

No. 828,545.

PATENTED AUG. 14, 1906.

T. J. HAMMER.  
GRATE FOR COOKING STOVES.  
APPLICATION FILED FEB. 3, 1905.

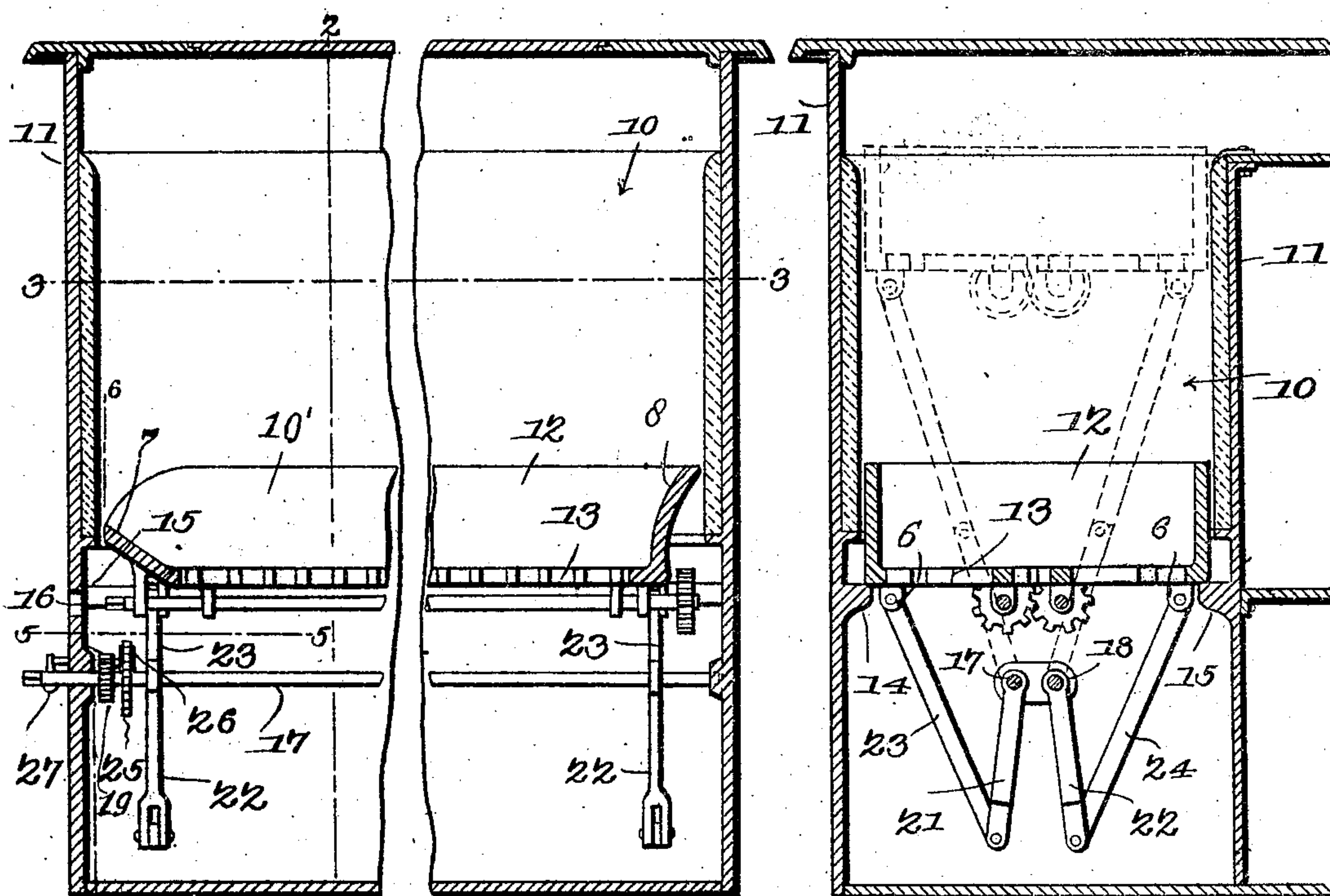


Fig. 1.

Fig. 2.

Fig. 4.

