

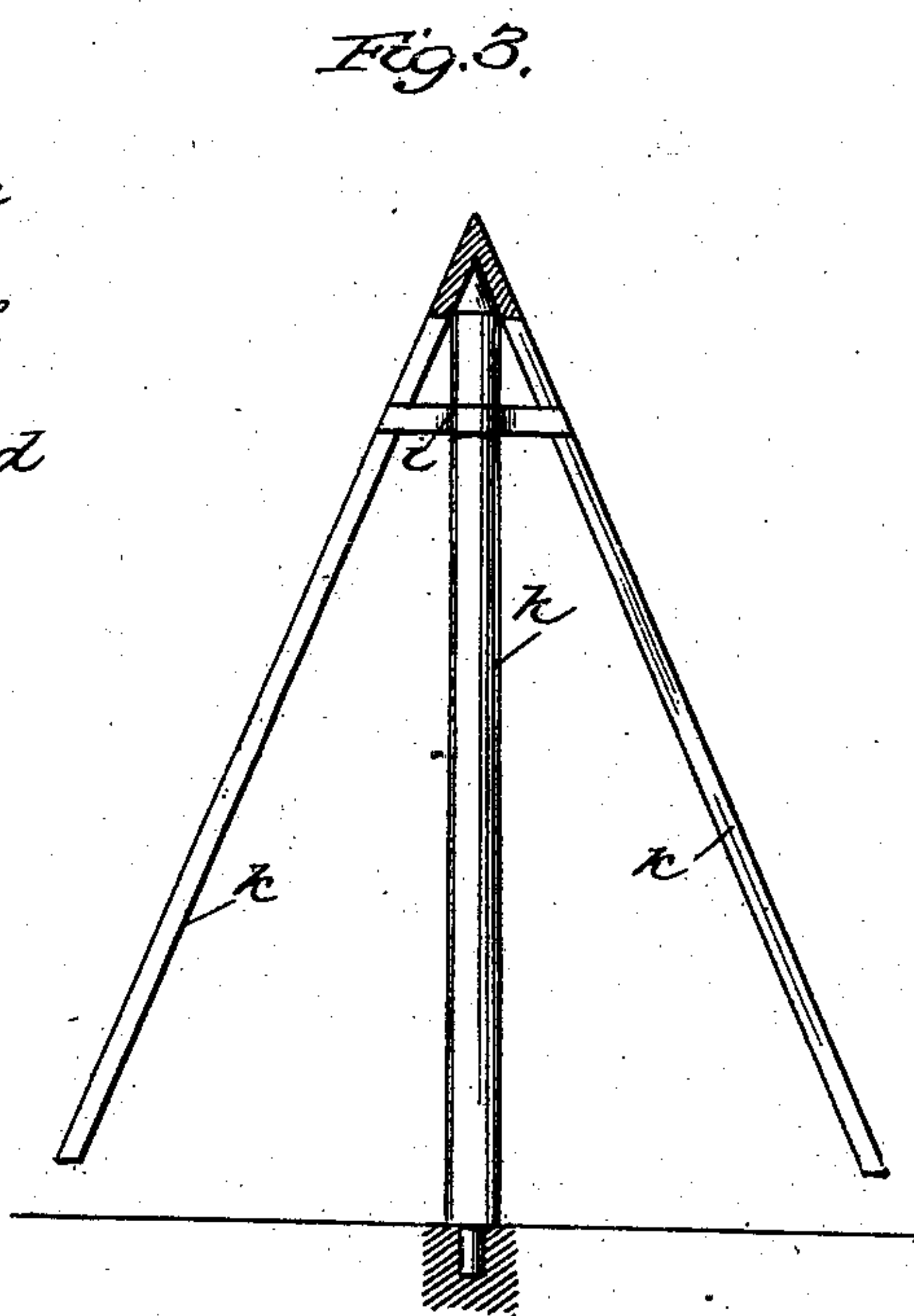
