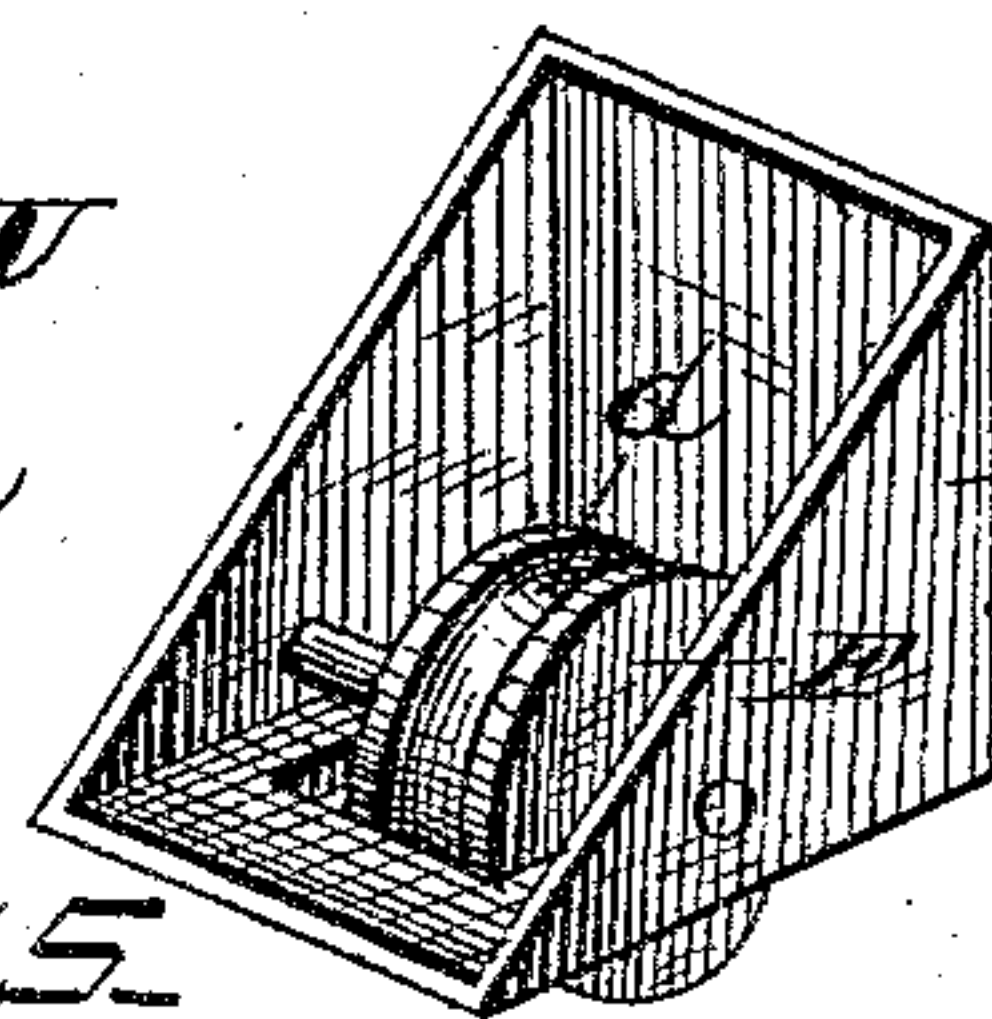