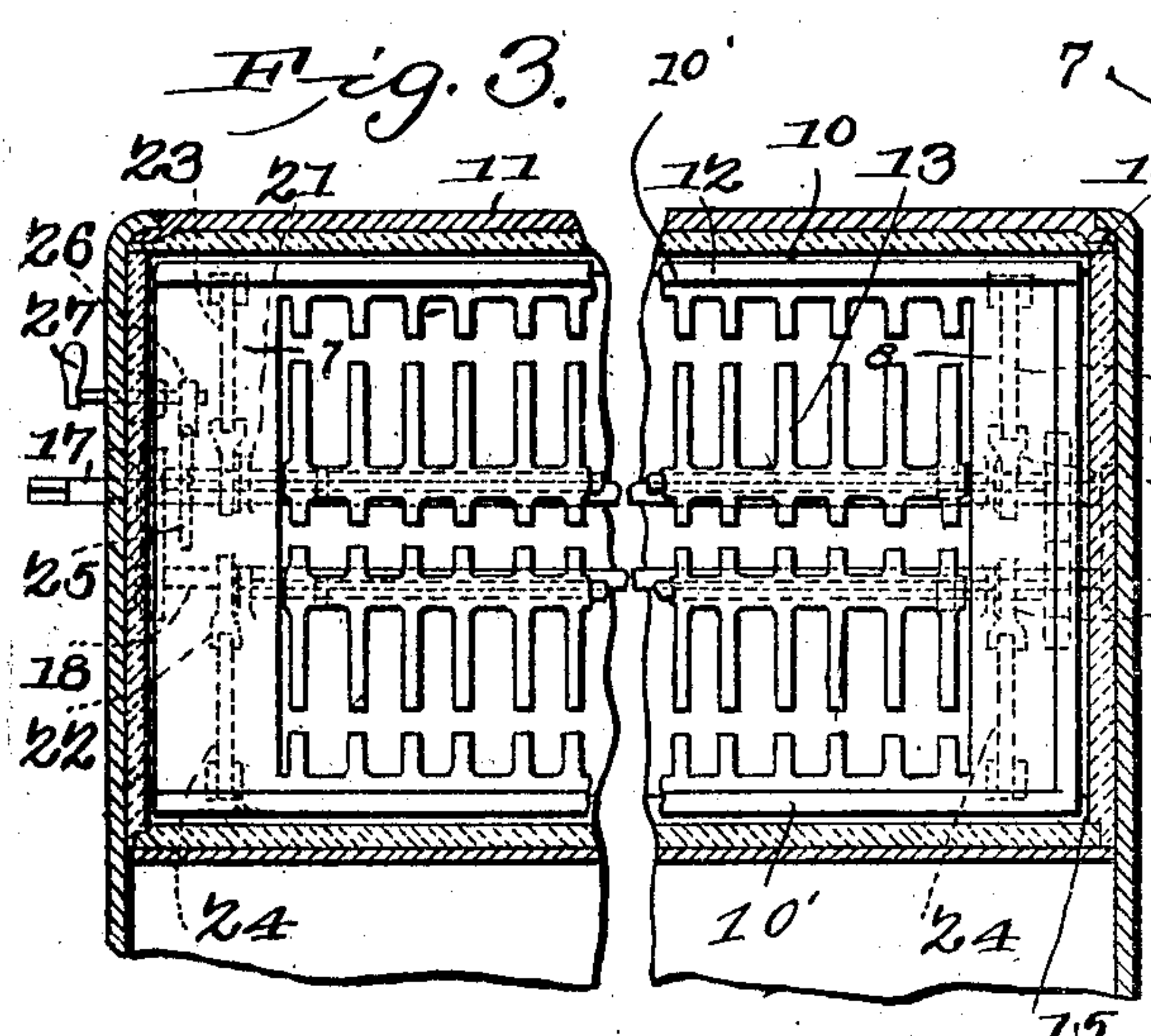


Fig. 3.

Fig. 5.

