May 29, 1962 M. S. HOLLIDGE 3,036,330

GATE CLOSING DEVICE

Filed May 25, 1959 2 Sheets-Sheet 1

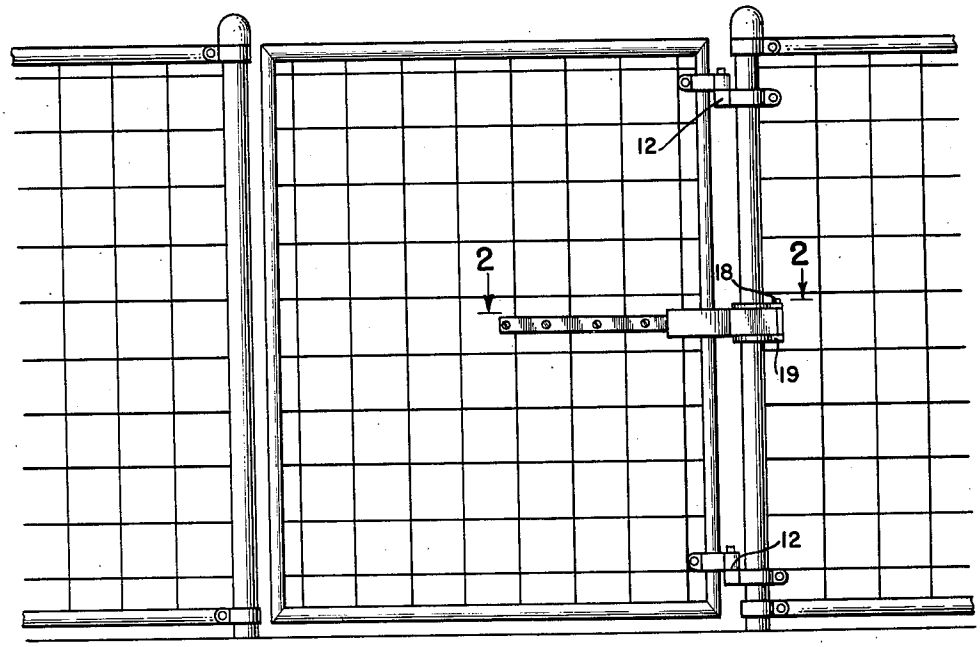

FIG. 1.

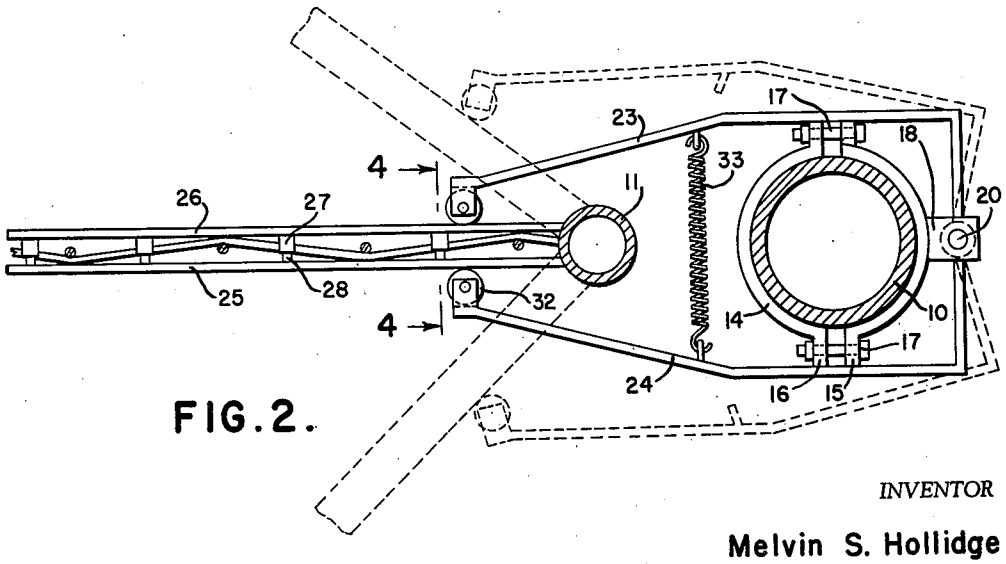

FIG. 2.