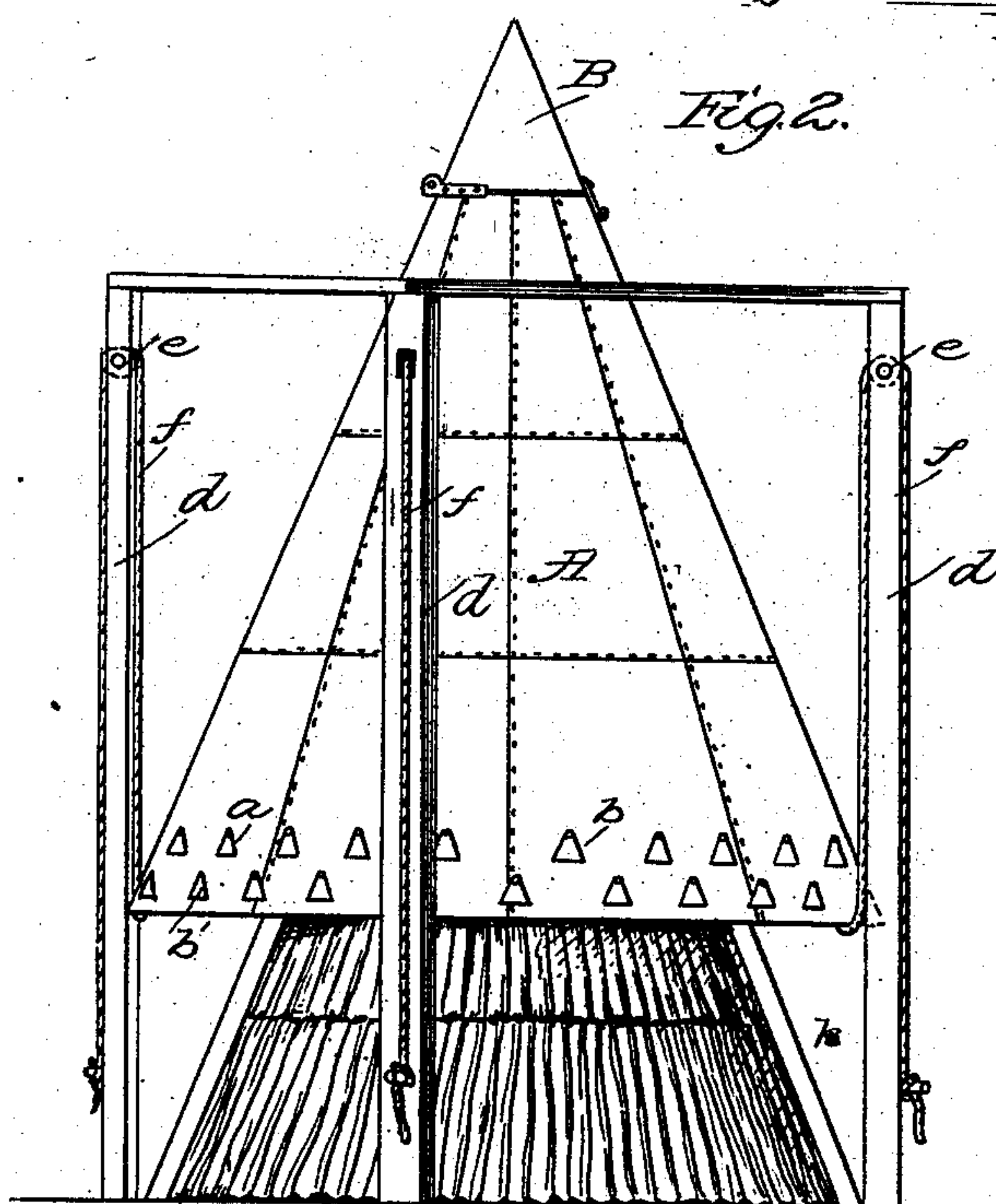