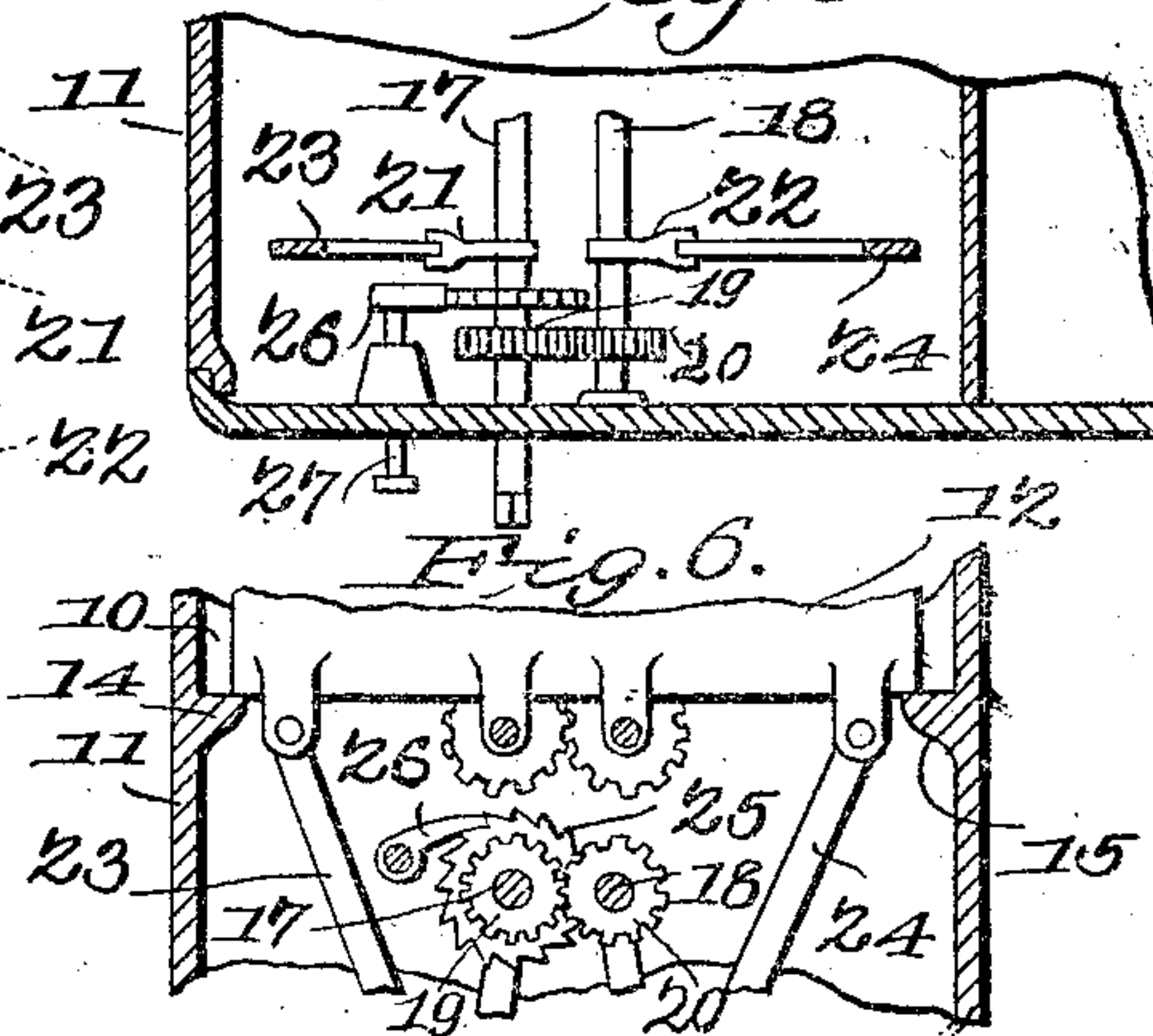


Fig. 6.

Witnesses  
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# UNITED STATES PATENT OFFICE.

THOMAS J. HAMMER, OF PORTLAND, OREGON.

## GRATE FOR COOKING-STOVES:

No. 828,545

Specification of Letters Patent.

Patented Aug. 14, 1906.

Application filed February 3, 1905. Serial No. 244,035.

*To all whom it may concern:*

Be it known that I, THOMAS J. HAMMER, a citizen of the United States, residing at Portland, in the county of Multnomah and State of Oregon, have invented a new and useful Grate for Cooking-Stoves, of which the following is a specification.

This invention relates to grates for stoves, especially for cooking-stoves and ranges; and it has for its object to provide a simple and efficient device whereby the grate may be adjusted vertically within the combustion-chamber to regulate and control the heat and the combustion of fuel.

With these and other ends in view, which will readily appear as the nature of the invention is better understood, the same consists in the improved construction and novel arrangement and combination of parts which will be hereinafter fully described, and particularly pointed out in the claim.

In the accompanying drawings has been illustrated a simple and preferred form of the invention, it being, however, understood that no limitation is necessarily made to the precise structural details therein exhibited, but that changes, alterations, and modifications within the scope of the invention may be made when desired.