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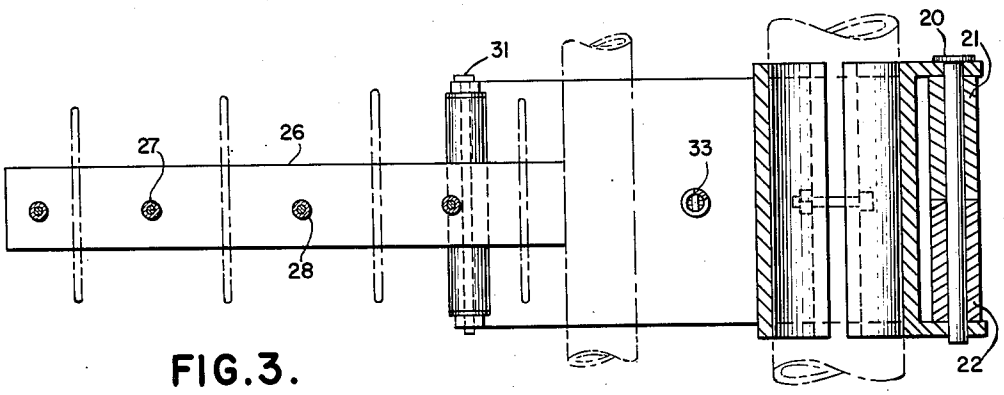

FIG.3.

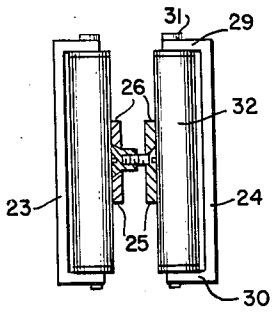

FIG.4.

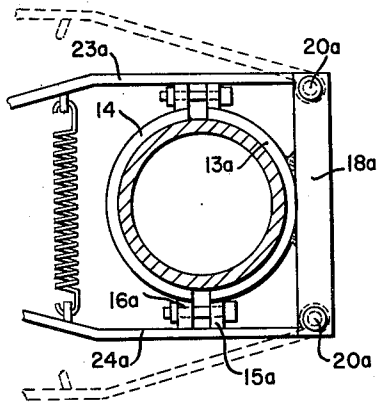

FIG.5.

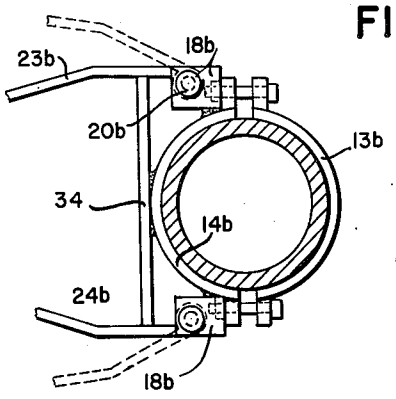

FIG.6.

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GATE CLOSING DEVICE

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2 Claims. (Cl. 16—80)

The present invention relates to a gate closing device and has for an object to provide a device which may be quickly attached to presently existing gate structures, which is simple in construction, permits of economic mass fabrication and which may be readily repaired in the event of failure of any component.

A further object of the present invention is to provide a device of the character described which may be employed for returning a gate to the closed condition from either in or out, or both.

With the foregoing and other objects in view, the invention will be more fully described hereinafter, and will be more particularly pointed out in the claims appended hereto.

In the drawings, wherein like symbols refer to like or corresponding parts throughout the several views:

FIGURE 1 is a side elevation view of a gate and fence construction having a device of the present invention applied thereto;

FIGURE 2 is a vertical section taken on the line **2—2** in FIGURE 1 at a magnified scale;

FIGURE 3 is a side elevational view of FIGURE 2 with parts broken away and parts shown in section;

FIGURE 4 is an end elevational view of the roller arrangement on the gate closing arms taken on the line **4—4** in FIGURE 2;

FIGURE 5 is a fragmentary top plan view of a modified form of the invention, and

FIGURE 6 is a further modified form of the present invention.

