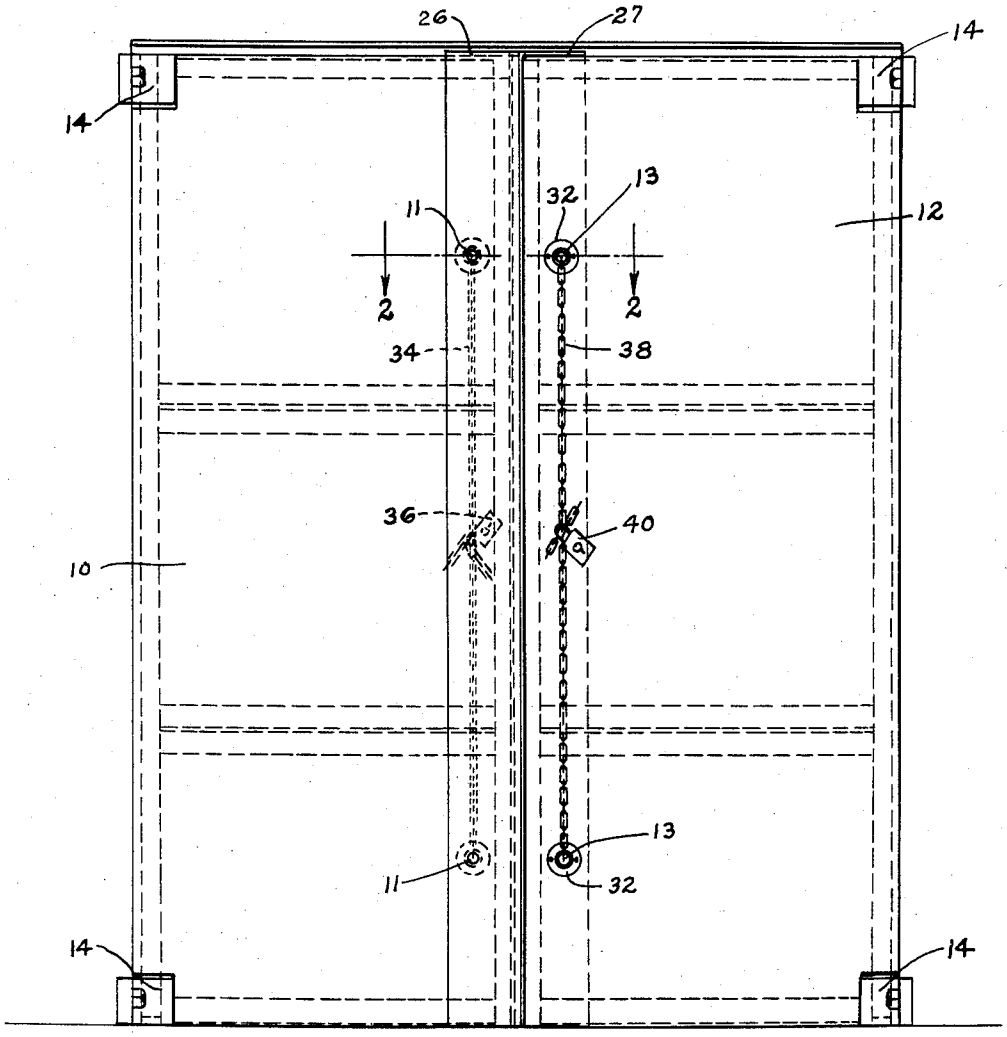
Sept. 16, 1958 O. C. ECKEL 2,851,870

LOCKING MECHANISM FOR DOORS

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Fig. 1.



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Fig. 2.

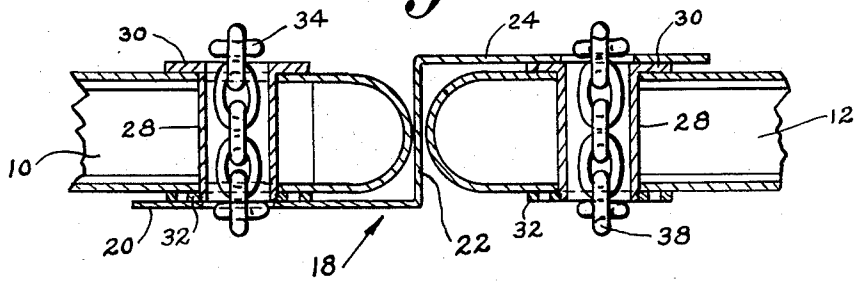


Fig. 3.

