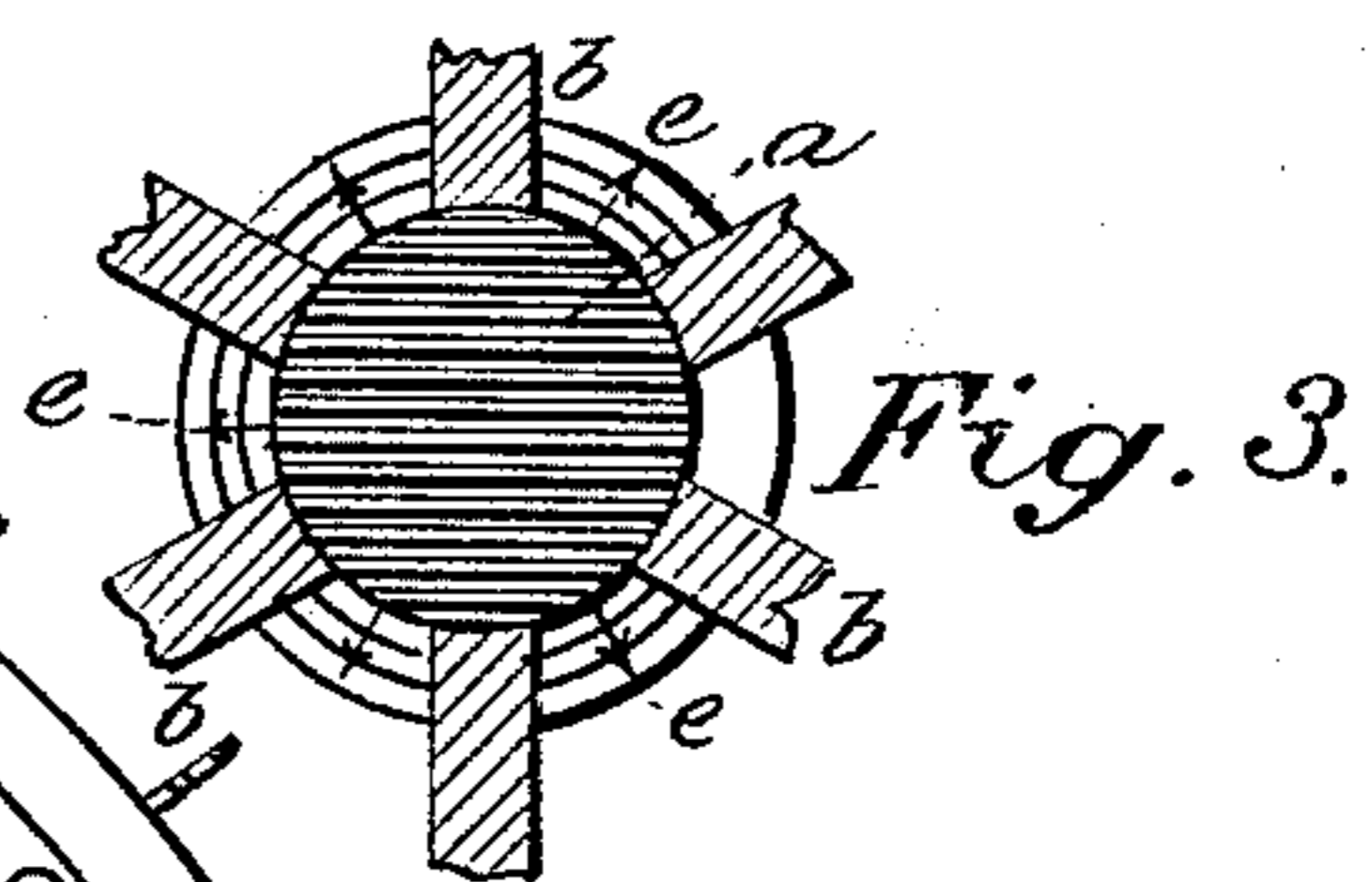
