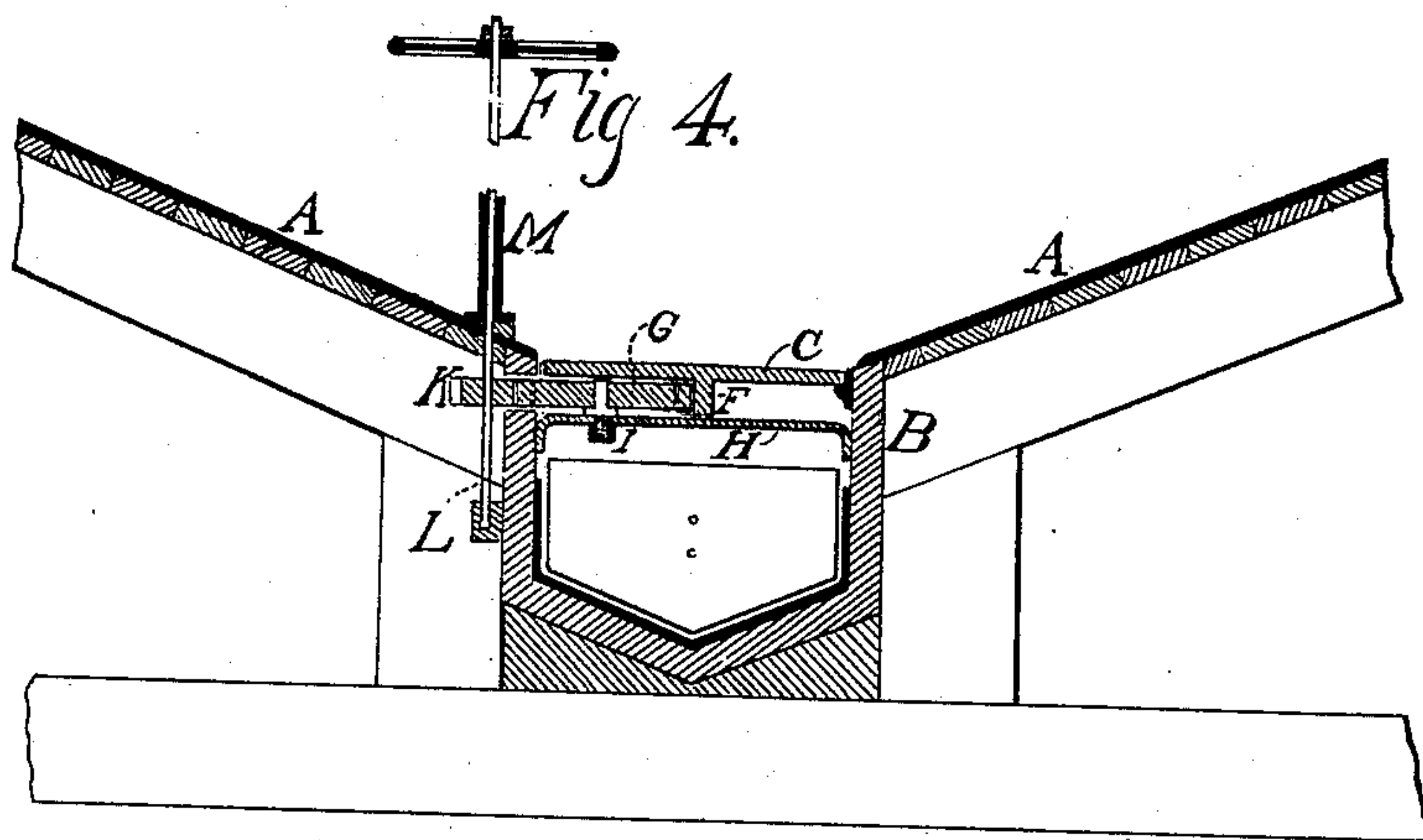
