

2 SHEETS—SHEET 1.



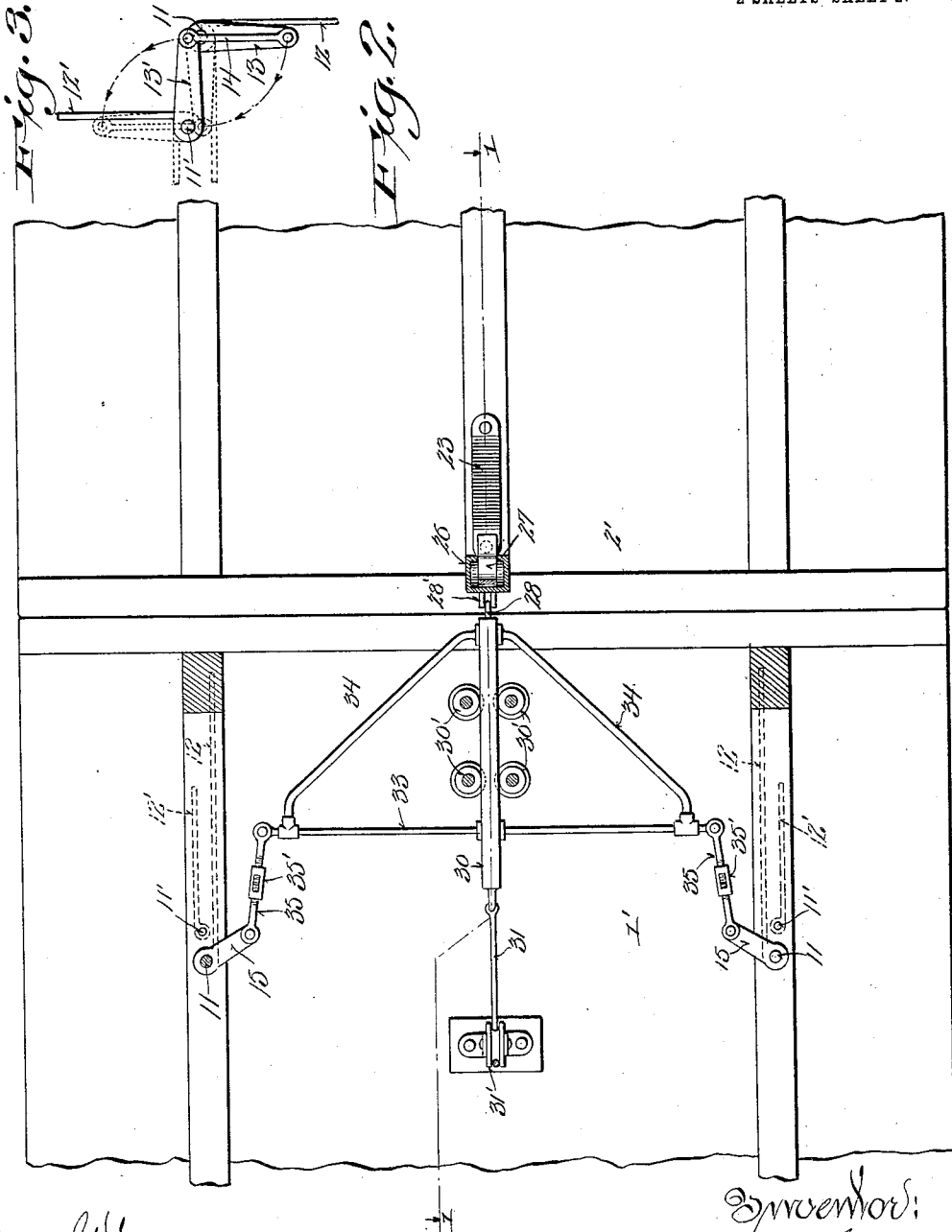
Groenend.
Casper Faust
Soy *Captain Young.*
Attorneys.

