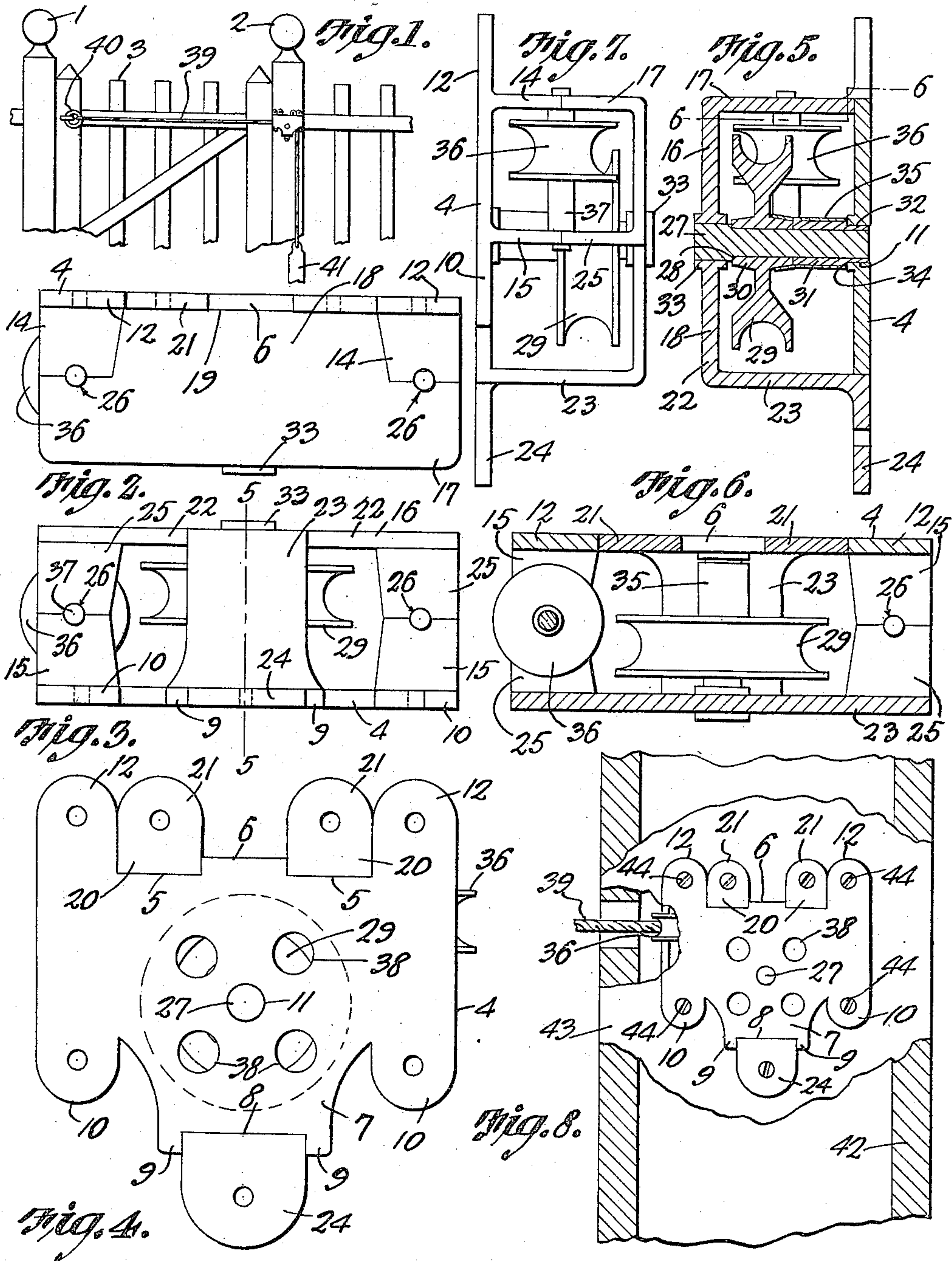


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GATE CLOSER.  
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Witnesses

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# UNITED STATES PATENT OFFICE.

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## GATE-CLOSER.

1,167,267.

Specification of Letters Patent.

Patented Jan. 4, 1916.

Application filed May 13, 1915. Serial No. 27,913.

*To all whom it may concern:*

Be it known that I, ALBERT BUJEWSKI, a citizen of the United States, residing at Nashville, in the county of Washington and State of Illinois, have invented a new and useful Gate-Closer, of which the following is a specification.

The device forming the subject matter of this application is adapted to be employed in connection with a flexible element and weight, for moving a gate to a closed position.

