

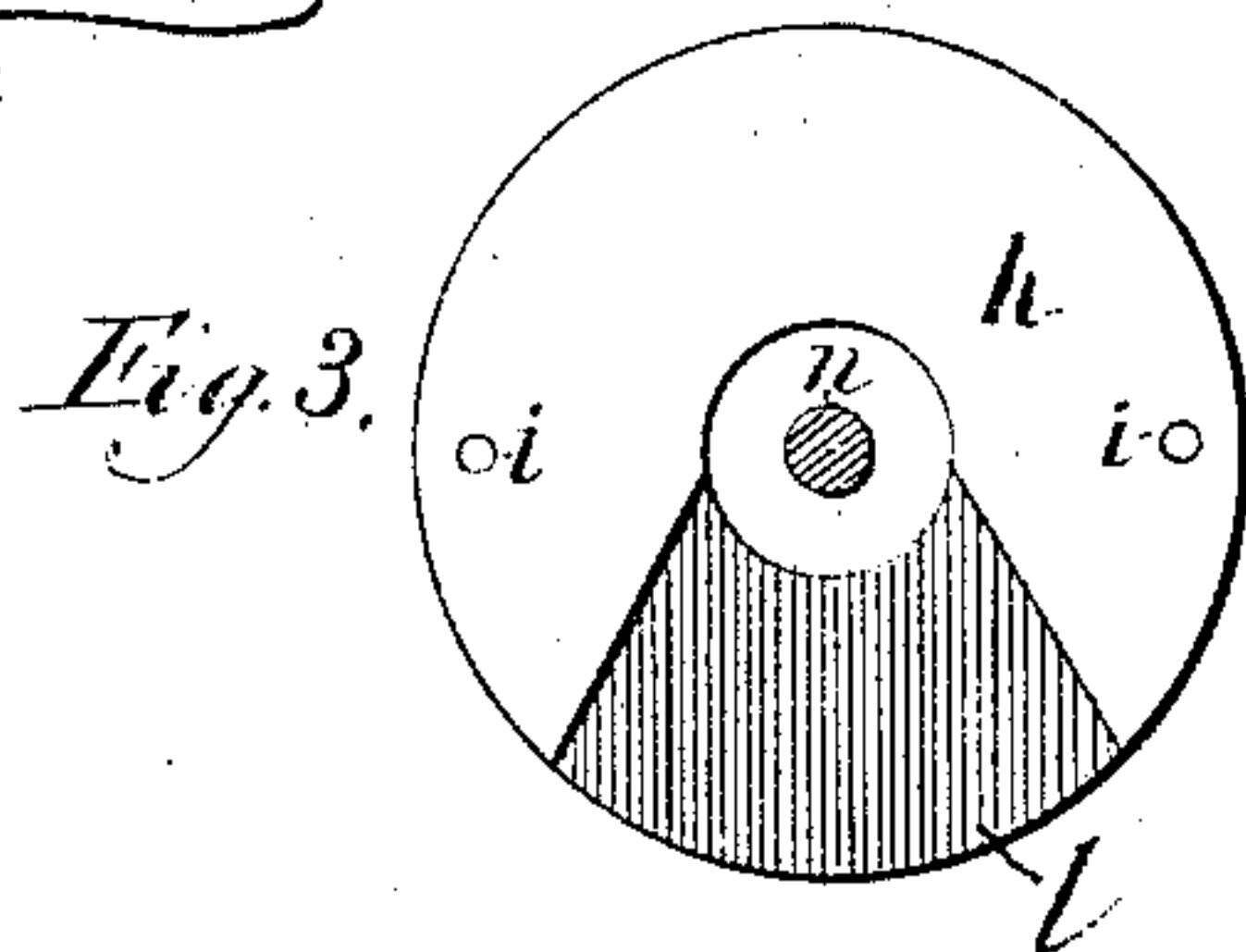
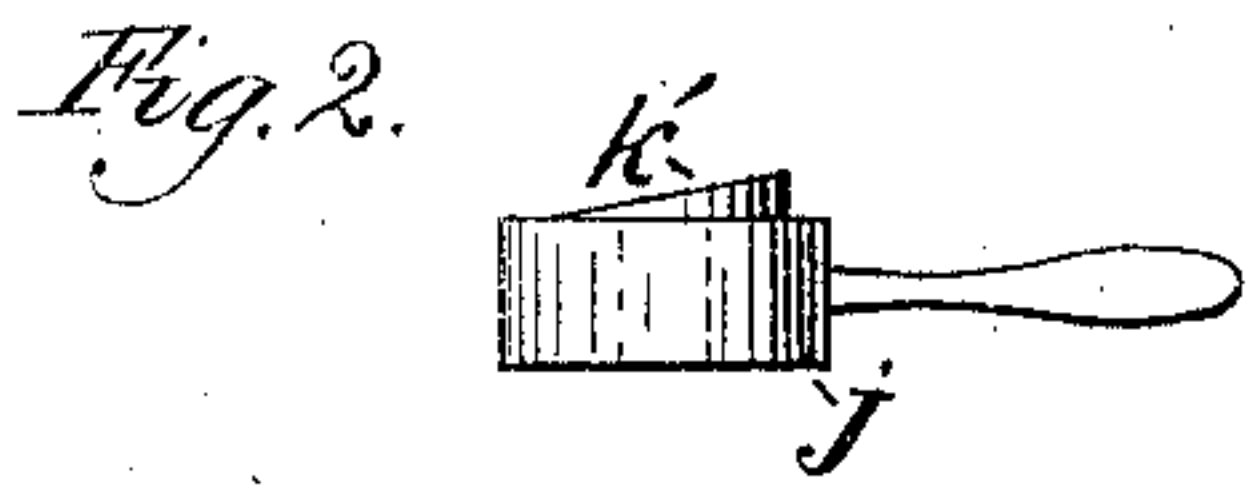