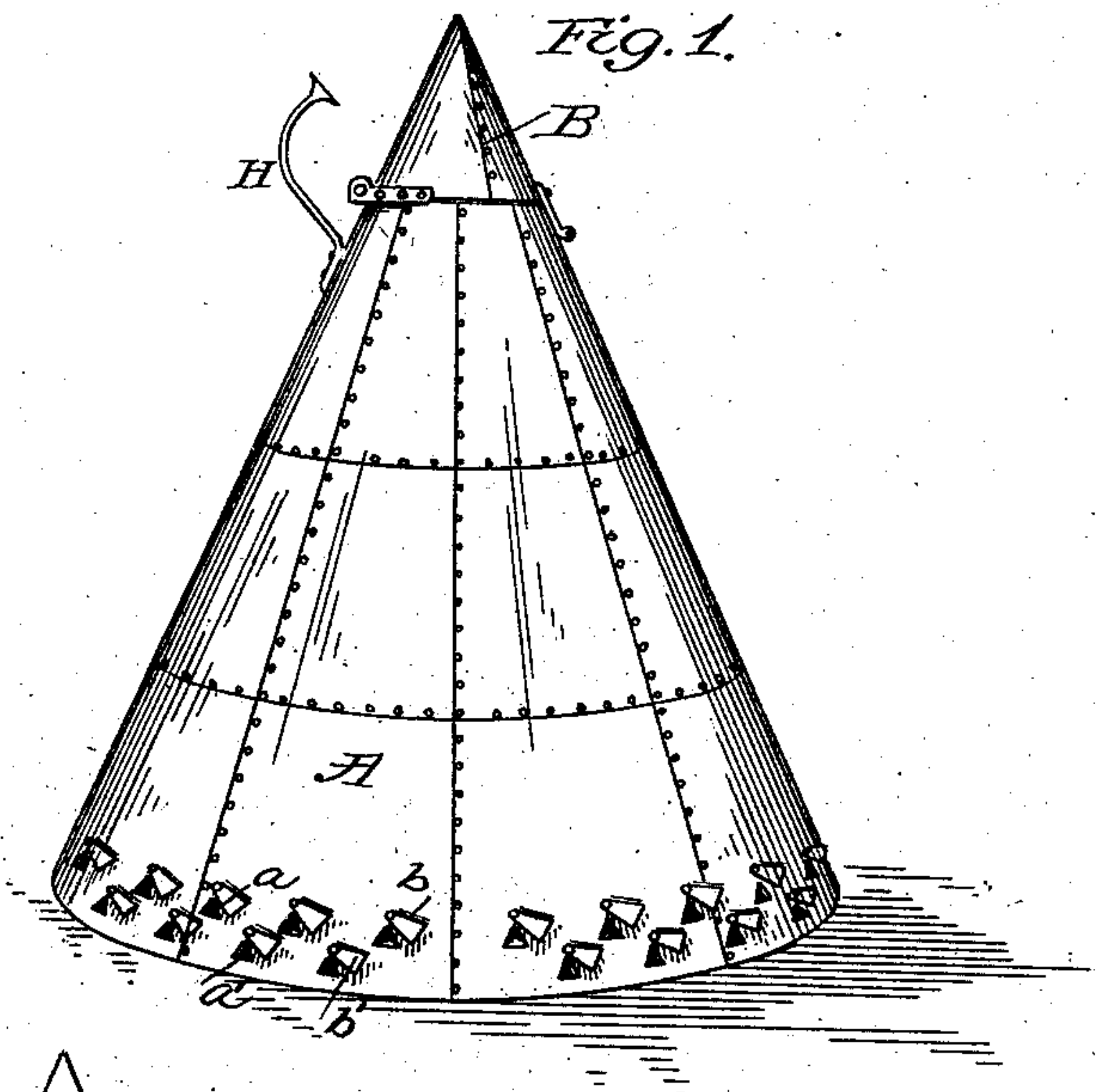
(No Model.)

