

[54] **PARKING SPACE BARRIER**
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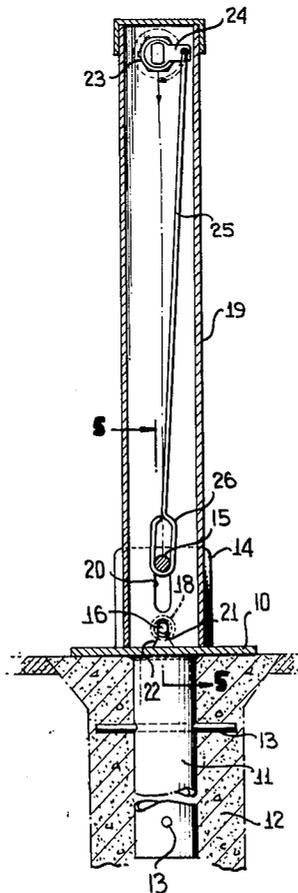
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[51] Int. Cl.² **E05B 65/00**
[58] Field of Search 292/186; 312/219; 49/39, 49/33, 35, 131; 404/6; 52/98; 403/2; 70/181; 256/13.1, 1

[57] **ABSTRACT**

A barrier post to prevent unauthorized use of a private parking space includes a firmly anchored base and a post which is shiftable from an upright barrier position to a lowered inactive position. A simplified locking and release mechanism permits separating the post from its shear pin holding means by a lifting and pivoting manipulation.

[56] **References Cited**
UNITED STATES PATENTS
2,309,238 1/1943 Corey 403/2

5 Claims, 5 Drawing Figures



PARKING SPACE BARRIER

BACKGROUND OF THE INVENTION

The prior patented art contains a number of teachings pertaining to parking space barriers including locking and release means to be controlled exclusively by an authorized user of the space and to preclude use by unauthorized users. Some examples of the prior art are U.S. Pat. Nos. 3,417,508 and 3,688,439 and British Patent specification 967,322.

In order for devices of this character to be widely accepted, they must be completely practical, easy to operate, highly resistant to damage and, above all, economical to manufacture and install. If all of these qualities are not present in the device, it will not be economically feasible to use the device on a large scale or commercial basis, and this is thought to be the reason why such barrier devices up to the present time are not in wider usage.

Accordingly, it is the objective of the invention to provide a parking space barrier of the described type which is completely practical, easy to use, resistant to damage and very economical to manufacture and install.

More particularly, the device is characterized by extreme simplicity of construction, employing a minimum number of parts, and the parts being of an inexpensive nature. Additionally, the device is equipped with a fail-safe feature in the form of shear pin means which will yield or fail when the barrier post is struck by a vehicle, thus preventing damage to the vehicle or to the device. The shear pin elements are readily replaceable following failure so that the device may be reused indefinitely.

Other features and advantages of the invention will become apparent during the course of the following description.

BRIEF DESCRIPTION OF THE DRAWING FIGURES

FIG. 1 is a perspective view of a parking space barrier device in the upright active position to prevent entry of the vehicle into the space.

FIG. 2 is a perspective view, partly broken away, showing the device in a lowered or inactive position to allow free entry or egress of the vehicle. FIG. 3 is an enlarged vertical section taken on line 3—3 of FIG. 1.

FIG. 4 is a similar section taken on line 4—4 of FIG. 2.

FIG. 5 is a vertical section taken on line 5—5 of FIG. 3.

DETAILED DESCRIPTION

Referring to the drawings in detail, wherein like numerals designate like parts, the numeral 10 designates a flat base plate having a depending vertical pipe extension 11 rigidly secured thereto and adapted to be anchored in a concrete mass 12 which may be part of a garage floor or a separately formed concrete mass in an unpaved parking lot or the like. The anchoring pipe 11 preferably has cross rods 13 extending into the concrete mass for additional security.

The base plate 10 carries a pair of spaced parallel upstanding bracket plates 14 rigid therewith, and these bracket plates are interconnected near their tops and centrally by a sturdy cross pin 15 fixedly secured thereto. Below the cross pin 15 and in vertical align-

ment therewith, a pair of inwardly projecting shear pins 16 are mounted on the bracket plates 14 so as to project inwardly thereof near and above the base plate 10. The shear pins have screw-threaded shanks 17 engaging within screw-threaded openings of the bracket plates 14 and also have exterior heads 18 adapted to receive an Allen wrench or the like for removal of the shanks 17 following failure of the shear pins.

