

(No Model.)

E. T. BURGESS.
GASOLINE STOVE.

No. 465,341.

Patented Dec. 15, 1891.

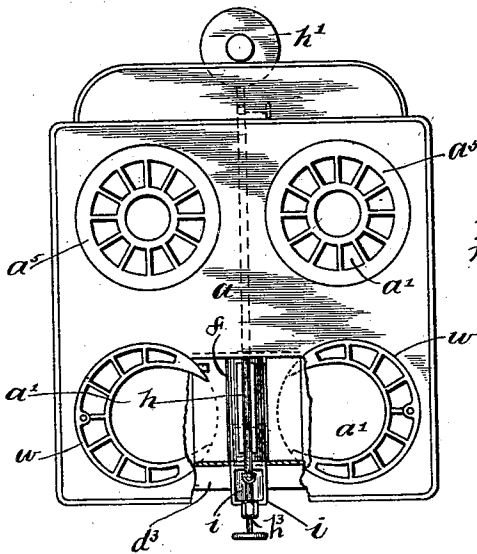


FIG. 1

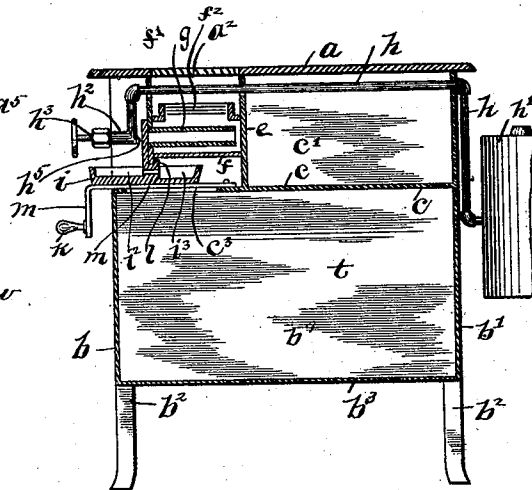


FIG. 2

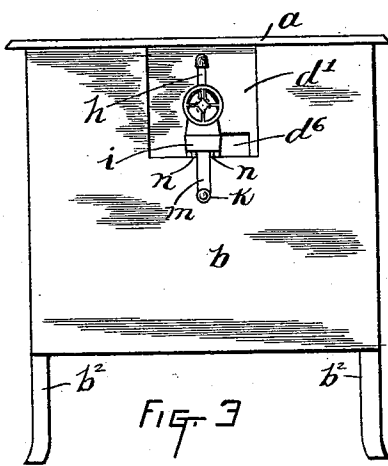


FIG. 3

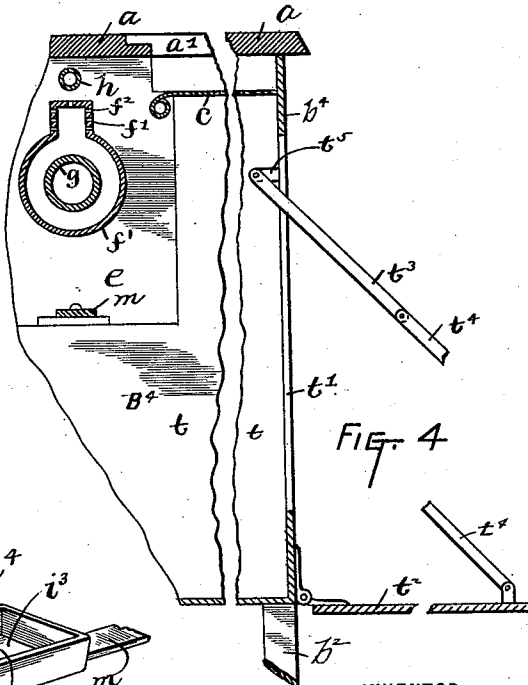


FIG. 4

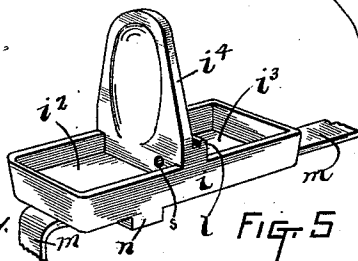


FIG. 5

WITNESSES:
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EDWARD T. BURGESS, OF COLUMBUS, OHIO.

GASOLINE-STOVE.

SPECIFICATION forming part of Letters Patent No. 465,341, dated December 15, 1891.

Application filed December 1, 1890. Serial No. 373,166. (No model.)

To all whom it may concern:

Be it known that I, EDWARD T. BURGESS, a citizen of the United States, residing at Columbus, in the county of Franklin and State of Ohio, have invented a certain new and useful Improvement in Gasoline-Stoves, of which the following is a specification.

My invention relates to the improvement of gasoline-stoves of that class wherein a fuel-gas is generated from gasoline or other petroleum.

