May 7, 1929. C. N. LEET 1,711,535

LOCKING DEVICE

Filed June 15, 1927

Fig. 1.

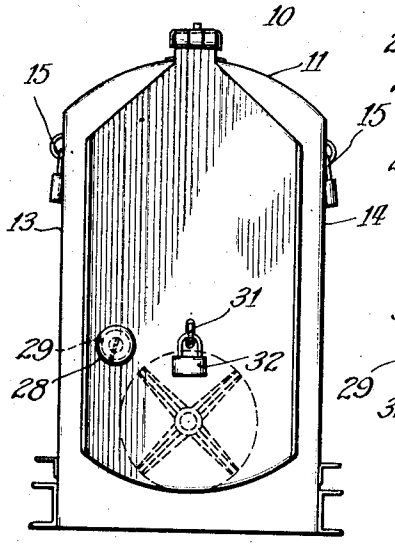


Fig. 2.

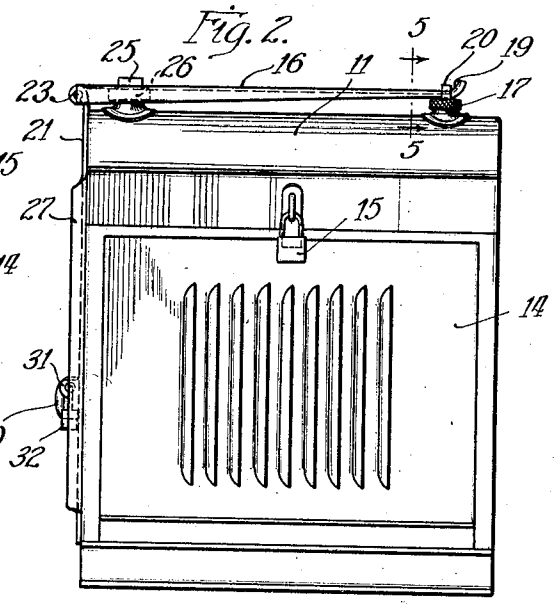


Fig. 3.

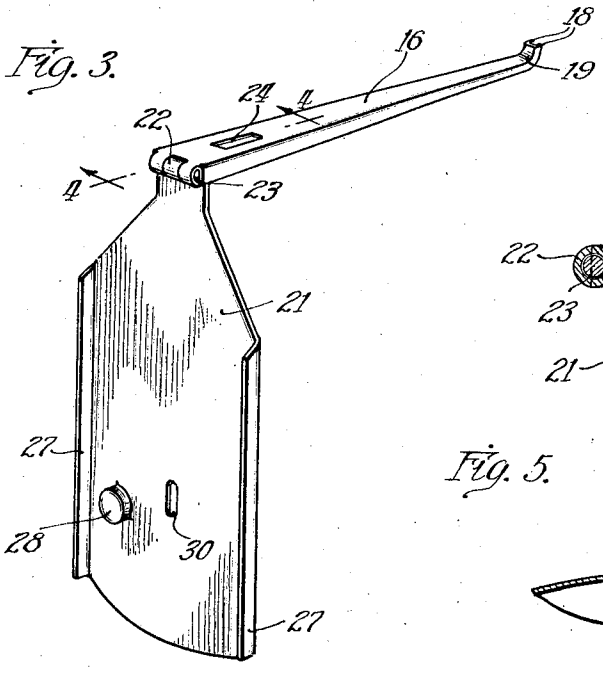


Fig. 4.

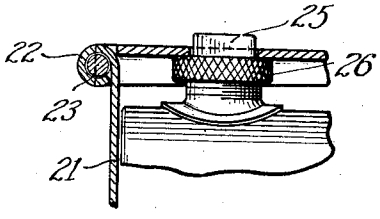
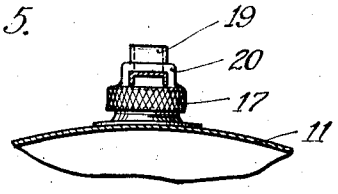


Fig. 5.