J. A. EDWARDS.

CHARCOAL OVEN.

No. 292,635.

Patented Jan. 29, 1884.



Attest:

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# UNITED STATES PATENT OFFICE.

JOHN A. EDWARDS, OF COLUMBIANA, ALABAMA.

## CHARCOAL-OVEN.

SPECIFICATION forming part of Letters Patent No. 292,635, dated January 29, 1884.

Application filed July 9, 1883. (No model.)

*To all whom it may concern:*

Be it known that I, JOHN A. EDWARDS, of Columbiana, in the county of Shelby and State of Alabama, have invented a new and useful  
5 Improvement in Charcoal-Ovens; and I do hereby declare that the following is a full, clear, and exact description of the same.

My invention relates to an improvement in the construction of ovens or kilns for making  
10 charcoal.

The object of my invention is to provide a portable metallic kiln which shall be complete in itself, and can be set up without the use of an independent foundation or an addi-  
15 tional lining of brick or cement.

The invention consists, partly, in combining with a portable metallic oven a peculiar frame-work and hoisting apparatus, and in the improved guide or templet.

20 In the accompanying drawings, Figure 1 is a side elevation. Fig. 2 is a similar view, showing the action of the hoisting apparatus. Fig. 3 is a view of the revolving templet.

A represents a kiln or oven, which I prefer  
25 to form of sections or plates of thin boiler-iron, which are riveted together, as shown. The kiln is of conical shape, so that it stands firmly and steadily on its base, and is easily transported from place to place on a wagon.  
30 The upper part of the oven is a conical door, B, hinged to the wall of the structure, as shown, and having a suitable fastening for locking it in a closed position. Around the lower part of the oven is a double row of  
35 holes, *a a'*, which may be wholly or partly closed by hinged dampers *b b'*.

In devices of this class, where the kilns are portable, it has been necessary to charge the kiln through one or more doors left in the  
40 side of the structure, because as the kiln, when set up, was made either with an independent stone foundation or a brick lining, it became, for present practical purposes, a permanent device. To avoid this inconvenience, I use  
45 a hoisting apparatus a form of which is shown in operation in Fig. 2. I drive into the ground three or more stout uprights, *d*, which may be braced at the bottom, in the upper part of which I journal pulleys *e* or  
50 support any kind of tackle. Over these pul-

leys pass ropes *f f*, connected to the lower edge of the oven.

In operation the uprights are driven into the ground around the spot where the pile of wood is to be made. The oven is connected  
55 to the ropes and elevated to a sufficient height, the ropes being secured to a projection on the post. The pile of wood is of conical shape, and in building it of symmetrical form to fit the oven I use the revolving guide or templet  
60 shown in Fig. 3. A stationary post, *h*, is set up at the center of the spot where the pile of wood is to be, the upper end of such part being pointed, to form a conical bearing for the revolving guide. The guide consists of a  
65 cross-piece, *i*, with a round perforation, through which the post passes. Inclined beams *k k* are joined at the top, and a bearing is formed at their junction, which fits the upper end of the post *h*, so that the beams *k k*  
70 and cross-piece *i* revolve around such post. The pile of wood may either be built up directly around the center post, or, as the preferred construction, I form a chimney of wood around the post and build the conical pile  
75 around such chimney. The workman, by revolving the templet, is enabled to accurately gage his pile of wood to fit the oven. The pile is built up to the cross-piece *i* and finished with a flat top. When the pile is com-  
80 plete, the revolving templet is raised slightly and moved sidewise, which permits the center post to be withdrawn through the draft-opening in the top of the oven. The templet can  
85 there be easily removed. The oven is now lowered over the finished pile until the bottom of the kiln rests on the ground, and sufficient air enters below the edge through open-  
90 ings *a'* to support the slow combustion necessary. The opening in the top is now closed, and the smoke and gases during the process escape at the damper-openings *a*. At the completion of the process the kiln is elevated bodily and the charcoal removed.

H is a guard to cause the draft-door to  
95 close, should it be blown open by an accumulation of gas caused by combustion.

The conical shape of the oven prevents the burning material from falling against the iron walls and burning them, though the tendency  
100

of the pile is to shrink toward the center away from the walls.

Having thus described my invention, I claim—

- 5 1. The herein-described conical metallic charcoal-oven of the described construction, and adapted to rest on the ground, in combination with the corner posts and hoisting-ropes.
2. The guide having inclined pivoted arms,
- 10 in combination with a conical charcoal-oven.

3. The combination of the center post, *h*, cross-beam *i*, and arms *k k*.

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

JOHN A. EDWARDS.

Witnesses:

L. W. SEELY,

W. C. DUNNALL.