

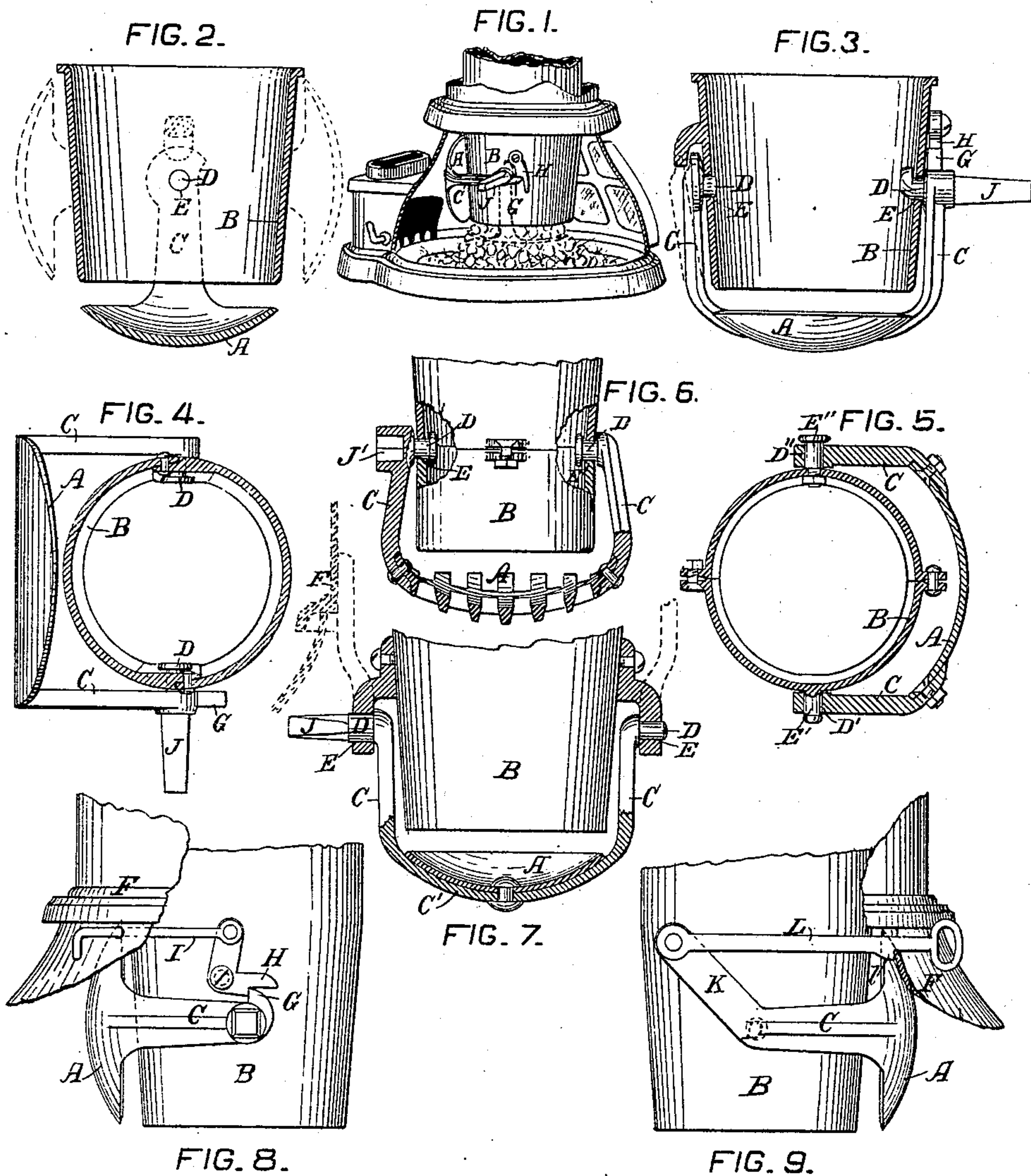
(No Model.)

J. H. GOODFELLOW.

CUT-OFF ATTACHMENT FOR MAGAZINE STOVES.

No. 251,358.

Patented Dec. 27, 1881.



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CUT-OFF ATTACHMENT FOR MAGAZINE-STOVES.

