No. 648,651. Patented May 1, 1900.

E. B. BORLAND.

AIR MOISTENER FOR OPEN FIRES.

(Application filed Dec. 23, 1899.)

(No Model.)

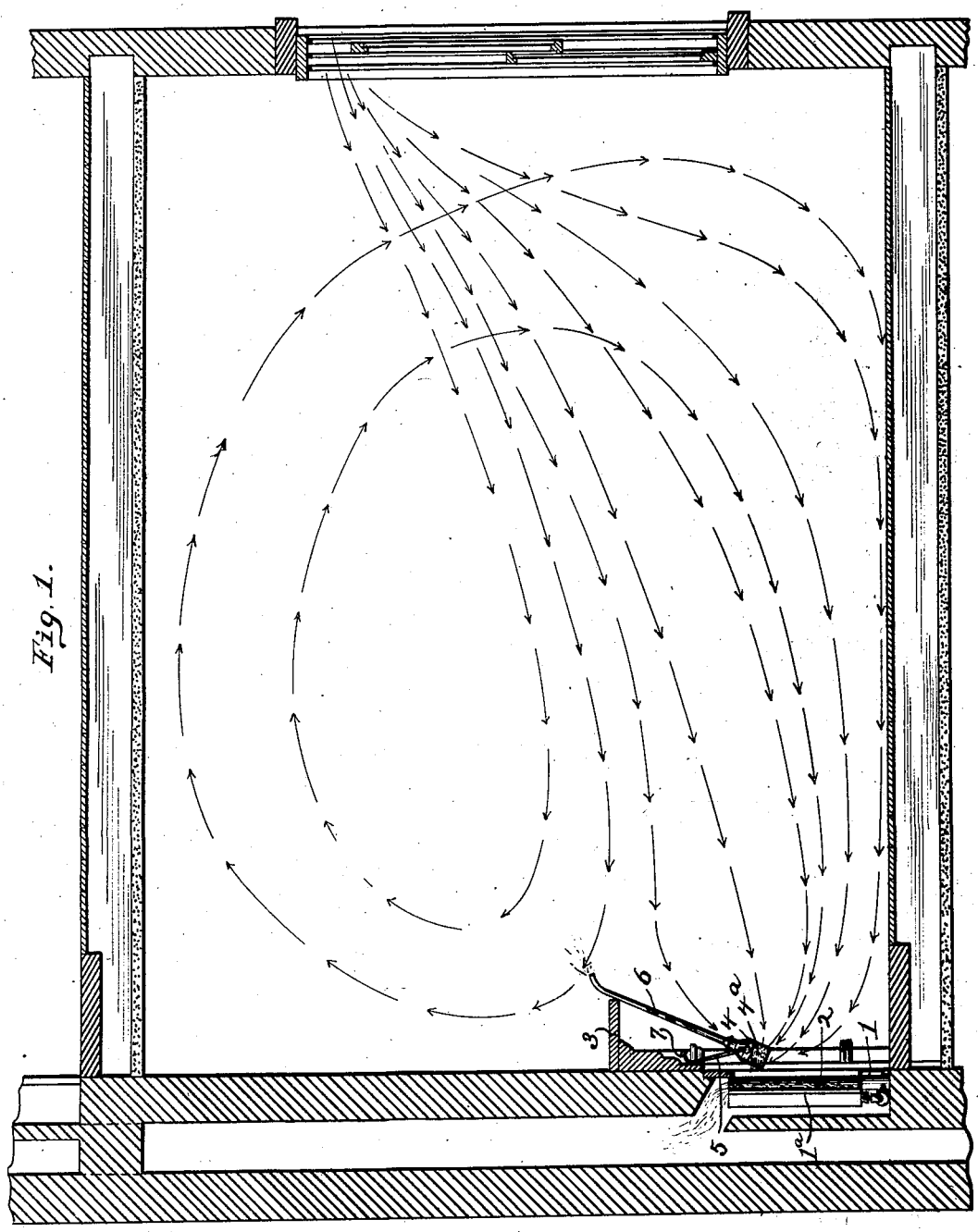

Fig. 1.

Witnesses:
Walter Samaress
Harry J. Wiseman

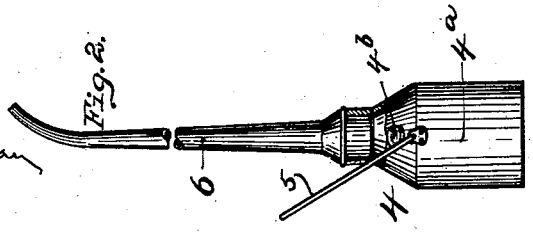

Fig. 2.

Inventor:
Elmer B. Borland
By Kay & Totten
Attorneys

UNITED STATES PATENT OFFICE.

ELMER B. BORLAND, OF PITTSBURG, PENNSYLVANIA.

AIR-MOISTENER FOR OPEN FIRES.

SPECIFICATION forming part of Letters Patent No. 648,651, dated May 1, 1900.

