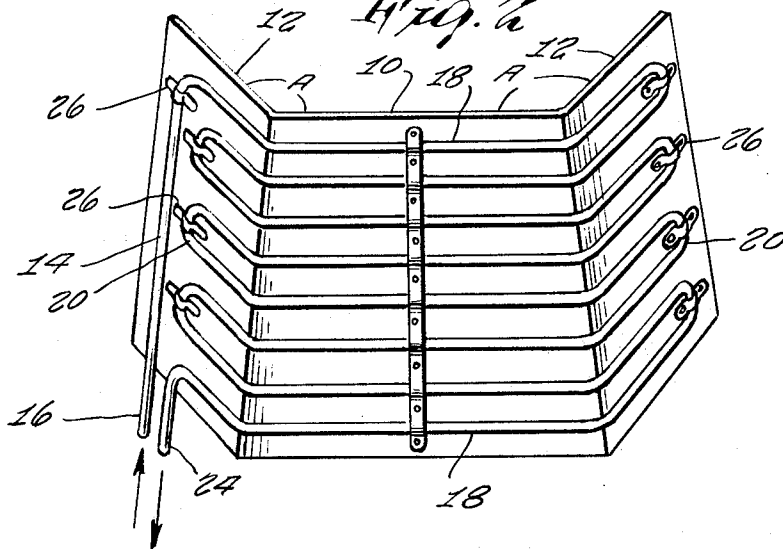


Fig. 2



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FIREPLACE HEATING SYSTEM
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ABSTRACT OF THE DISCLOSURE

A device functioning as an auxiliary boiler for any hydronic heating system which utilizes heat from a fire in a fireplace.

Summary of the invention

My device comprises a fire liner adapted to be free standing which has a central vertical section and two side vertical sections, each side vertical section being secured to the central section at an angle. Hollow copper tubing in the form of interconnected horizontal coils extend back and forth across all of the sections and is secured thereto. The tubing is provided with inlet and outlet connections whereby water can be pumped and circulate therethrough.

Thus when the screen is placed adjacent a fireplace with a fire burning therein, the water circulating through the coils will be heated and in turn used for heating other areas or regions. Means can be provided for permitting the water to circulate through the coils only when heat from a fire reaches them.

Brief description of the drawings

In the drawings:

FIGURE 1 is a perspective front view of my invention; and

FIGURE 2 is a perspective rear view thereof.

Detailed description of preferred embodiment

Referring now to FIGURES 1 and 2, a sheet iron fire screen has a solid central vertical section 10 with two side vertical sections 12 secured thereto at angles A. The front surfaces of these sections are smooth and flat and free of any tubing.

The opposite surface however carries a single length of hollow tubing which rises vertically along one side section as shown at 14 from one (inlet) end 16; then is moved back and forth in successively shorter horizontal lengths 18 with coiled or looped ends 20 which are vertically displaced one below the other and finally falls vertically as shown at 22 to the other (outlet) end 24, the two vertical sections being disposed adjacent each other.

The coils are held in position by separate clips 26

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secured to the various side sections and the horizontal lengths are held in place by a vertical strap 28 having curved portions overlying and in contact with these lengths.

5 The function of my invention is to provide a supplementary boiler for any hydronic heating system which can be used in existing fireplaces or as a form for new construction of fireplaces.

10 By placing an aquastat on the boiler tube system it will control two "zone type" valves. One valve will allow water to circulate through the tubing only when it is heated by fire in a fireplace; the other valve will bypass the tubing when no fire is present.

15 The novel features and the operation of this device will be apparent from the foregoing description. While the device has been shown and the structure described in detail, it is obvious that this is not to be considered limited to the exact form disclosed, and that changes may be made therein within the scope and the spirit of the invention.

20 Having thus set forth and disclosed the nature of this invention, what is claimed is:

1. A device adapted to receive heat from a fire, said device comprising:

25 (a) a fire screen adapted to be free standing and including a central vertical section and two side vertical sections, each side vertical section being secured to the central section at an angle; and

30 (b) hollow copper tubing in the form of interconnected horizontal coils extending back and forth across all of said sections and secured thereto, said tubing having vertical inlet and outlet connections extending downward along one of the side sections.

2. A device as set forth in claim 1 further including means to circulate water through said tubing.

35 3. A device as set forth in claim 2 further including a valve secured to said tubing to prevent said water from circulating when no heat reaches said coils, said valve permitting said water to circulate when said coils are heated.

40 4. A device as set forth in claim 3 further including clips carried by said side pieces for holding the loops of said coils in place.

45 5. A device as set forth in claim 4 further including strap means to secure said coils to said central section.

References Cited

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FREDERICK KETTERER, Primary Examiner.