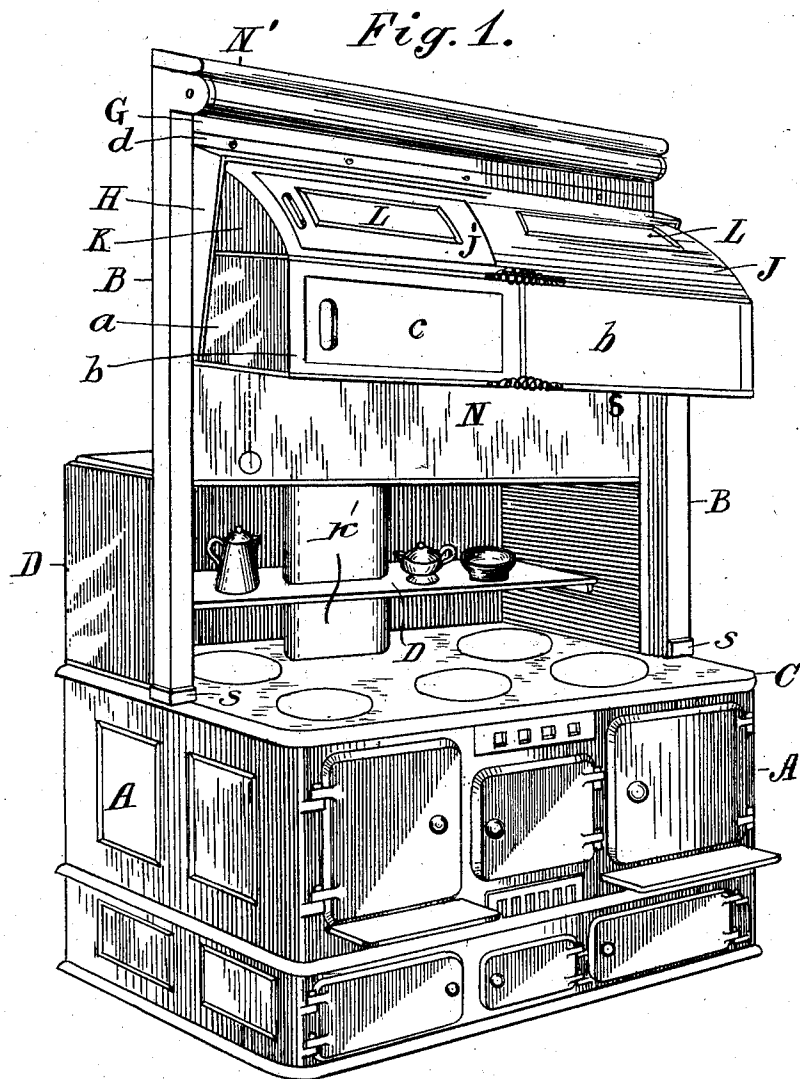


1,038,287.

B. F. CARPENTER.
ROLL TOP BALANCED HOOD.
APPLICATION FILED MAY 23, 1911.

Patented Sept. 10, 1912.
4 SHEETS—SHEET 1.



