

May 28, 1929.

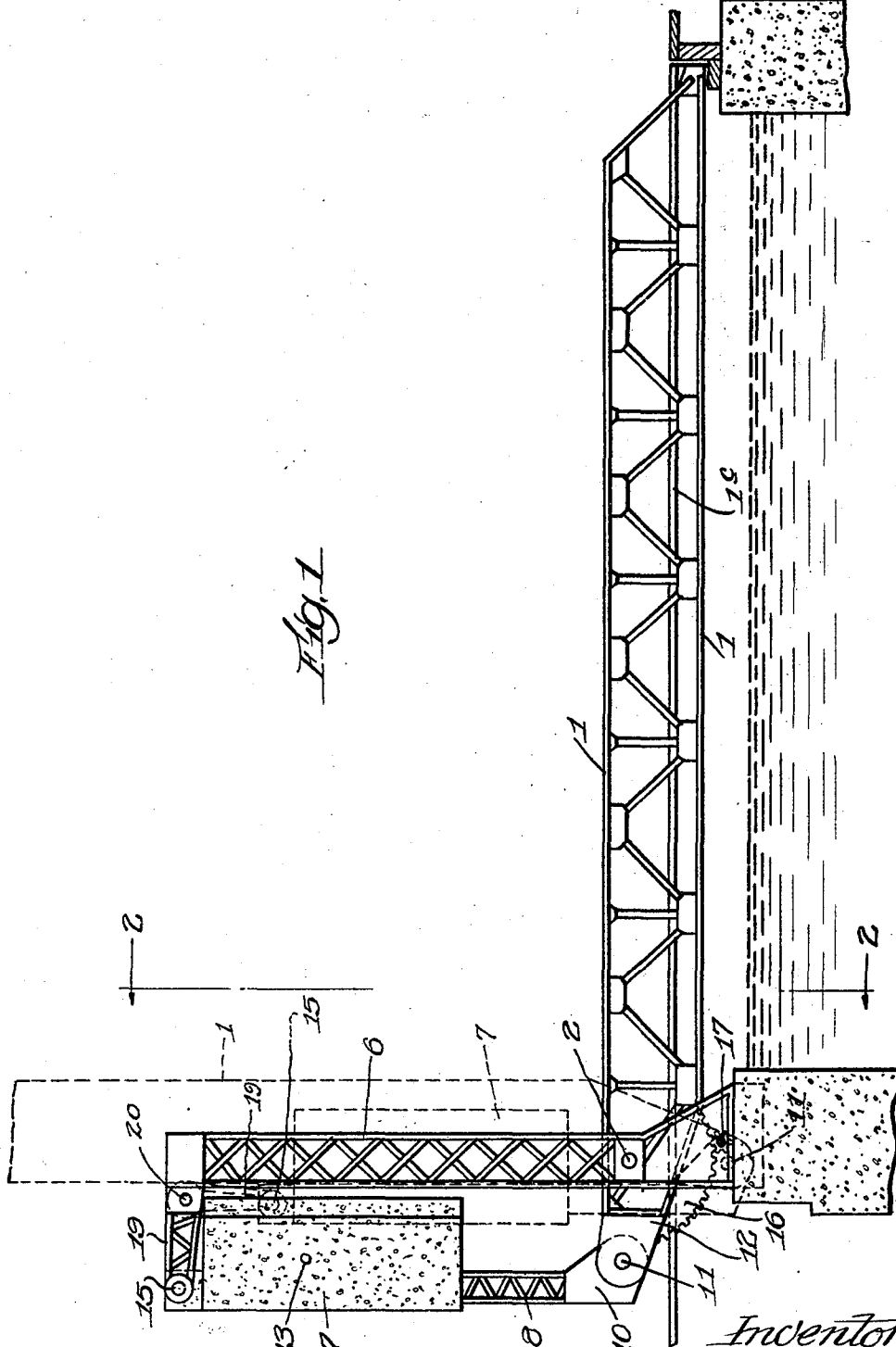
J. B. STRAUSS

1,714,699

BASCULE BRIDGE

Filed Sept. 3, 1925

2 Sheets-Sheet 1



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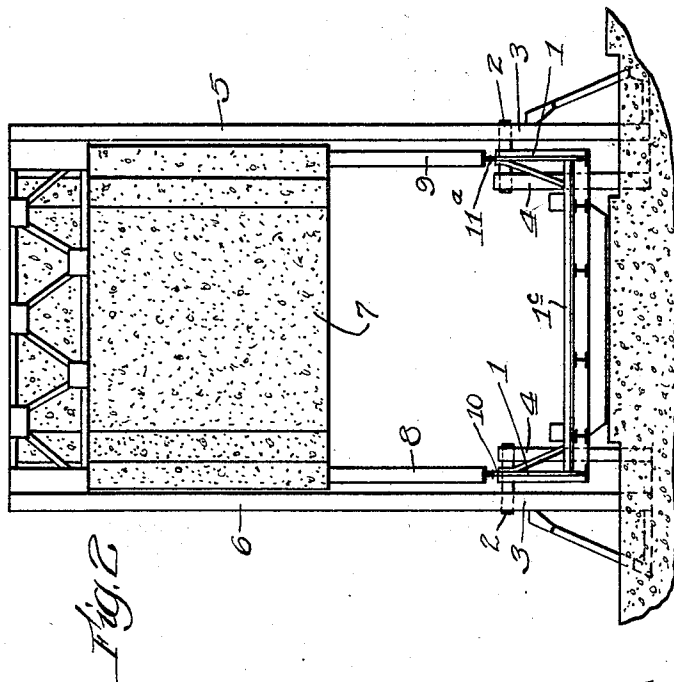
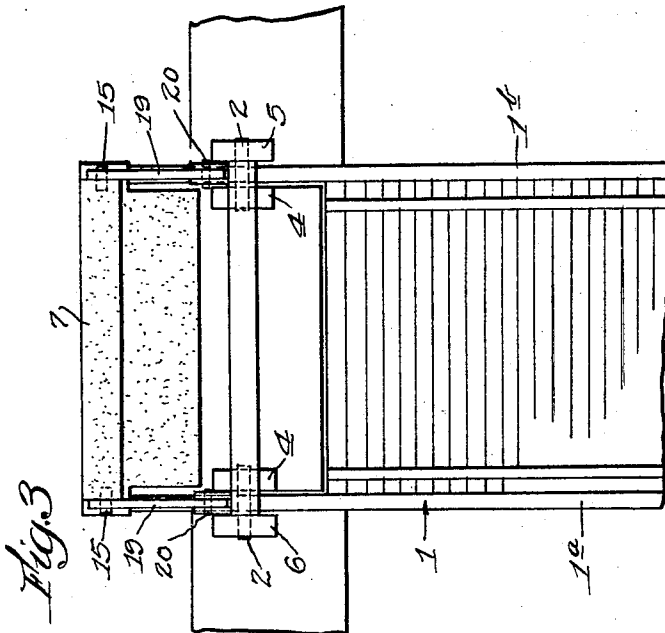
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2 Sheets-Sheet 2



Inventor:
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Patented May 28, 1929.

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UNITED STATES PATENT OFFICE.

JOSEPH B. STRAUSS, OF CHICAGO, ILLINOIS.

BASCULE BRIDGE.

Application filed September 3, 1925. Serial No. 54,195.

This invention relates to bascule bridges and has for its object to provide a new and improved device of this description. The invention has a further object to provide a bascule bridge that can be opened substantially 90°; that is, wherein the span can be moved to a substantially vertical position when opened. The invention has other objects which are more particularly pointed out in the accompanying description.

Referring now to the drawings:

Fig. 1 is a side view showing one form of device embodying the invention.

Fig. 2 is a view taken on line 2—2 of Fig. 1.

Fig. 3 is a plan view.

Like numerals refer to like parts throughout the several figures.

