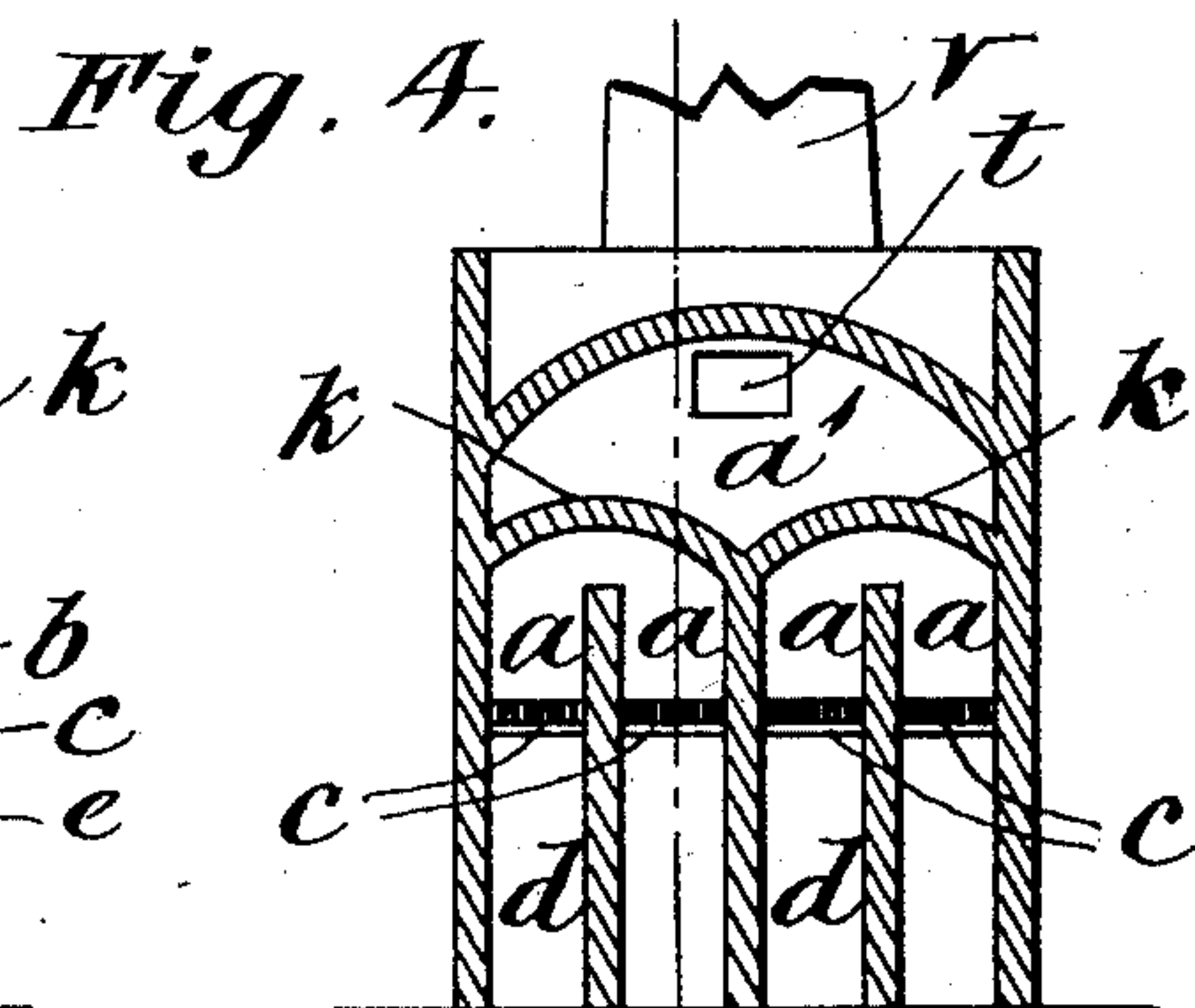
