

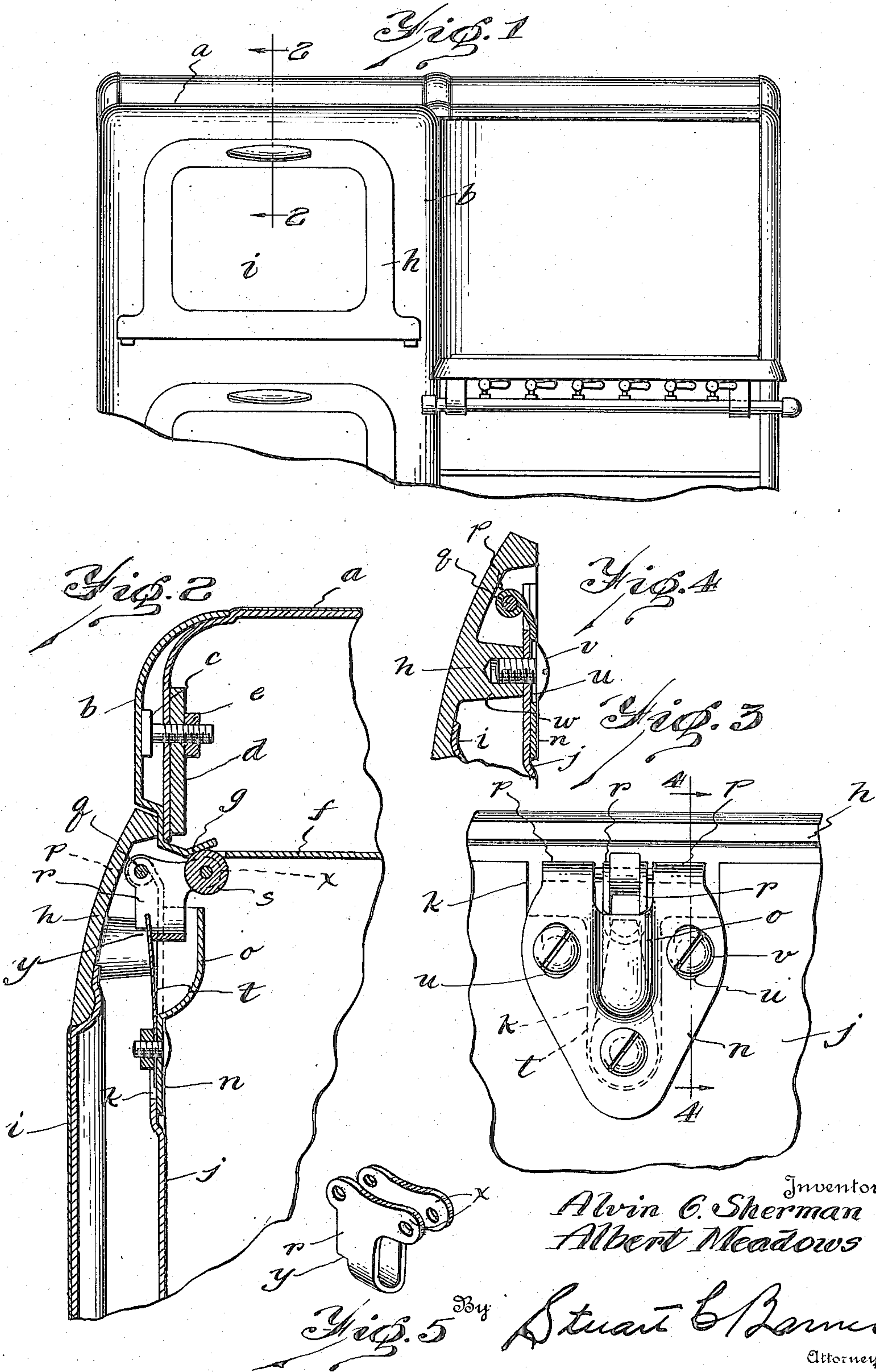
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STOVE DOOR LATCH

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# UNITED STATES PATENT OFFICE.

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DETROIT VAPOR STOVE COMPANY, OF DETROIT, MICHIGAN, A CORPORATION OF  
MICHIGAN.

## STOVE-DOOR LATCH.

Application filed November 15, 1923. Serial No. 674,894.

*To all whom it may concern:*

Be it known that we, ALVIN G. SHERMAN and ALBERT MEADOWS, citizens of the United States, residing at Detroit, in the county of Wayne and State of Michigan, have invented certain new and useful Improvements in Stove-Door Latches, of which the following is a specification.

This invention relates to stove door latches. In the copending application of Albert Meadows, Serial No. 575,347, there is described a form of stove latch, and this application is an improvement over that form of construction.