C. FAUST.
SAFETY GATE FOR BASCULE BRIDGES.
APPLICATION FILED MAY 7, 1912.

1,042,776.

Patented Oct. 29, 1912.

2 SHEETS—SHEET 2.



Witnesses
Cassius Young
May Downey.

Inventor:
Casper Faust
By *Cassius Young*
Attorneys

UNITED STATES PATENT OFFICE.

CASPER FAUST, OF OSHKOSH, WISCONSIN.

SAFETY-GATE FOR BASCULE-BRIDGES.

1,042,776.

Specification of Letters Patent.

Patented Oct. 29, 1912.

Original application filed March 5, 1912, Serial No. 681,774. Divided and this application filed May 7, 1912.
Serial No. 695,655.

To all whom it may concern:

Be it known that I, CASPER FAUST, a citizen of the United States, and resident of Oshkosh, in the county of Winnebago and State of Wisconsin, have invented certain new and useful Improvements in Safety-Gates for Bascule-Bridges; and I do hereby declare that the following is a full, clear, and exact description thereof.

My invention refers to lift bridges of the bascule type and has for its object to provide a simple, effective and positive actuating safety gate attachment for the toe end of such bridges, said invention being a division of an application for patent for improvements in safety gates for bascule bridges, filed by me March 5, 1912, Serial No. 681,774.

With the above object in view the invention consists in certain peculiarities of construction and combination of mechanical elements as set forth hereinafter with reference to the accompanying illustrations and subsequently claimed.

In the drawings Figure 1 represents a longitudinal sectional view of a bascule bridge of the single span type equipped with safety gates at the toe end of the bridge embodying the features of my invention, the section being indicated by line 1—1 of Fig. 2; Fig. 2, represents an inverted plan view of a portion of the bridge and its abutment, parts being broken away and parts in section as indicated by line 2—2 of Fig. 1, and Fig. 3, a detailed plan view of a pair of the bridge gates showing their link connections.

Referring by characters to the drawings 2' indicates the toe of a single bridge span of the lift or bascule type, the same being provided with a leg 22 that is affixed to said toe end. This leg is mounted in bearings of a bracket 23 that is rigidly secured to the frame timbers at the toe end of the bridge member, the said leg being held downward by a coiled spring 24 that surrounds the same and is interposed between the top bearing of the bracket and a collar 24' carried by said leg, movement of the spring being limited by a second collar 25 that is normally seated against the lower bearing of the bracket.

By providing the yielding spring connection for the leg 22 it is apparent that said leg is capable of slight movement in

its bearings, whereby shock is absorbed incidental to the engagement of the aforesaid leg with a gate-actuating mechanism to be hereinafter particularly described. Were it not for this slight yield the sudden shock would cause undue vibration of the gate mechanism incidental to its initial starting movement.

1' indicates the toe end abutment of the bridge, which abutment has secured to its superstructure a vertically disposed U-shaped flanged track 26, that has slidably mounted therein a block 27 provided with anti-friction rollers for engagement with the base and inner faces of the flanges of said track. When the bridge is closed as shown in Fig. 1, the leg 22 engages and depresses the block to the position illustrated, upward movement of said block being limited by a cable 27' that has one end secured to the aforesaid block and its opposite end secured to the abutment. The cable 27' is provided with a turnbuckle for adjustment whereby upward movement of the block is regulated.

Secured to the head of block 27 is a cable 28 that passes over a guide-sheave 28', the same being journaled in ears extending from the upper end of the track 26. From this sheave, the cable 28, is looped backward over a plunger pulley 29 and the end of the upper stretch of the cable loop is secured to the abutment superstructure in any suitable manner. The plunger pulley 29 is carried by a horizontally disposed plunger 30, which plunger is supported between sets of vertically and horizontally arranged anti-friction rollers 30' that are mounted upon a cross-timber forming part of the abutment superstructure. The rear end of the plunger 30 is connected to a cable 31, which cable passes over a guide-sheave 31' and has attached thereto a weight 32 at its end, whereby said plunger is drawn rearward in opposition to forward movement thereof, caused through the engagement of the bridge-leg 22 with the slidable block 27, incidental to closure of the toe end of the bridge member relative to its abutment. The rear end of the plunger 30 also carries a cross-head bar 33 that is suitably stiffened by obliquely disposed brace-bars 34, which brace-bars connect the ends of the cross-head 33 and forward end of the plunger.