Referring now to the drawings, **10** designates a gate post having hung thereon the conventional gate **11** as by pivotal hangers **12**. A two-piece clamp member **13** and **14** having flanges **15** and **16** which are held together about the gate post **10** by bolts **17**, having nuts thereon. Flange or ear members **18**, **19** extend off the top and bottom of the clamp member **13** and provide support for a pivot shaft **20**. The pivot shaft passes through collars **21**, **22** of gate closing arms **23** and **24**. The gate closing arms have portions which are substantially parallel in plan view in the fence post area and which arms converge toward the gate, as best seen in FIGURE 2.

Secured to the gate **11** are two roller tracks **25**, **26** which are joined by sleeves and countersunk screws **27**, **28**. The screws **28** are threadedly received in the sleeves **27**. These two roller plates **25**, **26** are secured about a portion of the wire of the gate and locked in position by the setting of the screws in their sockets. The forward convergent portion of the gate closing arms **23** and **24** are provided with flanges **29**, **30** and act as supports for a shaft **31** about which freely rotates a pair of rollers **32**. The two arms **23**, **24** are urged toward one another and into engagement so that the rollers **32** engage the track members **25** and **26** by means of a tension spring **33**, one end of which is secured to the arm **23** and the other end of which is secured to the arm **24**. When the gate is moved toward the bottom of FIGURE 2, the roller **32** will ride on the track **25**, as indicated in the dotted line position of FIGURE 2 and will extend the spring **33**. Upon releasing of the opening force applied to the gate **11**, the tension force of the spring **33** will force the roller **32** to ride across the track **25** thereby closing the gate and returning the same to a state of balance in the closed position.

The flanges or collars **15**, **16** on the clamp member **13**, **14** act as limit stops for the pivotal movement of the arms **23**, **24** toward the closed position of the gate.

Referring now to FIGURE 5, I have shown a modified form of mounting which comprises a two-piece clamp member **13ᵃ**, **14ᵃ** having a flange member **18ᵃ** welded thereto, which flange member provides a support for the pivot members **20ᵃ** of the arms **23ᵃ**, **24ᵃ**. In this embodiment the pivot points are spaced vertically apart from one another.

Referring now to FIGURE 6, I have illustrated a still further embodiment of the present invention in which I provide a two-piece clamp member **13ᵇ**, **14ᵇ** having flanges **18ᵇ** which provide the supports for the pivots **20ᵇ** of the arms **23ᵇ**, **24ᵇ**. A limit stop member **34** is provided in this embodiment and is secured to the clamp member **14ᵇ** as by welding and acts to limit the closed position of the two gate closing arms **23ᵇ** and **24ᵇ**.

To install the device of the present invention upon a gate, as best seen in FIGURES 1 and 2, the roller track members may be first applied to the gate by the placement of the roller tracks **25** and **26** at the desired elevation on the gate and setting the countersunk screws in the sleeves **27** until the tracks grip and are firmly retained in place about the gate construction.

The two-piece clamp member **13**, **14** is then elevated to the desired level whereby the rollers **32** register with the track members **25**, **26** and the bolts **17** are then tightened with their respective nuts to firmly anchor the assembly in place at the desired elevation. The tension spring **33** is then secured, one end to the arm **23** and the other end to the arm **24**.

When the gate is opened in either direction, one of the arms will be extended which will open or tend to expand the spring **33**, the other arm being firmly anchored against the limit stops of the flanges **15**, **16** of the clamp member. This extension of the spring **33**, upon removal of the force opening the gate will through the roller track mechanism force the gate to the closed position shown in solid lines in FIGURE 2.

Although I have disclosed herein the best forms of the invention known to me at this time, I reserve the right to all such modifications and changes as may come within the scope of the following claims.

What is claimed is:

1. A gate closing device adapted to be installed on an erected gate post intermediate the pivots thereof comprising a pair of split clamp means, means for securing said split clamp means in assembled, post-engaging relationship, pivot means carried by said clamp means and positioned in horizontally spaced relation to a gate, a pair of arms each carried at an end thereof by said pivot means and extending on either side of a gate, spring means operatively connected to said arms and urging said arms toward gate closed position, said spring means being within said arms, said clamp means having flanges thereon, and securing means extending through said flanges, said flanges constituting stop means for engagement by an intermediate portion of each said arm in gate closed position.

2. The device of claim 1, said pivot means being on the opposite side of the gate post from the gate and constituting a single pivot pin to which said arms are journalled.

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