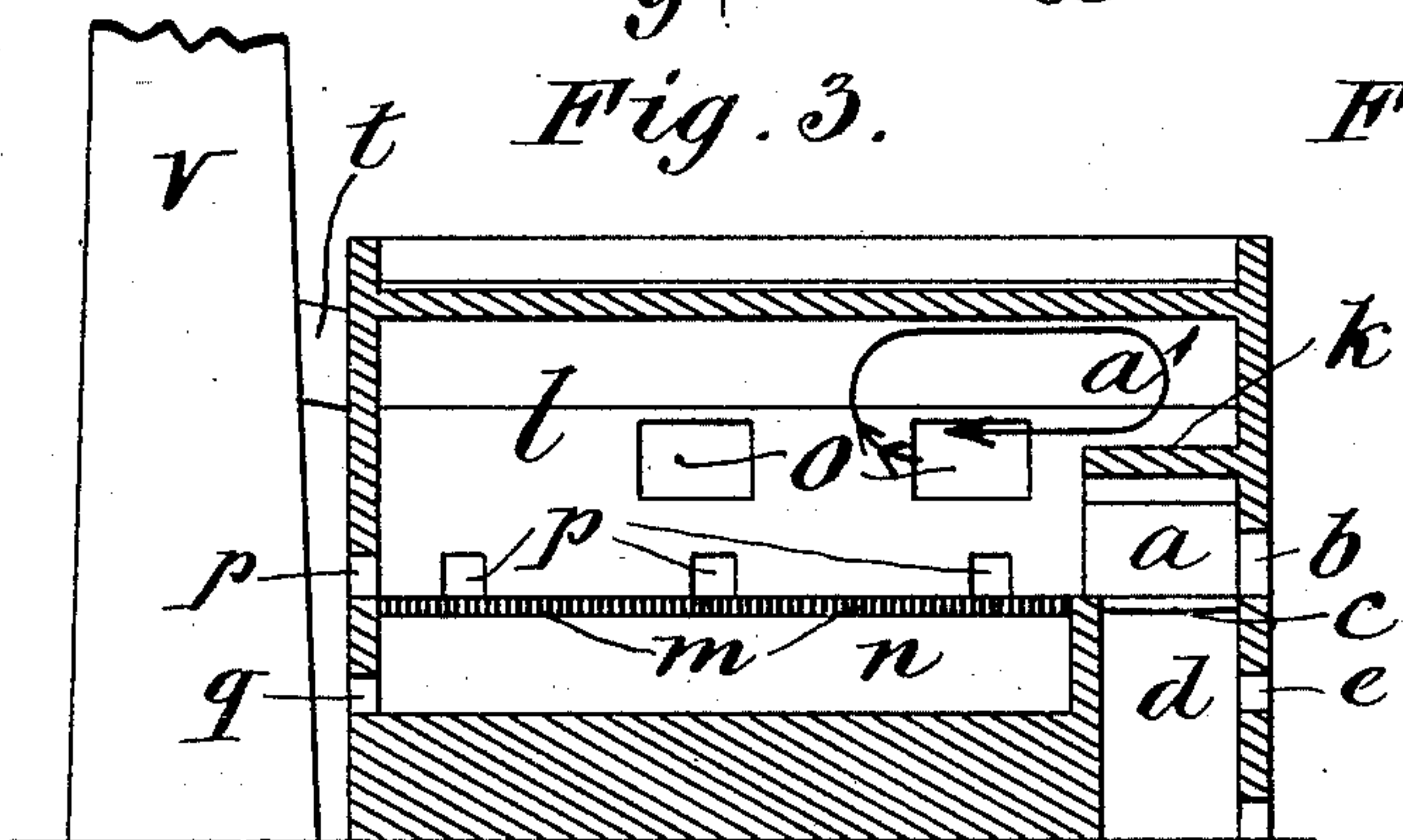
