

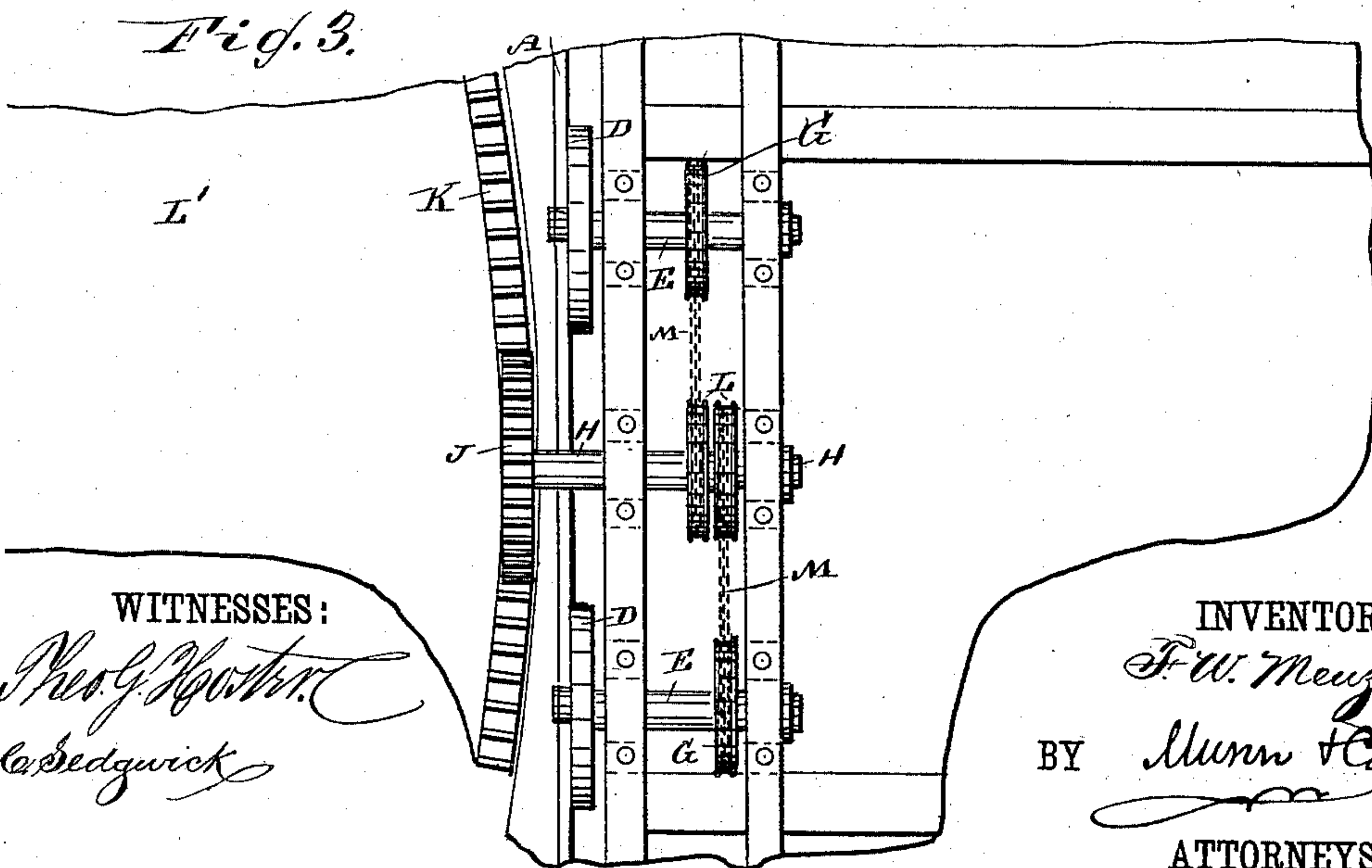
