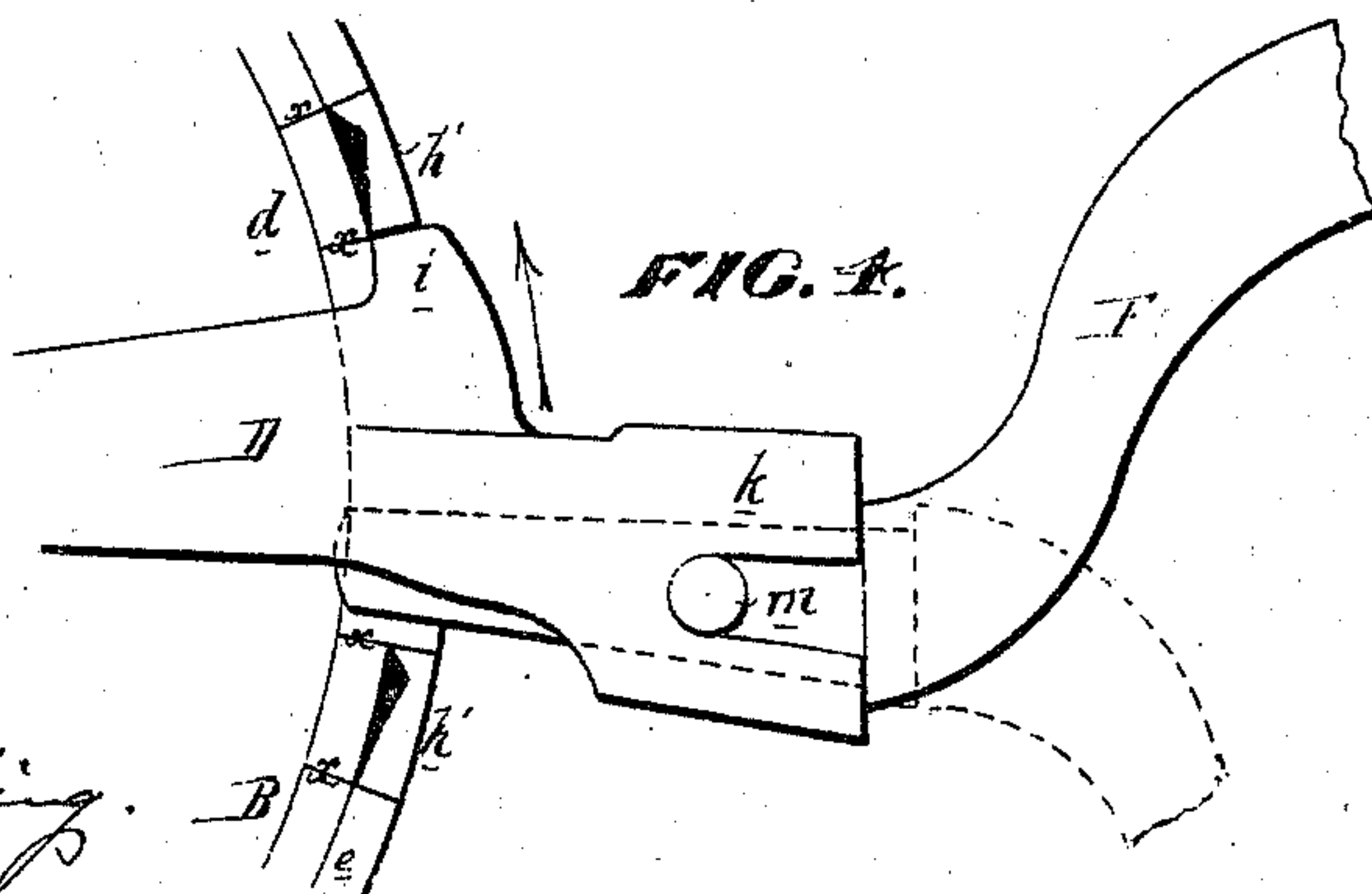
