Dec. 6, 1927. 1,651,394

J. KAUFMAN

FOLDABLE GATE LOCK

Filed Nov. 30, 1926

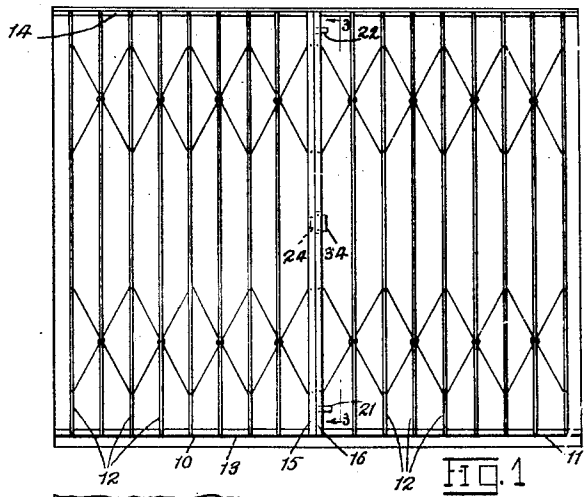


FIG. 1

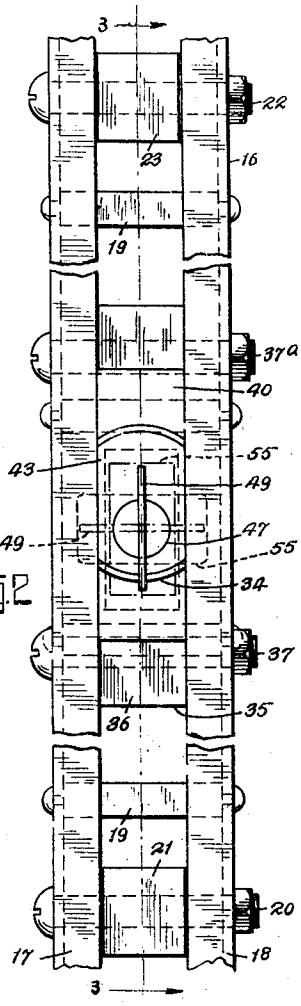


FIG. 2

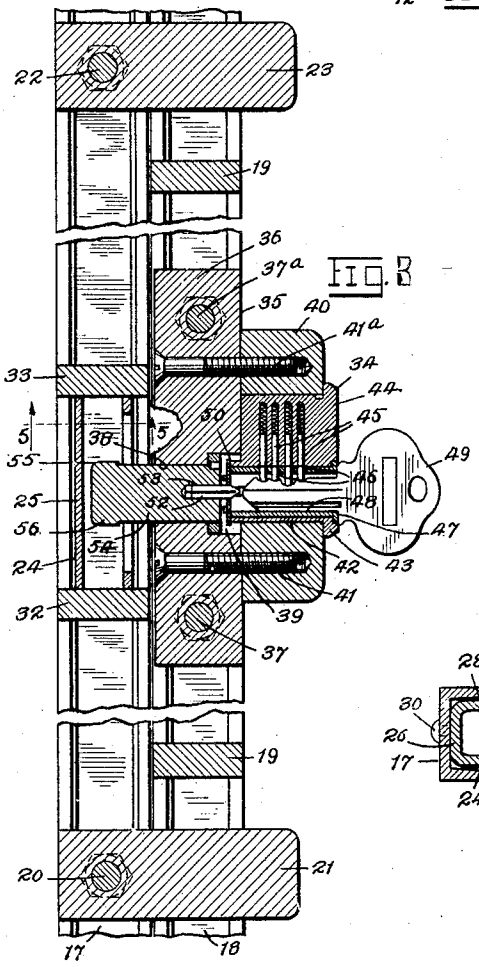


FIG. 3

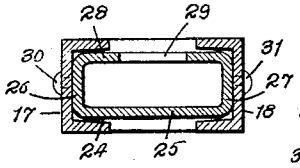


FIG. 5

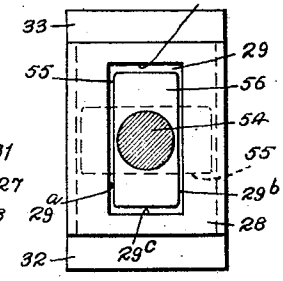


FIG. 4.

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FOLDABLE-GATE LOCK.

Application filed November 30, 1926. Serial No. 151,753.

This invention relates more particularly to a foldable gate having a lock as a fixture thereof.