Projecting upwardly through the toe

abutment 1' between the roadway thereof and sidewalk sections, are pairs of posts 11, 11', the same being mounted in suitable journals with which the abutment is provided. The master post 11 of each pair carries a roadway gate 12 and the companion post 11' a similar sidewalk gate 12'. The upper ends of the posts of each pair are provided with cranks 13, 13', respectively, having crankpins that are connected by a link 14. Hence it will be seen that when the master-post 11 is rotated movement will be imparted through the crank and link connection from the master post to the sidewalk gate 12', whereby said sidewalk gate and road gate are folded back parallel when the bridge is closed and when said bridge is opened the connected gates are extended across their respective ways to form guards as shown in Fig. 3.

Secured to the lower ends of the master or roadway gate-posts 11 and under the abutment are horizontally disposed lower cranks 15. These cranks are connected by links 35 to the ends of the plunger cross-head 33, said links being provided with adjusting turnbuckles 35'.

From the foregoing description it will be understood, that when the toe end of the bridge is closed relative to its abutment the safety gates will be folded and held in this position by engagement of the leg 22 with the block 27, which engagement takes place just prior to the closure of the toe of the bridge and in the final downward movement thereof, the block is caused to travel downward and through its looped cable connection, the weight-controlled plunger 30 is drawn forward, whereby said gates are folded owing to the crank and link connection with the plunger-cross-head 33. When the bridge member is swung upward or open, disengagement of the leg 22 from the block, will cause the weight-controlled plunger 30 to slide rearward and the link connections 35, between the plunger and master gate-post will cause said post to partially rotate whereby each pair of gates will be swung across their respective sidewalk and roadway passages to thus block traffic.

I claim:—

1. In a lift bridge member having a heel end abutment, trunnions for the member

supported thereby, and a toe abutment for the bridge adapted to be alined with the toe of the bridge; the combination of pairs of vertically disposed posts journaled in the toe abutment and extending therethrough, cranks carried by the posts of each pair, links connecting the cranks, lower crank arms carried by one post of each pair, a weight-controlled plunger mounted upon the abutment, links connecting the plunger with the lower crank-arms of the posts, a vertical track supported by the toe abutment, a block slidably mounted in the track, a cable secured to said abutment, the cable being in loop connection with the plunger and secured to the block, and a leg carried at the toe end of said bridge for engagement with said block.

2. In a lift bridge having a toe end and its abutment; the combination of a bracket secured to the toe end of the bridge member, a leg mounted in the bracket, a vertical track supported by the abutment, a block slidably mounted in the track engageable with the leg, pairs of guide-rollers, a plunger mounted between said pairs of guide-rollers, a pulley carried by the plunger, a guide-sheave mounted upon the upper end of the track, a cable connected to the block and passed over the guide-sheave and plunger pulley, said cable being looped thereabout and connected to the abutment, means for limiting upward movement of the slidable block, a yoke carried by the plunger, pairs of vertically disposed parallel posts journaled in the aforesaid abutment and extending therethrough, cranks secured to the upper end of each pair of posts, a link connecting each pair of cranks, cranks carried at the lower end of the posts of each pair, links connecting the cranks and plunger yoke, and a weighted cable in connection with the plunger whereby the same is moved in one direction to close the gates incidental to lift of the toe end of the bridge.

In testimony that I claim the foregoing I have hereunto set my hand at Milwaukee in the county of Milwaukee and State of Wisconsin in the presence of two witnesses.

CASPER FAUST.

Witnesses:

GEO. W. YOUNG,
M. E. DOWNEY.