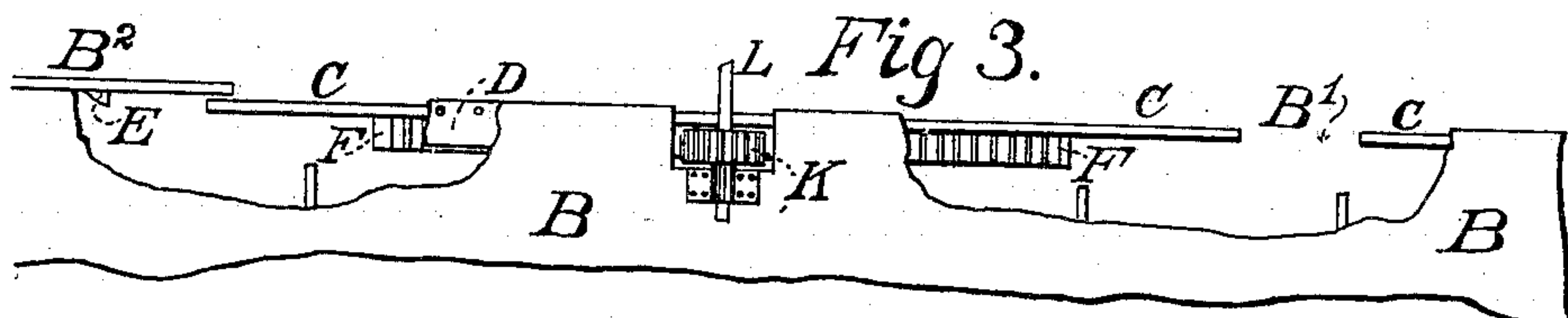
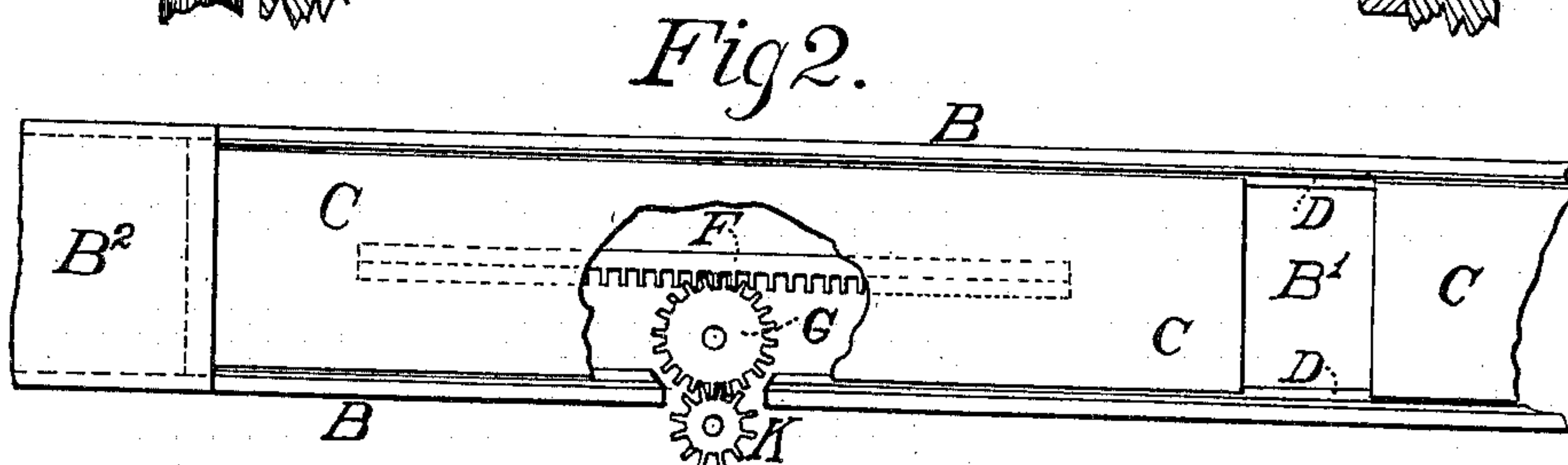