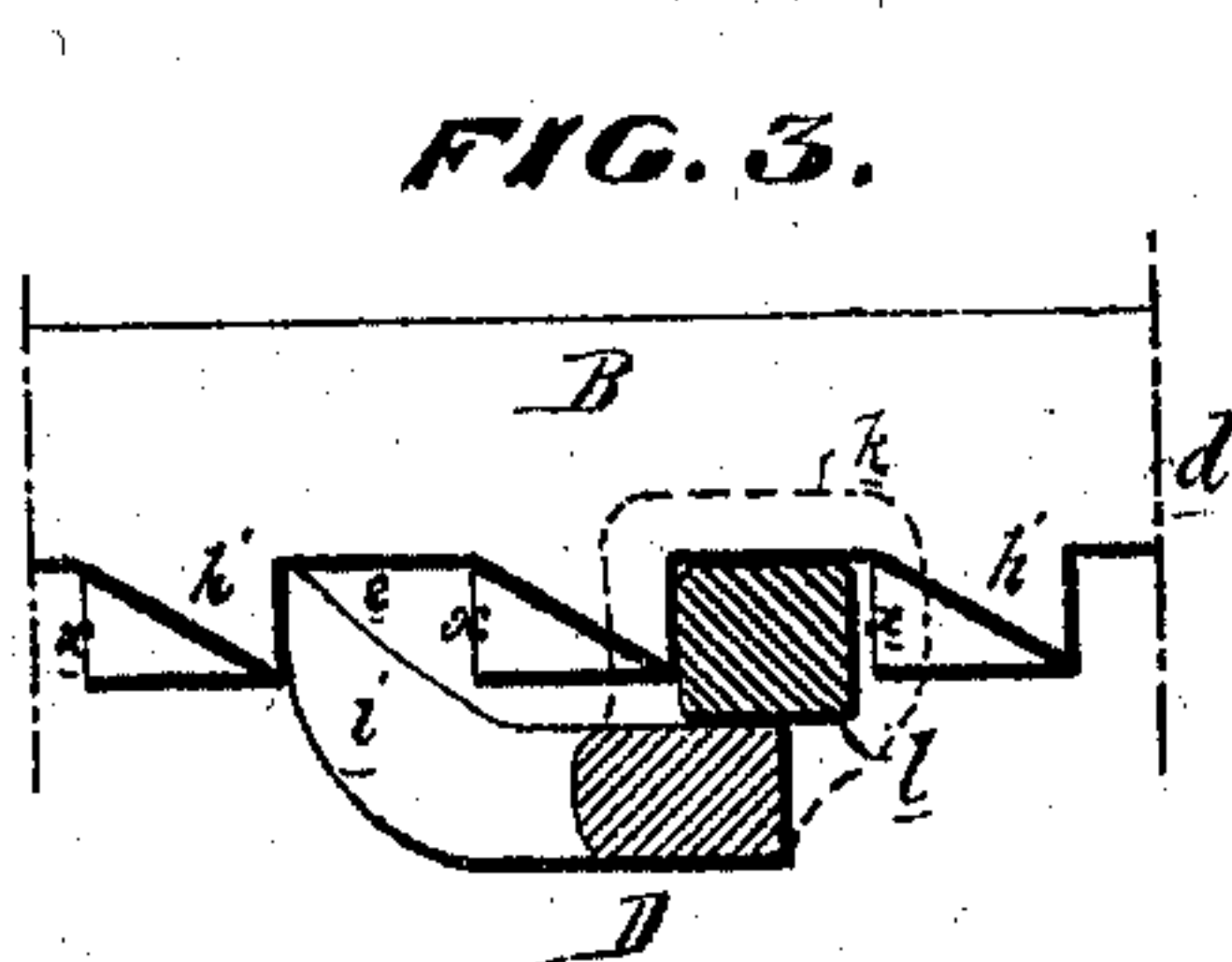
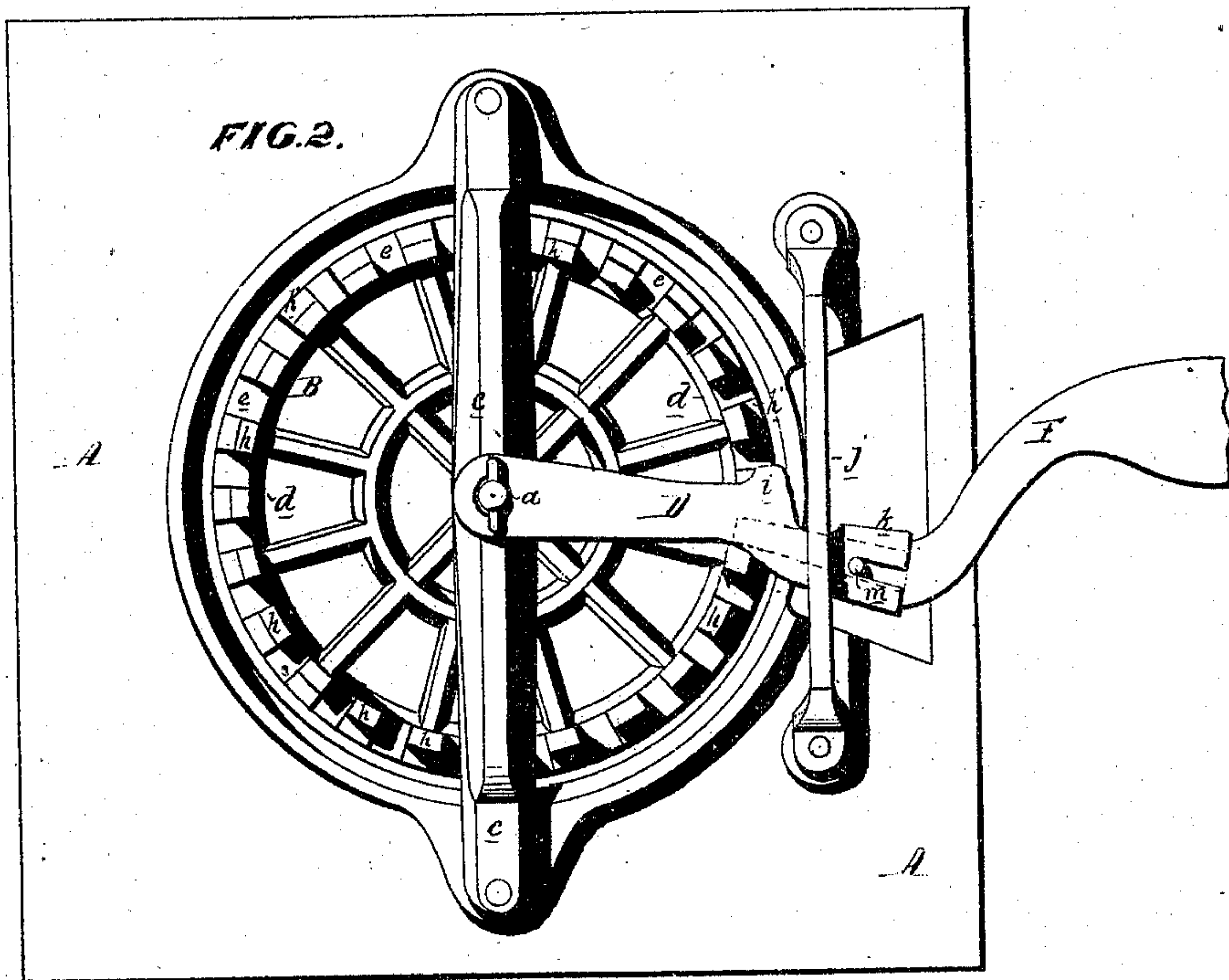
