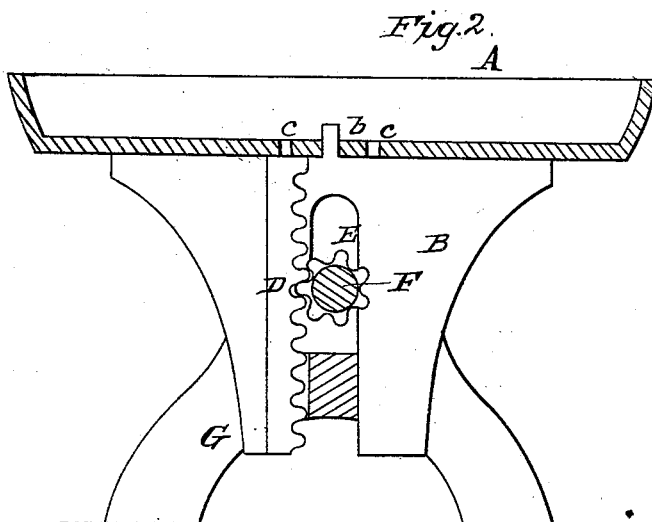
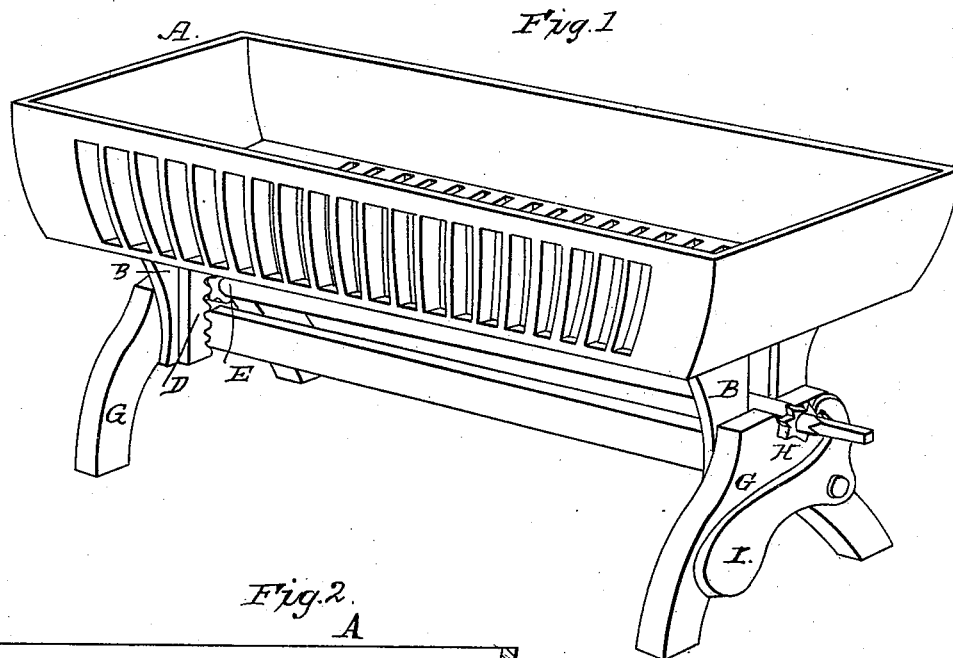


D. P. FOSTER.  
Cooking Stove.

No. 48,923.

Patented July 25, 1865.



Witnesses  
signatures, test

Inventor  
D. P. Foster  
By M. Dodge  
his Attorney

# UNITED STATES PATENT OFFICE.

D. P. FOSTER, OF SHELBURNE FALLS, MASSACHUSETTS.

## GRATE FOR COOKING-STOVES.

Specification forming part of Letters Patent No. 48,923, dated July 25, 1865.

### *To all whom it may concern:*

Be it known that I, D. P. FOSTER, of Shelburne Falls, in the county of Franklin and State of Massachusetts, have invented a new and useful Improvement in Stove-Grates; and I do hereby declare the following to be a full, clear, and exact description of the same, reference being had to the accompanying drawings, in which—

Figure 1 is a perspective view of my improvement. Fig. 2 is a vertical cross-section taken on a line just within the rack and pinion.