Application filed December 23, 1899. Serial No. 741,442. (No model.)

To all whom it may concern:

Be it known that I, ELMER B. BORLAND, a resident of Pittsburg, in the county of Allegheny and State of Pennsylvania, have invented a new and useful Improvement in Air-Moisteners for Open Fires; and I do hereby declare the following to be a full, clear, and exact description thereof.

My invention relates to means for moistening the atmosphere of rooms heated by open fires, and particularly to the atmosphere of rooms heated by open gas-fires, although not necessarily limited to such specific use.

The object of my invention is to provide a means for the purpose above indicated which shall be simple and inexpensive and which shall be more effective than devices heretofore proposed and used for this purpose. It has been heretofore proposed to moisten the air of rooms heated by open fires by placing vessels containing water in proximity to such fires; but in all such cases, so far as I am aware, the openings through which the generated steam issues into the room have been located below the fireplace mantel-shelves. When the devices are so located, it necessarily follows that the steam issuing from the outlet and which is intended to circulate through the room and moisten the air therein actually passes into the chimney-flue, and therefore fails to perform the function intended. I have found by observation and experiment that currents of cold air coming into the room, whether through ventilators specially provided for the purpose or around doors and windows, take a variety of paths, some leading beneath the mantel-shelf of the fireplace and others above such shelf. Those leading beneath the shelf are almost wholly, if not entirely, deflected downward and pass into the chimney-flue, whereas those that strike above the shelf are deflected upward and circulate through the room, so as to reach the fireplace-opening and chimney-flue upon their return course. It is these latter currents that I am able to reach by my moistening device, and since they circulate practically throughout the room before returning to the fireplace the moisture issuing from my device becomes disseminated through the atmosphere of the room.

Referring to the accompanying drawings, in which my invention is illustrated, Figure 1 is a sectional view of a room containing a fireplace and mantel provided with my air-moistening device, and Fig. 2 is a side elevation, partially broken away, of the moistening device.

I have shown the fireplace 1 as provided with gas-burners 1^a and with an asbestos front 2, over which the flame plays, this being a usual form of fireplace or grate where the fuel burned is natural gas. My invention is not, however, limited to any specific variety of fireplace or burner or to any specific fuel, although the invention is particularly desirable in connection with the burning of gas by reason of the fact that substantially no moisture is given off into the room from a fire of this sort.

The mantel-shelf 3 may be of any desired form, but, as is usually the case, it projects forward some distance beyond the main portion of the mantel and the wall of the room against which it is set.

The vessel 4 for containing the water to be evaporated, as shown, comprises a body portion 4^a, to which is suitably attached a bail 5. Projecting from the upper end of the body portion 4^a is a spout or nozzle 6, this nozzle being of such length that when the body portion 4^a of the receptacle is supported in proximity to the fire the end of the nozzle will project above the mantel-shelf. The spout may have a screw-thread connection with the body 4^a or it may have merely a frictional connection, as indicated. The body may also have a separate filling-opening closed by a suitable cap or stopper 4^b, if desired. The bail is preferably attached to the body below the center of gravity of the empty vessel, so that as the water is evaporated the moistener will be automatically tilted, and thus indicate by its position the amount of water in it. I have shown a nail or peg 7 to receive the bail 5; but the device may obviously be supported by any other suitable means.

The cold air is indicated as entering the room at the top of a partially-open window, the currents of air in the room being indicated by arrows. It will be understood that while I have indicated generally the directions taken by the air-currents they will depend in a measure upon the points at which

the cold air enters. In any event, however, the issuance of the steam from the moistener at a point above the mantel-shelf will insure a dissemination of the moisture through the room.

While I have shown a specific form of moistening device, I desire it to be understood that such form may be varied to suit the desires or convenience of the manufacturer, so long as the dimensions and location of the device are such as to bring the steam-outlet above the mantel-shelf.

What I claim as my invention is—

1. An air-moistening device for rooms heated by open fires, consisting of a water-containing vessel having a steam-delivery spout or nozzle of such length that when the vessel is supported in proximity to the fire such spout or nozzle projects above the fireplace mantel-shelf, substantially as set forth.

2. A moistening device for the atmosphere of rooms heated by open fires, consisting of a water-containing vessel having a bail and a steam-delivery spout or nozzle, in combination with means engaged by said bail to support the vessel in proximity to the fire and at such height that the spout or nozzle projects above the fireplace mantel-shelf, substantially as set forth.

3. A moistening device for the atmosphere of rooms heated by open fires, consisting of a water-containing vessel having a bail and a spout or nozzle, the connection between the bail and vessel-body being at such height that the vessel will be automatically tilted as the water is evaporated, in combination with means for supporting the vessel-body in proximity to the fire and at such height that the nozzle projects above the fireplace mantel-shelf, substantially as set forth.

In testimony whereof I, the said ELMER B. BORLAND, have hereunto set my hand.

ELMER B. BORLAND.

Witnesses:

WALTER FAMARISS,

HARRY G. WISEMAN.