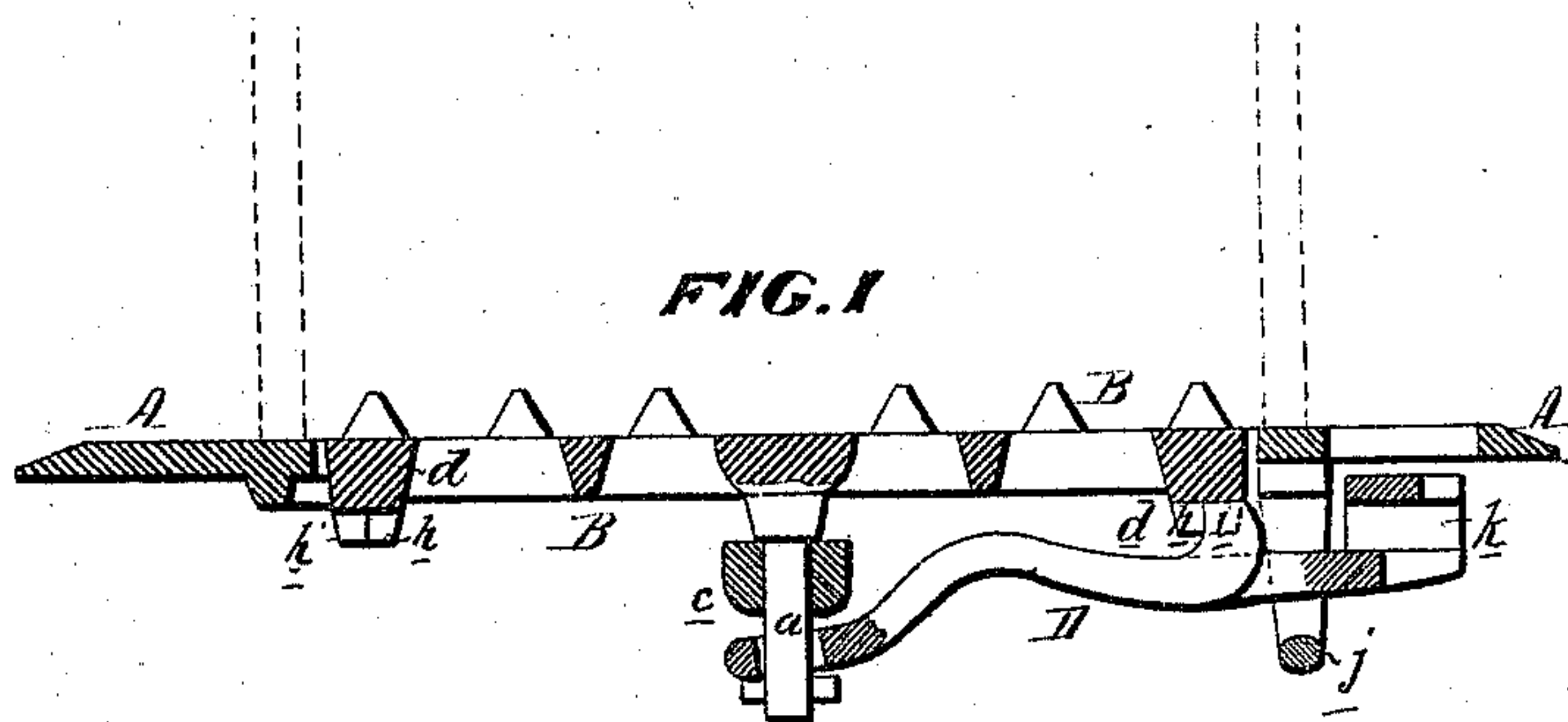