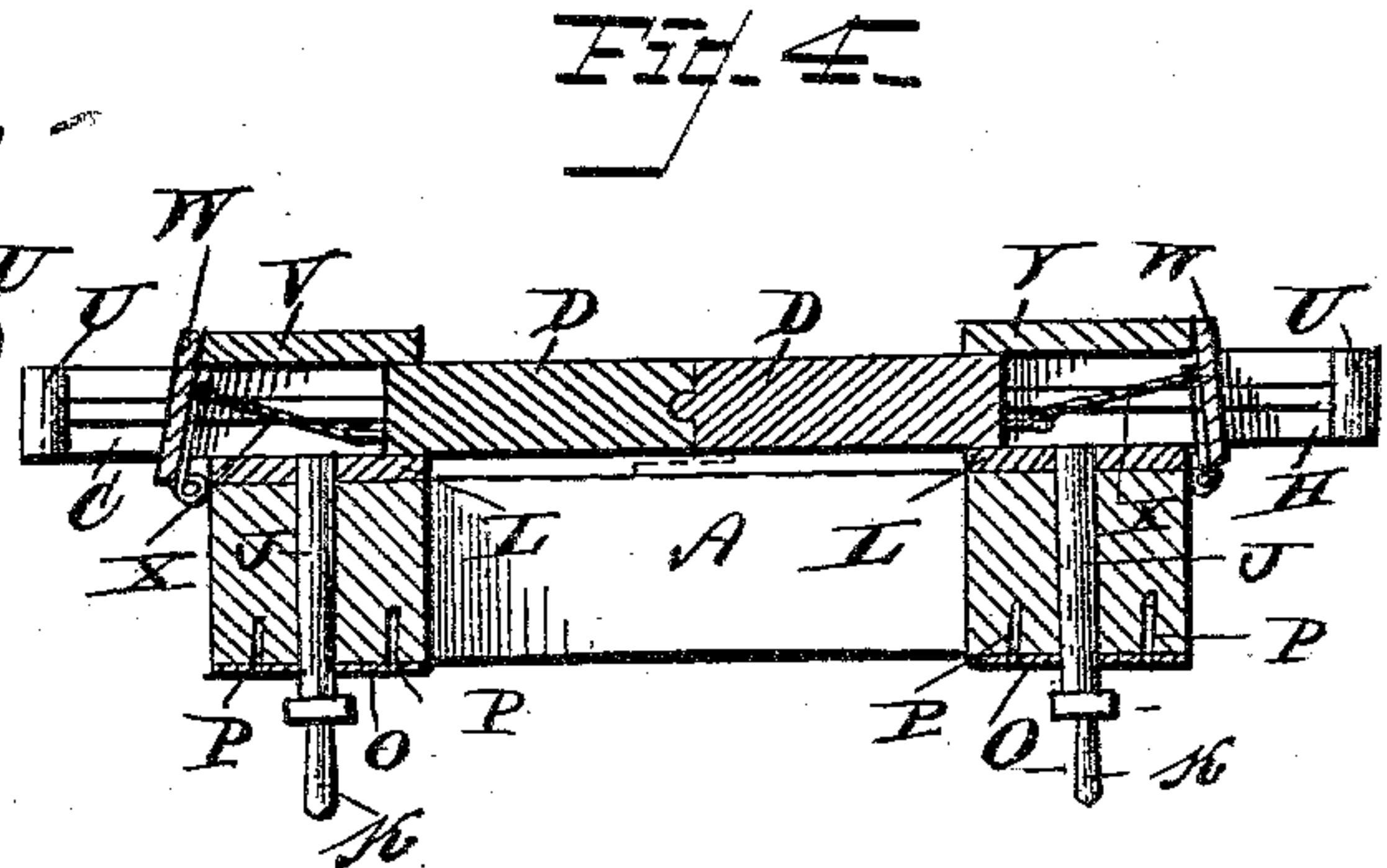
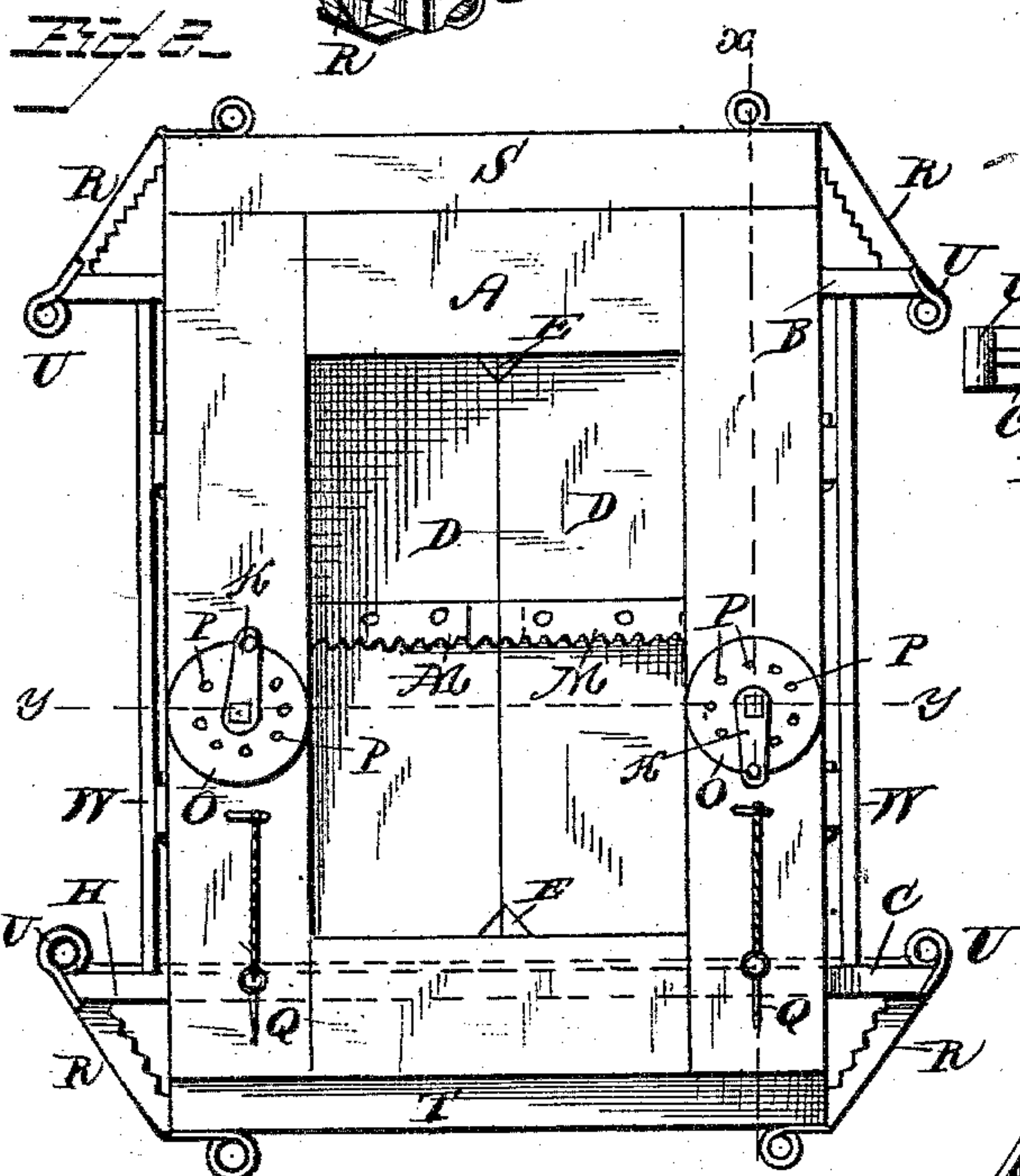
