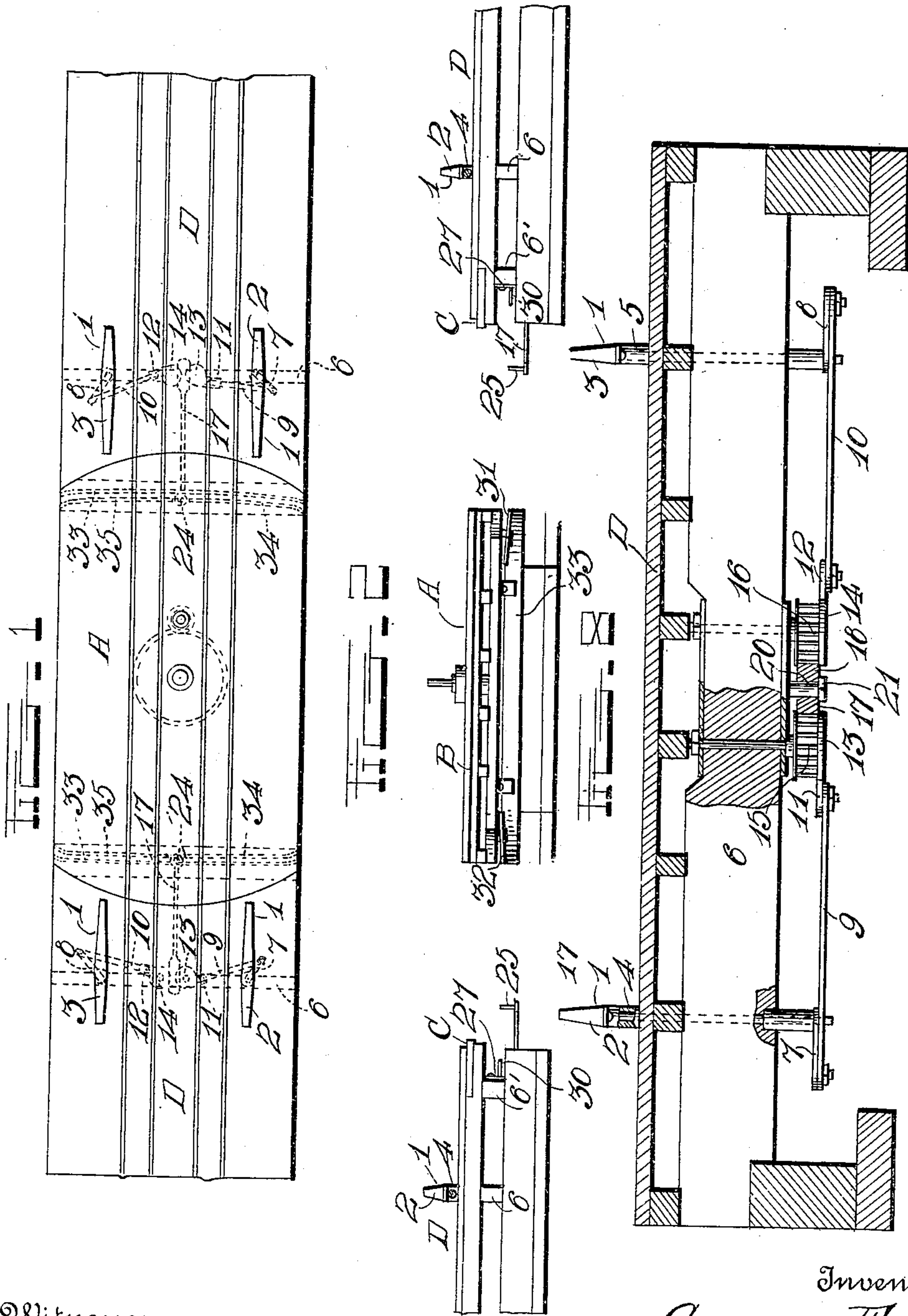


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BRIDGE GATE.  
APPLICATION FILED MAY 26, 1910.

Patented Dec. 20, 1910.