The invention aims to improve the construction of the casing through which the intermediate portion of the flexible element is trained, the construction being such that the constituent parts of the casing may be detached readily for the insertion and removal of the sheaves which guide the flexible element.

Another object of the present invention is to provide a casing which may be assembled in different ways with supporting posts of different forms.

It is within the province of the disclosure to improve generally and to enhance the utility of devices of that type to which the present invention appertains.

With the above and other objects in view which will appear as the description proceeds, the invention resides in the combination and arrangement of parts and in the details of construction hereinafter described and claimed, it being understood that changes in the precise embodiment of the invention herein disclosed can be made without departing from the spirit of the invention.

In the accompanying drawings: Figure 1 shows in front elevation, a gate wherewith the device forming the subject matter of this application has been assembled; Fig. 2 is a top plan of the casing through which the flexible element is trained; Fig. 3 is a bottom plan of the casing; Fig. 4 is a rear elevation of the casing; Fig. 5 is a vertical section taken approximately on the line 5—5 of Fig. 3; Fig. 6 is a horizontal section taken approximately on the line 6—6 of Fig. 5; Fig. 7 is an end elevation of the casing; Fig. 8 is a sectional elevation showing the casing mounted on a post differing from the post delineated in Fig. 1.

In the accompanying drawings, the numeral 1 indicates a striking post, the numeral

2 denoting the supporting post, and the numeral 3 designating a gate which is hingedly mounted on the supporting post 2 and coöperates with the striking post 1 in a manner requiring no further description.

The gate 3 is swung to a closed position by means of a flexible element 39, attached as shown at 40 to the gate, a weight 41 being secured to the free depending end of the flexible element 39. The flexible element 39 is trained through a casing mounted on the supporting post 2 and this casing will now be described in detail.

The casing preferably is fashioned from metal throughout and embodies a main plate denoted by the numeral 4 and shown in clearest outline in Fig. 4. When the casing is applied to the outer face of the supporting post 2, the plate 4 bears directly against the supporting post and the plate, therefore, may be referred to as a back plate.

In its upper edge, as shown in Fig. 4, the back plate 4 is provided with spaced notches 5 defining between them an upstanding lug 6. The back plate 4 is tapered to form a reduced, depending neck 7 in the end of which is formed a notch 8 defining spaced lugs 9. In its lower edge and upon both sides of the depending neck 7, the back plate 4 is equipped with attaching ears 10. The back plate 4 is provided with a bearing opening 11. Upstanding from the back plate 4 and located laterally beyond the notches 5 are attaching ears 12. Projecting forwardly from the back plate 4 at right angles thereto and in vertical alinement with the attaching ears 12 are upper wings 14. Disposed parallel to the upper wings 14 are lower wings 15.

The front of the casing comprises an auxiliary plate 16 having a bearing 33. The plate 16 is connected with a top 17 embodying a rearward extension 18 having a notch 19, upon opposite sides of which are formed lugs 20 provided with upstanding attaching elements 21. The plate 16 extends downwardly to form a neck 22 like the neck 7 and connected with the neck and extended rearwardly therefrom is a bottom 23 terminated in a depending attaching ear 24. Projecting rearwardly from the lower edges of the plate 16 are bottom wings 25.

When the front plate 16 and parts car-

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ried thereby are assembled with the main or bearing plate 4, the coöperation between the constituent elements of the parts above mentioned is as follows:—The lugs 20 which  
 5 form a part of the front of the casing are received in the notches 5 of the back plate 4, the lug 6 on the back plate being received in the notch 19 in the top 17 of the front  
 10 portion of the casing. The rear end of the bottom 23 of the front of the casing at its point of union with the attaching ear 24 is received in the notch 8 of the back plate 4, between the lugs 9. The bottom wings 15  
 15 on the back plate are lined up with the bottom wings 25 of the front portion of the casing, as shown at Fig. 3. The upper wings 14 of the back plate 4 coact with the top 17, as shown in Fig. 2, upon opposite sides of the extension 18. It is to be noted that in  
 20 the parts 14 and 17 upon the one hand and 25 and 15 upon the other hand, coöperating notches are formed, the same coöperating to constitute bearing openings 26. Owing to the manner in which the front and  
 25 rear portions of the casing are interlocked against lateral movement, as shown in Fig. 4 the openings 26 remain of a circular contour. Journaled for rotation in the bearing 33, and in the opening 11 of the back  
 30 plate 4, is a shaft 27 having a shoulder 28 receiving one end of a hub 30 constituting a part of a main sheave 29. Surrounding a portion of the shaft 27 is a bushing 31 having a reduced end 32 received immediately in  
 35 the opening 11 of the back plate and defining a shoulder 34 which coacts with the back plate. Secured to the bushing 31 is a sleeve 35 in which one end of the hub 30 of the main sheave 29 is rotatably received.  
 40 The invention comprises an auxiliary sheave 36 loose on an axle 37 for movement longitudinally thereof and to rotate thereon. This axle 37 may be received in the openings 26 at the right hand end of the casing, referring to Fig. 3, or in the openings 26 at  
 45 the left hand end of the casing, the axle and the sheave being mounted in the last specified openings, in Figs. 1, 2 and 3 of the drawing. The auxiliary sheave 36 is  
 50 horizontally disposed, the main sheave 29 being vertically disposed. The back plate 4 and the front plate 16 of the casing may be provided with any desired number of additional openings 38 permitting the use  
 55 of main sheaves 29 of different sizes or permitting a shifting of the position of the main sheave.

