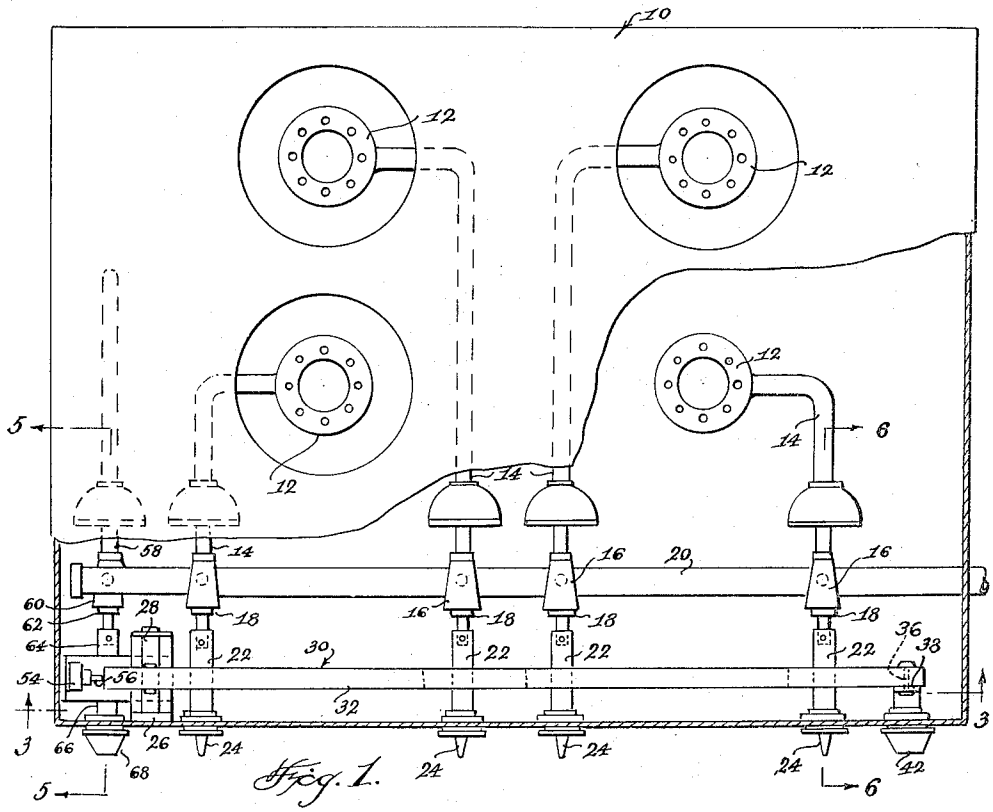
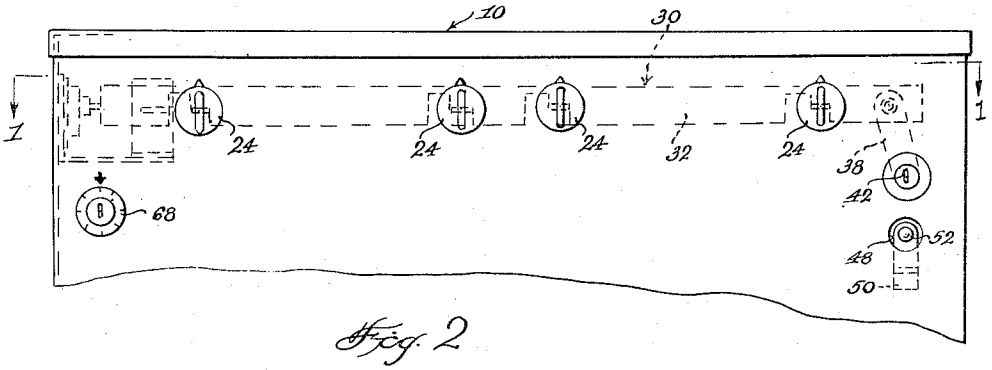
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SAFETY ATTACHMENT FOR A STOVE

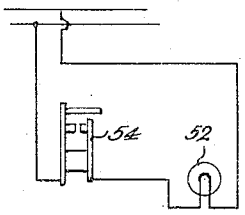
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Hfig. 1.



Hfig. 2



Hfig. 7.