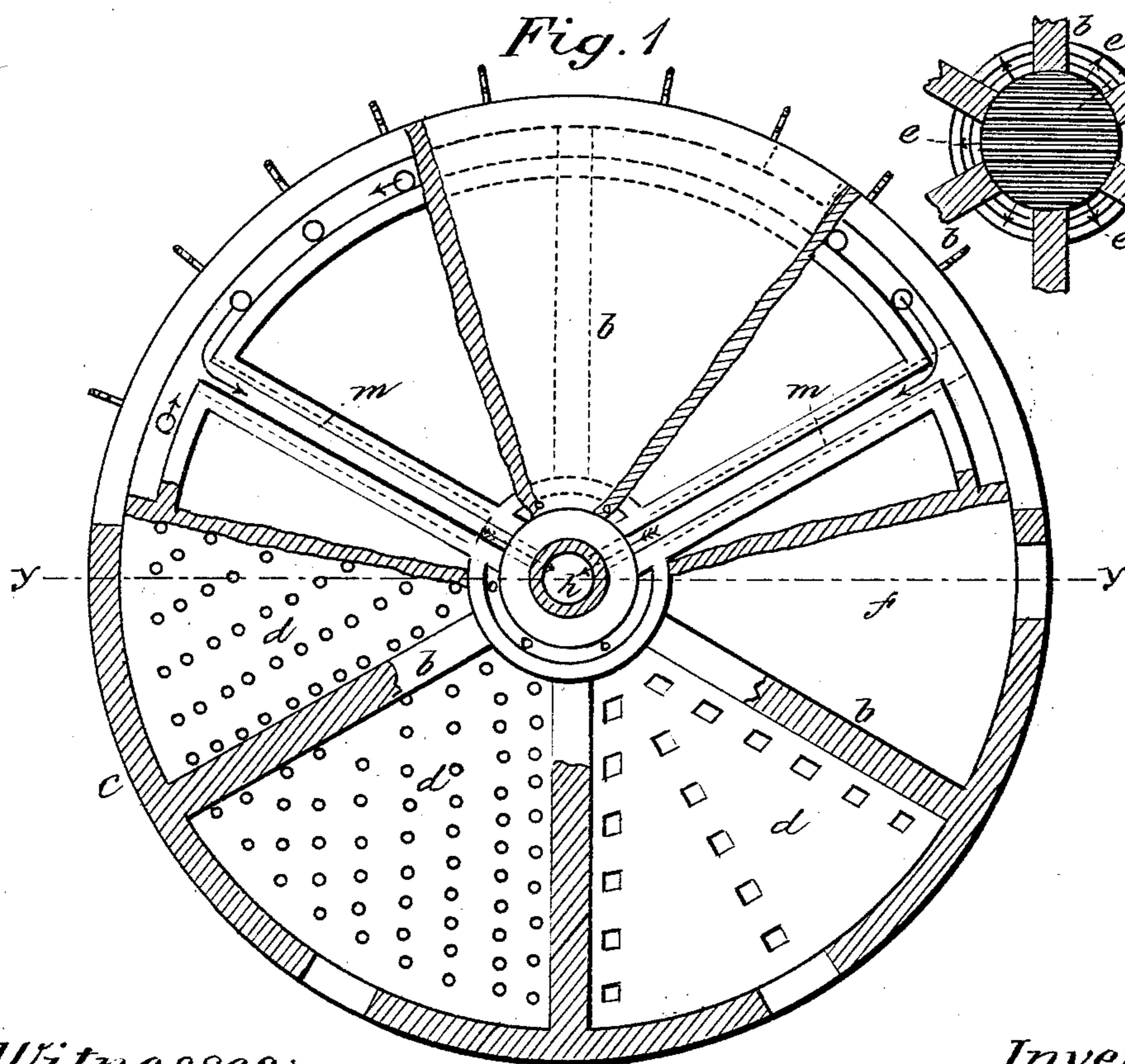