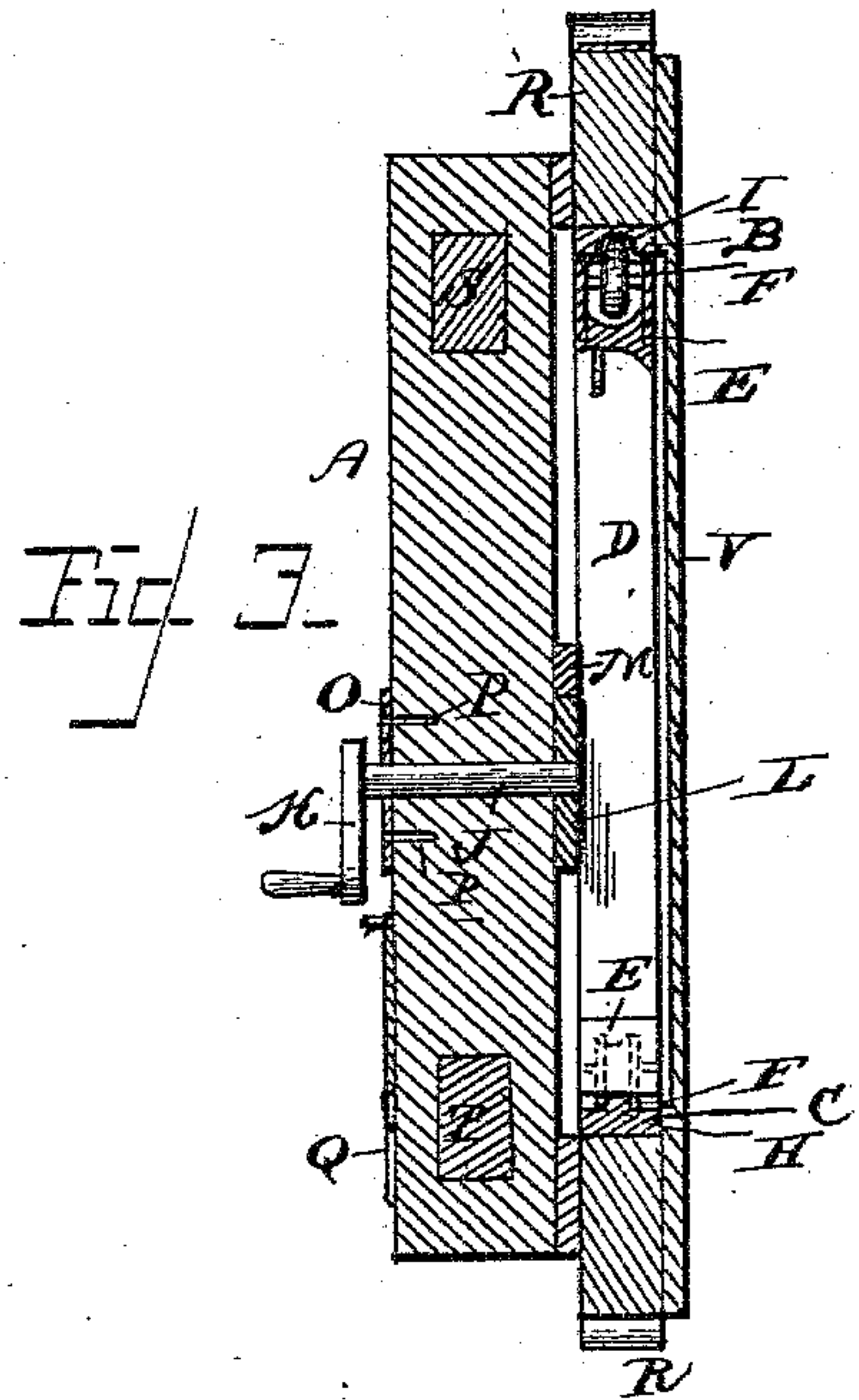