INVENTOR

ALBERT MELLO

BY

McMorrow, Berman & Davidson

ATTORNEYS

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SAFETY ATTACHMENT FOR A STOVE

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Fig. 3.

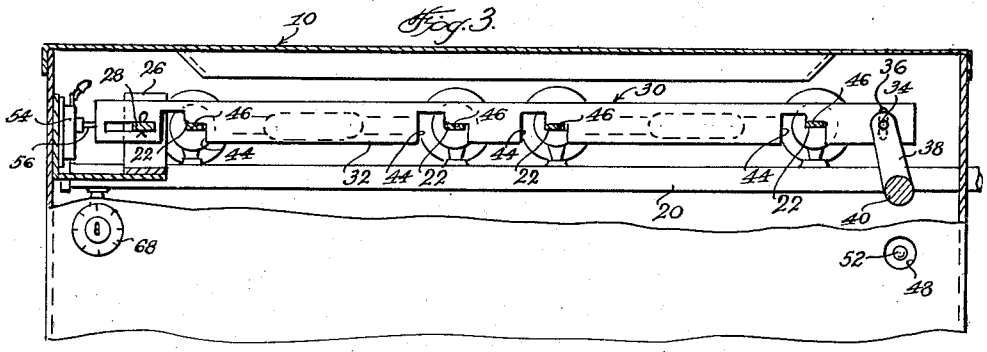


Fig. 4.

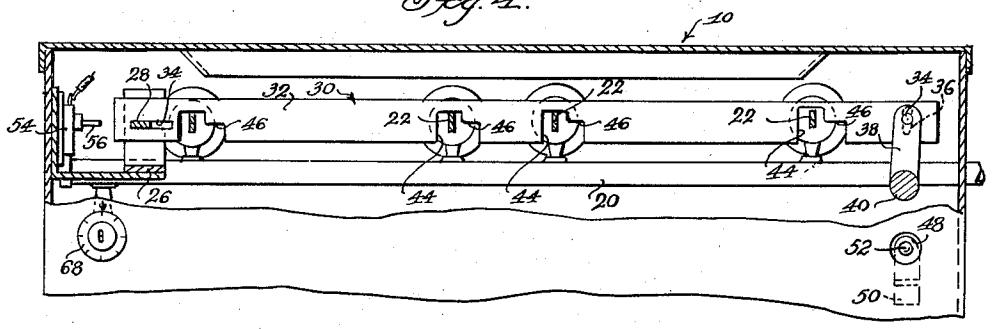


Fig. 5

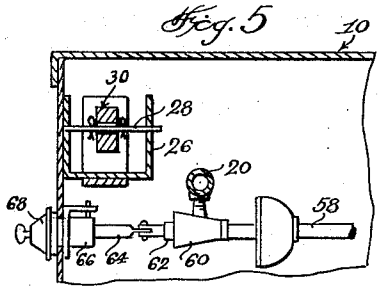
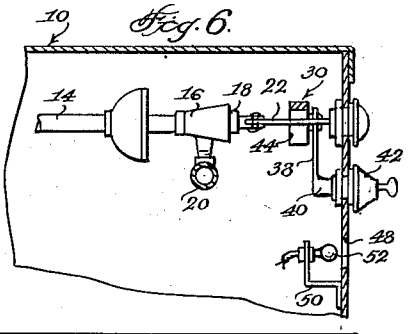


Fig. 6.



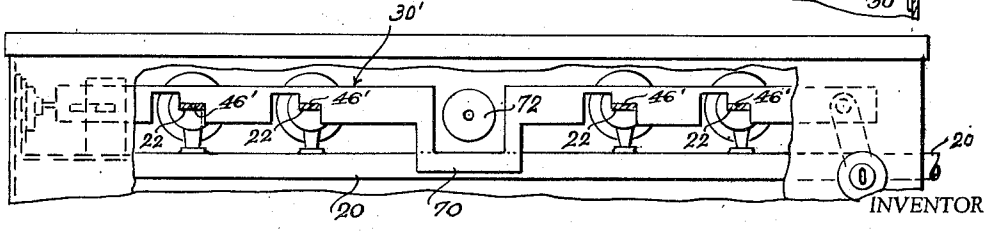


Fig. 8.