The nature of my invention consists in so constructing an adjustable stove-grate as to adapt it to the fire-box of ordinary cooking-stoves without any change in the construction of the stove or the grate and its apparatus, and at the same time be capable of being adjusted vertically, so as to bring the fire nearer to the cooking-vessels.

That others may understand my invention, I will particularly describe it.

A is the fire-box or grate, having sides considerably elevated if the same is designed for the burning of coal, but may be much lower if wood only is to be used. The grate A rests upon two upright slotted frames, B B, projecting upward from the top of each of which is the stud *b b*. These studs are inserted through orifices *c c* in the bottom of the grate, and serve not only to keep the grate in place, but they also serve to prevent the frames B from falling or being displaced.

Upon the inner sides of the frames B are the racks D D, by means of which, through the intervention of pinions E E upon the shaft F, the grate is raised or lowered at will.

The stand G, upon which my grate is represented as mounted, is only added for the purpose of convenience in adapting my grate to stoves now in use, and it is obvious that the supports for the working parts of my devices may be attached to or form parts of the stove when constructed.

Upon the shaft F, at a convenient point, is the ratchet H, into which the weighted pawl I engages and holds the pinions E in any desired position. The shaft F may be turned by a key or crank on the end, which is allowed to project for that purpose.

It is well known that it is often difficult to make a small fire suffice for cooking articles

upon the top of the stove, for the reason that so much space intervenes between the surface of the fire and the article to be heated that the heat is dissipated by the intervening air and carried into the chimney. A sufficient fire to overcome this difficulty is sometimes, as in summer, very unpleasant and objectionable, and it is perfectly obvious that if the small fire which it is desirable to use in hot weather can be elevated so as to be very near the covers of the stove its local influence will be as great as a much hotter fire placed at a greater distance, and it is to accommodate these conditions that my present invention has been devised.

The operation of my invention requires but little description. The orifices *c c* are made so that if it is not convenient to place the stand G in the middle of the fire-chamber of the stove it may be placed either forward or back of the middle, and the grate still occupy a central position. In such a case the stud *b* will be inserted, not through the central orifice, *c*, but through one of the side ones. The edges of the grate should not be placed in immediate contact with the sides of the fire-chamber, for bits of coal or cinder may then lodge in the small space between and prevent free action. The raised sides of the grate may be perforated all around, if desired. When it is desired to raise the fire nearer to the covers of the stove the key or crank is applied to the end of the shaft F and then turned, so as to cause the grate to rise. The pawl I engages with every tooth of the ratchet H, and will maintain the grate at any desired elevation. When it is desired to lower the grate it will only be necessary to apply the key or crank again, raise the pawl I clear of the ratchet, and then allow the grate to descend as far as required, when, if the pawl is released, it will engage in the ratchet again and hold the grate at that point.

It will be seen that by this construction and arrangement of the parts my grate is adapted for use in any ordinary cooking-stove, the entire apparatus being set into the fire-box of the stove, with the legs or frame G resting on the bottom thereof, with the end of the shaft to which the key or handle is to be applied opposite the door, so that by simply opening the latter the key can be applied and the grate adjusted at pleasure.

The box A, together with the shaft F and

connecting-bar J, will necessarily be made of various sizes to fit the various sizes of stoves in use; but the remaining parts may in all cases be made of uniform size.

It will be observed that by this construction and arrangement I avoid the necessity of making any holes through the plates of the fire-box, and that no bolts or other attachments are required, as the whole thing is simply set in the fire-box and rests firmly on the feet of G, the slot in B serving, in connection with rod F and bar J, as a guide, and causing the box A to move in a direct line when raised, and thereby preventing it from tilting or tipping to one or the other side, whereby it is made to work perfectly free and easy.

Having described my invention, what I claim

as new, and desire to secure by Letters Patent, is—

1. The fire box or grate A, provided with the holes *c c c*, or their equivalents, in combination with the slotted frames B, constructed and arranged to operate substantially as and for the purpose herein set forth.

2. The movable stand composed of the end pieces, B B, united by the bar J, in combination with shaft F, pinion E, ratchet H, and pawl I, for the purpose of supporting and adjusting the grate A, as and for the purpose described.

DAN P. FOSTER.

Witnesses:

SAML. G. FIELD,

WM. J. DAVIS.