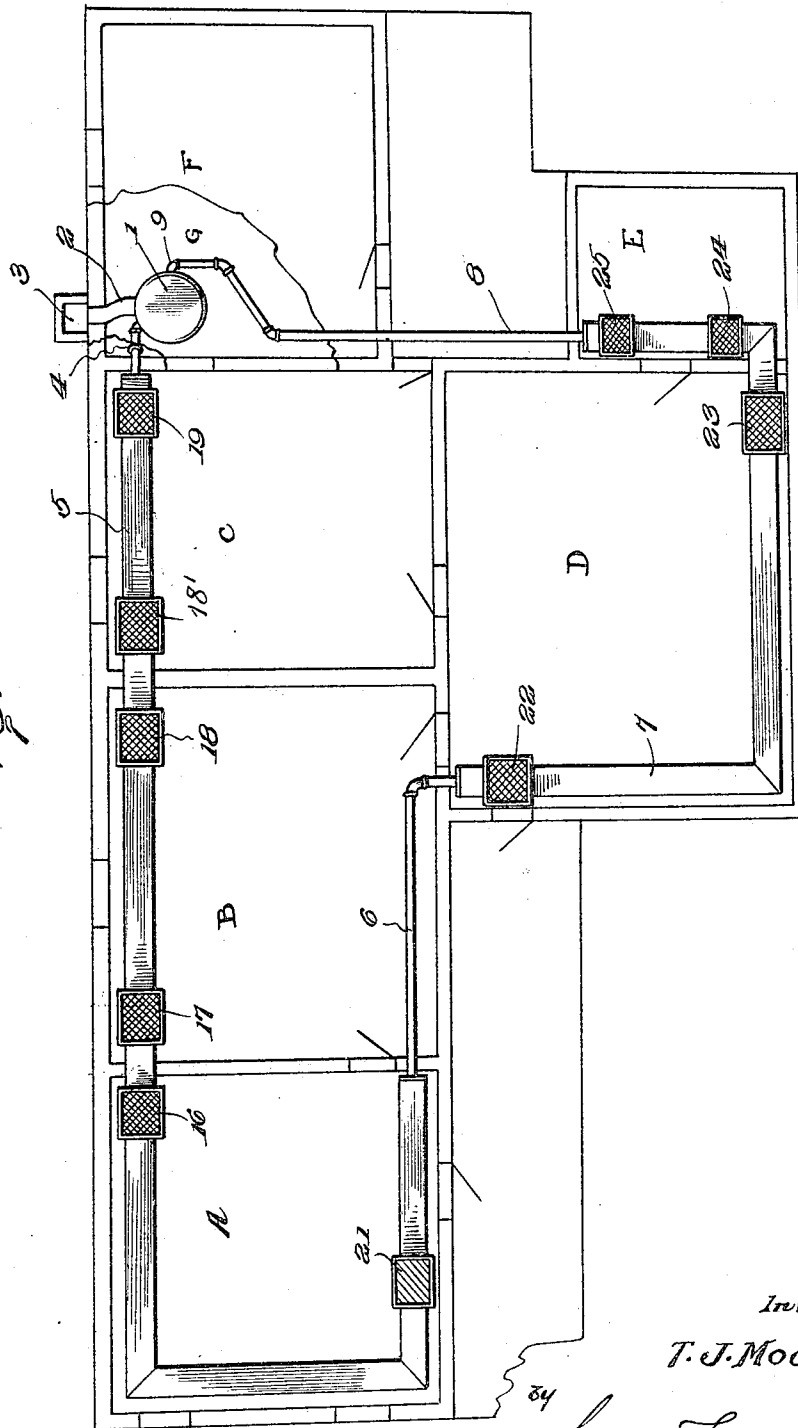


1,410,706.

Patented Mar. 28, 1922.
2 SHEETS—SHEET 1.

Fig. 1.



