

(No Model.)

G. W. McCLURE.
FURNACE VALVE.

Patented Aug. 27, 1895.

No. 545,244.

Fig. 1.

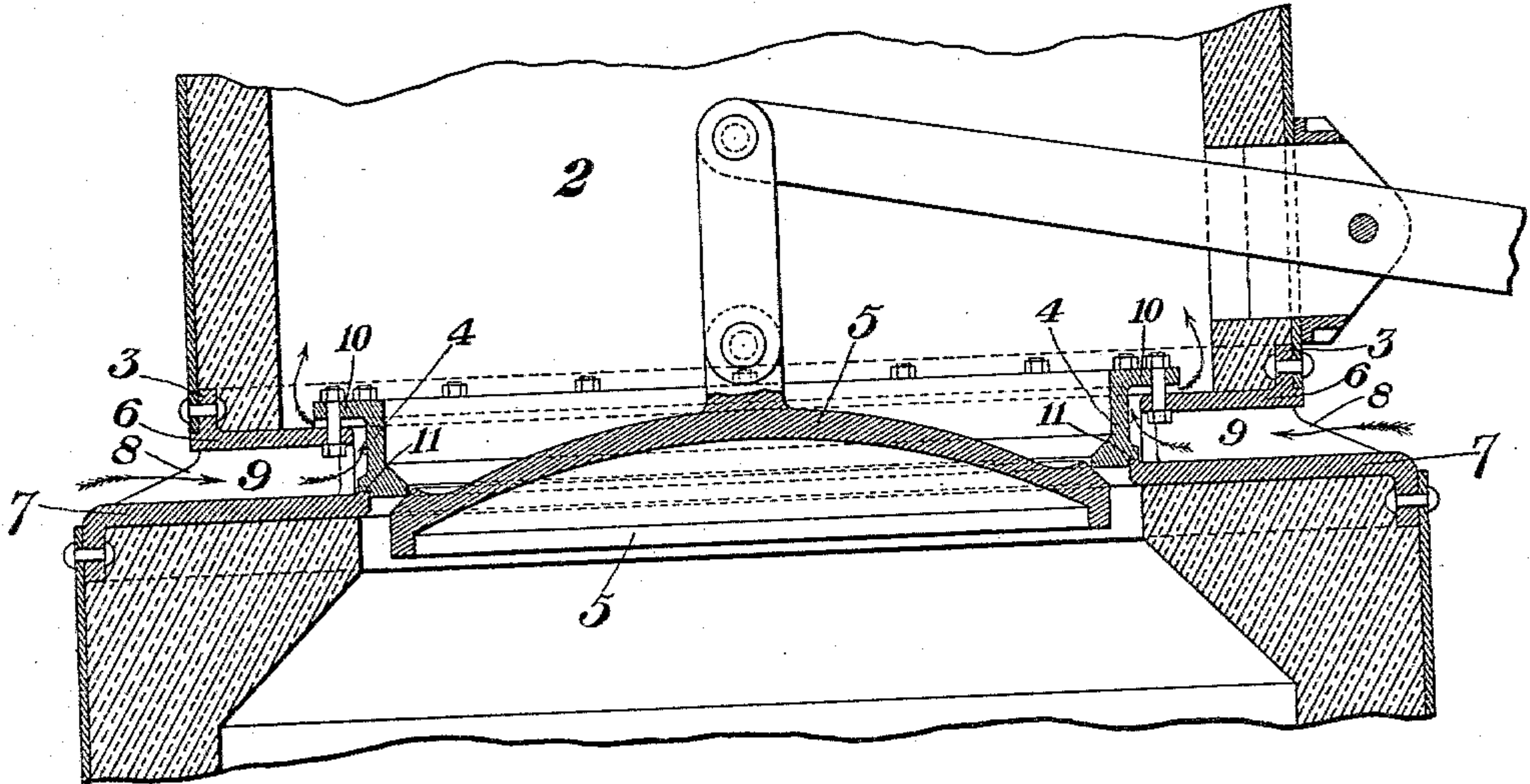
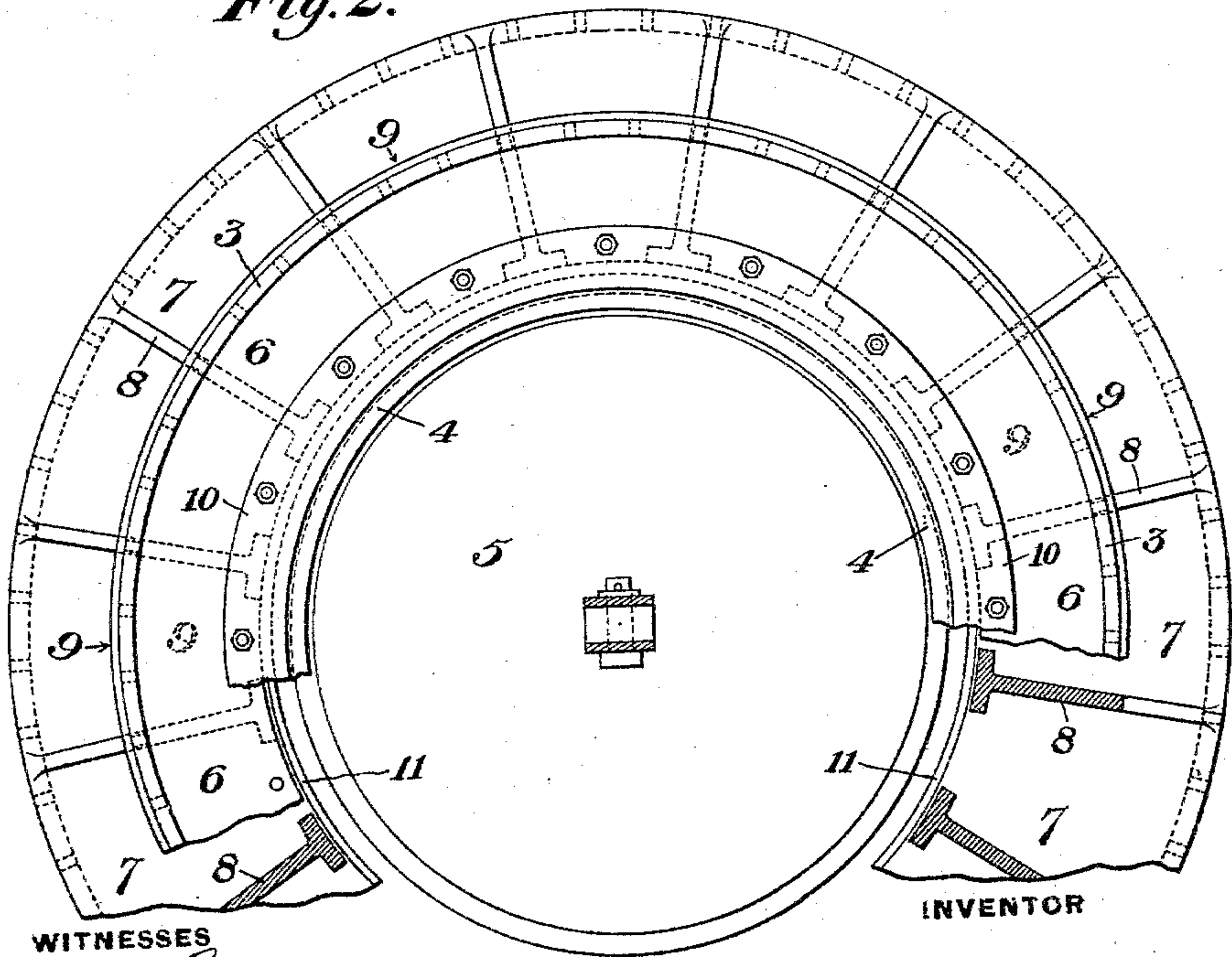