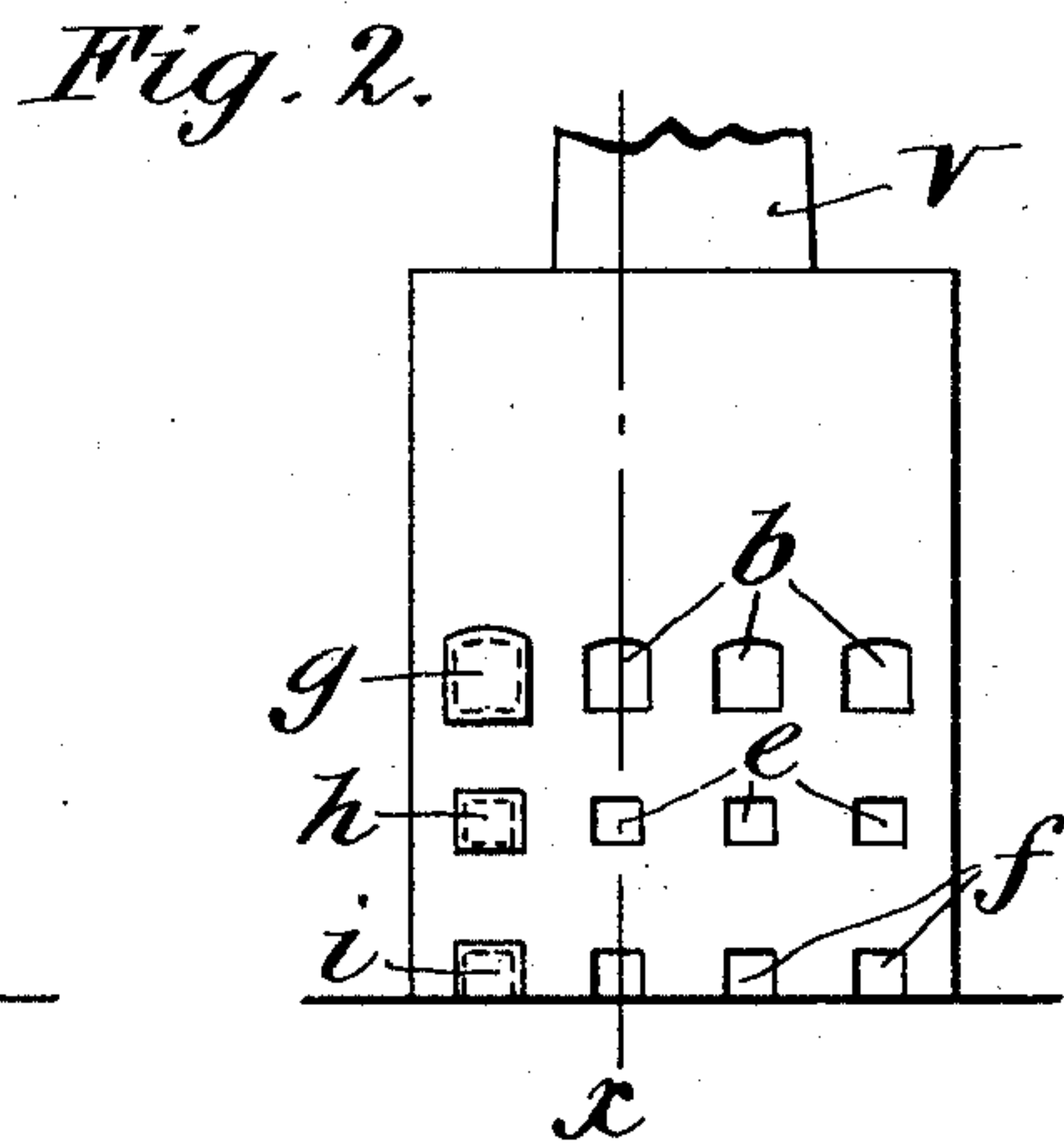
