(No Model.)

R. P. LAMONT.

DRIVING MECHANISM FOR BRIDGES.

No. 503,378. Patented Aug. 15, 1893.

FIG 1.

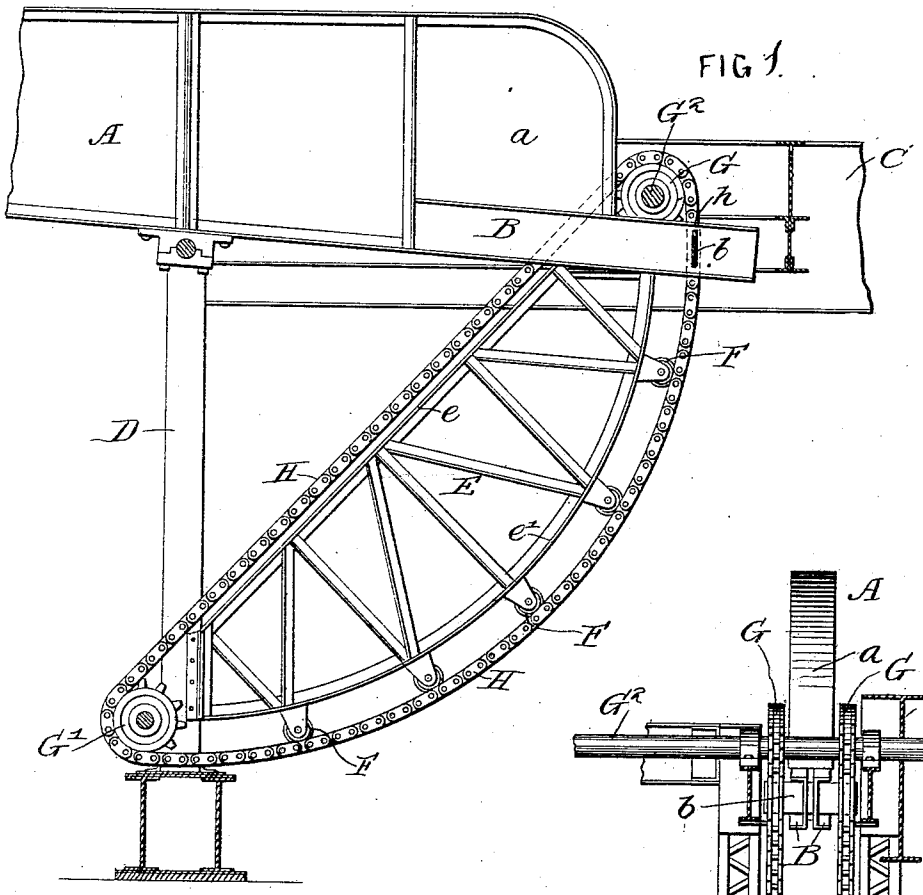
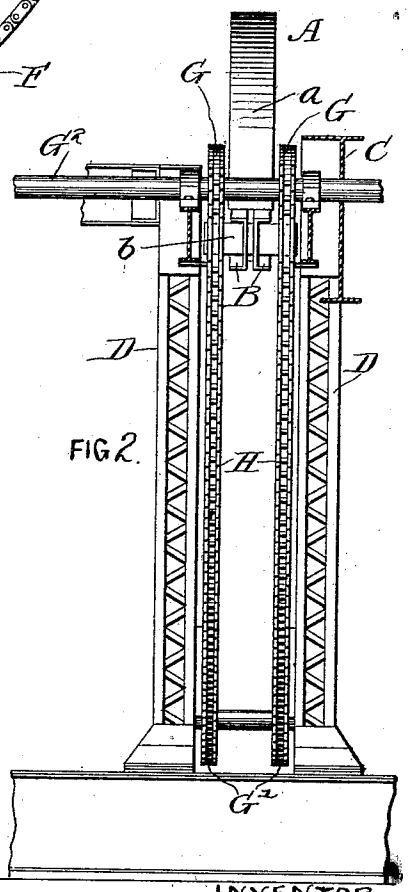


FIG 2.



WITNESSES
Wm. J. Fleming
Wm. M. Rheem.

INVENTOR
Robert P. Lamont
BY Walter H. Chamberlin
ATTORNEY.

UNITED STATES PATENT OFFICE.

ROBERT P. LAMONT, OF CHICAGO, ILLINOIS.

DRIVING MECHANISM FOR BRIDGES.