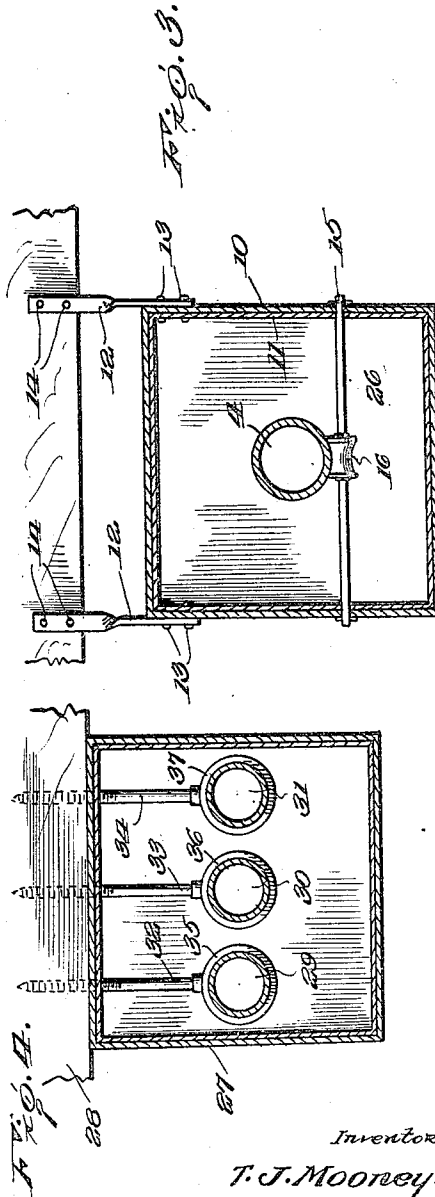
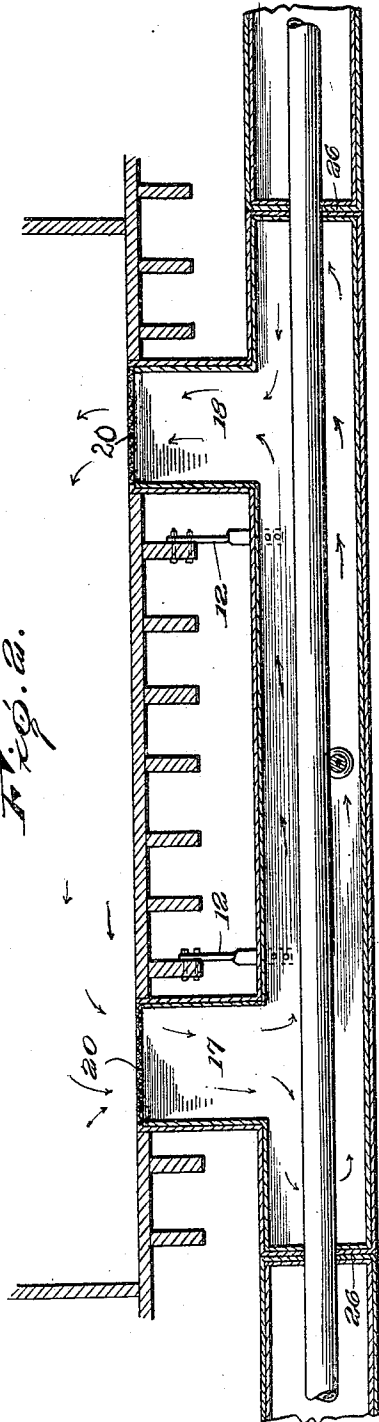
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1,410,706.

Patented Mar. 28, 1922.
2 SHEETS—SHEET 2.



Inventor.

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UNITED STATES PATENT OFFICE.

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HEATING SYSTEM.

1,410,706.

Specification of Letters Patent.

Patented Mar. 28, 1922.

Application filed January 30, 1920. Serial No. 355,253.

To all whom it may concern:

Be it known that I, TIMOTHY J. MOONEY, a citizen of the United States, residing at Nashville, in the county of Davidson and State of Tennessee, have invented certain new and useful Improvements in Heating Systems, of which the following is a specification.

This invention relates to a heating system which is especially convenient for installation in one story buildings such as bungalows, small school houses and the like for heating the same by steam, although it is equally adaptable for the heating of buildings of two or more stories.

