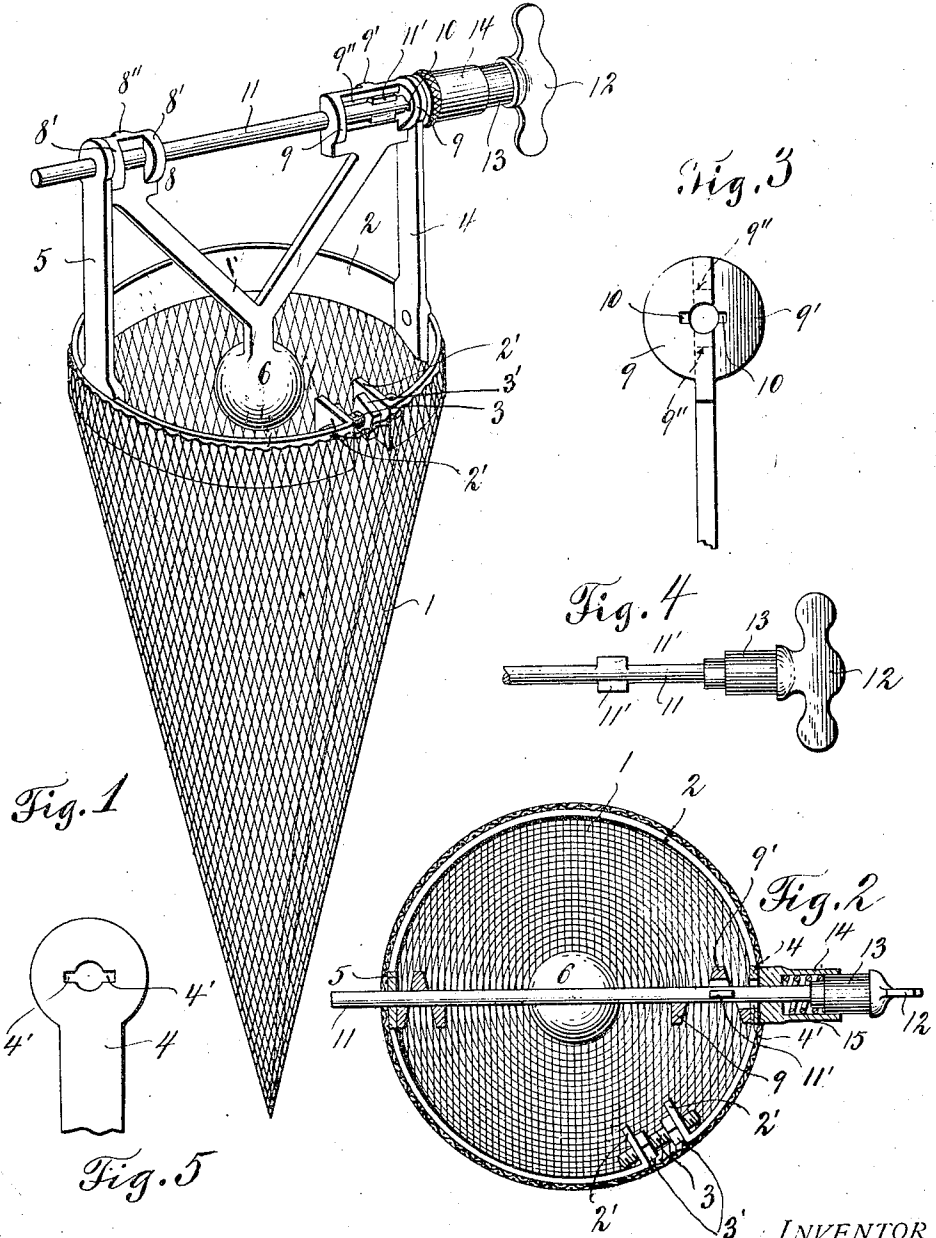


W. R. HALL.
SPARK ARRESTER.
APPLICATION FILED MAR. 15, 1911.

1,016,069.

Patented Jan. 30, 1912.



WITNESSES:

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WILLIAM R. HALL, OF WARNER, NEW HAMPSHIRE.

SPARK-ARRESTER.

1,016,069.

Specification of Letters Patent.

Patented Jan. 30, 1912.

Application filed March 15, 1911. Serial No. 614,592.

To all whom it may concern:

Be it known that I, WILLIAM R. HALL, a citizen of the United States, residing at Warner, in the county of Merrimack and State of New Hampshire, have invented certain new and useful Improvements in Spark-Arresters, of which the following is a specification.

The present invention consists of a comparatively simple form of spark arresting device, designed particularly to be placed in stove pipes to eliminate likelihood of passage of live sparks from a chimney.

The invention involves improved means for securing the spark arrester in place in the stove pipe, a special form of agitator or knocker, and peculiar means whereby the device may be placed in position and for operating said agitator.

For a full understanding of the present invention, reference is to be had to the following description and to the accompanying drawings, in which—

Figure 1 is a perspective view of the device embodying the invention; Fig. 2 is a horizontal sectional view taken through the spindle supporting the baffle; Fig. 3 is a fragmentary end view of one of the journal members of the agitator looking at the outer end of the same; Fig. 4 is a fragmentary view of the spindle and handle therefor; Fig. 5 is a fragmentary view of one of the hangers supporting the baffle.