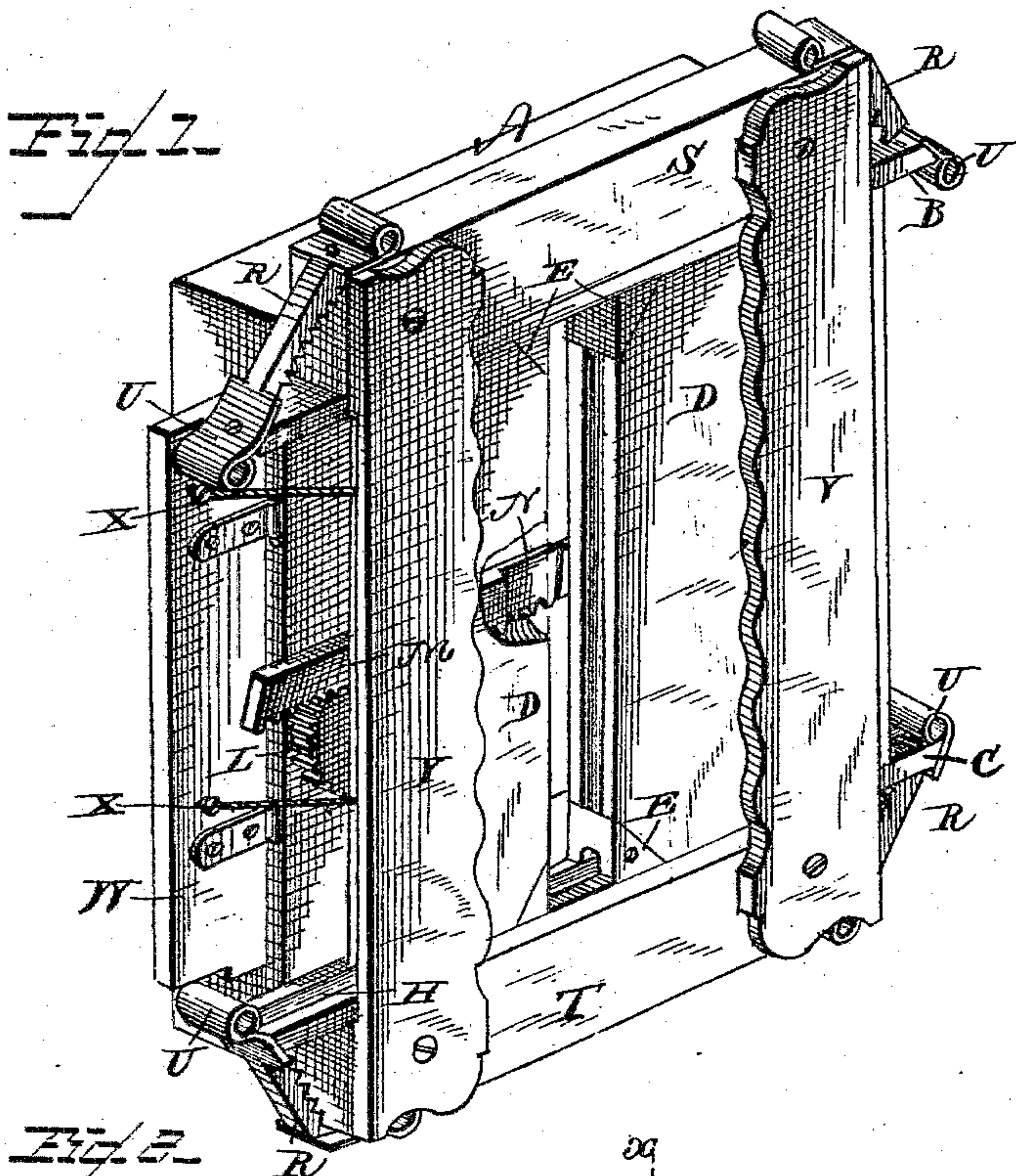