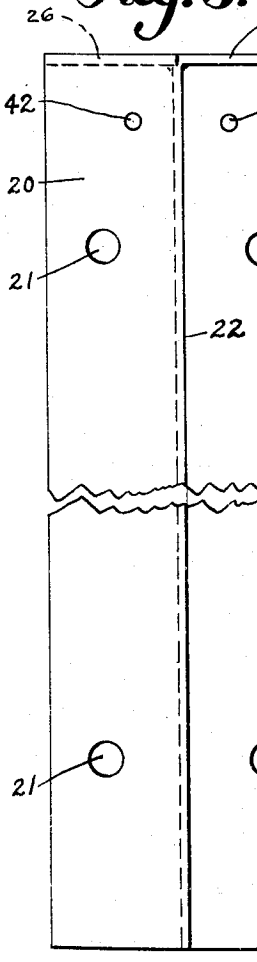


Fig. 4.

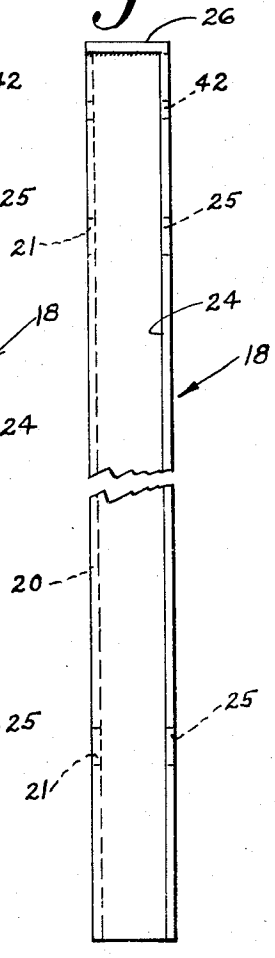
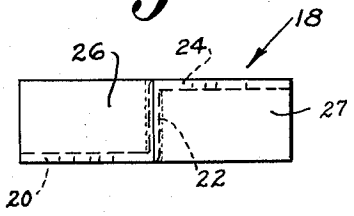


Fig. 5.



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LOCKING MECHANISM FOR DOORS

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Application November 7, 1955, Serial No. 545,436

6 Claims. (Cl. 70—101)

This invention relates to locking mechanism for doors, particularly doors with flexible bodies.

Flexible door bodies are used in some double-door installations because they are struck so hard when opened by driving trucks, or the like, against them, that if they were not yieldable, the door bodies would be severely damaged or torn off the hinges. However, such flexible doors present the problem as to how to effectively lock them from intruders, who might distort them sufficiently to effect an entrance, or a partial entrance.

Accordingly, one object of my invention is to provide locking mechanism, particularly for double doors, that will prevent distorting of a door sufficiently to gain an effective entrance.

Another object is to provide locking mechanism whereby, with a single locking control member, a double door can be separately locked at the inside and also separately locked at the outside, and likewise unlocked from either the inside or outside.

A further object is to provide such locking mechanism that is simple to place in or remove from, locking position, and is relatively inexpensive to manufacture.

The foregoing and other objects which will appear as the nature of the invention is better understood, may be accomplished by a construction, combination and arrangement of parts such as is disclosed by the drawings. The nature of the invention is such as to render it susceptible to various changes and modifications, and therefore, I am not to be limited to the construction disclosed by the drawings nor to the particular parts described in the specification; but am entitled to all such changes therefrom as fall within the scope of my claims.

In the drawings:

Fig. 1 is a front elevational view of a double door with my locking mechanism in locked position.

Fig. 2 is an enlarged, sectional view taken on the line 2—2 of Fig. 1.

Fig. 3 is a front elevational view of my locking control member.

Fig. 4 is a side elevational view of said member.

Fig. 5 is a top plan view of my locking control member.

As illustrated, a double door includes a single left door **10** having holes **11** therethrough in the upper half and lower half thereof. Also included is a single right door **12** having holes **13** therethrough in the upper half and lower half thereof. Said doors **10** and **12** are swingably supported by hinges **14** and are slightly spaced apart, between their noses or free edges, when in closed position.