*Rees Moss,*  
*Inventor of Codes and in Devices for Operating the same.*

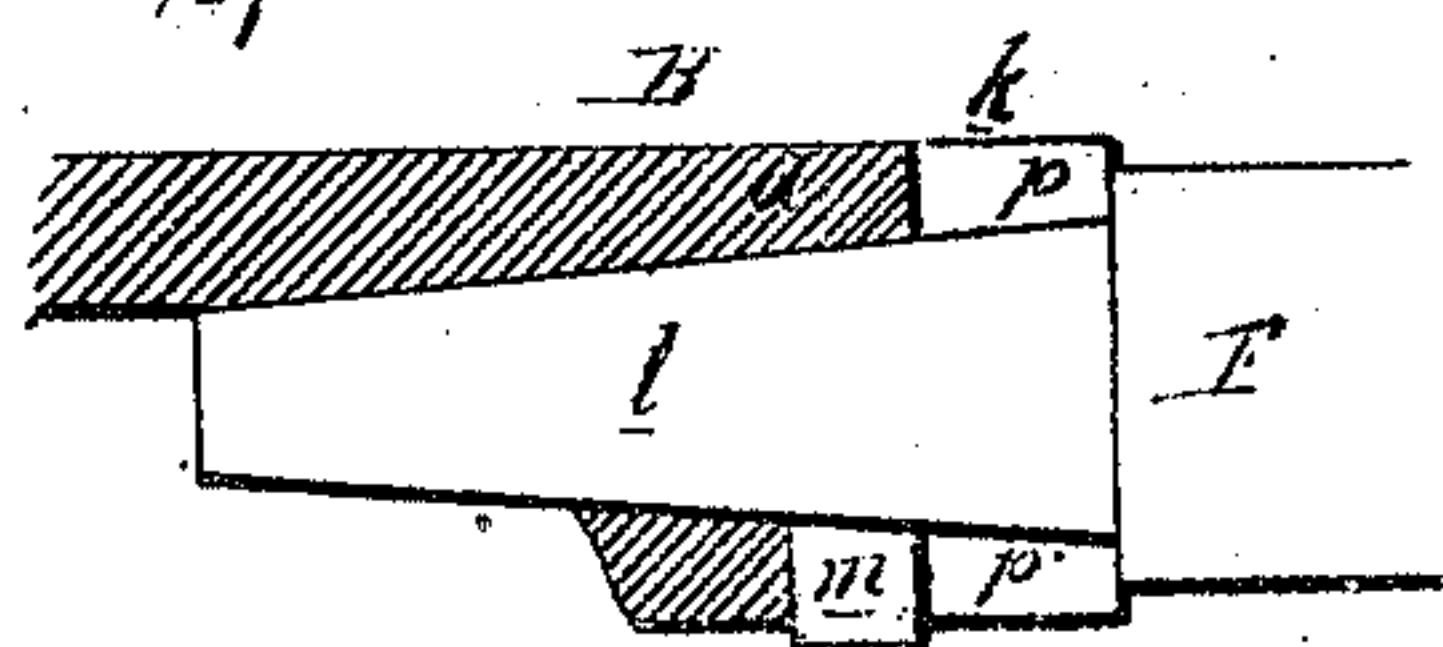
No. 120,992.