INVENTOR

ALBERT MELLO

BY

McMorrow, Berman & Davidson

ATTORNEYS

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SAFETY ATTACHMENT FOR A STOVE

Albert Mello, New Bedford, Mass.

Application June 23, 1953, Serial No. 363,631

1 Claim. (Cl. 70—177)

This invention relates to improvements in locking means for the burner valve handles of gas ranges and the like, designed to prevent operation of the handles by children.

The primary object of this invention is to prevent the turning of the burner valve handles of a stove to on position by children.

Another object is to facilitate the rapid release of the burner valve handles for operation by an adult, and to signal that the burners are in condition for use.

The above and other objects may be attained by employing this invention which embodies among its features flat surfaces carried by coupling members extending between burner valve units and burner valve control knobs or handles on a conventional stove, a bar mounted to move transversely across the coupling members, and flat surfaces carried by the bar adapted to be moved into and out of engagement with the flat surfaces of the coupling members to arrest rotation of the coupling members and prevent rotary movement being transmitted from the knobs to the burner valve units.

Other features include a pin tumbler lock mounted on the stove, an arm carried by the barrel of the pin tumbler lock and pivotally connected to the bar for shifting said bar longitudinally to move the flat surfaces of the bar into and out of engagement with the flat surfaces of the coupling members.

Other features include a signal lamp mounted on the stove adjacent the burner valve knobs, a switch mounted on the stove and located in the path of movement of the bar, said switch being operatively connected with the lamp so that when the bar is moved longitudinally to unlock the burner valve units, the lamp will be illuminated.

In the drawings:

Figure 1 is a top plan view of a stove equipped with locking mechanism in accordance with the present invention, portions of the top of the stove being broken away more clearly to show certain details of construction;

Figure 2 is a fragmentary front elevation of the stove illustrated in Figure 1;

Figure 3 is a transverse vertical sectional view taken substantially on the line 3—3 of Figure 1;

Figure 4 is a view similar to Figure 3 showing the locking bar in unlocked position;

Figure 5 is an enlarged fragmentary sectional view taken substantially on the line 5—5 of Figure 1;

Figure 6 is a fragmentary sectional view taken substantially on the line 6—6 of Figure 1;

Figure 7 is a wiring diagram for the signalling means; and

Figure 8 is a fragmentary view similar to Figure 2, showing a modified form of locking bar.

Referring to the drawings in detail, there is therein shown a stove designated generally **10** equipped with gas burners **12** connected through conventional pipes **14** to control valves **16** having plugs **18** which are rotatable to control the flow of fuel to the burners **12**. The valves are coupled to a conventional fuel supply pipe **20**. Connected to the plugs **18** and extending through the front

wall **15** of the stove are couplings **22** carrying at their ends remote from the valves **16** control knobs or handles **24** which are distributed in a row along the front wall of the stove adjacent the top thereof. The couplings **22** are in the form of flat bars having flat surfaces for a purpose to be more fully hereinafter described.

Mounted on the stove adjacent one end thereof is a substantially U-shaped bracket **26** carrying a horizontal guide bar **28** upon which a locking bar designated generally **30** is mounted to slide. The bar **30** comprises an elongated body **32** having adjacent one end an elongated longitudinal closed slot **34** receiving the bar **28**. The opposite end of the locking bar **30** is coupled through the medium of a pin and slot connection **36** with the free end of a radial arm **38** carried by the barrel **40** of a pin tumbler lock **42** which is mounted on the stove adjacent the end of the locking bar **30** remote from the bracket **26**. It will thus be seen that the locking bar **30** may be shifted longitudinally by oscillation of the barrel **40** of the pin tumbler lock **42**.

As illustrated in the drawings, the locking bar **30** is provided with longitudinally spaced downwardly opening notches **44** through which extend the coupling bars **22** and at one side of each notch **44** is a flat surface **46** which, as illustrated in Figure 3, is arranged to engage the flat surface of a related coupling bar **22** to prevent turning thereof and consequent opening of the burner valve to which the bar **22** is coupled. When the locking bar **30** is in the position illustrated in Figure 4, the valves **16** may be opened by rotation of the control knobs **24** thereof but when the locking bar **30** is in the position shown in Figure 3, the valves **16** and knobs **24** are locked against rotation.