3 SHEETS—SHEET 1.



Witnesses  
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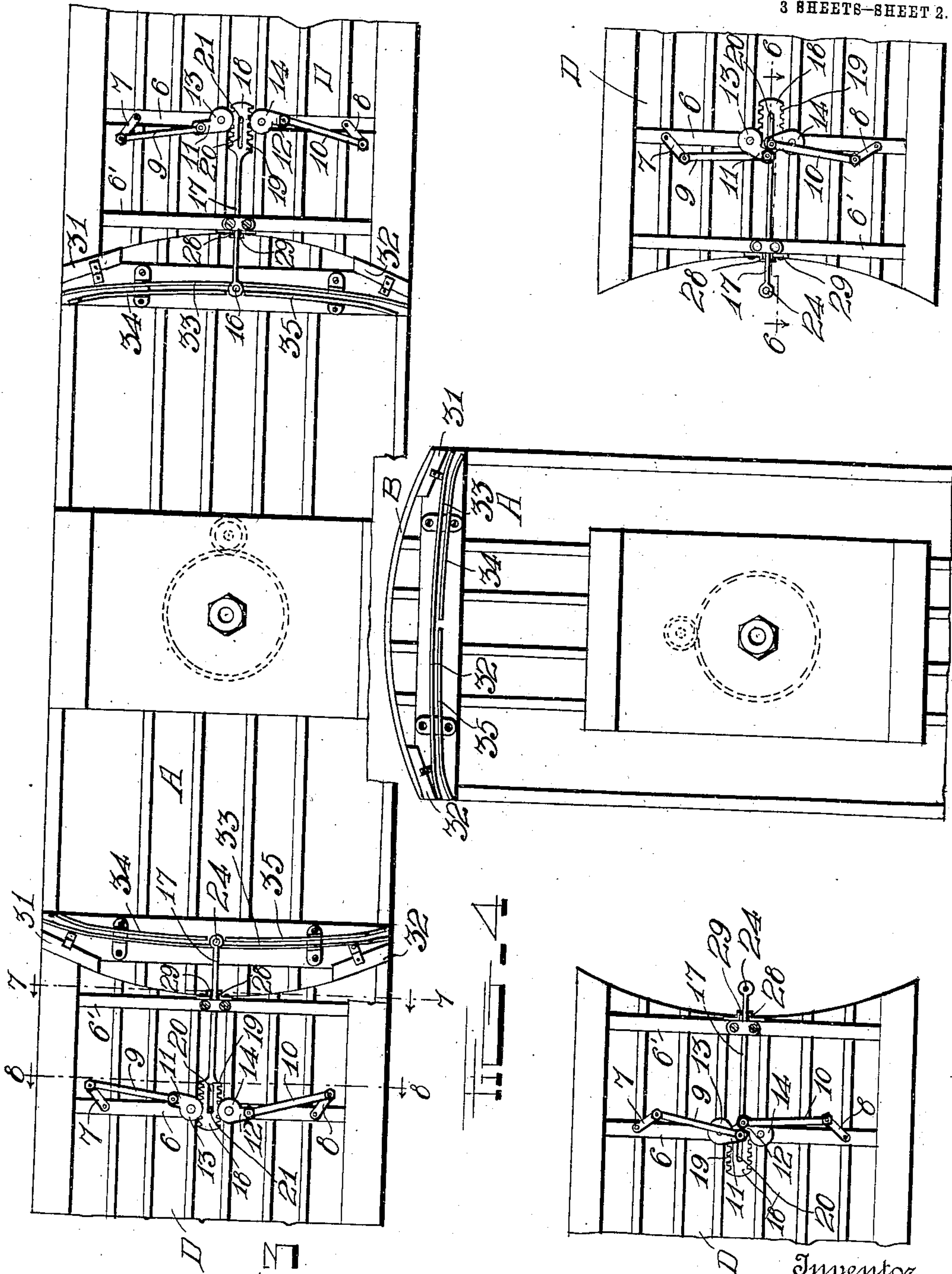