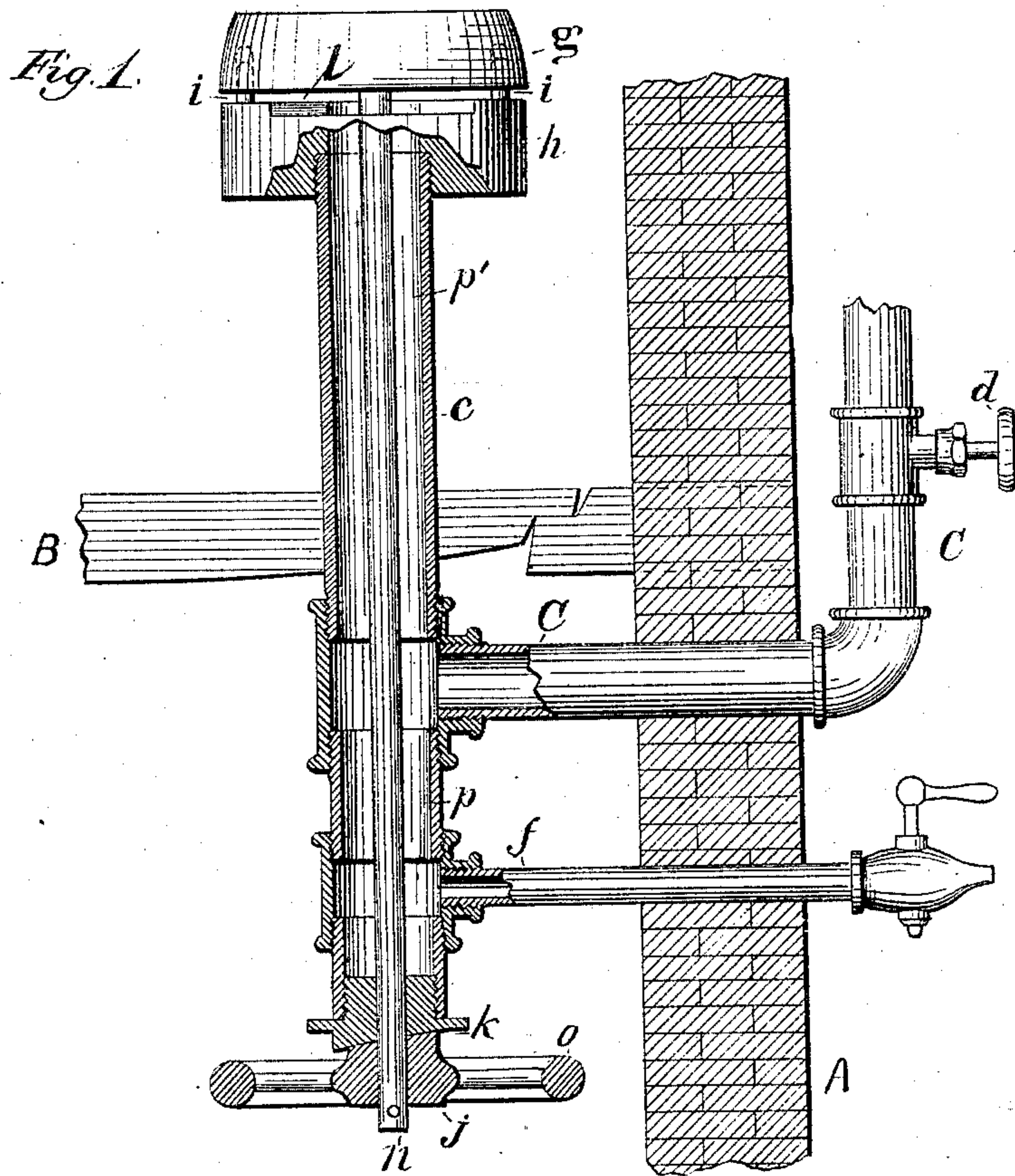
(No Model.)