My invention has for its object primarily to provide a foldable gate having a lock for enabling the collapsible members of the gate when closed to be releasably locked in a manner whereby it will be very difficult to surreptitiously open the lock and gate as well as serving to overcome the liability of forgetfulness to lock the gate at the required time which frequently occurs owing to the present forms of gates of this class being usually locked by the use of separate locking means, such as padlocks which are frequently misplaced or forgotten at the time when the gate should be locked.

The invention consists broadly of means providing a socket on one of the opposing end rails of the collapsible members of a foldable gate, and the socket has preferably a substantially rectangular entrance of less dimension than the socket so that the edge portions of the sides of the socket provide overhanging flanges. On the second end rail is locking means which is operative only by a key of a given form, and the locking means includes an approximately T-shaped bolt for allowing its cross-arms to enter the entrance lengthwise of said socket when the end rails are closed together by the key being partly turned to unlock the locking means and to allow the cross-arms of the bolt to engage the overhanging side flanges of the socket when the bolt is subsequently partly rotated by turning the key to a position for locking the locking means. The members of the gate being extensibly adjustable toward and from each other may thereby be effectually locked when closed against being surreptitiously opened.

A further object of the invention is to provide a foldable gate of a simple, efficient and durable construction which may be made in appropriate sizes and shapes.

With these and other objects in view, the invention will be hereinafter more fully explained with reference to the accompanying drawing forming a part of this specification in which similar characters of reference indicate corresponding parts in all the views, and will then be pointed out in the claims at the end of the description.

In the drawing, Figure 1 is an elevation of one form of foldable gate embodying my invention.

Fig. 2 is an enlarged fragmentary view, partly broken away, taken on the line 2—2 of Fig. 1 and which shows an elevation of a portion of an end rail of the gate.

Fig. 3 is an enlarged fragmentary detail sectional view, partly broken away and partly in elevation, taken on the line 3—3 of Fig. 2.

Fig. 4 is an enlarged view showing an elevation of the front of the socket of one of the end rails of the gate, and which shows partly in section and partly in elevation the bolt of the lock of the gate seated therein, and

Fig. 5 is an enlarged sectional view of the socket taken on the line 5—5 of Fig. 3.

The foldable gate has two collapsible members 10, 11 which may be of any of the commonly used extensibly adjustable forms, though the members of the gate illustrated are of the well known Bostwick type having structural parts which need not be herein described since their construction is generally understood. The opposite ends of the members 10, 11 of the gate are suitably supported in fixed positions for allowing the spaced parallel vertical rails 12 of each member to be slidably moved on the lower and upper longitudinally disposed tracks or rails 13, 14 toward and from each other in the usual fashion when the gate is opened and closed.

At the opposing ends of the members 10, 11 are respectively two end rails 15, 16 which are adapted to contact with each other when the gate is closed. Each of the end rails are composed of two spaced vertically disposed bars 17, 18. The bars 17, 18 of both end rails are preferably of similar lengths, and the bars of each end rail are each of a U-shape in cross section as well as being spaced apart at similar distances so that the spaces between the bars of both rails are in alinement. The U-shaped bars of each end rail are disposed with the free edges of their legs in opposed relation and each pair of the bars are secured together by spaced cross-bars or bolts 19. Between

the lower ends of the bars 17, 18 of the end rail 15 is secured at 20 one end of a short bar or block, as 21, and between the upper ends of the bars 17, 18 of this end rail is secured at 22 one end of a second short bar or block 23. Both of the short bars 21, 23 protrude angularly from the end rail 15 for being received between the bars 17, 18 of the end rail 16 to guide the bars of the end rail 16 into contact with the bars of the end rail 15 when the collapsible members 10, 11 of the gate are closed.

In the central part of the end rail 15 between its bars 17, 18 is a socket 24 of substantially a rectangular shape having a bottom wall 25, side walls 26, 27 and a front wall 28. In the central part of the front wall 28 is an approximately rectangular opening or entrance 29 of a less dimension than the socket so that the edge portions of the entrance provide overhanging flanges 29^a, 29^b, 29^c, 29^d. This socket may be formed by flattening a tube to a size so that the side walls 26, 27 snugly fit in the pair of U-shaped bars 17, 18 of the end rail 15, and the side walls of the socket may be secured, as at 30, 31 to the U-shaped bars of the end rail. The socket has a lower end wall 32 and an upper end wall 33. Both of the end walls 32, 33 are preferably in the forms of bars which may be welded or otherwise secured between the U-shaped bars of this end rail.