It is the object of this invention to provide a construction that can be more cheaply and efficiently manufactured and of such a design that all the parts of the latch can be formed of stampings. Another object of the present invention is to form the latch member so as to carry a roller which contacts with the latch strike so as to form an easily operated door latch.

In the drawings:

Fig. 1 is a front elevation of a gas stove.

Fig. 2 is a vertical section through the latch, and adjacent stove parts, taken on the line 2—2 of Fig. 1.

Fig. 3 is an elevation of the latch and fragmentary portion of the oven door looking at the same from the inside.

Fig. 4 is a section on the line 4—4 of Fig. 3.

Fig. 5 is a detail in perspective of the bell crank lever.

The standard gas oven consists of the stove top *a*, and the front *b* of pressed steel, which has the bolts welded to the inside of the frame as at *c* so that the front and top may be assembled together in a way to conceal the presence of the bolts. A reinforcing strip *d* is secured on the inside of the stove and the nuts *e* are run on the bolts to bind the top, front and reinforcing strip together.

In Fig. 2 it will be noticed that the steel front *b* of the oven door is turned inwardly and is joined to the top wall *f* of the oven proper. A portion of this top wall *f* is struck up as at *g* to form a latch strike. Obviously this latch strike could be formed as a separate member and welded or otherwise secured to the stove frame. The door is made up of a frame *h* having secured a panel *i* on the outside and a lining *j* on the

inside thereof. The inside lining *j* is cut away as at *k*.

The latch housing *n* is formed with a hollow bossed portion *o* and the knuckle eyes *p*. A pin *q* is supported by these knuckle eyes and supports the stamping *r*, which forms a bell-crank lever carrying a roller *s* at one end and the other end of the bell-crank lever projecting within the boss *o* of the latch housing. A leaf spring *t* is bolted to the latch housing and bears against the end of the bell-crank lever *r* which extends within the housing. This bell-crank lever, as will be seen from Figs. 3 and 5, is bent substantially in the form of a U, the leaf spring *t* bearing against the bottom portion or closed end of the U, and tending to force the roll striker upwardly against the latch strike *g* so as to retain the door in a closed position.

The sides of the latch housing or case are slotted as at *u* and the screws *v* are threaded into the suitable bosses *w* carried by the door frame. In this way, a suitable adjustment of the housing may be had by loosening the screws *v* and moving the housing up or down thereby positioning the roll striker in the correct position.

The wall of the boss acts as a stop to limit the outward movement of the latch when the same is not engaged with the latch strike *g*.

The stamping *r* is so arranged that when the same is bent into the form of a U, it provides the ears *x* through which the stud for supporting the roller strike *s* passes. This provides a suitable bearing for supporting the roller on both sides. The bottom or closed end of the U-shaped bell crank lever is notched as at *y*, and the free end of the leaf spring *t* is adapted to engage within this notched portion for the purpose of forcing the roll striker into the socket *g*. The spring bearing against the lever and engaged within the notched portion will prevent the bell-crank lever from sidewise movement, since the eyelets which support the pivot bearing are necessarily constructed so as to allow plenty of clearance and the parts would be inclined to rattle if it were not for the spring *t* exerting pressure on the lever.

What we claim is:

1. In a stove door latch construction, the combination of a stove frame provided with a latch strike, a door hingedly supported



by said frame, a housing secured to the door, a bell crank latch member U-shaped in cross section and pivotally supported by the housing, one end of which is provided  
5 with a striker portion, and a leaf spring arranged to bear against the other end of the bell-shaped latch member to force the striker portion into the latch strike.

2. In a stove door latch construction, the  
10 combination of a stove frame provided with a latch strike, a door hingedly supported by said frame, a housing secured to the door and provided with a raised portion forming a hollow boss, a bell-crank type of latch  
15 member U-shaped in cross section pivoted to the housing, the open end of said U-shaped bell crank projecting from the housing and provided with a roll striker on the extreme end thereof, the closed end of the U-shaped  
20 bell crank projecting within the hollow boss portion of the housing, and a spring carried by the housing and adapted to bear against

the closed end of the U-shaped bell crank thereby tending to force the roll striker into the latch strike.

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3. In a stove door latch construction, the combination of a stove frame provided with a latch strike, a door hingedly supported by said frame, a housing secured to the door provided with a raised portion forming a  
30 hollow boss, a bell-crank type of latch member U-shaped in cross section pivoted to the housing, the open end of said U-shaped bell crank provided with a striker, the closed end of same provided with a notched-out  
35 portion, and a leaf spring secured to the housing, the free end of which is adapted to engage in said notch carried by the bell crank lever to force the striker into the  
40 latch strike.

In testimony whereof they have affixed their signatures.

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