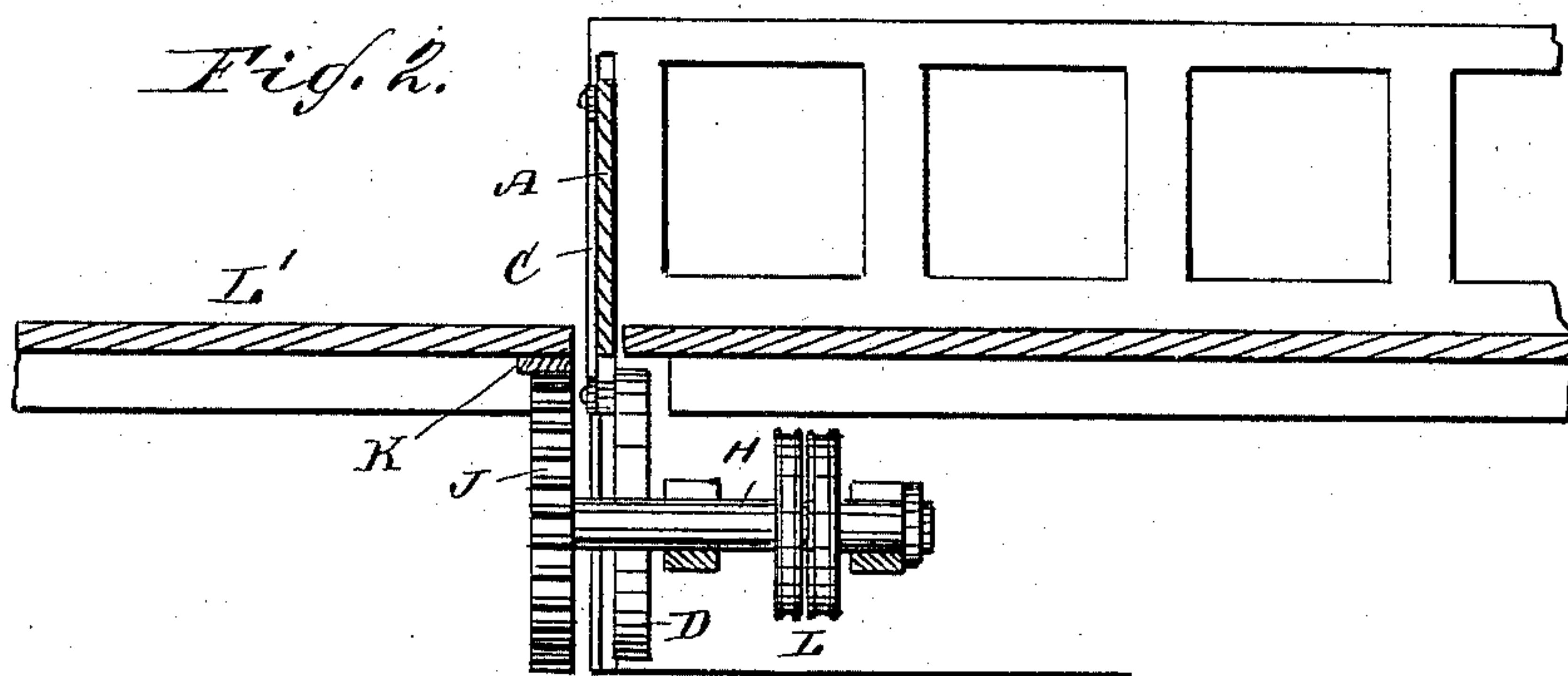