Between the central parts of the bars 17, 18 of the end rail 16 is means providing a lock 34 having a casing 35 which is preferably of a form composed of a block or bar 36 of a length somewhat longer than the socket 24. The block 36 is arranged between the pair of bars of the end rail 16, and the end portions of this block are bolted, as at 37, 37^a, to the bars. Through the central part of the block 36 is an opening 38 which is adapted to be alined with the center of the entrance 29 of the socket 24 when the end rails 15, 16 are in contact with the closing of the members 10, 11 of the gate, and the other end of the opening 38 may lead into a recess 39 provided in the central part of the outer face of the block. On the recessed face of the block 36 is another block or short bar 40 having its end portions fastened, as at 41, 41^a, to the block 36. In the central part of the block 40 is an opening 42 which is larger than the recess 39 of the block 36, and the lower part of the opening 42 leads into the recess. In the opening 42 of the block 40 is suitably fixed the cylinder 43 of a lock 44 which may be of any well known combination type having the spring actuated spaced tumblers 45 adapted to be moved into and out of the spaced orifices 46 of the barrel 47 having a determined form of socket 48 for receiving the stem of a key, as 49, of a given type as may be required to operate the particular form of the barrel and the tumblers of the lock that may be used in order to prevent the lock from being surreptitiously opened. The key barrel 47 may be of a length so that its free end extends into the recess 39 of the block 36 of the casing 35, and the free end of the barrel may be capped by a plate 50 having in its center an angular hole. Protruding from the barrel 47 is an angular stem or pin 52 which extends through the hole 51 of the cap plate 50 and through the recess 39 into the opening 38 of the block 36. The projecting portion of the stem 52 is seated in the recess 53 in the free end of the leg or arm 54 of a substantially T-shaped lock bolt 55. The cross-arm 56 of the lock bolt is shorter than the length of the entrance 29 of the socket 24 of the end rail 15, but this cross-arm is of a length so that its protruding ends are adapted to engage the overhanging side flanges 29^a, 29^b of the wall of the entrance of the socket. The lock bolt is also of such a length that when inserted in the socket 24 its cross-arm 56 may be rotatively moved to and from crosswise and lengthwise positions in the socket.

In order to lock the gate the members 10, 11 are moved toward each other so that the end rails 15, 16 are in proximity and so that the guide bars 21, 23 of the end rail 15 are moved between the pair of bars 17, 18 of the end rail 16. The barrel 47 of the lock 34 must be in a position so that the head or arm 56 of the lock bolt 55 extends crosswise of the end rail 16 before the key can be inserted in the barrel of the lock. When the key is inserted in the barrel for operating the tumblers 45 the barrel and lock bolt are then turned half of a revolution to dispose the cross-arm 56 of the lock bolt in a vertical position. The members 10, 11 are then moved to cause contact of the end rails 15, 16 at which time the lock bolt with its cross-arm will pass into the socket 24 through its entrance 29, and by rotating the key one-half of a revolution the barrel and bolt of the lock will be likewise revolved for positioning the cross-arm of the bolt crosswise of the interior of the socket into engagement with the edge portions of the sides of the wall of the entrance, as shown in dotted lines in Figs. 2 and 4 of the drawing. Thus the end rails 15, 16 of the members of the gate must be locked together before the key can be withdrawn from the lock, and by requiring the use of the key in this manner the liability of forgetfulness to lock the members of the gate will be largely overcome.

In the foregoing description I have embodied the preferred form of my invention, but I do not wish to be understood as limiting myself thereto as I am aware that modifications may be made therein without de-

parting from the principle or sacrificing any of the advantages of this invention, therefore, I reserve to myself the right to make such changes as fairly fall within the scope thereof.

Having thus described my invention, I claim as new and desire to secure by Letters Patent:—

1. In a foldable gate, end rails adapted to be moved to and from each other, said rails comprising two vertically spaced bars, means providing a socket between said bars of one of the rails having a substantially rectangular entrance of less dimension than the socket whereby at least the edge portions of the sides of the entrance provide overhanging flanges, locking means on the second end rail, operative only by a key of a given form, and including a bolt having lateral extensions for allowing the extensions when the bolt is partly rotated by turning the key to unlock the locking means to enter the entrance lengthwise of said socket and to allow the extensions to engage the overhanging side flanges of the socket when the bolt is subsequently partly rotated by turning the key to a position for locking said locking means.

2. In a foldable gate, end rails adapted to be moved to and from each other, said rails comprising two vertically spaced bars, means providing a socket between said bars of one of the rails having a substantially rectangular entrance of less dimension than the socket whereby at least the edge portions of the sides of the entrance provide overhanging flanges, a casing on the second end rail, locking means in the casing, operative only by a key of a given form and including a bolt having lateral extensions for allowing the extensions when the bolt is partly rotated by turning the key to unlock the locking means to enter the entrance lengthwise of said socket and to allow the extensions to engage the overhanging said flanges of the socket when the bolt is subsequently partly rotated by turning the key to a position for locking said locking means.