A locking control member **18**, of general Z-shape in cross section, may be formed of sheet steel, for instance, such as 16 gauge, or about 1/16 inch thick. In position of use it has a left portion **20** bearing upon or adjacent a face of said door **10**, and which has holes **21** therethrough corresponding to said holes **11** in said door **10**. An intermediate or connector portion **22** extends angularly, shown as a right angle, to said left portion **20**, from which extends a right portion **24** at a right angle to said connector portion **22** and bearing upon or adjacent a face of said door **12**. The latter has holes **25** therethrough corresponding to holes **13** in said right door **12**.

Said control member has an integral top hanger portion **26** that is bent at an angle so that it extends from said left portion **20** rearwardly and rests on top of the left door **10**. Another top hanger portion **27** is also bent at an angle so that it extends from said right portion **24** forwardly at an angle and rests on top of the right door **12**. These top hanger portions **26** and **27** are welded to said intermediate portion **22**, and they keep said control member from scraping on the floor and utilize the doors to support the control member. My control member preferably extends the full height of the door, and is of considerably less width than that of the two doors **10** and **12**.

Extending through each of said door holes **11** and **13** are bushings **28** which are threaded at one end, each of which has an integral collar **30** which lies against a face surface of a door, while a threaded collar **32** screw-threadedly fits over the threaded end of said bushing **28** and lies against the face surface of said door, thus providing wear protection for said holes.

To lock said double door I provide an elongate member, shown as a chain **34**, or similar elongate member, that extends through the hollow bushings **28** in the upper and lower said door holes **11** of said left door **10**, and it also extends through said holes **21** in the locking control member **18** opposite said latter door holes **11**, the ends of said chain being brought together to receive a padlock **36**. Another chain **38** is provided for the right door that extends through the hollow bushings **28** in the holes **13** and through the holes **21** in the locking control member **18** on the right side, the ends of the chain **38** being locked outside said control member **18** by a padlock **40**. While a single chain could be used with a padlock to hold both doors in locked position, I prefer the above arrangement for some purposes.

To hang my control member **18** on a hook, for instance, I provide holes **42** therein.

What I claim is:

1. Locking mechanism in combination with a double door embodying a door at the left and another at the right, the noses of which doors are normally spaced apart, each said door having two holes therein spaced apart, and located in upper and lower half portions of said doors, said locking mechanism embodying a locking control member extending more than one-third the height of said doors and having a first portion adjacent a face of said left door and having two holes therethrough, an intermediate portion extending angularly therefrom, and a third portion extending from said intermediate portion and being adjacent a face of said right door and having two holes therethrough, said holes in said first and third portions communicating with said holes in said two doors, said intermediate portion extending from a point adjacent the front face of a said door, through said space between said door noses to a point adjacent the rear face of the other said door, said first and third portions connecting with said intermediate portion and extending therefrom in opposite directions and being at opposite faces of said doors, an elongated locking member extending through the holes in said left door and two of said holes in said locking control member first portion, means locking different portions of said elongate locking member together, and another elongate locking member extending through the holes in said right door and two of said holes in said locking control member third portion, and means locking different portions of said other elongate locking member together.

2. Locking mechanism in combination with a double

door embodying a door at the left and another at the right; the noses of which doors are normally spaced apart, each said door having a pair of holes therein spaced vertically apart, and located in upper and lower half portions of said doors; said locking mechanism embodying a locking control member extending more than one-third the height of said doors and having a first portion adjacent a face of said left door and having two holes therethrough, spaced vertically apart, an intermediate portion extending angularly therefrom, and a third portion extending from said intermediate portion and being adjacent a face of said right door and having two holes therethrough, said holes in said first and third portions communicating respectively with said holes in said left and right doors, said intermediate portion extending from a point adjacent the front face of a said door, through said space between said door noses to a point adjacent the rear face of the other said door, said first and third portions connecting with said intermediate portion and extending therefrom in opposite directions and being at opposite faces of said doors, a first elongate locking member extending through the holes in said left door and two of said holes in said locking control member first portion, means locking different portions of said elongate locking member together, and another elongate locking member extending through the holes in said right door and two of said holes in said locking control member third portion, and means locking different portions of said other elongate locking member together, the free ends of said first elongate locking member being at one face of said double door and the free ends of said other elongate locking member being at the opposite face of said double door.