Patented Nov. 14, 1871.



Witnesses } *Geo. B. Harding.*  
*Thos. Millman*  
 Rees Moss  
 by his Atty  
 Stowson and Son.

**FIG. 5.**





# UNITED STATES PATENT OFFICE.

REES MOSS, OF PHILADELPHIA, PENNSYLVANIA, ASSIGNOR TO HIMSELF AND  
SILAS H. EMERY, OF SAME PLACE.

## IMPROVEMENT IN STOVE-GRATES.

Specification forming part of Letters Patent No. 120,992, dated November 14, 1871; antedated November 3, 1871.

*To all whom it may concern:*

Be it known that I, REES MOSS, of Philadelphia, county of Philadelphia, and State of Pennsylvania, have invented certain Improvements in Grates and in Devices for operating the same, of which the following is a specification:

My invention consists of a circular grate adapted to a stove or furnace, and constructed as hereafter described, that it can be either revolved or shaken, and my invention also consists of certain arms or levers adapted to the stove, to each other, and to projections or teeth on the under side of the said grate, so as to impart either a revolving or reciprocating motion to the latter.

Figure 1 is a vertical section of the lower portion of a stove with my improved grate, and the devices for operating the same; Fig. 2, an inverted plan view of Fig. 1; and Figs. 3 4 and 5, detached views illustrating portions of my invention.

A represents a plate at the base of a stove or heater, and in this plate is a flanged opening for the reception of a circular grate, B, the latter being supported by and arranged to turn upon a central pivot-pin, *a*, adapted to a cross-bar, *c*, secured to the bottom of the plate A at opposite sides of the grate. On the under side of the outer rim, *d*, of the grate are a series of alternate projections or teeth, and depressions, *e*. All of the projections are divided in the center so as to form an inner row of plain teeth, *h*, having two abrupt sides, *x x*, and an outer row of inclined ratchet-teeth, *h'*, having one abrupt and one inclined side as best observed in Figs. 2 and 3. An arm or pawl, D, hung loosely to the lower end of the pivot-pin *a* beneath the grate, has a pointed projection, *i*, adapted to the ratchet-teeth *h'* of the latter, and is held up to within a proper distance of the said teeth by a guiding cross-piece, *j*, secured to the under side of the plate A. At the outer end of this pawl D there is a square socket, *k*, for receiving the end, *l*, of an operating lever or key, F. On one side of the latter is a projecting-pin, *m*, adapted to either of the two slots *p* and *p'* formed in the outer end of the pawl D at points above and below the socket. These slots are of different lengths, and with the pin *m* determine the extent to which the end of the key can be inserted into the socket of the pawl. If the key, for instance, be held in such a position that the pin *m*

shall be undermost, the latter will, when the said key is inserted into the socket, enter the longest slot *p'*, which will enable the end of the key to be thrust forward over the pawl and into one of the recesses, *e*, between the innermost plain teeth *h* of the grate. The abrupt sides *x* of the latter will retain the end of the key, so that when the latter, with the pawl, is reciprocated, the desired shaking motion can be imparted to the grate for the purpose of raking down ashes, etc. If the key be now withdrawn and inverted so as to cause the pin *m* to enter the shorter slot, *p*, the end of the key will be prevented from entering the spaces between the inner teeth, *h*, but the pointed projection *i* of the pawl will be at liberty to act upon the inclined or ratchet-teeth *h'* of the grate so as to impart an intermittent rotary motion to the latter as the said pawl is vibrated by means of the key. The operation of the pawl will be readily understood on referring to Figs. 3 and 4, where it will be seen that the grate will be turned by moving the pawl in the direction of the arrow, while, when it is moved in the contrary direction, the said pawl will slip over the inclined teeth of the grate, and the latter will remain stationary.

I claim—

1. A circular grate, having plain and inclined teeth *h* and *h'*, and intervening spaces *e* arranged substantially as specified, in combination with devices substantially as herein described, whereby the said grate may be either revolved or reciprocated.

2. The pawl D hung loosely to the pivot-pin *a* of the said grate, adapted to the ratchet-teeth *h'* of the latter, and otherwise arranged to be operated substantially in the manner described by a key F or its equivalent.

3. The reversible key F with its pin *m* adapted to the socketed end of the pawl to the slots *p* and *p'* of the same, and to the projections and recesses of the grate, all substantially as and for the purpose specified.

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

REES MOSS.

Witnesses:

WM. A. STEEL,  
HARRY SMITH.

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