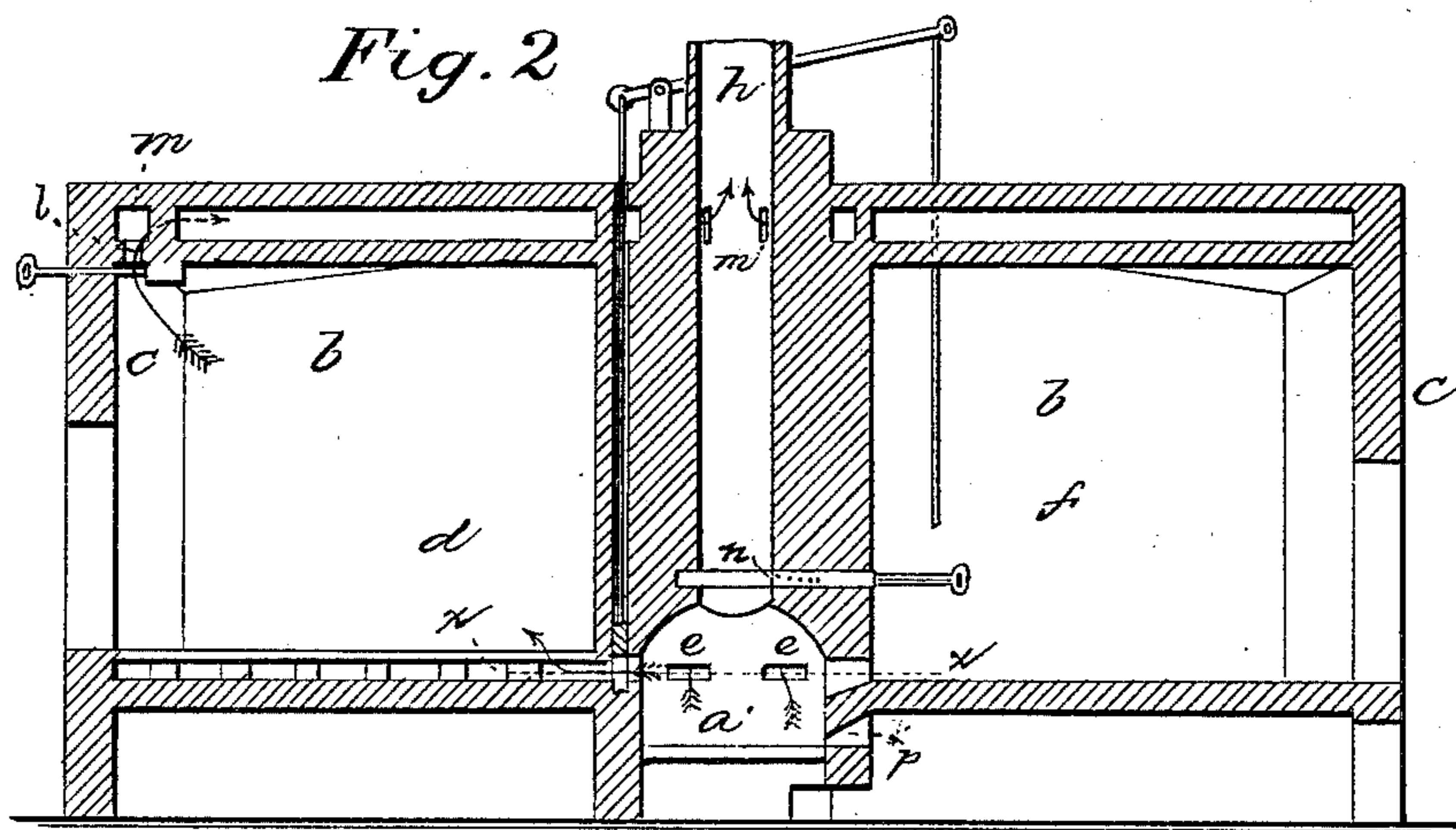


