Oct. 16, 1923. 1,470,930

L. McCONNELL

COMBINED DAMPER AND SPARK DEFLECTING DEVICE

Filed Feb. 24, 1921

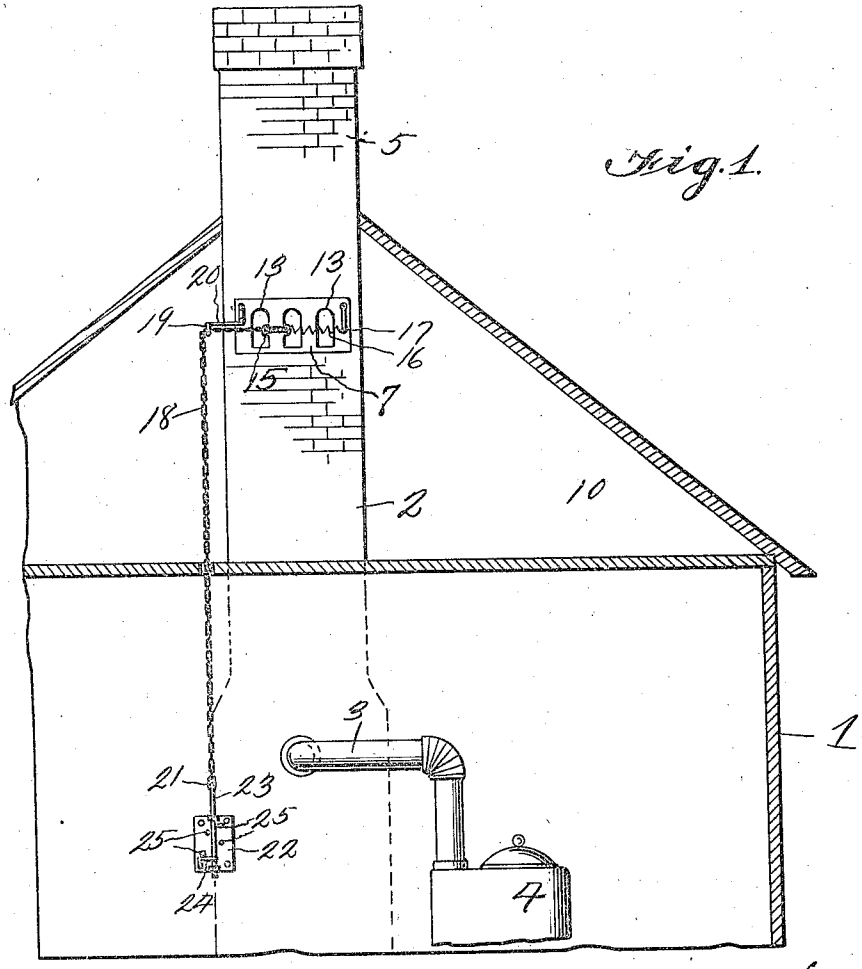


Fig. 1.

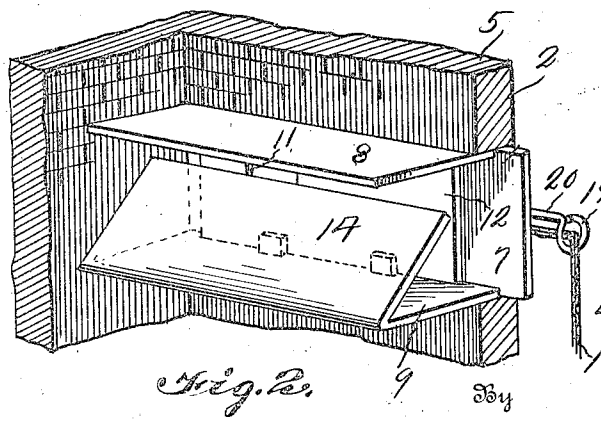


Fig. 2.

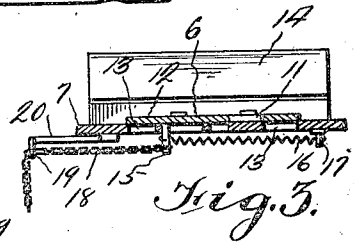


Fig. 3.

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Patented Oct. 16, 1923. 1,470,930

UNITED STATES PATENT OFFICE.

LERT McCONNELL, OF GRAND RIVER, IOWA.

COMBINED DAMPER AND SPARK-DEFLECTING DEVICE.

Application filed February 24, 1921. Serial No. 447,387.