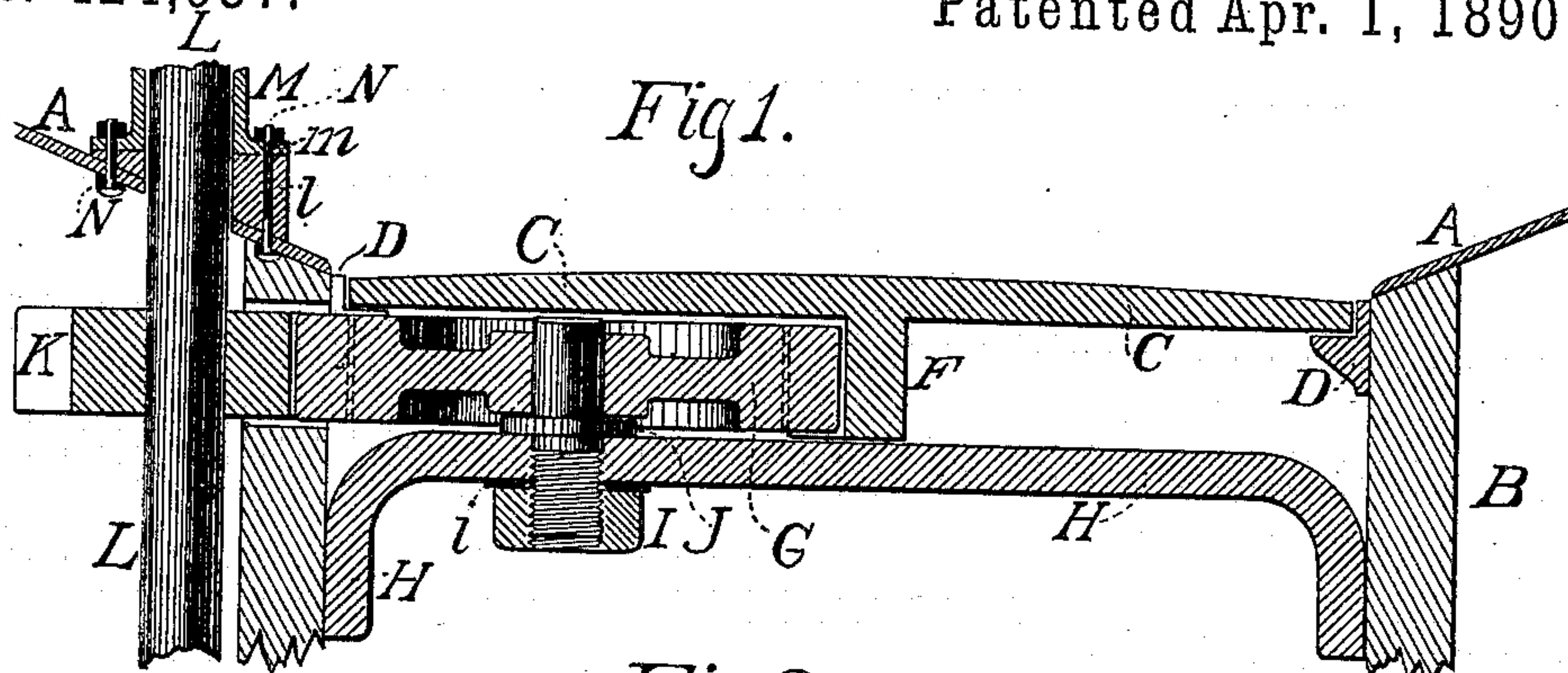