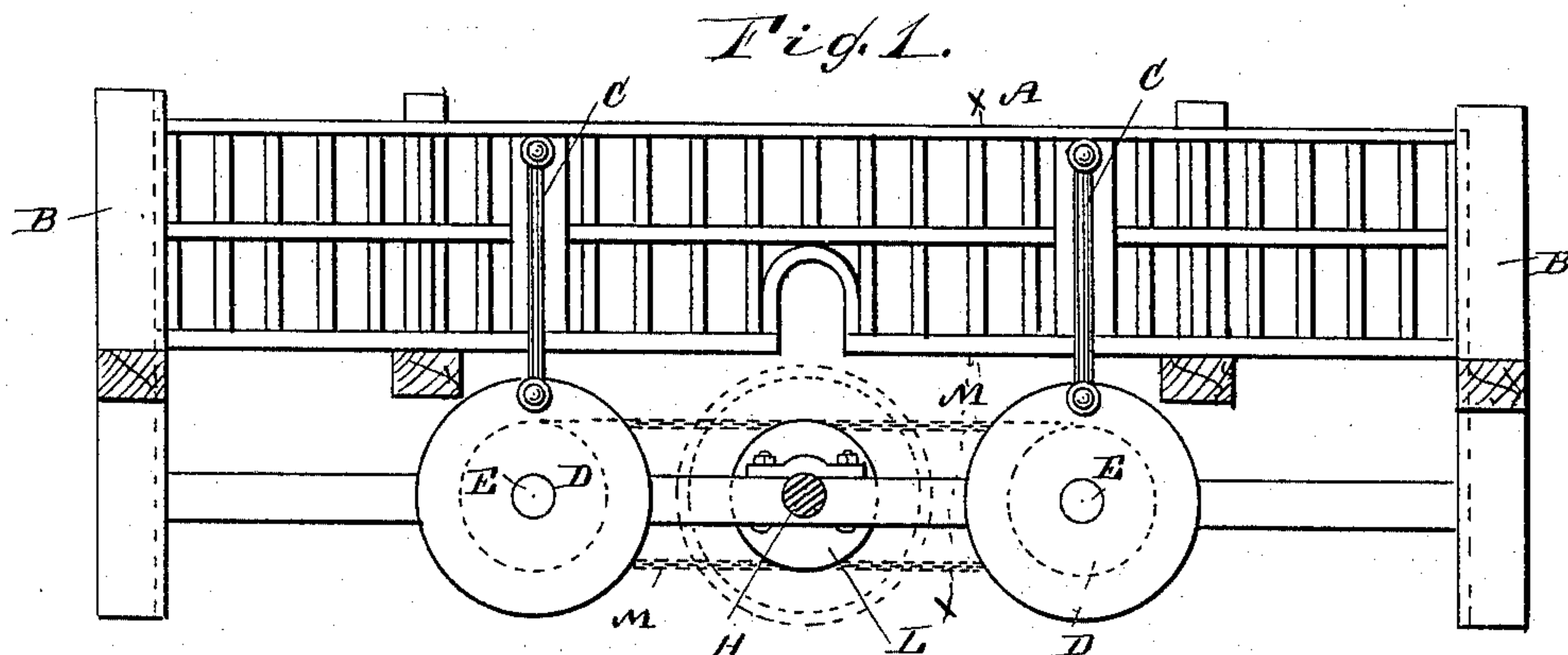
(No Model.)