Witnesses:
L. Lee.
Walter Deenbaum

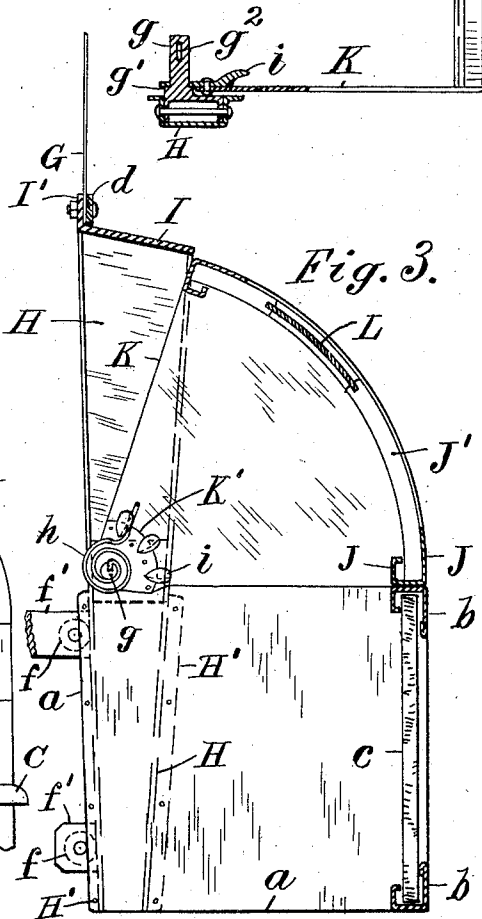
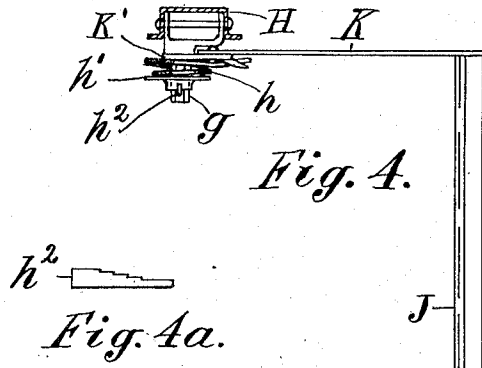
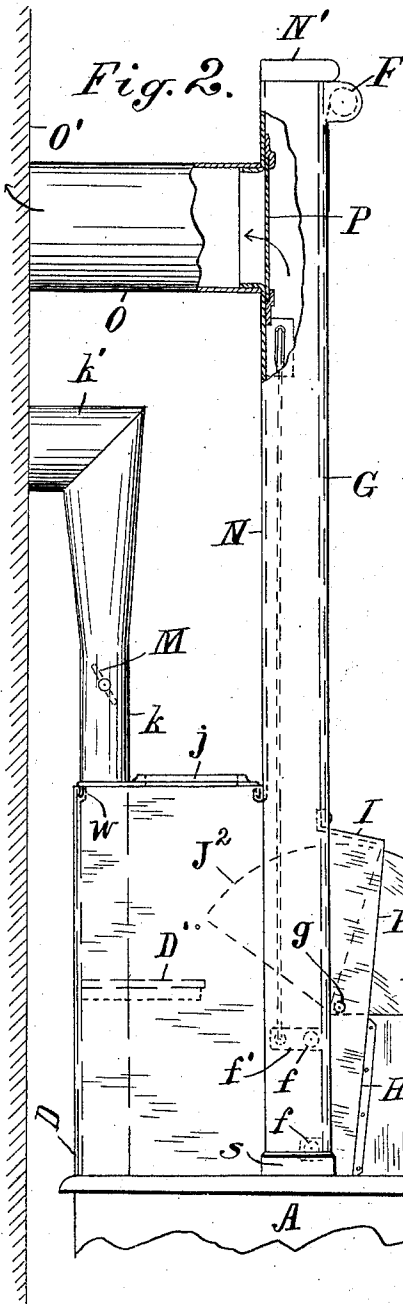
Inventor
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4 SHEETS—SHEET 2.



Witnesses:
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4 SHEETS—SHEET 3.

Fig. 6.