3. In a foldable gate, end rails adapted to be moved to and from each other, said rails comprising two vertically spaced bars, means providing a socket between said bars of one of the rails having a substantially rectangular entrance of less dimension than the socket whereby at least the edge portions of the sides of the entrance provide overhanging flanges, locking means on the second end rail, operative only by a key of a given form, and including an approximately T-shaped lock bolt for allowing its cross-arm when the bolt is partly rotated by turning the key to unlock the locking means to enter the entrance lengthwise of said socket and to allow the cross-arm of the bolt to engage the overhanging side flanges of the socket when the bolt is subsequently partly rotated by turning the key to a position for locking said locking means.

4. In a foldable gate, end rails adapted to be moved to and from each other, said rails comprising two vertically spaced bars, means providing a socket between said bars of one of the rails having a substantially rectangular entrance of less dimension than the socket whereby at least the edge portions of the sides of the entrance provide overhanging flanges, a casing on the second end rail, locking means in the casing, operative only by a key of a given form, and including an approximately T-shaped lock bolt for allowing its cross-arm when the bolt is partly rotated by turning the key to unlock the locking means to enter the entrance lengthwise of said socket and to allow the cross-arm of the bolt to engage the overhanging side flanges of the socket when the bolt is subsequently partly rotated by turning the key to a position for locking said locking means.

5. In a foldable gate, end rails adapted to be moved to and from each other, said rails comprising two vertically spaced bars, means providing a socket between said bars of one of the rails having a substantially rectangular entrance of less dimension than the socket whereby at least the edge portions of the sides of the entrance provide overhanging flanges, locking means on said second rail, including a barrel rotatable only by a key of a given form, and an approximately T-shaped lock bolt protruding from the barrel for allowing its cross-arm when the barrel is partly rotated by the key to unlock the lock to enter the entrance lengthwise of said socket and to allow the cross-arm of the bolt to engage the overhanging side flanges of the socket when the barrel is subsequently partly rotated by turning the key to a position for locking the lock and to permit the key to be withdrawn from the barrel.

6. In a foldable gate, end rails adapted to be moved to and from each other, said rails comprising two vertically spaced bars, means providing a socket between said bars of one of the rails having a substantially rectangular entrance of less dimension than the socket whereby at least the edge portions of the sides of the entrance provide overhanging flanges, a casing on the second end rail, locking means in the casing, including a barrel rotatable only by a key of a given form, and an approximately T-shaped lock bolt protruding from the barrel for allowing its cross-arm when the barrel is partly rotated by the key to unlock the lock to enter the entrance lengthwise of said socket and to allow the cross-arm of the bolt to engage the overhanging side flanges of the socket when the barrel is subsequently

partly rotated by turning the key to a position for locking the lock and to permit the key to be withdrawn from the barrel.

7. In a foldable gate, end rails adapted to be moved to and from each other and each rail including a pair of spaced parallel bars, means providing between the pair of bars of one of the end rails a socket having a substantially rectangular entrance of less dimension than the socket whereby at least the edge portions of the sides of the entrance provide overhanging flanges, locking means between the pair of bars of the second end rail, including a barrel rotatable only by a key of a given form, and an approximately T-shaped lock bolt protruding from the barrel for allowing its cross-arm when the barrel is partly rotated by the key to unlock the lock to enter the entrance lengthwise of said socket and to allow the cross-arm of the bolt to engage the overhanging side flanges of the socket when the barrel is subsequently partly rotated by turning the key to a position for locking the lock and to permit the key to be withdrawn from the barrel.

8. In a foldable gate, end rails adapted to be moved to and from each other and each rail including a pair of spaced parallel bars, two guide bars projecting angularly from spaced parts of the pair of bars of one of the end rails for being removably received in the space between the pair of bars of the second end rail, means providing between the pair of bars of one of the end rails a socket having a substantially rectangular entrance of less dimension than the socket whereby at least the edge portions of the sides of the entrance provide overhanging flanges, a casing between the pair of bars of the second end rail, locking means in the casing, including a barrel rotatable only by a key of a given form, and an approximately T-shaped lock bolt protruding from the barrel for allowing its cross-arm when the barrel is partly rotated by the key to unlock the lock to enter the entrance lengthwise of said socket and to allow the cross-arm of the bolt to engage the overhanging side flanges of the socket when the barrel is subsequently partly rotated by turning the key to a position for locking the lock and to permit the key to be withdrawn from the barrel.

This specification signed this 29th day of November, A. D. 1926.

JOSEPH KAUFMAN.