The objects of my invention are to produce an improved oil-pan for a stove of this class of such construction as to not only provide heat for generating gas with the pipe, but to provide in connection therewith means for lighting the burner; to provide a four-hole gasoline-stove of such construction as to admit of the heat being transmitted to all of the stove-top holes from one burner; to so construct and arrange the two forward holes and the intervening plate therefor as to provide a heating-seat for an oblong vessel, if desired, and to so construct said forward stove-top holes as to prevent the cracking of the top plate of the stove through the contraction and expansion thereof, and to provide in connection with said stove a convenient warming-oven, and to construct said stove in a comparatively simple and inexpensive manner. These objects I accomplish in the manner illustrated in the accompanying drawings, in which—

Figure 1 is a plan view of my improved gasoline-stove, showing the forward stove-hole-connecting piece removed and a portion of the top broken away for the sake of clearness. Fig. 2 is a central vertical longitudinal sectional view. Fig. 3 is a front view. Fig. 4 is an enlarged transverse section of a portion of the stove, taken on line xx of Fig. 1; and Fig. 5 is a detail view, in perspective, of the combined oil-pan and the deflector.

Similar letters refer to similar parts throughout the several views.

a represents the stove-top plate, which is provided, as shown, with four stove-holes a' , the forward pair of which is connected by a removable plate a^2 .

b represents the front and b' the rear ends of the stove-body, b^4 the sides, and b^3 the bottom plate thereof, which, as hereinafter de-

scribed, forms the bottom of the warming-oven. The stove-frame thus formed is supported upon suitable legs b^2 .

c represents the partition or flue-bottom plate which extends between the sides and ends of the stove-body in the upper half thereof, and between which and the stove-top is formed the heat space or flue c' . Formed in the upper and central portion of the stove end plate b is a squared depression or recess d' , which results, as shown, in the formation in the bottom of said recess of a horizontal ledge or shelf b^3 .

At a short distance in the rear of that portion of the front end plate of the stove which forms the face of the recess portion d' is a vertical plate e , which extends between the stove-top and partition c , and is of a width corresponding with the width of the recess d' . Against the inner sides of the plate e and the recess-face portion bear the ends of an approximately cylindrical burner-body f , which has an upwardly-projecting longitudinal neck portion, as shown at f' , and which is provided with slotted openings f^2 .

g represents an internal burner-tube, which, projecting within the burner-body from an opening in the forward end thereof, terminates a short distance from the rear end of the burner-body. The above-described form of burner, however, is substantially shown in a patent to Josiah Burgess, dated June 14, 1887, and numbered 364,986.

h represents the oil-supply pipe, which extends longitudinally through the upper and central portion of the flue c' and has its outwardly-projecting rear end portion connected with a gasoline-reservoir tank h' . The forward end portion of this pipe h extends above the burner-neck through the recess-face of the stove front, without which it is bent downwardly to a point directly in front of and a short distance from the forward opening of the internal burner-tube g , from whence said pipe is provided in the usual manner with a short forwardly-extending arm h^2 . This pipe-arm h^2 is provided at its forward end with the usual gasoline and gas-escape orifice h^3 , which is adapted to be closed and unclosed in the usual manner by a suitable valve h^3 , which is not shown in detail, owing to its being of the ordinary well-known form.

i represents the oil-supply pan, which, as shown, is in the form of an oblong receptacle open on its upper side, said receptacle being divided into front and rear cups or compartments *i*² *i*³, these compartments being divided by the base of an upwardly-extending deflector-plate *i*⁴, which has its face preferably concave or hollow, as shown. As shown in the drawings, the rear cup *i*³ is of slightly greater depth than the forward cup *i*².

m represents the oil-pan-supporting bar, which has its rear end pivotally connected with the internal stove-plate *c* at the center of the width of the latter in close proximity to the inner side of the vertical plate *e*. This bar *m* extends forwardly through a transverse slotted opening *d*⁵, formed in the lower portion of the face of the recess *d'*, and has its outer projecting end portion bent downwardly and provided with a suitable finger-piece *h*. The bar *m* passes loosely between two downwardly-projecting lugs *n*, which are formed in the lower side of the forward portion of the pan *i*, said pan extending partially through the slotted opening *d*⁵, resting upon said bar and having its projecting deflector-plate bearing against the recess-face, as shown. The base of the deflector-plate *i*⁴ is thickened on its rear side, as shown at *l*, said thickened portion having an upwardly-projecting lip which normally bears against the inner side of the recess-face and thus prevents the forward movement of the pan. The front and rear compartments of pan *i* are made to communicate by means of a small opening *s*, formed in the deflector-plate *i*⁴ slightly above its lower end. It will thus be seen that the bar *m* and pan-lugs *n* will bear upon the ledge *d*³ of the recess *d'*.

As shown in the drawings, an opening *c*³ is formed in the plate *c* beneath the inner portion of the pan *i*, said opening communicating with the warming-oven chamber *t*, which, as shown, is formed beneath said plate *c*. This warming-oven is provided on one side with a doorway *t'* and hinged door *t*², the outer end of the latter being supported from dropping below a horizontal position when open by jointed arms *t*³ *t*⁴, which connect the oven-door top with inwardly-projecting lugs *t*⁵ at the sides of the doorway *t'*.