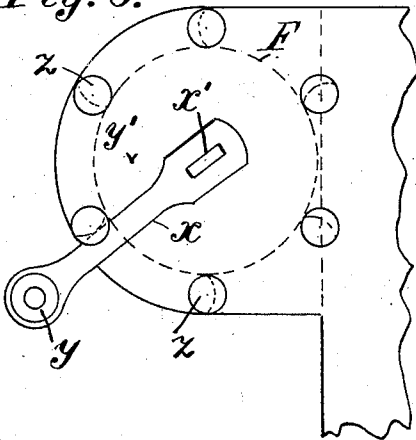
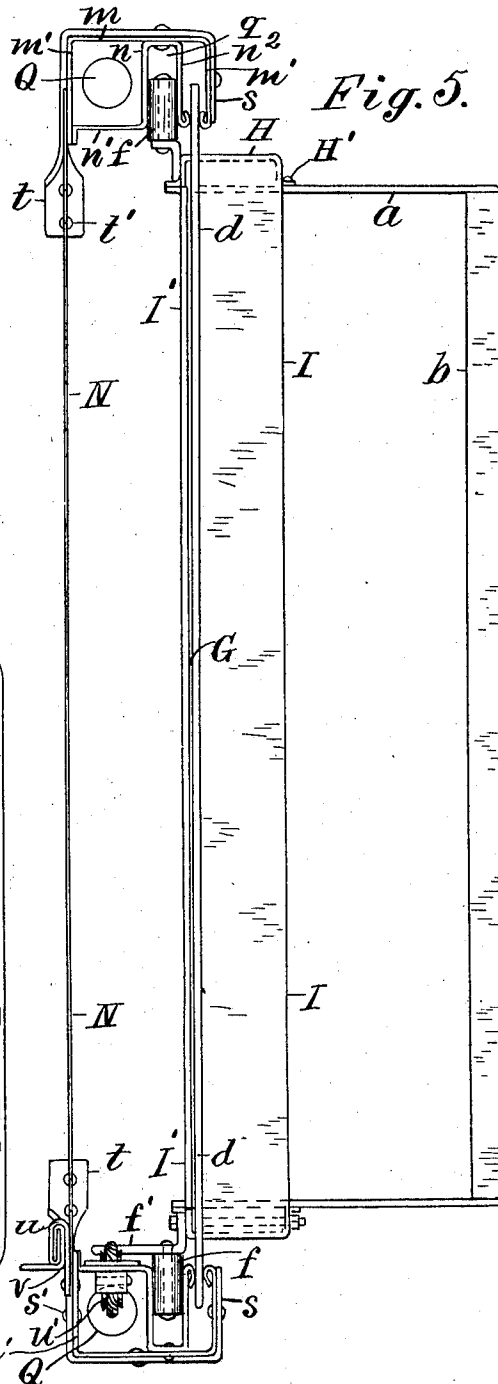
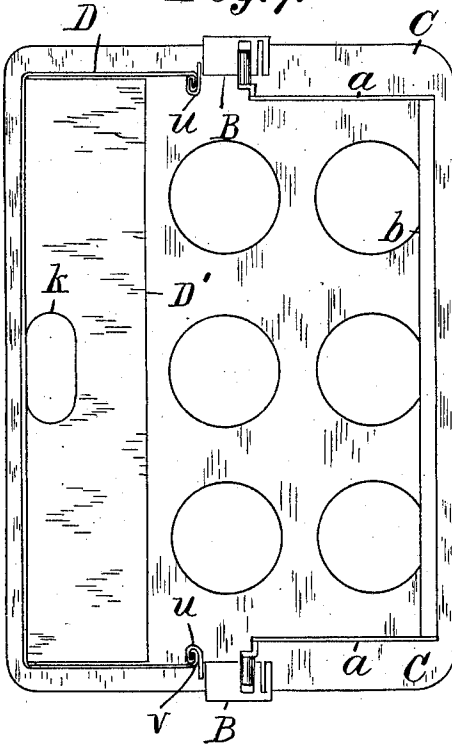


Fig. 7.