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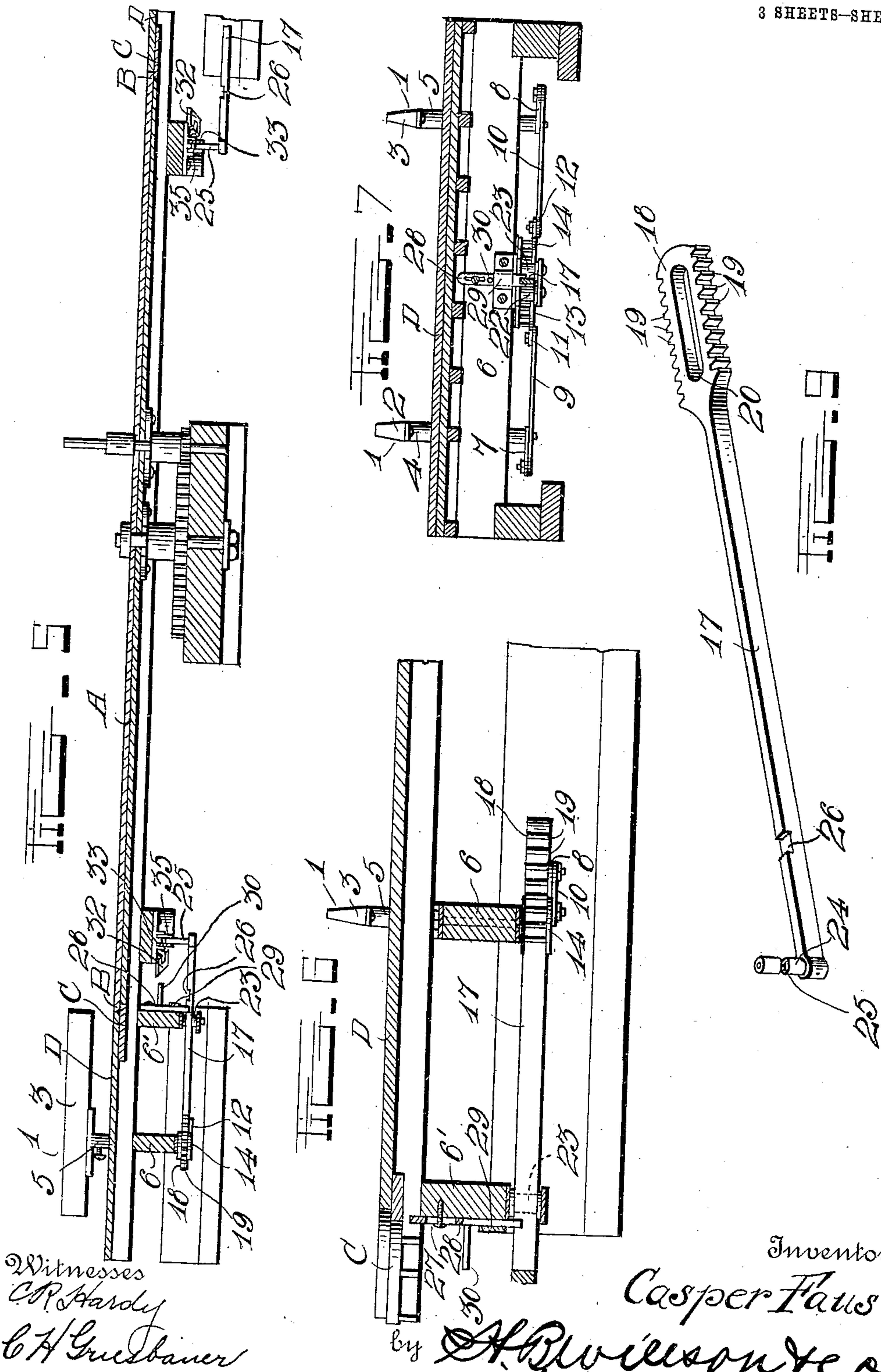
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# UNITED STATES PATENT OFFICE.