A barrier post 19 of rectangular or other cross section is provided and is preferably of a height to extend above the bumper level of automobiles. This post is provided near and above its bottom end and on opposite sides with vertically elongated slots 20, slidably and pivotally receiving the fixed cross pin 15 so as to form a lost motion connection between the post and the fixed base of the barrier device.

At the extreme bottom of the post 19, below the slots 20 and aligned therewith on the same opposite sides of the post, are downwardly opening slots 21 having flared lower end portions 22. The slots 21 are adapted to engage over the two fixed shear pins 16 to releasably lock the post 19 in the active upright position.

A simplified locking and release means for the barrier post is provided, in the form of a key lock 23 near the top of the post on one side thereof. The rotary component of this key lock carries a rotary crank arm 24, concealed within the interior of the post, and this arm is connected with the top of a rod 25 having a preferably elongated closed loop 26 at the lower end thereof slidably receiving the fixed cross pin 15.

During use, while the post 19 is upright with its lower end resting on the flat base plate 10 and the shear pin 16 projecting through the slots 21, the key lock is turned so that the crank arm 24 is elevated, FIG. 3, and the rod 25 and loop 26 are elevated. At this time, the bottom of the loop 26 engages the bottom of the cross pin 15 and the post 19 cannot be elevated or pivoted relative to the pin 15. It is locked in the active barrier forming position.

To lower the post, as indicated in FIGS. 2 and 4, so as to allow a vehicle to pass freely thereover, the key lock is turned to move the crank arm 24 one-quarter turn to a downward position parallel to the axis of the post, FIG. 2. This will lower the rod 25 and loop 26 within the post and relative to the pin 15 so that the bottom of the loop 26 is sufficiently spaced from the pin to enable lifting of the post 19 sufficiently to separate the slots 21 from the shear pins 16 and allow the post to be swung to its down position shown in the drawings. The slots 20 allow the required lifting movement along the axis of the post to separate the shear pins from the slots 21.

Should a vehicle strike the post 19 while it is locked in the upright position, before any damage can occur to the vehicle or the invention, the relatively small pins 16 will shear and the remaining shanks 17 can be removed by use of an Allen wrench, so that new shear pins can be installed.

The device is most simplified, very easy to operate, self-protecting against damage and very economical to manufacture, which should make the device entirely practical to use.

It is to be understood that the form of the invention herewith shown and described is to be taken as a preferred example of the same, and that various changes in the shape, size and arrangement of parts may be resorted to, without departing from the spirit of the invention or scope of the subjoined claims.

I claim:

1. A parking space barrier comprising a base adapted to be anchored to a floor or to ground and having a pair of spaced upright elements, a cross pin secured to and extending between said elements near their upper ends, opposing shear pins removably mounted on said elements near their lower ends and below said cross pin and projecting interiorly of said elements, a barrier post engaged between said upright elements and having bottom end opening slots in opposite sides thereof engaging over the shear pins removably and having vertically elongated closed end slots in the same opposite sides thereof above the first-named slots and slidably and pivotally receiving said cross pin, a key lock on said post near the top thereof including a rotary crank arm within the post, and a link connected with said crank arm and moved thereby and extending through the post and having a lower end loop receiving said cross pin with sufficient play between the loop and cross pin to allow the loop to be lowered by turning of the crank arm to release the post for lifting relative to

the cross pin sufficiently to separate said shear pins from said first-named slots.

2. A parking space barrier as defined by claim 1, and wherein the shear pins have screw-threaded engagement with said upright elements to allow separation of shear pin shanks from said elements and replacement of the shear pins following failure thereof.

3. A parking space barrier as defined by claim 1, and said lower end loop of said link being elongated axially of the link and slidably and pivotally receiving said cross pin.

4. A parking space barrier as defined by claim 3, and said bottom end opening slots being downwardly flared and the upper portions of the slots slidably and pivotally engaging said shear pins.

5. A parking space barrier as defined by claim 1, and said base including a flat base plate adapted to rest on a floor, said upright elements comprising spaced parallel plate elements, said barrier post being rectangular in cross section and one opposing pair of sides of said post fitting between said plate elements.

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