F. W. MEUZE.

AUTOMATIC DRAW BRIDGE GATE.

No. 316,635.

Patented Apr. 28, 1885.



WITNESSES:

*Geo. G. Norton*  
*Wm. Sedgwick*

INVENTOR:

*F. W. Meuze*

BY

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ATTORNEYS.

# UNITED STATES PATENT OFFICE.

FRIEDRICH WILHELM MEUZE, OF BAY CITY, MICHIGAN, ASSIGNOR TO  
HIMSELF AND CHARLES HAHN, OF SAME PLACE.

## AUTOMATIC DRAW-BRIDGE GATE.

SPECIFICATION forming part of Letters Patent No. 316,635, dated April 28, 1885.

Application filed January 6, 1885. (No model.)

*To all whom it may concern:*

Be it known that I, FRIEDRICH WILHELM MEUZE, of Bay City, in the county of Bay and State of Michigan, have invented a new and  
5 Improved Automatic Draw-Bridge Gate, of which the following is a full, clear, and exact description.

The object of my invention is to provide a new and improved gate for draw-bridges,  
10 which is automatically opened and closed by the closing or opening of the swinging part or draw of the bridge.

The invention consists in the combination, with a vertically-movable gate, of wheels ar-  
15 ranged below the bridge-floor and connected by rods with the gate, a rack on the under side of the draw, a cog-wheel engaging with the rack, and devices for operating the wheels connected with the gate from the shaft carry-  
20 ing the cog-wheel, whereby the gate is raised when the draw is opened and lowered when the draw is closed.

Reference is to be had to the accompanying drawings, forming part of this specification, in  
25 which similar letters of reference indicate corresponding parts in all the figures.

Figure 1 is a front view of my improved automatic gate for draw-bridges. Fig. 2 is a cross-sectional view of the same on the line *x*  
30 *x*, Fig. 1; Fig. 3, a plan view of the under side of the same and of the draw.

The gate A is arranged to slide vertically on the end of the draw-opening, and is guided by the vertical guides B. The gate is con-  
35 nected with two connecting-rods, C, pivoted to the gate at or near the top, and at their lower ends to the sides of two wheels, D, mounted on the outer ends of two shafts, E, arranged under the end of the permanent part  
40 of the bridge and parallel with the longitudinal axis of the bridge. The said shafts are suitably journaled, and on each is mounted a grooved or sprocket wheel, G, at or near the inner end.

45 A shaft, H, is journaled below the end of the permanent part of the bridge, at the middle of the said end, parallel with the shafts E, and on the outer end of the shaft H a cog-

wheel, J, is rigidly mounted and adapted to engage with a segmental rack, K, on the un- 50  
der side of the swinging part or draw L' at the end. That end of the shaft H carrying the wheel J must project a short distance into the draw-opening, so that the said wheel can engage with the rack on the draw. 55

On the shaft H two grooved or sprocket wheels, L, are mounted, over which endless chains M are passed, which also pass over the sprocket-wheels G on the shafts E.

A gate constructed as described is provided 60  
at each end of the draw-opening.

The operation is as follows: When the draw L swings open—that is, from the longi-  
tudinal axis of the bridge—the rack turns the wheel J and, by means of the wheels G 65  
and the chains L, the wheels D in such a direction as to pull the rods C downward, thereby lowering the gate. When the draw swings back into a position parallel with the longi-  
tudinal axis of the bridge, the wheel J is 70  
turned in the inverse direction, and the gate A is raised by the rods C, which are moved upward. The gates at the ends of the draw are thus opened and closed automatically, and cannot be tampered with, as they can only be 75  
operated by the swinging draw.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. The combination, with a vertically-mov- 80  
able bridge-gate, of rods connecting the gate with wheels below the bridge-floor, a seg-  
mental rack on the under side of the draw, and a wheel operated from the said rack and connected by suitable mechanism with the 85  
wheels for moving the gate, substantially as herein shown and described.

2. The combination, with a vertically-mov-  
able bridge-gate, of wheels arranged below the bridge-floor and connected by rods with 90  
the gate, a rack on the under side of the draw at the end of same, a cog-wheel on a shaft below the bridge-floor, and of chains for oper-  
ating the wheels connected with the gate from the shaft carrying the cog-wheel, substantially 95  
as herein shown and described.



3. The combination, with the vertically-sliding gate A, of the wheels D on the shafts E, the grooved wheels G on the shafts E, the shaft H, the grooved wheels L on the shaft  
5 H, the endless chains M, the cog-wheel J on the shaft H, the rack K on the draw L', and of the rods C, connecting the gate A with the

wheels D, substantially as herein shown and described.

FRIEDRICH WILHELM MEUZE.

Witnesses:

EMIL ANNEKE,  
E. E. ANNEKE.