S. PARKER.

STEAM JET FOR SMOKE CONSUMING FURNACES.

No. 283.809.

Patented Aug. 28, 1883.



Witnesses:

Chas. O. Gaylord.
F. B. Townsend

Inventor:

Sidney Parker
By *Wm. Zimmerman*
Atty

UNITED STATES PATENT OFFICE.

SIDNEY PARKER, OF CHICAGO, ILLINOIS.

STEAM-JET FOR SMOKE-CONSUMING FURNACES.

SPECIFICATION forming part of Letters Patent No. 283,809, dated August 28, 1883.

Application filed September 15, 1882. (No model.)

To all whom it may concern:

Be it known that I, SIDNEY PARKER, of Chicago, in the county of Cook and State of Illinois, have invented certain new and useful
5 Improvements in the Art of Constructing Jets for Smoke-Consuming Furnaces; and I hereby declare the following to be a full, clear, and exact description thereof, which will enable others skilled in the art to which my invention relates to make and use the same, reference being had to the accompanying drawings, forming a part hereof, and in which—

Figure 1 represents a side elevation of my apparatus, partly in section and placed into
15 the interior of a furnace. Fig. 2 represents a side elevation of the nut *j*, and in this case provided with a handle instead of a hand-wheel, as shown in Fig. 1. Fig. 3 is a plan view of the head *h*.

20 Like letters of reference indicate like parts.

The object of my invention is to construct a jet for blowing steam into a fire-box, that may be regulated so as to throw more or less steam at pleasure, and also for the purpose
25 of clearing the jet from any obstructions that may enter from the superheater, or which may result from the fire partly burning or melting down the mouth of the jet, and, further, so as to produce an annular disk or jet of steam from
30 all sides of the jet, or only in part, all as hereinafter more fully described.

In the drawings, A represents one wall of a furnace, upon which rest the grate-bars B. Through said wall A passes a pipe, C, taking
35 steam from the dome of a boiler, and on the end of said pipe C, at a suitable distance from the wall A, rises a pipe, *e*, and passes up between the grate-bars a suitable distance above the fire, and is provided at its upper end with
40 a cast-iron head, *h*. Said head is provided with dowel-pins *i*, and may for certain purposes be provided with a shallow slot, *l*. Upon said head *h* is mounted a loose block, forming a valve, *g*, provided with holes to fit over
45 the pins *i*, and to the center of said valve is fastened a stem, *n*, which passes down through

the pipe *e* and out through a bushing, into which it fits tightly, and to the under end of said rod is attached a nut or hub, *j*, resting on a pin or nut, as shown. Said nut may be
50 turned by a handle, as shown in Fig. 2, or be provided with a hand-wheel, and upon the upper side of the hub is attached a cam, *k'*, which fits against the bushing *k*, which is also provided with a corresponding cam, operating in
55 a well-known manner. A cock, *f*, is attached to the lower end of the pipe *e*, for the purpose of drawing off any water that may have formed in the chamber *p*.

When in operation, steam is let in through
60 the valve *d* into the pipe *e*, where it becomes superheated in the chamber *p'*, and lifts the valve *g* and issues out in a continuous annular sheet, which is then controlled by the nut *j* by turning it backward or forward, the pins *i* pre-
65 venting the valve and its stem *n* from turning. When it is desired to produce a jet of less area, a shallow slot, *l*, may be cut out of the head or valve, which slot or jet, when clogged in any way, may be cleared by releasing the valve,
70 as described.

The pipe *e*, instead of being connected to the steam-pipe C, may be attached to a super-
75 heater made for such purpose and receive its steam from it.

A jet so constructed will withstand the action of the fire, and may be cleared of obstructions by the action of the steam, which is not the case in any known jets now in use.

What I claim is—

1. In a steam-jet for smoke-consuming apparatus, the pipe *e*, provided with head *h*, dowels *i*, slot *l*, valve *g*, stem *n*, and cam-faced hub and bushing *j k*, substantially as specified.

2. In a steam-jet for smoke-consuming ap-
85 paratus, the pipe *e*, provided with cock *f*, head *h*, dowels *i*, valve *g*, stem *n*, and cam-faced hub and bushing *j k*, substantially as specified.

SIDNEY PARKER.

Witnesses:

WM. ZIMMERMAN,
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