(No Model.)

C. T. COCHEL.  
WINDOW SHUTTER.

No. 287,906.

Patented Nov. 6, 1883.



WITNESSES

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# UNITED STATES PATENT OFFICE.

CHARLES T. COCHEL, OF UNIONTOWN, MARYLAND.

## WINDOW-SHUTTER.

SPECIFICATION forming part of Letters Patent No. 287,906, dated November 6, 1888

Application filed January 25, 1883. (No model.)

*To all whom it may concern:*

Be it known that I, CHARLES T. COCHEL, a citizen of the United States, residing at Uniontown, in the county of Carroll and State of Maryland, have invented a new and useful Window-Shutter, of which the following is a specification, reference being had to the accompanying drawings.

This invention relates to shutters and blinds for the windows of houses, railroad-cars, steamboats, and, in fact, for all purposes for which shutters and blinds are used; and it consists in certain improvements in the construction of the said shutters or blinds, all as will be hereinafter more fully described, and particularly pointed out in the claims.

In the drawings hereto annexed, Figure 1 is a perspective view of a window equipped with my improved shutters. Fig. 2 is a front view of the same. Fig. 3 is a vertical sectional view on the line *x x* in Fig. 2. Fig. 4 is a horizontal sectional view on the line *y y* in Fig. 2, and Fig. 5 is a detail view of the corner of one of the shutters.