SPECIFICATION forming part of Letters Patent No. 251,358, dated December 27, 1881.

Application filed January 28, 1881. (No model.)

To all whom it may concern:

Be it known that I, JOHN H. GOODFELLOW, of the city of Troy, in the county of Rensselaer and State of New York, have invented a new and useful cut-off attachment, designed to be employed in connection with the feeders of magazine-stoves for the purpose of intercepting, whenever desired, the continuous supply of fuel from the magazine into the fire-pot of such stoves, so that such fire-pot can be emptied, either in part or wholly, without removing or disturbing the fuel in the magazine.

In the following specification, descriptive of my above-mentioned invention, reference is had to the accompanying drawings, in which like characters refer to similar parts in the various figures, and in which—

Figure 1 is a sectional perspective view of a portion of a magazine-stove with my invention as in connection therewith. Fig. 2 is a central vertical section of the lower portion of a magazine as removed from a stove and having my invention embodied therewith. Fig. 3 is a similar section of the same, taken in a plane transversely to that in Fig. 2. Fig. 4 is a horizontal section of a magazine-feeder, and showing modifications in my invention. Fig. 5 is a horizontal section of a differently-constructed feeder and my invention otherwise modified. Figs. 6 and 7 are each elevations of the lower portions of differently-constructed magazines, and showing (principally in section) other and different modifications of my invention therewith; and Figs. 8 and 9 are each an elevation of the lower portion of a stove-magazine and a small portion of the stove-casing, and showing, in elevation therewith, other and different modifications of my invention.

In Figs. 2, 3, 6, and 7 the various parts of my invention as therein shown are in that position in relation to the magazine as when employed in retaining the contents of such magazine therein, and in Figs. 1, 4, 5, 8, and 9 they are (in full lines) in such a position as to permit the contents of such magazine to fall unrestricted thereby into the fire-pot of the stove.

The distinctive feature of the device in which are embodied the various parts of my invention is a disk-like cut-off, A, supported, in relation to the magazine B of a stove, by means of arms C, rigidly connected with such cut-off, and pro-

vided with axial bearings, all being so constructed and arranged in reference to each other as to adapt such cut-off to be vibrated on such bearings to and fro in the arc of a circle between the position vertically at one side of such magazine and above the fuel in the fire-pot to that horizontally beneath the mouth of such magazine, substantially as shown. The cut-off A can be made either solid or in open-work, Fig. 6, and by making such cut-off of a curved form concentric with its axis of movement (see Figs. 2 and 4) it is enabled to pass through the fuel, in separating the contents of the magazine from that of the fire-pot, without crowding or shoveling the fuel in its path ahead of it to one side of the fire-pot. I generally prefer to make such curved-shaped cut-off in the form of a concavo-convex disk, so that, in addition to its moving freely through the fuel, it will better resist becoming distorted or warped by the action of the fire, and that its outer edge will be about equal distance from the lower edge of the magazine at all sides while it is suspended beneath the mouth of such magazine.

The arms C are shown in Figs. 5 and 6 as made separate and secured to the sides of the cut-off A. In Fig. 7 the arms C are shown as made in one piece with a cross-bar, C', to which the cut-off is secured. When the arms C and cut-off A are made separate, I, if desired, strike up or form the cut-off of sheet metal; but I prefer to make or cast the cut-off and its arms in one piece, as indicated in Figs. 1, 2, 3, 8, and 9.

In order, if required, to prevent the arms C coming in contact with the magazine between their axis and the cut-off, by reason of the mouth of the magazine becoming warped or blistered by the action of the fire, I form the arms C, Fig. 6, so that they will be farther from the sides of the magazine at its lower edge than at their axis.

In Figs. 2, 3, 4, 6, and 7 the rigidly-secured arms C of the cut-off A are shown as provided with lugs or journals D thereon, such lugs or journals D being preferably made solid and in one piece with such arms C, to form the pivotal axis for the cut-off to be vibrated upon, and such lugs or journals D are adapted to be supported in bearings E, formed in hangers connected to or made solid with the sides of the

magazine, or connected with the casing F of the stove, as indicated in Fig. 7, or, as I generally prefer, in bearings E, formed in the sides of the magazine B, as shown in Figs. 2, 3, 4, and 6. When the lugs D and bearings E are formed as in Figs. 2 and 3, after inserting one of the lugs in its bearings the opposite lug, as indicated by dotted lines, Fig. 3, can be sprung into its place.