The object of the invention is to provide a steam heating system in which radiators are dispensed with, thereby reducing the cost of installation and equipment, and in which heating is effected by utilizing one or more lengths of pipe or conduit for distributing the heat as conditions may require.

Another object of the invention is the provision of a system which gives direct contact of the air to be heated with the heating element without having exposed heating surfaces and also this construction provides for maintaining a definite path of circulation of the heated air throughout the room.

By reason of the fact that the piping is used as the heating means it is possible to employ a boiler of less capacity than is required where radiators are used due to the fact that the same amount of radiating surface is supplied as is present in the use of radiators in which the heating effect of the piping is a total loss.

In the drawings:

Figure 1 is a plan view of a single story building having the heating system of the present invention incorporated therein.

Figure 2 is a fragmentary longitudinal sectional view showing the principle of the heating system.

Figure 3 is a transverse section through one of the heating conduits, and

Figure 4 is a transverse section through a modified form of heating conduit.

In detail:

The invention as shown in Figure 1 is applied to a one story building having

rooms A, B, C, D, E and F. The partitions between the rooms are indicated but for the purpose of showing the invention more clearly it will be considered that the floors of the rooms are removed. The boiler or heater 1 is preferably located at any point where a flue connection can be arranged as for instance in the cellar as indicated at G and has a flue 2 connecting with the chimney 3 on the exterior of the house. Leading from the boiler 1 is a heating main 4 which enters a conduit 5 and continues along parallel with the side walls of the house and may emerge again from the conduit at 6 and enter another conduit 7 paralleling the walls of the rooms D and E from which latter conduit it again emerges at 8 and returns to the boiler 1 as indicated at 9 forming a complete heating circuit. The exposed lengths of pipe 6 and 8 may be encased in any suitable heat insulating covering so that no heat is lost. The conduits 5 and 7 are, in reality rectangular box-like members as shown in Fig. 3 comprising the exterior wall 10 having an interior heat insulating lining 11 suitably secured in place by adhesive means or the like. The conduit is supported from the sills of the floor as shown in Figs. 2 and 3 by means of suitable supports 12 attached to the conduit and to the sills as indicated at 13 and 14 respectively. Extending transversely of the conduit at suitable spaced points are rods 15 and mounted upon said rods are spool-like rolls 16 supporting the steam main 4. Leading from the conduit into the rooms A, B and C respectively, are inlets 17, 18 and 19. The conduit is further provided with outlets 16, 18 and 19 for said rooms. Other outlets and inlets 22, 23, 24 and 25 are also provided, there being an inlet and an outlet for each room and preferably, said inlets and outlets are closed at their upper portions by registers of any suitable type as indicated at 20. Disposed in the conduits 5 and 7, in order to separate the inlet and outlet of each room from the inlets and outlets of the other rooms, are partition members 26, so that, as shown in Figure 2, the circulation of heated air in each room will be in at one register and out at the other, the air thus circulating being in intimate contact with the steam main during

its course through its particular length of the conduit. In this manner a simple but effective system of heating rooms is provided without the necessity of the usual
5 radiators.

In the modification shown in Figure 4, the conduit 27 directly abuts the sills 28 and may contain several pipe lengths 29, 30 and 31 supported by the dependent hang-
10 ers 32, 33 and 34 having rings 35, 36 and 37 respectively for carrying the pipe lengths, thus doing away with the supports 12 and the members 15 and 16 of the previously described construction.

15 It is also to be understood that even though only one pipe length is used as indicated in Figures 1 to 3, the conduit may, nevertheless, be mounted directly against

the sills as indicated in Figure 4, or in any other suitable manner.

20

I claim:

A heating system for buildings including a heating main forming a heating circuit passing adjacent a plurality of rooms in said building, and a conduit surrounding
25 said main spaced therefrom and having partitions therein dividing the conduit into sections closed with respect to each other and each section having an inlet and an outlet for one of said rooms whereby each room
30 will have an individual air circulation through a portion of the conduit out of communication with the remainder thereof.

In testimony whereof I affix my signature.

TIMOTHY J. MOONEY. [L. s.]