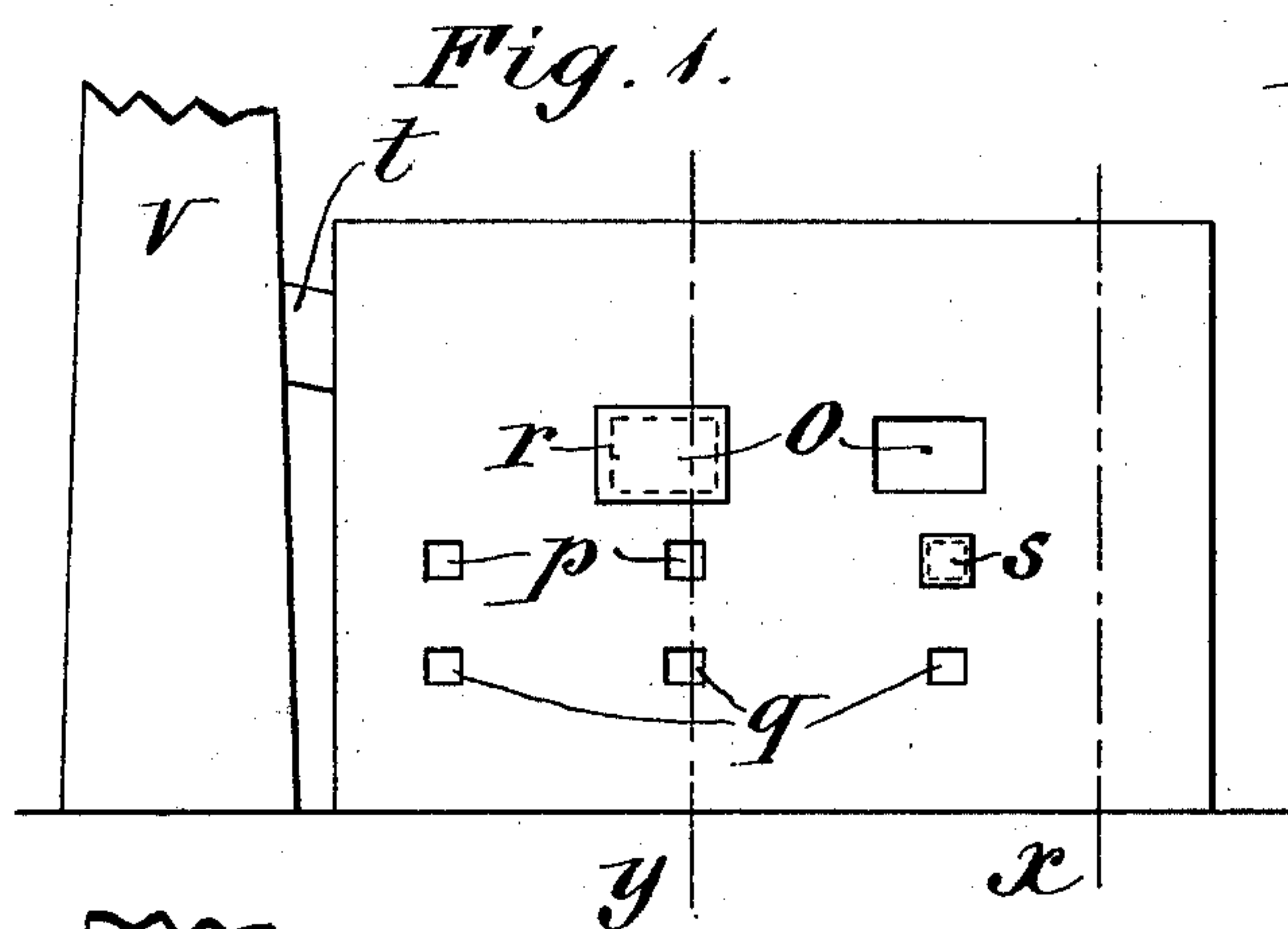