Witnesses:
 L. Lee.
 Walter Greenbaum

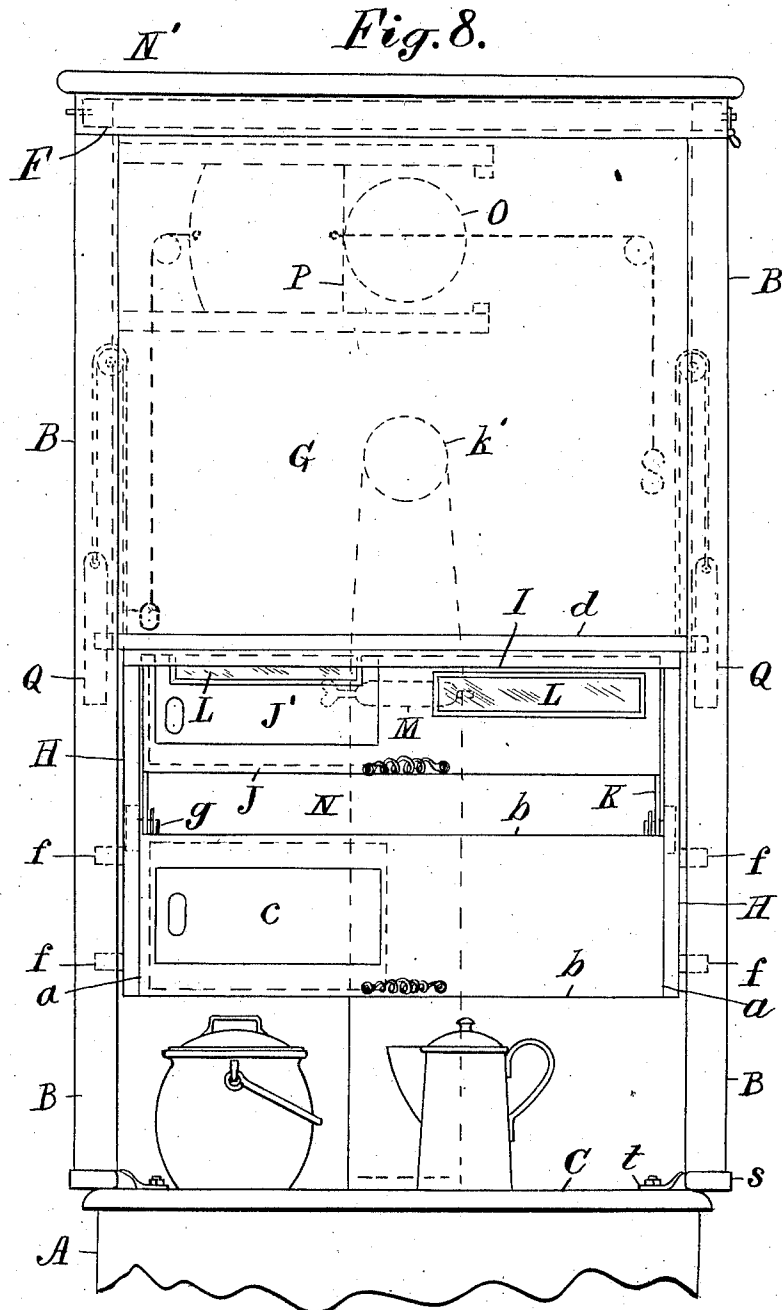
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B. F. CARPENTER.
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4 SHEETS—SHEET 4.



Witnesses
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 by Thomas S. Crane, Atty.

UNITED STATES PATENT OFFICE.

BENJAMIN F. CARPENTER, OF SUMMIT, NEW JERSEY.

ROLL-TOP BALANCED HOOD.

1,038,287.

Specification of Letters Patent.

Patented Sept. 10, 1912.

Application filed May 23, 1911. Serial No. 629,014.

To all whom it may concern:

Be it known that I, BENJAMIN F. CARPENTER, a citizen of the United States, residing at 65 Orchard street, Summit, county of Union, and State of New Jersey, have invented certain new and useful Improvements in Roll-Top Balanced Hoods, fully described and represented in the following specification and the accompanying drawings, forming a part of the same.

The object of this invention is to furnish a cooking stove or range with fixtures adapted for confining and carrying off the emanations escaping from fuel combustion, as gas, heat, smoke and dust, and also the vapors, heat, odors, smoke and greasy emanations released from the food being cooked.

The invention forms a device adapted to set upon the top of a stove or range to inclose the same when desired.