In the drawings, Figure 1 is a broken sectional elevation of a portion of a cook stove, taken longitudinally through the fire-chamber and showing the improvements applied. Fig. 2 is a transverse section taken on the line 2-2 of Fig. 1. Fig. 3 is a sectional view taken on the line 3-3 of Fig. 1. Fig. 4 is a broken side view of a grate-frame detached. Fig. 5 is a detail view in section on the line 5-5 in Fig. 1. Fig. 6 is a detail view in section on the line 6-6 of Fig. 1.

Corresponding parts in the several figures are indicated throughout by similar characters of reference.

The improved device may be applied with slight and unimportant modifications to any of the various forms and sizes of the combustion-chambers of cook-stoves and ranges. For the purpose of illustration the invention has been shown applied to a conventional form of combustion-chamber (represented at 10 and inclosed within a stove-casing 11.)

Supported for vertical movement within the combustion-chamber 10 is a frame 12, having vertical side walls 10' and flaring front and rear walls 7 and 8, the said front and rear walls being flared, respectively, in a forward

and in a rearward direction. Said frame forms a box-like structure the downward movement of which is limited by supporting-flanges 14 15, arranged interiorly upon the fire-pot and constituting supports for the frame 12 when the latter is in a depressed position.

The grate (represented at 13) is disposed in the bottom of the frame 12, and said grate may be of any approved form, no limitation being made to any particular form of grate structure.

Mounted for rotation in the ash-pit at the lower end of the combustion-chamber are spaced shafts 17 18, one of which extends through the wall of the stove-casing 11 to receive an operating handle or crank, the shafts being also provided with intermeshing pinions 19 20, so that they may be rotated simultaneously when the handle is applied to the shaft 17. Said shafts are also provided with crank-arms 21 22, the free ends of which are connected with lugs 6 upon the under side of the grate-frame 12 by means of links 23 24. One of the shafts 17 or 18, preferably the one to which the operating-crank is applied, is provided with a ratchet-wheel 25, adapted to be engaged by a pawl 26, which is pivoted interiorly upon the stove-casing and which is provided with an operating knob or handle 27, extending through the stove-casing to enable the pawl to be operated from the exterior.

The flaring front wall of the grate-frame 12 constitutes a deflector, which extends over the pinions 19 20, ratchet-wheel 25, and pawl 26 to prevent cinders or ashes from settling upon said parts, thereby interfering with the operation thereof. The flaring front and rear walls 7 8 will also have a tendency to guide any fuel that may be placed in the combustion-chamber away from the walls of the latter and in the direction of the grate in the bottom of the frame 12, so that when the said frame is raised or lowered the fuel will not scrape upon the walls of the combustion-chamber and cause a degree of friction which might interfere with the successful operation of the device.

It will be seen that by rotating the shaft 17 in one direction the crank-arms 21 22 and links 23 24 will elevate or depress the grate-frame to any required extent within the range of the crank-arms, so as to bring the bed of fuel upon the grate nearer to or farther from the top of the stove, as may be required.



thus regulating and controlling the heat and the amount of fuel consumed. Thus in hot weather or at times when only a small fire is required the grate may be elevated to a point near the griddles, where the heat may be fully utilized, as will be obvious. The grate-frame constitutes a shallow fuel-receptacle within which a small fire may be conveniently built and maintained, while by lowering the said grate-frame to a depressed position the capacity of the fuel-chamber will be materially increased. When the grate-frame is in a lowered position, as illustrated in Fig. 2, it will be firmly supported upon the flanges 14 15, and the lifting devices will thus be relieved of unnecessary strain to which they might otherwise be subjected when the grate in the frame is shaken or the fire is dumped, and the flaring front end wall serves to protect the operative parts of the lifting mechanism.

Having thus described the invention, what is claimed is—

In a stove, a combustion-chamber, sup-

porting-flanges upon the side walls of said chamber, a frame vertically slidable in the upper part of the combustion-chamber and adapted to rest upon the supporting-flanges said frame having a flaring front wall, a grate in the bottom of said frame, a pair of shafts supported in the combustion-chamber beneath the grate-frame, intermeshing pinions upon said shafts, crank-arms extending from the shafts, links connecting said arms with the grate-frame, a ratchet-wheel upon one of the shafts, and a manually-operable pawl engaging said ratchet; the intermeshing pinions and the pawl and ratchet being disposed beneath the inclined front wall of the vertically-slidable grate-frame and thereby shielded from material dropping through the grate.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in the presence of two witnesses.

THOMAS J. HAMMER.

Witnesses:

D. L. McLEOD,  
W. E. LACEY.