Inventor
Charles N. Leet
By Brown Bortner & Dienner
Atty's.

Patented May 7, 1929. 1,711,535

UNITED STATES PATENT OFFICE.

CHARLES N. LEET, OF CHICAGO, ILLINOIS.

LOCKING DEVICE.

Application filed June 15, 1927. Serial No. 198,900.

My invention relates, in general, to locking devices, and more particularly to locking devices for internal combustion engines adapted for industrial use.

The majority of internal combustion engines adapted for building or industrial use, are completely enclosed to protect them from the dirt and weather. The sides of these engine enclosures are usually readily removable in order that access may be had to the engine for adjustment and other purposes. When the engine is not in use, the sides are usually locked in order to protect the engine from the pranks of mischievous and malicious children. In actual practice it has been found that this locking is not sufficient for the reason that access may be readily had to the gasoline tank, to the radiator and to the crank shaft of the engine.

The principal object of my invention is to provide a very simple, cheap and highly efficient locking device that may be applied to an internal combustion engine of this character to prevent access to the gasoline tank, the radiator and the crank shaft.

There are other objects of my invention, which, together with the foregoing, will be described in the detailed specification which is to follow, taken in conjunction with the accompanying drawings.

Referring now to the drawings:—

Fig. 1 is a front elevation of an industrial internal combustion engine with my improved locking device attached;

Fig. 2 is a side elevation of the same;

Fig. 3 is a view, in perspective, of my improved locking device;

Fig. 4 is a detailed cross section along the line 4—4 of Fig. 3, showing the manner in which the locking device sets over the web of the radiator cap; and

Fig. 5 is a detailed section along the line 5—5 of Fig. 2 looking in the direction of the arrow showing the manner in which the hooked end of the locking device is inserted into the cap of the gasoline tank.

Referring now to the drawings, in which like reference characters in the various figures designate similar parts, the reference character 10 designates the internal combustion engine which is provided with the usual enclosure 11 having the removable sides 13 and 14. These sides may be locked into place by the lock and associated staples 15. This enclosure serves to protect the motor from curious or malicious mischief seekers.

My improved locking device comprises a channel steel bar 16 of sufficient length to extend from the gasoline tank cap 17 over the length of the motor and just beyond the radiator. The bar 16 is provided with flanges 18 in order to strengthen it. The outer end of the bar 16 has an upturned end 19 that is adapted to fit fairly snugly into the slotted extension 20 of the cap 17. The bar 16 is provided with this upturned end in order to render it very difficult to remove from its slot in the gasoline cap when in position, as will be apparent. The other end of the bar 16 has a covering member 21 pivotally attached to it by the hinge 22. The pin 23 of the hinge 22 is locked into position by the flanges 18 of the member 16. This provision is made so that the pin cannot be readily removed from the hinge to render the locking device ineffective. The bar 16 is also provided with a slot 24 and is adapted to slip over the web 25 of the radiator cap 26. (See Fig. 4.)

The member 21 is of the shape shown and is of sufficient width to completely cover the radiator core, and is of sufficient length to extend considerably below the crank shaft of the engine, as may be seen from Fig. 1. The member 21 is provided with flanged edges 27 for strengthening purposes. This flanged cover 21 has a circular raised portion 28 that is adapted to fit over the ignition switch 29 of the internal combustion engine, as may be seen from Fig. 1. The cover is also provided with a slot 30 that is adapted to coincide with a staple 31 attached to the enclosure of the internal combustion engine just below the radiator. The bail of a lock 32 is passed through the staple 31 in order to lock the locking device in place.

In order to lock the engine, the sides 13 and 14 are closed and locked in the usual manner, then the curved end 19 of my improved locking device is inserted into the slot 20 of the gasoline cap 17, the slot 24 is placed over the web 25 of the radiator tank cap, the covering member 21 is swung into place with the slot 30 coinciding with the staple 31, and then the bail of the lock 32 is passed through the staple 31 and locked. With the locking device in this position, it will be seen that it is impossible to remove the cap 17 of the gasoline tank or the cap 26 of the radiator. Also, the covering member 22 covers the radiator core as well as the crank shaft of the engine. Consequently, the internal combustion en-

gine is enclosed and adequately protected from meddlers. Since the locking device is made from iron or steel with flanged sides, it is relatively strong and cannot be bent without considerable trouble.