(No Model.)

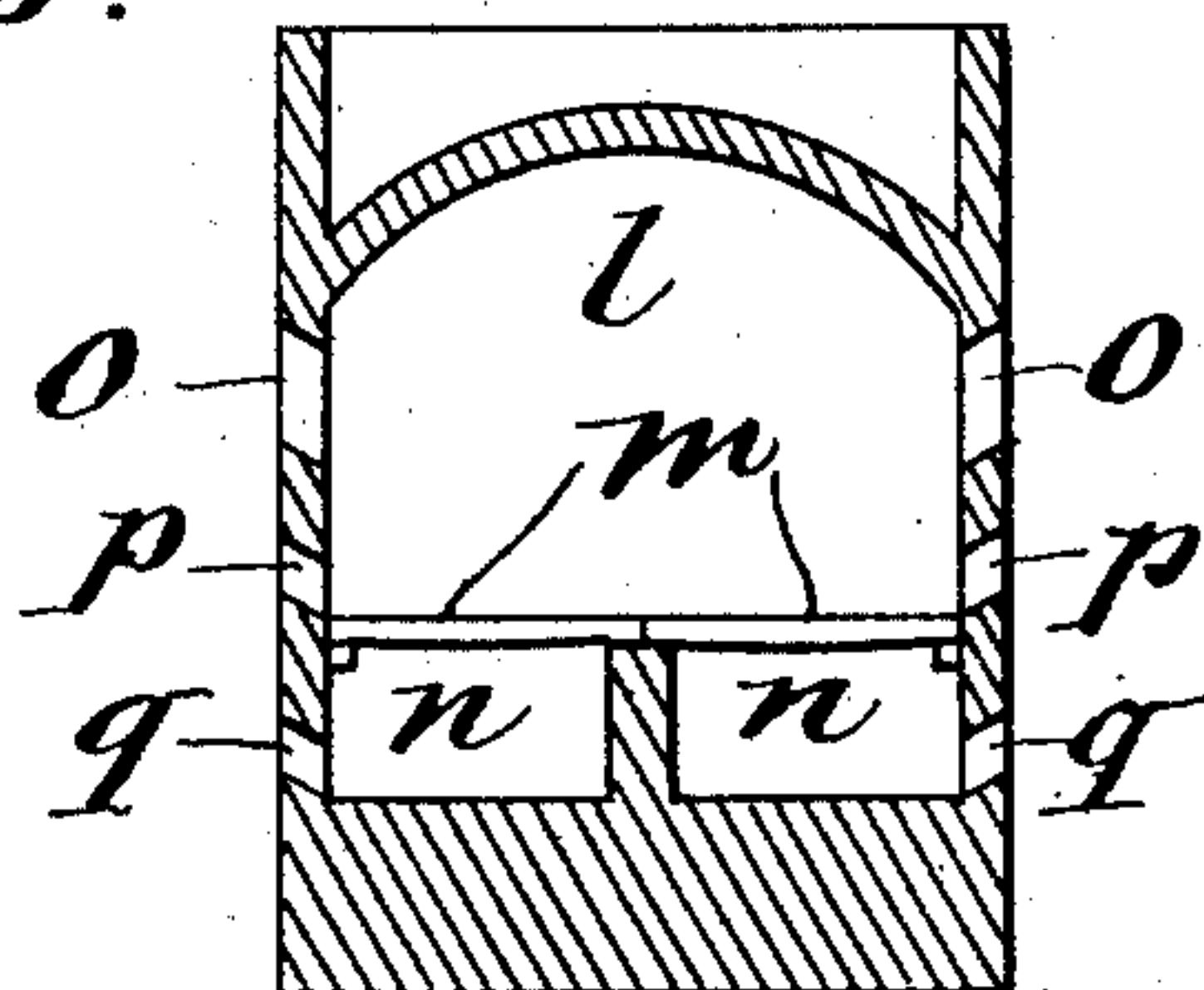
W. MANN.  
REFUSE BURNER.