Fig. 2.



WITNESSES

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UNITED STATES PATENT OFFICE.

GEORGE W. McCLURE, OF PITTSBURG, PENNSYLVANIA.

FURNACE-VALVE.

SPECIFICATION forming part of Letters Patent No. 545,244, dated August 27, 1895.

Application filed January 15, 1895. Serial No. 534,977. (No model.)

To all whom it may concern:

Be it known that I, GEORGE W. McCLURE, of
Pittsburg, in the county of Allegheny and
State of Pennsylvania, have invented a new
5 and useful Improvement in Furnace-Valves,
of which the following is a full, clear, and ex-
act description, reference being had to the ac-
companying drawings, forming part of this
specification, in which—

10 Figure 1 is a vertical central section through
a hot-blast-stove chimney having my valve-
seat therein; and Fig. 2 is a partial plan view
of the valve, valve-seat, and seat-ring.

The purpose of my invention is to provide
15 simple and effective means by which the valve-
seats used with the chimney-valves of hot-blast
stoves or other furnaces can be cooled and
prevented from being destroyed by the heat.

20 In the drawings, 2 represents the chimney
of a hot-blast stove.

3 is the valve-seat ring, to which the stack
is fixed.

4 is the annular valve-seat secured within
the ring, and 5 is the valve. The seat-ring is
25 composed of two superposed flat disks 6 7,
connected at intervals by vertical webs 8, so
spaced as to afford intervening air spaces or
passages 9. The annular valve-seat 4 is se-
cured to the disk 6 by bolts passing through a
30 flange 10 on the seat, and an annular shoulder
11 at the base of the seat fits on the seat-ring
and is supported thereby, so that there shall
be an annular air-space between the flange 10
and disk 6. When the parts are thus con-
35 structed the natural upward draft through the
stack will induce a constant current of air

from the outside between the disks 6 and 7,
and thence between the disk 6 and flange 10,
and this air-current impinging on the valve-
seat and passing therefrom in an annular cur- 40
rent keeps all parts of it evenly cool and ef-
fectually prevents its injury by the heat. By
thus dispensing with water-cooling and mak-
ing the device self-acting, I effect very im-
portant results. 45

Without limiting myself with strictness to
the construction shown in the drawings, which
may be varied by the skilled mechanic with-
out departure from my invention, what I claim
is— 50

1. The combination with a chimney-valve
seat, of a supporting ring, said seat and ring
having an intermediate annular air passage
communicating with the chimney-flue and also
communicating with the atmosphere, for the 55
passage of a cooling current of air; substan-
tially as described.

2. A chimney valve seat having a support-
ing ring within which the seat is supported,
said ring being composed of separated disks 60
affording an air passage and a seat supported
on the ring and having a flange by which it is
fixed thereto, said flange and ring being sep-
arated to afford an air-passage; substantially
as described. 65

In testimony whereof I have hereunto set
my hand.

GEORGE W. McCLURE.

Witnesses:

W. B. CORWIN,
H. M. CORWIN.