As shown in the drawings, the rear stove-top holes *a'* are preferably provided with suitable perforated covers *a*⁵, while the forward stove-holes have their outer side portions partially covered by crescent-shaped grating-pieces *w*, which bear upon the usual lid-receiving flanges at the base of the stove-holes. These crescent-shaped gratings are of any desired pattern of open or perforated work, and may, in conjunction with the uncovered portion of said stove-holes, be entirely covered by a suitable solid lid, if desired.

The manner of operating my improved stove is as follows: The pan-supporting bar *m* is moved laterally upon the ledge *d*³ until

the rear surface of the deflector-plate *i*⁴ covers the forward open end of the internal burner-tube *g*. The valve *h*³ is then opened and the gasoline-oil which escapes through the orifice *h*⁵ strikes the deflector-plate *i*⁴ and is deflected thereby to the pan-cup *i*², from which it escapes after having risen to the height thereof through the conduit *s* into the rear and deeper pan *i*³. The oil having been thus conveyed to the forward cup of the pan *i* rises to the opening *s* and passes therefrom into the rear cup *i*³. The oil having thus flowed into the pan until the bodies of the oil contained in the two cups are level with each other, the valve *h*³ is closed and the oil within the pan ignited. The heat from the forward cup of the pan which will be imparted to the forward portion of the supply-pipe will result, as usual, in the generation of gas within said pipe. The oil contained in the forward pan-cup having burned out, the pan is moved laterally until the plate *i*⁴ is past the opening of the tube *g*, when the valve *h*³ may be again opened and the gas discharged through the orifice *h*⁵ into the open end or mouth of the burner-tube *g*. The gas thus discharged within said burner-tube passes into the interior of the burner-body through the rear end of said tube and finds an outlet through the burner-neck slots *f*², after passing through which it is ignited by the flame which still rises from the inner and deeper cup *i*² of the pan, said inner cup having a greater supply of oil therein than the outer. It will be seen that the pan as herein constructed will afford means for both the generation of the gas and the lighting of the same at the burner. While the heat from the burner is discharged directly against the stove-hole-connecting plate *a*², it will be seen that it will be deflected laterally therefrom beneath each of the forward holes *a'* and thence rearwardly beneath the rear holes. By removing the forward-hole-connecting plate *a*² it will be seen that an oblong stove-hole is produced which will accommodate vessels of a similar shape. By the use of the partial gratings or lids of the crescent shape herein shown it will be seen that supports will be provided at each of the forward holes *a'* for smaller cooking-vessels, and that the stove-top plate will not be subjected to that direct intense heat which in this case is imparted to the crescent lids, and the tendency of said top plate to crack from the contraction and expansion produced by the heat will be lessened.

It will be observed that by the construction shown sufficient heat will be imparted to the warming-oven from the flue above to keep warm articles which may be placed therein. It is also obvious that the herein-described form of stove is of exceedingly simple and neat construction, and although being supplied with but one burner is made to supply heat for two or more holes therein at a comparatively low cost.

I am aware that gasoline-stoves have been formed heretofore in which the herein-described form of burner and a deflector-plate have been used to close and unclosed the burner-opening; but my invention differs from this in the points set forth in the claims.

Having now fully described my invention, what I claim, and desire to secure by Letters Patent, is—

10 1. In a gasoline-stove, the combination, with a fixed cylindrical burner having a forward opening, as described, and a rigid supply and generating pipe supported above and in front of said burner and having a valve-controlled orifice in front of said burner-opening, said supply-pipe being adapted to discharge directly into said burner, of a laterally-movable oil-pan supported beneath said burner-opening, and a deflector-plate projecting from and carried thereby, the latter being adapted to close said burner-opening, substantially as and for the purpose specified.

2. In a gasoline-stove, the combination, with the stove body or case, a burner supported centrally beneath the forward portion of the stove-top, communicating stove-holes on opposite sides of said burner, and detachable plate a^2 , dividing said stove-holes, of the partial stove lids or gratings w in the form of crescents, as described, on said stove-holes, substantially as described.

3. In a gasoline-stove, the combination, with the body, a burner supported therein and having a forward opening, as described, and a supply-pipe h , supported above and in front of said burner and having a valve-controlled orifice in front of said burner-opening, of a lateral movable oil-pan supported beneath said burner-opening, and a deflector-plate projecting therefrom, the latter being adapted to close said burner-opening, substantially as described.

4. In a gasoline-stove, the combination, with the stove-body, a burner supported therein, and a supply-pipe h , supported above and in front of said burner and having a valve-controlled orifice in front of said burner-opening, of a supporting-bar m , pivoted within said stove-body and projecting without the same, an oil-pan supported upon said supporting-bar, as described, lugs n , projecting from opposite sides of said pan, within which said bar m is adapted to engage when said pan is moved laterally thereby, and a deflector-plate formed integral with and projecting from said pan, said pan adapted to close, as described, the burner-opening, substantially as specified.

EDWARD T. BURGESS.

In presence of—

BARTON GRIFFITH,
C. C. SHEPHERD.