3. Locking mechanism in combination with a double door embodying a door at the left and another door at the right, each said door having a pair of holes therein spaced apart, and located in upper and lower half portions of said doors, said locking mechanism embodying a locking control member extending more than one-third the height of said doors and having a first portion adjacent a face of said left door and having two holes therethrough spaced apart, an intermediate portion extending angularly therefrom, and a third portion extending from said intermediate portion and being adjacent a face of said right door and having two holes therethrough spaced apart; said holes in said first and third portions communicating respectively with said holes in said left and right doors, said intermediate portion extending from a point adjacent the front face of a said door, through said space between said door noses to a point adjacent the rear face of the other said door, said first and third portions connecting with said intermediate portion and extending therefrom in opposite directions and being at opposite faces of said doors, bushings extending through each hole of said pair in said left door, bushings extending through each hole of said pair in said right door, a first locking member extending through said bushings in said left door and said holes in said first portion, means locking portions of said locking member together, another locking member extending through said bushings in said right door and said holes in said third portion, and, means locking portions of said other locking member together.

4. Locking mechanism in combination with a double door embodying a door at the left and another door at the right, each said door having a pair of holes therein spaced apart said locking mechanism embodying a locking control member having a first portion adjacent a face of said left door and having two holes therethrough spaced apart, an intermediate portion extending angularly therefrom, and a third portion extending from said intermediate portion and being adjacent a face of said right door and having two holes therethrough spaced apart, said holes in said first and third portions communicating respectively with said holes in said left and right

doors, said intermediate portion extending from a point adjacent the front face of a said door, through said space between said door noses to a point adjacent the rear face of the other said door, said first and third portions connecting with said intermediate portion and extending therefrom in opposite directions and being at opposite faces of said doors, bushings extending through each hole of said pair in said left door, bushings extending through each hole of said pair in said right door, a first locking member extending through said bushings in said left door and said holes in said first portion, means locking portions of said locking member together, another locking member extending through said bushings in said right door and said holes in said third portion, and, means locking portions of said other locking member together, said first portion embodying a top hanger portion extending angularly and said third portion embodying a top hanger portion extending angularly in the opposite direction to said first top hanger portion, both said top hanger portions resting on the tops of said doors.

5. Locking mechanism in combination with a double door embodying a door at the left and another door at the right, each said door having a pair of holes therein spaced vertically apart; said locking mechanism embodying a locking control member having a first portion adjacent a face of said left door and having two holes therethrough spaced vertically apart, an intermediate portion extending angularly therefrom, and a third portion extending from said intermediate portion and being adjacent a face of said right door and having two holes therethrocgh spaced vertically apart, said holes in said first and third portions communicating respectively with said holes in said left and right doors, said intermediate portion extending from a point adjacent the front face of a said door, through said space between said door noses to a point adjacent the rear face of the other said door, said first and third portions connecting with said intermediate portion and extending therefrom in opposite directions and being at opposite faces of said doors, a first locking chain extending through said holes in said left door and said holes in said first portion, means locking portions of said locking chain together, another locking chain extending through said holes in said right door and said holes in said third portion, and, means locking portions of said other locking chain together, said first portion embodying a top hanger portion extending right-angularly outward and said third portion embodying a top hanger portion extending right-angularly inward, both said top hanger portions resting on the tops of said doors.

6. Locking mechanism in combination with a double door embodying a door at the left and another at the right, the noses of which doors are normally spaced apart, each said door having two holes therethrough spaced apart, said locking mechanism embodying a locking control member extending for a major part of the height of said doors and having a first portion adjacent a face of said left door and having two holes therethrough spaced apart, an intermediate portion extending angularly therefrom, and a third portion extending from said intermediate portion and being adjacent a face of said right door and having two holes therethrough spaced apart, said holes in said first and third portions communicating with said holes in said doors, said intermediate portion extending from a point adjacent the front face of a said door through said space between said door noses to a point adjacent the rear face of the other said door, said first and third portions connecting with said intermediate portion and extending therefrom in opposite directions and being at opposite faces of said doors, and means extending through said door holes and said holes in said locking member first and third portions whereby said doors are held in closed position.

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