To all whom it may concern:

Be it known that I, LERT McCONNELL, a citizen of the United States, residing at Grand River, in the county of Decatur, State of Iowa, have invented a new and useful Combined Damper and Spark-Deflecting Device; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

The invention relates to a combined damper and spark deflector, and has for its object to provide a device of this character having its casing comprising a vertically disposed portion adapted to register with an opening in a chimney, spaced horizontally disposed portions carried by the vertically disposed portion, one of said horizontal portions having a spark deflector member extending upwardly and inwardly from the end of one of the horizontally disposed portions. Also to provide the vertically disposed portion of the casing with a damper for controlling the passage of air through the combined damper and spark deflector.

A further object is to provide controlling means for the damper whereby the damper may be held in various open positions and in closed position against the action of a coiled spring.

With the above and other objects in view the invention resides in the combination and arrangement of parts as hereinafter set forth, shown in the drawings, described and claimed, it being understood that changes in the precise embodiment of the invention may be made within the scope of what is claimed without departing from the spirit of the invention.

In the drawing:—

Figure 1 is a sectional view through a portion of a house showing a chimney and the damper applied thereto.

Figure 2 is a rear perspective view of the damper, showing a portion of the chimney.

Figure 3 is a horizontal sectional view through the damper.

Referring to the drawing, the numeral 1 designates a portion of a house and 2 the chimney thereof. Extending into the chimney 2 adjacent its lower end is a pipe 3 of a stove 4, whereby the products of combustion are conveyed to the chimney 2. Disposed in the front face of the chimney 2 at a point above the stove pipe 3 and preferably adjacent the upper end 5 of the chimney is a combined damper and spark deflecting device 6, by means of which damper the draft through the chimney and stove 4 may be controlled and regulated in such a manner that the consumption of coal by the stove will be reduced to a minimum and at the same time the draft controlled at will by admitting air to the chimney above the stove 4. The combined damper and spark deflecting device 6 includes a vertically disposed plate 7, said plate adjacent its upper and lower edges being provided with rearwardly extending horizontally disposed spaced plates 8 and 9, which plates prevent the entrance of sparks to the room 10 of the house through the damper opening 11 in the slidable damper 12 and the openings 13 in the plate 7. To additionally prevent passage of sparks from the flue to the room 10, the horizontally disposed plate 9 is provided with an upwardly and inwardly inclined baffle plate 14, which baffle plate has its upper end spaced from the plate 8 and is engaged by the sparks which are stopped in their upward movement by engagement with the plate 8 and consequently drop against the plate 14 and are deflected into the chimney, and therefore do not pass through the damper. The damper slide 12 is provided with an outwardly extending lug 15 to which lug is connected one end of a coiled spring 16, the other end of said coiled spring being connected as at 17 to a lug carried by the damper plate 7, said spring holding the damper slide in open position so that the air will pass from the room 10 to the flue of the chimney. It will be seen that by regulating the damper that the draft may be so controlled that part of it will be through the damper and part through the stove, thereby allowing an accurate controlling of the combustion of the fuel within the furnace at all times.

Connected to the lug 15 of the damper slide 12 is a chain 18, which chain extends through an eye 19 of a bracket 20 carried by the plate 7 and extends downwardly and is connected as at 21 to a vertically slidable bolt slidably mounted on a plate 22, said bolt being designated by the numeral 23. Bolt 23 is provided with a lug 24, which lug may be placed under any of the lugs 25 on the plate for holding the damper slide 12 in various positions against the action of

the coiled spring 16. The parts 7, 8, 9 and 14 may be cast together, formed from separate plates, or if desired secured together in any suitable manner.

From the above it will be seen that a chimney damper and deflecting device is provided which is simple in construction and one wherein the parts are reduced to a minimum and said damper may be controlled from a distance, preferably from a point adjacent the stove.

The invention having been set forth what is claimed as new and useful is:—

A combined damper and spark deflecting device, said device comprising a vertically disposed plate disposed in the chimney opening, a damper slidably mounted on the rear face of said vertically disposed plate and provided with an opening cooperating with openings in the vertically disposed plate, plates extending inwardly into the chimney in horizontal relation and from the upper and lower sides of the vertically disposed plate and in parallel relation to each other, the lower inwardly extending plate terminating in an upwardly and inwardly extending plate terminating adjacent the under side of the upper horizontal plate, said upwardly and inwardly extending plate forming means whereby sparks which are stopped in their upward movement by engagement with the under side of the upper horizontal plate, will, when they fall, be deflected into the chimney and away from the damper.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

LERT McCONNELL.

Witnesses:
NORA J. BOYD,
PAUL R. BECK.