CASPER FAUST, OF OSHKOSH, WISCONSIN.

## BRIDGE-GATE.

979,270.

Specification of Letters Patent. Patented Dec. 20, 1910.

Application filed May 26, 1910. Serial No. 563,553.

*To all whom it may concern:*

Be it known that I, CASPER FAUST, a citizen of the United States, residing at Oshkosh, in the county of Winnebago and State of Wisconsin, have invented certain new and useful Improvements in Bridge-Gates; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to an improved automatically operated bridge gate for use in connection with swinging bridges for closing the roadway approach to travel when the bridge is turned away from its approach.

The object of the invention is to provide a simply constructed and reliable gate which is automatically closed on the opening of the bridge and opened on the closing thereof.

Another object is to provide simple and efficient means for automatically locking the gate in closed position operable by the opening of the bridge and for unlocking it on the closing of the bridge.

With these and other objects in view, the invention consists of certain novel features of construction, combination and arrangement of parts as will be more fully described and particularly pointed out in the appended claims.

In the accompanying drawings: Figure 1 is a top plan view of a draw bridge and the adjacent roadway equipped with this improved gate the bridge being in closed position; Fig. 2 is a side elevation with the bridge shown in open position and the roadway closed by this improved gate; Fig. 3 is a bottom plan view thereof with the bridge in closed position; Fig. 4 is a similar view with the bridge in open position; Fig. 5 is a central longitudinal vertical section thereof; Fig. 6 is a similar view taken on the line 6—6 of Fig. 4; Fig. 7 is a transverse section taken on the line 7—7 of Fig. 3; Fig. 8 is a similar view taken on line 8—8 of Fig. 3; Fig. 9 is a perspective view of the rack bar.

In the embodiment illustrated A represents a portion of a draw bridge of the type which revolves about an axis located at its center and has ends which are formed on curves which are concentric with said axis, said curved ends being preferably provided with a flange B which extends in the same plane with the upper face thereof and is adapted to overlap a similar flange C formed

on the lower face of the abutment D which is formed with a curved end also arranged concentric with the axis of the bridge. The construction of the abutments D of this well known type of bridge depends upon the exigencies of the situation and they may be of masonry, open trestle work or any other desired construction.

A swinging gate 1 is herein shown and is preferably composed of two laterally opening members 2 and 3 which are mounted at opposite sides of the roadway on revoluble posts 4 and 5 which extend through the bridge floor and through a transversely arranged sleeper 6 with their lower ends projecting through said sleeper and fixed to one end of links 7 and 8. The free ends of these links 7 and 8 are preferably connected with one end of links 9 and 10 the other ends of which are pivotally connected with arms 11 and 12 which extend tangentially from disks 13 and 14 fixed to the outer faces of pinions 15 and 16 which are pivotally mounted on the sleeper 6 adjacent the center thereof. A rack bar 17 is mounted to move longitudinally on the sleepers 6 and 6' and is provided at its rear end with a longitudinally slotted head 18 having teeth as 19 arranged on the edges of the opposite sides of said head in position to mesh with the pinions 15 and 16 above described. The slot 20 of this head 18 engages a depending stud 21 on the lower face of the sleeper 6 which serves as a guide for said head and also as means for limiting the backward and forward movement of the bar 17. Two depending rollers 22 and 23 are preferably arranged on the lower face of the sleeper 6' between which rollers said bar 17 reciprocates and which form guides for the front end of said bar.

An upwardly projecting stud 24 is secured to the front end of the bar 17 and is preferably provided with a roller 25 which is adapted for engagement by a member carried by the draw bridge A for reciprocating the rack bar 17 on the movement of said draw bridge into and out of closed position. This bar 17 is also provided near its front end in its upper face with a recess 26 for engagement by a latch member 27 mounted to move vertically on the sleeper 6' for locking said rack bar against longitudinal movement when the gate is in closed position. This latch member 27 is preferably constructed in the form of a slotted bar slidably



engaged with a laterally extending stud 28 which projects from one face of the sleeper 6'. This member 27 also slides in a keeper 29 which guides the latch bar and holds it against lateral movement. The lower end of this latch member 27 is bifurcated and the arms thereof are adapted to pass on opposite sides of the rack bar 17 the crotch fitting within the recess 26 of said bar 17 and lock said bar against movement. An operating finger 30 projects laterally from the member 27 and is adapted to be engaged by operating members 31 and 32 secured to the opposite sides of the adjacent end of the draw bridge or movable member A. These members 31 and 32 are preferably made in the form of resilient plates fixed intermediately of their ends to the lower face of the bridge member A and inclined outwardly and forwardly from their inner toward their outer ends to provide for their engagement with the upper face of the finger 30 on the opening of the draw bridge and for their engagement with the lower face of said finger on the closing of the draw bridge whereby said latch member 27 is moved into and out of operative position.