SPECIFICATION forming part of Letters Patent No. 503,378, dated August 15, 1893.

Application filed November 25, 1892. Serial No. 452,978. (No model.)

To all whom it may concern:

Be it known that I, ROBERT P. LAMONT, a citizen of the United States, residing at Chicago, county of Cook, State of Illinois, have invented a certain new and useful Improvement in Driving-Power for Bridges; and I 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 pertains to make and use the same, reference being had to the accompanying drawings, which form a part of this specification.

My invention has for its object the provision of a driving power for that class of bridges wherein either the entire bridge, or a section thereof is tilted to open it. That is to say, one end of the section is elevated, while the other end is depressed. Heretofore in this class of bridges, it has been customary to apply the power to elevate the section by engaging to the outer end of the section a flexible connection, and extend it up over towers or trestle work, and down to a windlass or other power applying mechanism. In my invention the power is applied to the end which is depressed and consequently the driving mechanism is entirely below the surface of the road way, and out of sight. It consists in a combination of devices and appliances hereinafter described and claimed.

In the drawings: Figure 1. represents a side elevation of a section of bridge with my apparatus applied thereto. Fig. 2. is a rear elevation of a portion of the same.

I will further state that in an application filed of even date herewith for counter-balances for bridges, I have shown an entire section of bridge with my power mechanism applied thereto.

In carrying out my invention A represents the section of bridge that is to be tilted, *a* representing the rear or depressible end thereof. Extending from this rear end is the arm B, preferably made up as shown in Fig. 2 of two channel irons with a cross bar *b* extending at right angles across the end of the arm B.

C represents the permanent section of the bridge and D the up-rights to which the bridge section is pivoted.

E is a frame work constructed with one edge *e* straight, and the edge *e'* sector shaped. The edge *e'* has bearing wheels, or rollers F.

G—G' are sprocket wheels at each end of the frame work E, and H is a sprocket chain passed around said sprocket wheels and around the edge of the frame work. This sprocket chain is engaged at *h* to the cross bar *b*, there being as shown in Fig. 2, two of these sprocket chains, one engaged to each end of the cross bar *b*.

It will of course be understood that the mechanism shown herein is duplicated on the other side of the bridge, the shaft G^2 connecting the two. It will now be understood that when any suitable driving power is applied to the shaft G^2, the sprocket wheel G will be revolved, thus causing the sprocket chain to travel round the edge of the frame work, carrying with it the arm B, and consequently depressing this end of the bridge section. When the arm B and its accompanying cross bar have reached the lower end of the frame work, the bridge is opened to its fullest extent, and to lower it, the direction of the revolution of the shaft G^2 need only be reversed. A simple, compact, and efficient driving power is thus provided, and one that is entirely beneath the roadway and out of sight. At the same time by the employment of this form of mechanism for opening the bridge section the said section can be thrown to a substantially vertical position and the water way thus be open and unobstructed to its widest extent.

What I claim is—

1. In a bridge the combination with a tilting section thereof, of mechanism for tilting said section consisting of a flexible connection engaged to the end of said section to be depressed, pulleys above and below said section around which the connection passes, bearings between said pulleys for holding said connection substantially on the line traveled by the depressible end, and means for causing said flexible connection to move in either direction to elevate or depress the end to which it is engaged, substantially as described.

2. In a bridge the combination with a tilting section thereof of a sprocket chain engaged to the end of said section to be depressed, sprocket wheels above and below said end to be depressed, bearings between said wheels for holding said chain substantially on the line traveled by the depressible

end, and means for causing one or both of said sprocket wheels to revolve, substantially as described.

3. In a bridge the combination with a tilting section thereof of an endless sprocket chain engaged at one point to the end of said section to be depressed, sprocket wheels above and below said point of connection with the section, bearings between said wheels for holding one side of said chain substantially on the line traveled by the depressible end, and means for causing one of the sprocket wheels to revolve, substantially as described.

4. In a bridge the combination with a tilting section thereof of an endless sprocket chain engaged at one point to the end of said section to be depressed, sprocket wheels above and below said point of engagement, means for applying power to revolve one of said sprocket wheels and a series of rollers arranged on the arc of a circle on which said sprocket chain bears, substantially as described.

In testimony whereof I sign this specification in the presence of two witnesses.

ROBERT P. LAMONT.

Witnesses:
W. H. CHAMBERLIN,
J. RAYHILL.