The same letters refer to the same parts in all the figures.

A in the drawings designates the window-frame, which may be of any suitable well-known construction, and provided on the outside with top and bottom ledges, B and C, to hold and guide the shutters or blinds. In the drawings ordinary shutters have been shown. These, which are denoted by letter D, are provided at their corners with angle-plates or corner-castings E, which serve to protect the corners, and which carry friction-rollers F F. Of the latter those at the lower corners are grooved, as at G, so as to fit over a guide-cleat, H, upon the lower ledge, C. The friction-rollers at the upper corners engage a groove, I, in the under side of the top ledge, B. By this construction the shutters are held securely to their places, and the lower supporting-ledge is free from any groove in which snow, ice, or other obstacles might accumulate and interfere with the operation of the shutters.

J J are shafts journaled in the sides of the window-frame, and provided with cranks K at their inner ends, by means of which they may be conveniently turned. The outer ends of the shafts J carry pinions L, which engage

rack-bars M upon the inside of the shutters. The said rack-bars, which are bolted or otherwise secured horizontally upon the shutters, as shown, may extend beyond the sides of the latter, in order to increase the extent to which they may be operated. The inner ends of the rack-bars are recessed, as at N, so as to be jointed together when the shutters are closed.

The bearings of the inner ends of the shafts J are surrounded by circular plates O, having perforations P, in which a pin or key, Q, may be inserted, so as to bear against the crank K, which is thereby prevented from turning. By this simple mechanism I am enabled to lock the shutters securely in either an open or a closed position, as may be desired, thereby dispensing with such locking devices as are now ordinarily used.

The inner adjoining ends of the shutters are grooved and tongued, so as to fit closely together and make a tight joint when closed.

At the outer ends of the ledges B and C are ornamental brackets R, connecting the ends of said ledges with the ends of the window cap and sill S and T. These brackets not only serve as ornaments, but they also form braces, and their ends project so as to form stops U, which prevent the shutters from sliding off the guide-ledges.

V V are covering-plates, which are secured to the cap and sill outside the sides of the window-frame, so as to partly cover the shutters and to cover and protect the operating mechanism. To the sides of the window-frame are hinged narrow doors or plates W, reaching to the edges of the said covering-plates, and forming guards, which prevent snow and the like from being blown into and obstructing the operating mechanism. These doors or guards are operated simultaneously with the shutters by cords or chains X, connecting the outer edges of said shutters with the outer edges of the guards. When the shutters are opened, the outer ends of the rack-bars push the guards open, and when they are closed the chains or cords draw them shut.

From the foregoing description, taken in connection with the drawings hereto annexed, the operation and advantages of my invention will be readily understood. The shutters may invariably be operated from the inside with-



out raising the sash, thus obviating the discomfort of opening the window in bad and stormy weather for the purpose of closing or opening the shutters. As stated, they may  
5 also be fastened securely from the inside.

When only partly closed, my improved shutters or blinds will leave a section of the window unobstructed for its entire height, thus enabling the scenery to be observed without  
10 inconvenience. For this reason, as well as on account of the ease with which it may be operated, my invention is especially adapted for railroads, steamboats, and other conveyances.

I claim as my invention and desire to secure  
15 by Letters Patent of the United States—

1. The combination of the window-frame, the top and bottom ledges, the laterally-sliding window-shutters, mechanism for operating the same, and the brackets or braces connect-  
20 ing the ends of the ledges with the window

cap and sill, and serving to prevent the shutters from sliding off the ledges, substantially as set forth.

2. The combination of the window-frame, the ledges at the top and bottom of the same, 25 the laterally-sliding shutters, mechanism for operating the same, the covering-plates connecting the ends of the ledges outside the frame, the doors or guards hinged to the sides of the latter, and chains or cords connecting 30 the outer edges of the guards with the outer edges of the shutters, substantially as and for the purpose set forth.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in 35 presence of two witnesses.

CHARLES THEODORE COCHEL.

Witnesses:

THOS. F. SHEPHERD,

JAMES FRANCIS GETTY.