J. V. B. REMSEN.

Brick Kiln.

No. 94,513.

Patented Sept. 7, 1869.



Witnesses:
charles m. m. m.
geo. m. m. m.

Inventor:
James V. B. Remsen
L. H. Jewell
J. H. Jewell

United States Patent Office.

JAMES V. B. REMSEN, OF NEW YORK, N. Y.

Letters Patent No. 94,513, dated September 7, 1869; antedated August 27, 1869.

IMPROVED BRICK-KILN.

The Schedule referred to in these Letters Patent and making part of the same.

To all whom it may concern:

Be it known that I, JAMES V. B. REMSEN, of the city and State of New York, have invented an Improvement in Kilns for Bricks, &c.; and I do hereby declare the following to be a full, clear, and exact description of the same, reference being had to the annexed drawing, making part of this specification, wherein—

Figure 1 is a plan of the kiln, showing the chambers in different stages of construction, to represent the parts more fully;

Figure 2 is a vertical section at the line *y y*; and

Figure 3, a partial sectional plan at the line *x x*.

Similar marks of reference denote the same parts.

The object of this invention is to provide means for burning bricks in successive charges, in separate compartments, by one central fire, so that one compartment can be charged while another is being emptied, a third burned, and the others drying and becoming gradually heated.

By this construction it becomes unnecessary to extinguish the fire, and the bricks are burned with greater uniformity than heretofore.

In the annexed drawing—

a represents a furnace of suitable size, located centrally between the diverging walls *b b*, that run radially, or nearly so, to the outer wall *c*, in which are openings or doors leading to the various chambers formed as aforesaid.

Each chamber is roofed with an arch of brick or masonry, and between the fire-chamber *a* and the surrounding chambers *d*, flues *e* are introduced, and each is formed with a damper by means of which the heat may be shut off from all the chambers except the one that is in use.

These flues *e* pass into horizontal flues or arches, or a hollow perforated floor, upon which the bricks rest.

One of the chambers (*f*) is to be used for fuel and to give access to the furnace *a*.

It will be understood that the combustion of the gases will be made as perfect as possible by the fire-chamber being sufficiently large to retain them until proper combustion takes place, and that the bricks will be burned by the heated gases as in a reverberatory furnace.

With this apparatus the chambers can be charged successively with the bricks and they become gradually heated by a small amount of gases admitted, and then the burning of each chamber, in its turn, is completed, after which the cooling and removal are in succession.

Coal may be employed instead of the wood heretofore

used, thereby effecting a saving in cost, and making a more uniform heat.

The central chimney *h* may be employed to take away the waste products of combustion, a series of openings or flues for that purpose being provided as at *ll*, opening into a radial flue, *m*, that leads to the chimney. One of these flues may answer for two of the chambers *d*, and dampers should be provided to each of the flues *l*, or there may be a flue, *m*, to each chamber.

The main damper *n* allows the chimney *h* to be used in kindling the fire, or in case the heat becomes too great for any given chamber.

I prefer to have the fuel-opening of the furnace formed as shown for bunking in the coal, and an opening left at *p*, allows the fire to be raked above the grate for drawing out clinkers.

This construction of kiln gives great facility for charging, heating, burning, and emptying the chambers successively, and I remark that the radial dividing-walls may be constructed with air-spaces or other means for preventing heat passing from one chamber to the other, and the arches and parts of the kiln may be tied or anchored in any desired manner to strengthen them.

The parts of the furnace exposed to high temperature should be lined with fire bricks.

The dampers should be made of fire-brick set in a clamp so that they can be replaced, and the levers that work the respective dampers may all be connected with pulls in the attendant's compartment, *f*.

This kiln is particularly adapted to the burning of bricks, but I do not limit its use in that particular, as it may be employed for other articles.

Openings and stoppers may be provided in the top of each chamber, for allowing the vapors to escape while drying and heating the brick, or to aid in cooling the kiln after the brick has been burned.

I do not claim a kiln with a fire in the centre, as in the English patent, No. 1,582, A. D. 1865.

What I claim, and desire to secure by Letters Patent, is—

The arrangement herein described, of a series of chambers around a central fire, so that the operation of charging, burning, and removing the bricks or other articles can be performed successively, substantially as specified.

In witness whereof, I have hereunto set my signature, this 4th day of January, A. D. 1869.

JAMES V. B. REMSEN.

Witnesses:

GEO. D. WALKER,
CHAS. H. SMITH.