The invention embraces primarily a hood to inclose the top of the stove and having a segmental roll-top which can be turned to open the upper part of the hood.

The invention also embraces means for counterbalancing the hood and moving it upward from the stove-top when access to the entire top is desired. The invention thus combines the advantages of the rolling hoods and the balanced hoods heretofore used.

To guide the hood when lifting it from the stove-top, the usual grooved posts are extended upward from the edges of the stove-top and the opposite sides of the hood fitted movably thereto, and a curtain connects the top of the hood with a spring shade-roller journaled between the tops of the posts, to confine the heat and vapors within the hood. When these improvements are applied to a portable stove or range the posts are connected with the front corners of a hot closet which extends backwardly from the posts over the rear half of the stove-top as shown in the drawing herewith.

In the following description it will be understood that the term "hood" is used to include all the parts which are movable between the posts, excepting the curtain which connects the top of the hood with the curtain-roller. These movable parts embrace a rectangular base adapted to fit closely upon the top of the stove or range, a yoke having side-bars projected upward from the ends of the base and connected by a top yoke-bar having an attachment for a

curtain, and a roll-top journaled between the side-bars and adapted to swing to and from the front of the base to cover or expose the top of the same at pleasure.

The invention includes various details of construction which will be understood by reference to the annexed drawing, in which—

Figure 1 is a perspective view of the apparatus with the hood entirely raised; Fig. 2 is an edge view of the apparatus with the edge of a stove-top; Fig. 3 is a section of the hood at the middle of its length; Fig. 4 is a plan of the roll-top and its pivots with the adjacent side-bar H of the yoke in cross section at the upper end of the view, and the pivot with its connected parts in section in the lower part of the view. Fig. 4^a shows the key for the roll-top pivot. Fig. 5 is a plan of the fixtures with the roll-top omitted and some of the parts above the hood, as the curtain-roll F and its hangers. Also the pulley *u*, cleat *v* and the fold *v* are omitted in the upper part of this figure. Fig. 6 is an elevation of the shade-roller adjusted; Fig. 7 is a plan of the stove-top with the ends and back of the hot closet and the hood-base. Fig. 7 is on a small scale, and the details of construction are omitted as Fig. 5 exhibits them fully. Fig. 8 is a front view of the hood with the top of a range.

A stove A is shown in Fig. 1, the posts B for guiding the hood resting upon the stove-top C. A hot closet D is extended backwardly from the rear edges of the posts and sheathing N extends upwardly from the top of the closet between the rear edges of the posts to a cornice at their upper end. The base of the hood is formed with end base-plates *a* and front *b* having a sliding door *c* fitted therein. A yoke is provided to suspend the hood from the shade-roller F by means of a flexible curtain G. The yoke is preferably formed with end-bars H of trough-shape affixed to the base-plates *a* by flanges secured by rivets H', and extending above the same to a top-bar I having a flange I' at its rear edge for the attachment of the curtain G; which is clamped to such flange by a curtain-bar *d*. Guide-rolls *f* are fixed upon the end-bars H by brackets *f'* and the posts are formed with grooves to guide such rolls, and with grooves for the ends of the curtain-bar *d*. Pivots *g* are projected inwardly from the end-bars H

adjacent to the base-plates *a*, and the roll-top is formed with segmental front *J* and triangular end-plates *K* which are journaled upon the said pivots *g* by journal plates *K'*.
 5 The front *J* is formed with a sliding door *J'*, and glass panels *L* are shown in the door and in the adjacent portion of the roll-top. The end-plates *K* of the roll-top are riveted to the journal-plates *K'*, and a spirally
 10 coiled wire *h* has its inner end engaged with a groove in the pivot *g* and its outer end bent radially to engage any one of a series of lugs *i* upon the plates *K'* carried by the pivots *g*. Such wire spring is adjusted to
 15 substantially balance the weight of the movable roll-top.