In the form shown the movable or draw bridge member A is provided on its lower face adjacent the curved end thereof with a longitudinally curved track member 33 arranged transversely of the member A. This track member 33 is preferably composed of a resilient metal plate supported edgewise on said draw bridge by any suitable means and with the opposite ends thereof curved inwardly to facilitate its engagement with the stud 24 carried by the inner end of the bar 17 and which moves said bar inward and outward for opening and closing the gate on the movement of the draw bridge member into closed and open positions respectively. Two resilient plates 34 and 35 are supported edgewise adjacent the inner face of the member 33 being spaced laterally therefrom a sufficient distance to permit the roller 25 on the stud 24 to move freely therebetween. The inner ends of these members 34 and 35 are spaced slightly apart as is shown clearly in Fig. 3.

In the operation of this improved gate the parts being in the position shown in Fig. 1 with the roller 25 engaging the inner face of the track member 33 at a point midway its length the movement of the draw bridge A in either direction will cause this curved track 33 to move the rack bar rearwardly thereby rotating the pinions 15 and 16 a sufficient distance to close the swinging gate members 2 and 3 motion being imparted to said members 2 and 3 by means of the cam disks 13 and 14, arms 11 and 12 and links 9 and 10 and 7 and 8 as above described. When the rack bar 17 has reached its extreme rearward movement the recess 26

therein will be brought into position just below the bifurcated end of the member 27 and as the bridge member A swings open the member 32 thereof will engage the upper face of the finger 30 and force said latch 27 downward into engagement with said recess 26 where it will remain by gravity and hold the gate in closed position until the draw bridge is closed when the member 32 on the closing thereof will engage the lower face of the finger 30 and raise said latch 27 out of engagement with the recess 26 thereby permitting the rack bar 17 to be moved forwardly by the track 33 and the end members 2 and 3 to be swung into open position as shown in Fig. 1.

From the foregoing description taken in connection with the accompanying drawings, the construction and operation of the invention will be readily understood without requiring a more extended explanation.

Various changes in the form, proportion and the minor details of construction may be resorted to without departing from the principle or sacrificing any of the advantages of this invention as defined in the appended claims.

I claim as my invention.

1. In a bridge gate the combination of two laterally spaced revolvably mounted posts, gate members fixed at one end to said posts and extending laterally therefrom, laterally spaced pinions arranged in a plane below said gate members, cam disks fixed to said pinions, links connecting said cam disks with said posts, a longitudinally movable member having a toothed head arranged to mesh with said pinions, an upwardly projecting member carried by the front end of said rack bar and a laterally swinging member provided with means for reciprocating said rack bar.

2. The combination with a gate, a slidable rack bar, means connecting said gate with said rack bar, a swinging member having means for reciprocating said rack bar, locking means for said rack bar comprising a slidably mounted member having a bifurcated end for engaging said rack bar when said bar is in projected position to hold the gate in closed position.

3. The combination with a gate, a slidable rack bar, means connecting said gate with said rack bar, a swinging member having means for reciprocating said rack bar, said bar having a recess in one face thereof and a vertically movable locking member operable by said swinging member and having means for engaging the recess in said rack bar for holding the gate in operative position.

4. The combination with a gate, a slidable rack bar, means connecting said gate with said rack bar, a swinging member having means for reciprocating said rack bar, said



rack bar having a recess in one face, and a vertically slidable locking member having a bifurcated end for engaging the recess in said bar to lock the gate in operative position.

5     5. The combination with a gate, a slidable rack bar, means connecting said gate with said rack bar, a swinging member having means for reciprocating said rack bar, said  
10 rack bar having a recess in one face, and a vertically slidable locking member having a bifurcated end for engaging the recess in said bar to lock the gate in operative position, and means carried by said swinging  
15 member to release said locking member from said rack bar on the movement of the swinging member in one direction.

6. The combination with a gate, a slidable rack bar, means connecting said gate with

said rack bar, a swinging member hav- 20  
ing means for reciprocating said rack bar, said rack bar having a recess in one face, and a vertically slidable locking member having a bifurcated end engaging the recess  
25 in said bar to lock the gate in operative position, and means arranged at opposite sides of said swinging member to engage said locking member with said rack bar on the movement of the swinging member in one direction and release it on the movement of  
30 said swinging member in the other direction.

In testimony whereof I have hereunto set my hand in presence of two subscribing witnesses.

CASPER FAUST.

Witnesses:

JOHN KLOECKNER,  
VERNA WOLVERTON.