Throughout the following detail description and on the several figures of the drawings, similar parts are referred to by like reference characters.

Specifically describing the invention, 1 denotes a conical baffle of foraminous material adapted to be arranged in a stove pipe with the pointed end downward and serving to effectively prevent likelihood of passage of live sparks from the pipe out of the chimney, or the like, with the usual resultant advantages.

The baffle 1 is adapted to be positioned in a stove pipe by an expansible band 2 secured to the upper end thereof, said band being split and formed with the terminals 2' connected by a screw 3 having thereon nuts 3' to engage and separate the terminals 2'. Projecting upwardly from the band 2 are the spaced hangers 4 and 5, the latter being apertured at their upper ends. A knocker or agitator 6 is arranged near the upper end of the baffle 1 and consists of a

ball adapted to be moved back and forth into engagement with the sides of the baffle to dislodge soot or other foreign matter which may adhere to the baffle and interfere with a good draft in the stove pipe.

The agitator comprises a frame suspended from a spindle 11 by means of centrally bored journal members 8 and 9 in spaced relation. The spindle 11 passes through the journal members 8 and 9, the member 8 being composed of the end semi-circular vertical web portions 8' and the central similar portion 8'' opposite the portion 8'. The journal member 9 is elongated but of a form similar to the member 8, and provided with a longitudinal passage 9'' spanned by the vertical central web 9' intermediate the ends of said member. The outer end of the journal member 9 is provided with an aperture through which the spindle passes, said aperture having recesses 10 extending from opposite sides thereof, and the web 9' being provided with a similar recess, the said recesses coinciding with other recesses 4' provided at opposite sides of the aperture of the adjacent hanger 4. On the spindle 11 are the oppositely extending lugs 11' adapted by turning the spindle to be placed in register with the recesses 10 and 4'. At one end the spindle 11 has a handle 12 and enlargement 13. The enlargement 13 is movable in a tubular bushing 14 which incloses a spring 15, said spring being interposed between the inner end of the bushing and the enlargement 13.

The operation of the invention is as follows: To apply the device to a stove pipe, it is only necessary to form openings in opposite sides of the latter, and by separating the sections of the pipe at a joint, place the baffle 1 in the pipe. The baffle is positioned properly by expanding the band 2 by operating the nuts on the screw 3. The apertures in the hangers 4 and 5 and those in the journal members 8 and 9 are registered with the openings in the pipe and the spindle 11 is then passed therethrough, it being necessary to turn said spindle so that the lugs 11' register with the horizontal recesses 4' and 10 of the parts 4 and 9 respectively. Since the enlargement 13 abuts with the spring 15, to lock the spindle with respect to the agitator it is necessary to exert pressure inwardly on the handle 12 until the lugs 11, arranged horizontally, pass beyond the web 9', whereupon the handle 12 is turned to dis-

pose the lugs vertically, and the handle may then be released. When the handle 12 is released, the spring 15 will force the spindle outwardly moving the lugs along the side of the web 9', as shown in Figs. 1 and 2, said lugs being adapted to abut with the web under such conditions to thereby enable the agitator 6 to be moved back and forth by turning the handle 12 in a similar manner.

10. The spindle 11 can not be accidentally removed, furthermore, because the parts 9' and 11' form a lock necessitating peculiar manipulation of the spindle, namely that it be forced inward and then turned 90° before it can be removed.

Having thus described the invention, what is claimed as new is:

1. In a spark arrester, the combination of a baffle, a spindle, a knocker suspended from said spindle and cooperating with the baffle, journal members supporting the knocker on the spindle, and means on the spindle arranged to interlock with and engage one of the journal members on the knocker, whereby the latter is rendered operable by the spindle, the journal member having recesses permitting longitudinal movement of the spindle to disengage the same from the knocker.
2. In a spark arrester, the combination of a hollow baffle having an open end portion, a spindle supported by said baffle, a knocker comprising members through which said spindle passes, said knocker comprising a ball or weight movable back and forth into and out of engagement with the walls of the baffle, the spindle having means for interlocking it with respect to the knocker whereby the knocker may be operated by the spindle, and resilient means for normally hold-

ing the interlocking means in operative relation to the knocker and spindle and facilitating detachment of the spindle from the knocker.

3. In a spark arrester, the combination of a baffle, a spindle associated with said baffle, an agitator coacting with the baffle and comprising journal members mounted on said spindle, and means on the spindle adapted to interlock with a journal of the agitator for causing simultaneous movement of said spindle and agitator, and spring means coacting with the spindle to normally hold the same in a position preventing accidental detachment from the journal member with which it interlocks.

4. In a spark arrester, the combination of a baffle of conical form, a pair of hangers secured to the larger end of the baffle, an agitator coacting with the baffle and comprising journal members, the journal members and hangers having apertures in alinement, a spindle passing through said apertures and formed with an interlocking lug, one of the journal members and hangers having recesses leading from their apertures and through which the lug is adapted to be moved, a handle for turning the spindle to cause the lug thereof to be thrown out of register with the recesses aforesaid, the journal member last mentioned having a portion adapted to abut with said lug to cause simultaneous movement of the spindle and agitator.

In testimony whereof I affix my signature in presence of two witnesses.

WILLIAM R. HALL.

Witnesses:

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