It will be observed in Fig. 3 that the roll-top extends from the upper edge of the base to the front corner of the top yoke-bar *I* which projects forward from the line of the posts so that the curved segment is materially less than a quadrant of a circle, and when turned backwardly beneath the top yoke-bar *I*, as shown in dotted lines *J*² in
 20 Fig. 2, it therefore projects but a short distance into the hot closet *D*. The hot closet is shown with a shelf *D'* and a glass window *j* in its roof to light the closet and stove-top. A smoke-pipe *k* extends upwardly from the stove-top *C* through the roof of the hot closet and through the shelf
 30 *D'*, and is provided with an elbow *k'* to connect it with the chimney. A damper *M* is shown in the smoke-pipe *k*. A sheathing *N* extends upwardly from the top of the hot closet to the cornice *N'* connecting the ends of the posts, and a ventilating pipe *O* is extended from the sheathing to the chimney
 35 *O'*, and provided with a damper. The space between the curtain *G* and the sheathing *N* is nearly equal to the width of the posts and affords ample room for the gases and vapors in the hood and hot closet to pass upwardly to the ventilating-pipe *O*.

It is evident that the entire draft of the chimney may be concentrated upon the ventilating-pipe by closing the stove-pipe damper *M*, or upon the stove-pipe by closing the ventilating damper *P*, or in any intermediate degree by suitably adjusting the two dampers. The construction of the posts is shown in Fig. 5, with an exterior shell formed of a sheet-metal strip *m* having inwardly turned flanges *m'* at its opposite
 50 edges, giving it a trough-shape combined with an interior piece of sheet-metal having two attached portions *n* and *n'* bent to a right angle to form a pocket for the counterbalance weight *Q*, and the portion *n*
 55 bent to form a trough *q* and its edge-flange *n*² extended parallel with the flange *m'*. Pulleys *u* are provided in the upper part of the posts to sustain the cord for the counterbalance-weight, one such pulley being shown
 60 in the lower part of Fig. 5, but omitted from

the upper part to show the weight more clearly. The trough *q* serves as a guide-groove for the guide-rolls *f* upon the hood, and the space between the flanges *n*² and *m'* serves as a guide for the ends of the curtain-bar *d*. The adjacent outer edges of the flanges *n*² and *m'* are rolled inwardly to stiffen them at opposite sides of the trough which guides the curtain-bar. A strap *s* encircles the outer sides of the posts at the bottom and is secured thereto by rivets *s'*, and has its inner end twisted to form a foot *t* to rest upon the stove-top to which it can be secured by bolts inserted through holes *t'* if desired. Where the posts are set directly upon the top of the stove, the sheathing is extended upwardly from the top of the closet, as shown in Fig. 2, and the posts are provided, as shown in Fig. 7, with cleats having a vertical double fold *u* adapted to engage double folds *v* upon the forward corners of the hot closet, which serve to keep the hot-closet in suitable connection with the posts and the hood. The cleats are fastened to the plates *m'* above the straps *s*, and in order to show clearly the connection between the foot *t* and the strap *s*, the cleat is omitted in the upper end of Fig. 5, but shown above the foot at the lower end of this figure. The cover of the hot-closet is downwardly flanged at the edges and fits detachably into channels *w* formed upon the upper edges of the closet, as shown in Fig. 2, so that the body of the closet and its cover are readily detachable from one another and from the posts, to facilitate transportation.

From the above description it will be seen that the hood has a rectangular base-portion which, when the hood is lowered, rests upon the top of the stove and wholly protects the cook from the spattering of fat or water from any vessels upon the stove-top. The door upon the hood furnishes access to the stove-top without raising the hood. If the roll-top be closed at such time all the emanations are confined within the hood and are led upwardly behind the curtain *G* to the ventilating-pipe *O*. The roll-top is balanced upon the hood so that it can be set open to any given amount or can be wholly opened to examine articles upon the stove-top to stir them or to shift them about or remove them entirely. When the roll-top is closed, its door *J'* may be opened for access to any particular article, the window *L* furnishing additional light at such times to the interior of the hood. When the roll-top is opened, access to the hot-closet is afforded without raising the remainder of the hood, as the shelf in the closet is readily accessible beneath the top-bar *I* of the yoke. When desired, the entire hood may be raised, as shown in Fig. 1, thus affording access at once to the entire stove-top.