(No Model.)

C. S. SCHENCK.
GATE FOR COAL CONVEYERS.

No. 424,937.

Patented Apr. 1, 1890.



Witnesses.
Charles L. Carter
John Halle

Inventor.
Charles Stewart Schenck
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Attorney.

UNITED STATES PATENT OFFICE.

CHARLES STEWART SCHENCK, OF NEW YORK, N. Y., ASSIGNOR TO JOHN HALLE, OF SAME PLACE.

GATE FOR COAL-CONVEYERS.

SPECIFICATION forming part of Letters Patent No. 424,937, dated April 1, 1890.

Application filed July 24, 1889. Serial No. 318,536. (No model.)

To all whom it may concern:

Be it known that I, CHARLES STEWART SCHENCK, a citizen of the United States, residing at New York, in the county of New York and State of New York, have invented certain new and useful Improvements in Gates for Coal-Conveyers; and I do hereby 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.

The object of this invention is to provide more convenient and satisfactory means than those hitherto in use for transferring coal and other substances from barges, bins, &c., to other receptacles and places through conveying troughs or channels. To this end I provide each conveyer with a sliding gate working over the top of it and operated by gearing, substantially as hereinafter described, so that the coal may at will be cut off or allowed to drop into said conveyer.

In the accompanying drawings, Figure 1 represents a vertical section from side to side through my gate and proximate parts. Fig. 2 represents a plan view of the same on a smaller scale. Fig. 3 represents a side elevation of the gate and gearing, the housing, and a part of the conveyer, the latter being broken away to show said gearing better; and Fig. 4 represents a vertical cross-section on a smaller scale than Fig. 1 through the lower part of a barge and the conveyer and gate attached thereto, the two views otherwise coinciding, except that Fig. 4 shows more parts.

A designates the sloping sides of a coal-barge, in the bottom of which a conveying-trough B is constructed. This conveying-trough or channel runs lengthwise of the boat and may have any suitable external connection for the purpose of allowing the coal to be conveyed to the storing-ground or wherever needed.

C designates a gate working longitudinally with respect to itself and said conveying-trough to open or close a long aperture or doorway B' in the top or housing B² of the latter. This gate runs on angular guides D, attached to the side walls of the conveying-trough at the top thereof and just below said

housing. A stop-lug E is attached to the under side of said housing near one end of aperture B' and prevents the gate from moving too far in that direction and thereby getting out of gear. A longitudinal rack F is attached to the under side of said gate, presenting its cogs laterally to those of a cog-wheel G, which turns on a stud supported by a cross-bar H, rigid with the sides of the conveying-trough. To make this stud conveniently detachable it is preferably screw-threaded at its lower end and turned through a screw-tapped hole in said cross-bar, receiving a nut I below the latter. A washer i is interposed between said nut and said cross-bar, so that said stud is also a bolt. Above said cross-bar it has an annular shoulder or fixed collar J, holding gear-wheel G away therefrom. This wheel meshes with a pinion K on a vertical hand-shaft L, having bearings in one side of the barge and in a frame l attached thereto and surrounded by a tubular guide M, which also braces said rod. The lower end of this tube M is provided with an outwardly-extending horizontal annular flange m. Bolts N pass through this, fastening it to the side A of the barge.

Although spoken of here as parts of a barge, it is evident that the sloping sides A may belong equally well to a bin or other receptacle.

The devices herein described may be used for lime, sand, or other materials capable of flowing, as well as with coal. The sides A need not be sloping. The gearing may be modified without passing beyond the limits of my invention, and other slight changes may be made. Some device must be used for turning the shaft L, preferably a hand-wheel O, such as shown in Fig. 4. By turning this in one direction the pinion and gear-wheel aforesaid cause the rack and the gate to move endwise, so as to allow the coal to fall through into the conveyer. By turning said wheel in the opposite direction the said devices close the gate, cutting off the coal from the conveying-trough.

My application filed October 29, 1888, Serial No. 289,424, describes and shows a rack and gearing in combination with a gate between a conveying-trough and the hold of a barge, and also other parts and combinations of parts.

The latter are not claimed nor shown herein. My application filed October 29, 1888, Serial No. 289,424, also shows movable gates between the hold of a vessel and conveying-troughs
5 and passages, as well as many other parts. The latter I do not claim in the present application.

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

The trough B, fixed cross-bar H, and stud I, in combination with the gear-wheel G, adapted to turn on said stud, the hand-shaft

L, exterior to said trough, the pinion K on said shaft engaging said gear-wheel, the fixed tubu- 15
lar guide M, surrounding said shaft, the sliding gate C, provided with a laterally-toothed rack F, engaged by said gear-wheel, and fixed guides D, supporting said gate.

In testimony whereof I affix my signature in 20
presence of two witnesses.

CHARLES STEWART SCHENCK.

Witnesses:

E. CHESTER CENTER,
JOHN HALLE.