In order to provide a visual indication for enabling a person to ascertain whether the mechanism is locked or unlocked, a window **48** (Figures 2, 3, 4 and 6) is provided in the front wall **15** of the stove **10** and mounted on a suitable bracket **50** (Figures 2, 4 and 6) behind the window **48** is an electric lamp **52**. A switch **54** is mounted on the stove in the path of movement of the locking bar **30** adjacent one end thereof and has a push button **56** which is engaged by and displaced to its "off" position in the locking position of the locking bar **30**. As the locking bar **30** is moved to its unlocked position, the button **56** is released to its "on" position, wherein the lamp **52** is energized.

For controlling and locking the oven burner of the stove **10**, to which burner gaseous fuel is supplied through a valve **60** from a pipe **58**, the valve **60** is connected to the supply pipe **20**, and is provided with a rotatable plug **62** which is connected through a suitable coupling link **64** with the barrel of a pin tumbler lock **66** carried by the front wall of the stove, as illustrated in Figure 5. The pin tumbler lock **66** is provided with the control knob **68** by means of which the cylinder thereof can be rotated when the lock is in unlocked condition so as to turn the coupling member **64** and plug **62** so as to regulate the flow of fuel through the pipe **58**.

In the modified form of the invention, illustrated in Figure 8, the locking bar **30'** is provided with flat surfaces **46'** for engaging the coupling bars **22** when the coupling bar **30** is in locked position. Formed intermediate the ends of the bar **30'** is a depending U-shaped yoke **70** which is designed to provide clearance from a thermostat **72** which may be located midway between opposite ends of the stove.

In use it will be obvious that upon inserting a key into the lock **42**, the barrel **40** thereof may be rotated to shift the bar **30** to the right as viewed in Figures 3 and 4 to disengage the stop surfaces **46** from the coupling bars **22** and permit the coupling bars to turn in the notches **44**. Obviously, upon the shifting of the locking bar **30**

to the right, as viewed in Figure 4, the switch **54** will be operated to energize the lamp **52** and provide a visual indication that the burner control units **16** are unlocked and ready for use. When it is desired to lock the units to prevent tampering with and possible opening of the burners, the lock barrel **40** is turned to the left, as suggested in Figure 3, to shift the bar **30** to the left, and cause the stop surfaces **46** to engage the coupling bars **22** to lock the burner control units and their control knobs against rotation. Obviously, when the bar **30** is shifted to the left, the switch **54** will be operated to discontinue the flow of electrical energy to the lamp **52**.

While in the foregoing there has been shown and described the preferred embodiment of this invention, it is to be understood that minor changes in the details of construction, combination and arrangement of parts may be resorted to without departing from the spirit and scope of the invention as claimed.

What is claimed is:

In combination, a support, a valve mounted on the support, a rotatable plug controlling the valve, a coupling bar having a first end connected to said plug and a second end, a knob secured on said second end, a locking bar having first and second ends, said locking bar extending crosswise of said coupling bar, means mounting said first end of the locking bar on said support for endwise movement in opposite directions from a locked position to an unlocked position, an opening in said locking bar through which said coupling bar extends, said opening having edges out of contact with said coupling bar in the unlocked position of the locking bar, said opening having a stop edge, said knob and coupling bar being rotatable together to closed position in which the burner valve is closed, said stop edge being positioned to engage a side of the coupling bar only in the locked position of the locking bar whereby rotation of the coupling bar is precluded, said means comprising an arm pivoted to said second end of the locking bar and to said support, and actuating means connected to said arm to swing said arm for moving the locking bar endwise between its locked and unlocked positions.

References Cited in the file of this patent

UNITED STATES PATENTS

780,985	Fossum	Jan. 31, 1905
956,947	Curlett	May 3, 1910
1,597,403	Cromie	Aug. 24, 1926
1,652,660	Devereaus	Dec. 13, 1927
1,860,288	Hyndman	May 24, 1932
1,984,870	Farmer	Dec. 18, 1934
2,094,441	Aidala	Sept. 28, 1937
2,115,305	Fox	Apr. 26, 1938
2,116,885	Friedman	May 10, 1938
2,350,078	Smith	May 30, 1944
2,413,237	Jones	Dec. 24, 1946
2,489,611	Becvar	Nov. 29, 1949
2,525,562	Reeves	Oct. 10, 1950