When desired I form the magazine B in sections, either vertically, as shown in Figs. 4 and 5, or horizontally, as shown in Fig. 6. In Fig. 5 the magazine is shown as made of two parts, joined together between the opposite places of support for the arms of the cut-off, and on one of the sections is shown as cast thereon a lug, E', adapted to receive an eye, D', formed in an arm of the cut-off, and the section opposite is shown as provided with a hole therein adapted to receive a stud, E'', as a support for the eye D'. By making such hole of suitable shape and size it will be adapted to receive a lug similar to either of the lugs D, as shown in Fig. 3.

By making the magazine B in sections, as shown in either Fig. 4 or 6, the joints of such sections passing through the holes forming the bearings E for the supporting lugs D of the cut-off A, such lugs, having annular collars or projections formed thereon inside of the magazine, are prevented from being sprung out of their bearings by securing such sections together.

By casting a magazine divided, as indicated in Figs. 4, 5, or 6, the bearings for the supports for the cut-off, as described, may be conveniently cast therewith, thus saving the labor and expense of afterward providing the magazine with the same.

In order to support the cut-off A in its place at one side of the magazine B, (when not employed in retaining the fuel in the magazine,) I provide one of the arms C with a finger, G, to engage with a pawl, H. This pawl H, if desired, I provide, Fig. 8, with a rod or connection, I, passing through the casing F of the stove, so as to release the cut-off A from its position at the side of the magazine without necessarily opening the stove. In order to operate my invention to and fro, I have provided one of the arms C with a shank, J, Figs. 1, 3, 4, 7, 8, or with a box, J', Fig. 6, or other equivalent therefor, on a line with the axis of cut-off, and adapted to receive a wrench by which, by opening one of the mica-light doors opposite such shank, or its equivalent, the cut-off can be vibrated; as set forth, or, by making the shank J of sufficient length to project a short distance through an aperture in the casing of the stove, the wrench can be applied to operate the cut-off without necessarily open-

ing the stove; or in lieu of the device composed of the shank J, or its equivalent, and a wrench in vibrating the cut-off, and the above-described device composed of the catch G and pawl H, I, if desired, provide one of the arms C with a lever, K, and operating-rod L, Fig. 9, provided with a projection or dog, l, to engage with the casing F of the stove, substantially as shown, so that by raising the end of the rod L, projecting beyond the casing F, the dog l will be disengaged, and the rod L can be employed in operating the cut-off, as set forth.

When it is desired to carry a smaller fire in the fire-pot of the stove, while the magazine contains a supply of fuel, than when the cut-off is at the side of the feeder, such cut-off can be left in the position beneath the mouth of the feeder, and the fire from time to time, as desired, be replenished by vibrating the cut-off a short distance while in that latter position.

What I claim as new and of my invention is—

1. In combination with the fuel-magazine of a stove, the cut-off A, having arms C, and having its support and center of vibration above the discharge end or mouth of the magazine, and adapted to be vibrated to and fro through an arc of a circle edgewise between a horizontal position beneath the mouth of the magazine and a vertical one at the side, and external to the magazine above its mouth, such cut-off being of a curved form corresponding with its path of movement, all being disposed and arranged substantially as shown and specified.

2. In combination with the fuel-magazine of a stove, the cut-off A, having arms C, and having its support and center of vibration above the discharge end or mouth of the magazine, and adapted to be vibrated to and fro through an arc of a circle edgewise between a horizontal position beneath the mouth of the magazine and a vertical one at the side, and external to the magazine above its mouth, such cut-off having a concavo-convex form, all being disposed and arranged substantially as shown and described.

3. A cut-off, A, provided with fixed arms C, and journals D, connected therewith, constructed, arranged, and supported in combination with the fuel-magazine of a stove, and adapted to operate externally of such magazine, substantially as shown and set forth.

In testimony whereof I hereunto set my hand, in the presence of two subscribing witnesses, this 25th day of January, 1881.

JOHN H. GOODFELLOW.

Witnesses:

JAMES T. GOODFELLOW,
EDWARD F. LEAHY.