The flexible element 39, it will now be understood, is trained across the horizontally  
 60 disposed auxiliary sheave, is extended across the upper edge of the main sheave 29, and is prolonged downwardly to receive the weight 41, it being obvious that the flexible element, traversing the sheaves under the  
 65 action of the weight will tend to draw the

gate 3 to a closed position, when the same has been opened.

When the casing above described is assembled with the outer face of a supporting post, such as the supporting post 2, securing elements are passed through the attaching members 24 and 21 of the front portion of the casing, and the back portion of the casing as well as the front portion thereof, will be secured to the post. The foregoing  
 75 explanation presupposes that a solid post is to be used. Under some circumstances, a tubular post may be employed, the flexible element 39 being extended downwardly through the interior of the tubular post. 80

In Fig. 8 of the drawings, there is shown a tubular post denoted by the numeral 42 and including a face plate 43. When it is desired to assemble the casing shown in Figs. 2, 3 and 4 with such a post, so that  
 85 the flexible element 39 may be extended downwardly inside of the tubular post, the auxiliary sheave 36 and the axle 37 are shifted from the left hand end of the casing to the right hand end thereof. The casing  
 90 is then reversed, so that that element which has been mentioned hereinbefore as the back plate 4, becomes in reality the front plate. An opening is formed in the closure plate 43 of the post 42 and into this opening, the  
 95 casing is thrust, the attaching elements 12, 21 and 24 overlapping the outer face of the element 43, as will be understood clearly from Fig. 8. It will now be understood that the back plate 4 cannot be held to the  
 100 element 43 by inserting securing elements into the ears 21 and 24 as before, but in order to secure the casing in position when the same is arranged as above described, securing  
 105 elements 44 are inserted through the attaching elements or ears 10 and 12 of the back plate 4. The casing is now so assembled with the tubular post 43 that the flexible element 39 may be led downwardly inside of the post. Since the front portion of  
 110 the casing is detachable readily from the rear or back portion thereof, it will be understood that the various sheaves may be mounted in place in the casing and be removed or be shifted therein. 115

Having thus described the invention, what is claimed is:—

1. In a device of the class described, a casing including a back having upper and lower forwardly extended wings; a front  
 120 comprising a top including an extension lying between the upper wings and provided with support engaging means, and lower wings coöperating with the lower wings of the back; a main sheave disposed parallel  
 125 to the front and to the back and journaled therein; and an auxiliary sheave disposed approximately at right angles to the front and the back, the top and the upper wings on the one hand, and the lower wings of the 130



front and the back on the other hand constituting bearings for the auxiliary sheave whereby the same may be mounted at either end of the casing.

- 5 2. In a device of the class described, a casing including a back having upper and lower outstanding wings; a front comprising a top including an extension lying between the upper wings and provided with  
10 support engaging means, lower wings cooperating with the lower wings of the back, and a bottom coacting with the back, the bottom being provided with support engaging means; a main sheave disposed parallel  
15 to the front and the back and journaled therein; and an auxiliary sheave disposed at right angles to the front and back, the top and the upper wings upon the one hand, and the lower wings of the front and the back  
20 on the other hand constituting bearings for

the auxiliary sheave whereby the same may be mounted at either end of the casing.

3. In a device of the class described, a casing comprising a front, and a back abutting against the front, the front having attaching means whereby the back may be held against a support by the front, the back having attaching means whereby the front may be held against a support by the back when the casing is reversed; and a pair of angularly disposed sheaves journaled in the front and in the back.

In testimony that I claim the foregoing as my own, I have hereto affixed my signature in the presence of two witnesses.

ALBERT BUJEWSKI.

Witnesses:

JACOB K. MAY,  
JOHN M. BONK.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."