No. 371,203.

Patented Oct. 11, 1887.



*Fig. 5.*



*Witnesses*  
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*By his Attorney*  
*Charles H. L. Simpson*

# UNITED STATES PATENT OFFICE.

WILLIAM MANN, OF MONTREAL, QUEBEC, CANADA.

## REFUSE-BURNER.

SPECIFICATION forming part of Letters Patent No. 371,203, dated October 11, 1887.

Application filed March 8, 1887. Serial No. 230,095. (No model.)

*To all whom it may concern:*

Be it known that I, WILLIAM MANN, of the city of Montreal, in the district of Montreal, Province of Quebec, Canada, have invented  
5 new and useful Improvements in Refuse-Burners; and I do hereby declare that the following is a full, clear, and exact description of the same.

This invention has reference to the construction and arrangement of a furnace for the purpose of cremating the vegetable, animal, or other combustible matter collected in cleaning the streets, &c., of cities, towns, villages, &c., or in the general scavenging of such, to  
15 produce a furnace in which such combustible refuse may be consumed in a more inexpensive and less laborious manner, and with a less amount of noxious vapors or gases being given off to create disease than in the furnaces at  
20 present in use for this purpose.

In the drawings hereunto annexed similar letters of reference indicate like parts.

Figure 1 is a side elevation of a cremating-furnace embodying my invention. Fig. 2 is a  
25 front end elevation of the furnace shown in Fig. 1. Fig. 3 is a longitudinal vertical section of the said furnace, taken on lines *x*, Figs. 2 and 4. Fig. 4 is a transverse vertical section taken at line *x*, Fig. 1. Fig. 5 is a trans-  
30 verse vertical section taken at line *y*, Fig. 1.

Letters *a* are furnaces. As shown, these are four in number; but a greater or less number may be used, as desired. The furnaces *a* are provided with feed openings *b*, fire-bars *c*, and  
35 ash-pits *d*, having openings *e* and *f*. All the openings, *b*, *e*, and *f*, are provided with ordinary doors, *g*, *h*, and *i*, by which the said openings may be closed when desired. The tops *k* of the furnaces are preferably so arranged  
40 that two furnaces are embraced under one arch, *k*, to give a greater spread to the flames.

*l* is a chamber so arranged with regard to the furnaces *a* that the furnaces *a* occupy the lower part at one end, thus forming a space, *a'*, above  
45 the furnaces. The chamber *l* is provided with fire-bars *m*, ash-pits *n*, openings *o*, *p*, and *q*, each provided with ordinary doors, *r* or *s*; also with opening of flue *t* to chimney *v*.

The operation of the invention is as follows: Strong coal-fires are formed in the furnaces *a*, 50 and after the chamber *l* has been sufficiently heated the material to be cremated is passed into the chamber by the openings *o*, and by rakes introduced through the openings *p* distributed upon the fire-bars *m*; also, the ashes 55 accumulating on the bars *m* may be raked down through the bars into the ash-pits *n*, from which the ashes will be removed by the openings *q*.

Attention is called to the position of the 60 arches or tops *k* of the furnaces *a* as being an important feature in this invention, because by forming a space, *a'*, above them an eddy is caused, as indicated by the arrow in Fig. 3, by which the gases arising from the material be- 65 ing cremated are brought over and over again to be acted upon by the intense heat at the back end of the furnaces *a*, and thus are more perfectly consumed before passing by the opening or flue *t* to the chimney. 70

A number of chambers, *l*, provided with furnaces *a*, and otherwise constructed as above described, may be arranged and connected with one chimney, *v*, or each chamber *l* may be provided with a chimney in any ordinary manner; 75 but in any case a liberal amount of chimney-power to form a very active draft should be provided.

What I claim, and wish to secure by Letters Patent, is as follows: 80

The combination, in a refuse-burner, of the furnace *a*, consisting of a suitable casing having suitable inlet and outlet openings, *o*, *p*, and *c*, the grate-bars *m* and ash-pit *n*, the chamber *l* within the casing, the inwardly-projecting 85 tops or arches *k*, and flue *t*, the whole constructed, arranged, and operating together, substantially as described, for the purposes set forth.

W. MANN.

Witnesses:

CHARLES G. C. SIMPSON,  
H. IRWIN.