Referring to the drawings I have shown a main span having trusses 1^a and 1^b at opposite sides thereof which project above the floor 1^c of the bridge, mounted upon trunnions 2, the trunnions being mounted upon the trunnion supports 3 and 4. Projecting above the trunnions 2 are the fixed parts 5 and 6 which preferably form a part of the outside trunnion posts. A counterweight 7 is provided for the main span, preferably of concrete. At the sides of the counterweight are the single posts 8 and 9 upon which it is supported. These posts or supports project eccentrically from the counterweight as illustrated in Fig. 1. These supports or posts have at their lower ends projecting parts 10 and 11^a which are pivotally connected to the rear or tail end of the main span. The projecting part 10; for example, is pivoted at 11 to the rearwardly projecting part 12 of the main span. The pivotal connections between the counterweight and the main span are in the same vertical plane as the center of gravity 13 of the counterweight. The upper end of the counterweight 7 is connected to the upwardly projecting fixed parts 5 and 6 by means of links 14, one pivoted to each of the fixed parts. These links have their other ends pivoted eccentrically at 15 to the counterweight. The pivotal connection of these links to the counterweight is in alignment with the supports or posts 8 and 9. The counterweight is preferably formed at the top so that this may be done. The main span is raised and lowered by means of the rack 16 and the pinion 17, said pinion being connected with some suitable source of power. When the

main span is lowered it is in the position shown in full lines in Fig. 1. When it is desired to open the bridge the pinion 17 is rotated and this pinion, by engagement with the rack 16, causes the main span to be lifted to the position shown in dotted lines in Fig. 1. It will be noted that the main span in this position has opened substantially 90° and is substantially vertical. It will further be noted that the counterweight when the bridge is open projects in between the trusses of the main span. The width of this counterweight is such as to permit this. The eccentric method of supporting the counterweight permits it to be moved so that it projects in between the trusses of the main span so that when the bridge is open the supports or posts 8 and 9 will not strike the trunnions or the supports or any part of the bridge and will permit the main span to be moved to a vertical position. It will be seen that a portion of the counterweight and the main span above the trunnions are in the same vertical plane when the bridge is open; that is, the main span and the counterweight overlap.

I claim:

1. A bridge comprising a main span, trunnions upon which it is mounted, a counterweight, means projecting eccentrically and vertically from the rear bottom portion of said counterweight for connecting it with the main span, a fixed part projecting above the main span and a link connection from said fixed part to said counterweight.

2. A bridge comprising a main span, trunnions upon which it is mounted, a counterweight located above the main span when said span is closed, a connecting member projecting eccentrically from said counterweight, and pivotally connected with said main span, said connecting member having the portion thereof which is connected with the main span, in the vertical plane extending through the center of gravity of said counterweight.

3. A bridge comprising a movably mounted main span, a counterweight therefor, a support for said counterweight eccentrically connected therewith, an inwardly projecting part at the bottom of said support and extending under the center of gravity of the counterweight, and a pivotal connection between said projecting part and said main span.

4. A bridge comprising a main span, trun-

nions upon which it is supported, a counterweight for said main span, a support eccentrically connected with said counterweight at the side farthest from said trunnions, a projecting part at the bottom of said support extending under the center of gravity of the counterweight, and a pivotal connection between said projecting part and said main span, said pivotal connection being located in the same vertical plane as the center of gravity of said counterweight.

5. A bridge comprising a main span, trunnions upon which it is supported, a counterweight for said main span, a support eccentrically connected with said counterweight at the side farthest from said trunnions, a projecting part at the bottom of said support extending under the center of gravity of the counterweight and a pivotal connection between said projecting part and said main span, said pivotal connection being located in the same vertical plane as the center of gravity of said counterweight, a fixed part extending above said trunnions and

a link pivotally connected with said fixed part and said counterweight.

6. A bridge comprising a main span, trunnions upon which it is supported, a counterweight for said main span, a support eccentrically connected with said counterweight at the side farthest from said trunnions, a projecting part at the bottom of said support extending under the center of gravity of the counterweight and a pivotal connection between said projecting part and said main span, said pivotal connection being located in the same vertical plane as the center of gravity of said counterweight, a fixed part extending above said trunnions and a link pivotally connected with said fixed part and said counterweight, said link pivoted to said counterweight eccentrically and in alignment with said support.

Signed at Chicago county of Cook and State of Illinois, this 27th day of August, 1925.

JOSEPH B. STRAUSS.