The device furnishes all the advantages of a balanced canopy, that can be raised or lowered over the stove-top, and also the advantage of a roll-top which, without the effort of raising a canopy, can be turned upward when necessary for access to the vessels within the hood.

The apparatus is highly efficient first, in confining all emanations when originated within the hood, second, in protecting the person and clothing of the cook from heat, flame, and spattering during the cooking operations, third, in affording access to a portion of the stove only for such operations, as broiling, toasting, frying, handling laundry irons, &c., while confining the heat largely to the top of the stove, fourth, in controlling the temperature within the apparatus for cooking and other purposes, and thus regulating the temperature of the kitchen by preventing the radiation of heat and the flow of hot air from the stove, fifth, in affording access to the hot-closet through the roll-top while protecting the person from the hot stove-top by the base of the hood, and finally, in affording means for lighting the hot-closet and the interior of the hood by panels of glass in the various parts.

The parts operate most satisfactorily when the entire hood is rather underbalanced by the weights *Q*, and then balanced accurately by adjusting the tension of the curtain-roller *F* to exactly balance the hood in any position so that when raised or lowered it will retain such position. The adjustment of the roller is in practice effected by the means shown in Fig. 6, consisting of a crank-arm *x* fitted to the roller-spindle *x'* of the shade-roller and having a knob *y* upon the end by which it may be readily turned in a manner well known to tighten the spring of the shade-roller; being locked when the desired tension is attained by engagement with any one of a series of notched studs *z* fixed upon the end of the roller-housing. In like manner, the roll-top *J* is adjusted by setting the coiled wire spring *h* in connection with a suitable locking lug *i*, as shown in Fig. 3. The spiral balanced spring in this construction is, unlike those heretofore used, made of dish-shape; so that the outer end of the spring lies in a different plane from the inner, as is distinctly shown in the upper part of Fig. 4, so that a washer *h'* may be adjusted upon the pivot *g* to compress the coils of the spring more or less and crowd the journal-plate *K'* of the roll-top against the shoulder upon the pivot, shown at *g'* in the lower part of Fig. 4. Such adjustment of the washer is effected by the use of a slot *g''* in the pivot (shown in the lower part of Fig. 4), and a step-key *h''* shown in Fig. 4^a, which may be fitted into the slot outside of the washer and inserted suffi-

ciently to compress the spring in the desired degree. The friction thus produced between the journal-plates *K'* and the shoulder *g'* serves to prevent the segmental front *J* from moving accidentally from any position in which it is placed, as it would be liable to do if held in exact equilibrium by the springs *h*.

Having thus set forth the nature of the invention what is claimed herein is:

1. A movable hood adapted to set upon a stove or range, comprising a rectangular base, a yoke extended upwardly from the base, and a roll-top fitted movably on the yoke and adapted to turn within the yoke and wholly inclose the top of the base when lowered thereon, in combination with means for counterbalancing and guiding the hood and means for guiding the yoke.

2. A movable hood adapted to set upon a stove or range, comprising a rectangular base, a yoke having side and top-bars extended upwardly from the base, and a roll-top pivoted within the side-bars and adapted to turn beneath the top-bar to the rear side of the same, in combination with means for counterbalancing the hood and means for guiding the yoke.

3. A movable hood adapted to set upon a stove or range, comprising a rectangular base, a yoke having side and top-bars extended upwardly from the base, pivots upon the side-bars adjacent to the base, and a roll-top journaled upon such pivots with springs connected to the pivots for counterbalancing the weight of the said roll-top, in combination with means for counterbalancing the weight of the hood and means for guiding the yoke.