While I have shown a specific embodiment of my invention, I am aware that many changes, modifications and deviations may be made, and it will be understood that I do not wish to be limited to the specific embodiment shown, but desire to protect by Letters Patent all such changes, modifications and deviations as come within the scope of the appended claims.

I claim:—

1. In combination with an internal combustion engine having a gasoline tank, and a radiator, each provided with a cap, a slot in one of said caps and a web on the other cap, a locking bar having one end fitted through said slot, said web being fitted through an opening near the other end of said bar, and means depending from one end of said bar for locking said bar in place.

2. In combination with an internal combustion engine having a gasoline tank and a radiator, each provided with a cap, a locking bar for said caps, cooperating means on said caps engaging said bar for locking said caps, a radiator guard depending from one end of said bar and means for securing said guard in position over the front of the radiator.

3. In combination with an internal combustion engine having a gasoline tank and a radiator, each provided with a cap, a locking bar for said caps, cooperating means on said caps, engaging said bar for locking said caps, a radiator guard depending from one end of said bar, a pin for pivotally securing said guard to said bar and means on said bar preventing the removal of said pin.

4. In combination with an internal combustion engine having a gasoline tank and a radiator, each provided with a cap, a locking bar for said caps, means on said caps cooperatively engaging said bar and locking said caps from rotary or vertical motion, a curved portion on one end of said bar for preventing horizontal movement thereof and means on the other end of said bar for preventing vertical movement thereof.

5. In combination with an internal combustion engine having a gasoline tank and a radiator, each provided with a cap, a locking bar for said caps, means on said caps cooperatively engaging said bar and locking said caps from rotary or vertical movement, a curved portion on one end of said bar for preventing horizontal movement thereof and a relatively wide radiator guard on the other end of said bar, a pivot pin securing said guard to said bar, flanges on said bar engaging over the end of said pivot pin, and means for locking said guard in place over the front of said radiator.

6. A combined gasoline tank cap lock, a radiator cap lock, a radiator guard and ignition switch protector, comprising a relatively wide guard member adapted to be positioned over the front of the radiator, stiffening flanges thereon, an outwardly extending cap member thereon fitted over the ignition switch, a bar hinged to the upper end of said guard, a hinge therefor comprising a hinge pin, flanges on said bar engaging over the ends of said pin to prevent its removal, a web on one of said caps passing through a slot in said bar, a slot in the other cap, a reduced portion on said bar extending through the slot in said cap, a curved end portion on said bar for holding said bar from longitudinal movement and means for preventing vertical and lateral motion thereof.

7. In combination with an internal combustion engine having a gasoline tank and a radiator, a cap for said gasoline tank having a slotted extension thereon, a cap for said radiator having a web thereon, a locking bar for said caps having an end adapted to fit through said slot, said bar having a slot at the other end thereof to receive said web, and a member pivotally attached to said bar for locking said bar in place.

8. In combination with an internal combustion engine having a gasoline tank provided with a cap, a radiator provided with a second cap, of a slot in the cap of the gasoline tank and a web on the second cap, a locking bar having one end arranged to fit within said slot and a slot in the other end of said bar arranged to fit over said web, and locking means for said bar.

9. In combination with an internal combustion engine having a gasoline tank provided with a cap and a radiator provided with a second cap, of a slot in the cap of the gasoline tank and a web portion on the second cap, a locking bar having one end adapted to fit within said slot, a slot in the other end of said bar adapted to fit over said web for locking said cap in place, and a member pivotally attached to said bar and having a slot therein arranged to fit over a staple in the frame of said engine, for securing said bar in locking engagement with said cap.

In witness whereof, I hereunto subscribe my name this 11th day of June, 1927.

CHARLES N. LEET.