4. A movable hood adapted to set upon a stove or range comprising a rectangular base, a yoke having trough-shaped side-bars attached to said base with a top-bar connecting the same and having attachment for a curtain at the rear edge of said top-bar, pivots upon the side-bars adjacent the base, and a segmental roll-top journaled upon said pivots and extended from the top of the base to the front edge of the top-bar, whereby a full opening of the base is secured by turning the roll-top less than ninety degrees.

5. A movable hood adapted to set upon a stove or range comprising a rectangular base, a yoke having trough-shaped side-bars with marginal flanges secured to the ends of the base, a top-yoke-bar connecting the side-bars with attachment for a curtain, pivots secured between the edges of the side-bars, a roll-top journaled upon the said pivots, the front of the base and of the roll-top being provided with sliding doors.

6. The combination, with a movable hood adapted to set upon the top of a stove or range and having a projection upon each

end and a curtain-bar upon its top, of side-
posts having a curtain-roller journaled
upon the tops, a curtain extended upwardly
from the curtain-bar to such curtain-roller
5 and the side-posts having separate grooves
adapted to separately guide the projections
upon the hood and the ends of the curtain-
bar, each post being formed of two pieces of
sheet-metal, one of trough-shape for the ex-
10 terior of the post and the other of angle
and channel-shape secured therein to form
the grooves and a pocket for a counterbal-
ance weight, a pulley upon each of the posts,
and cords attached to the movable hood
15 and extended over the pulleys and pro-
vided with counterbalance weights movable
in the said pockets.

7. The combination, with a movable hood
adapted to set upon the top of a stove or
20 range and having a projection upon each
end and a curtain-bar upon its top, of side-
posts having a curtain-roller journaled upon
the tops, a curtain extended upwardly
from the curtain-bar to such curtain-roller,
25 and the side-posts having separate grooves
adapted to separately guide the projections
upon the hood and the ends of the curtain-
bar, and a hot-closet having a detachable
sliding connection with the rear sides of
30 said posts, whereby the closet may be
readily detached from the posts to facilitate
transportation.

8. In a device to inclose the top of a
stove or range, the combination, with side-
35 posts having grooved guides near their front
edges, of a hood fitted movably to the said
guides and having a curtain-bar upon the
top, a curtain-roller journaled at the top
of the posts, a curtain attached to the same
40 and to the curtain-bar, a hot-closet fitted to
the rear of the posts, a sheathing extended
from the top of the hot-closet between the
rear corners of the posts, a ventilating-

pipe extended from such sheathing to con-
nect with the chimney, and a damper in 45
such pipe to regulate the discharge of va-
pors therethrough.

9. In a movable hood adapted to set upon
a stove or range, the combination, with the
stove-top, of side posts having grooved guides 50
near their front edges, a hood fitted movably
thereto, a shade-roller upon the front of the
posts, a curtain attached thereto and to the
hood, a hot-closet fitted to the rear of the
posts, a smoke-pipe extended from the stove- 55
top upwardly through the top of said closet
and provided with a chimney connection
and with a damper, a sheathing extended
upward from the top of the hot-closet and
connecting the rear edges of the posts, and 60
such sheathing having a ventilating-pipe
with a damper for regulating the flow of
vapor therethrough, whereby the whole
chimney draft or any portion thereof may
be concentrated either upon the smoke-pipe 65
or the ventilating-pipe at pleasure.

10. The movable hood adapted to set upon
a stove or range and comprising a rectan-
gular base, a yoke extended upwardly there-
from to suspend the hood, shoulder pivots 70
upon the yoke, a sectional roll-top having
end-plates journaled upon the pivots in
contact with the shoulders, dish-shaped
coiled wire springs engaging the pivots and
the plates, and means for compressing the 75
springs longitudinally upon the pivots to
hold the plates in frictional contact with
the shoulders.

In testimony whereof I have hereunto set
my hand in the presence of two subscribing 80
witnesses.

BENJAMIN F. CARPENTER.

Witnesses:

L. LEE,

THOMAS S. CRANE.