E. W. STAPLES, Jr.

Fastenings for Sliding Doors.

No. 141,019. Patented July 22, 1873.

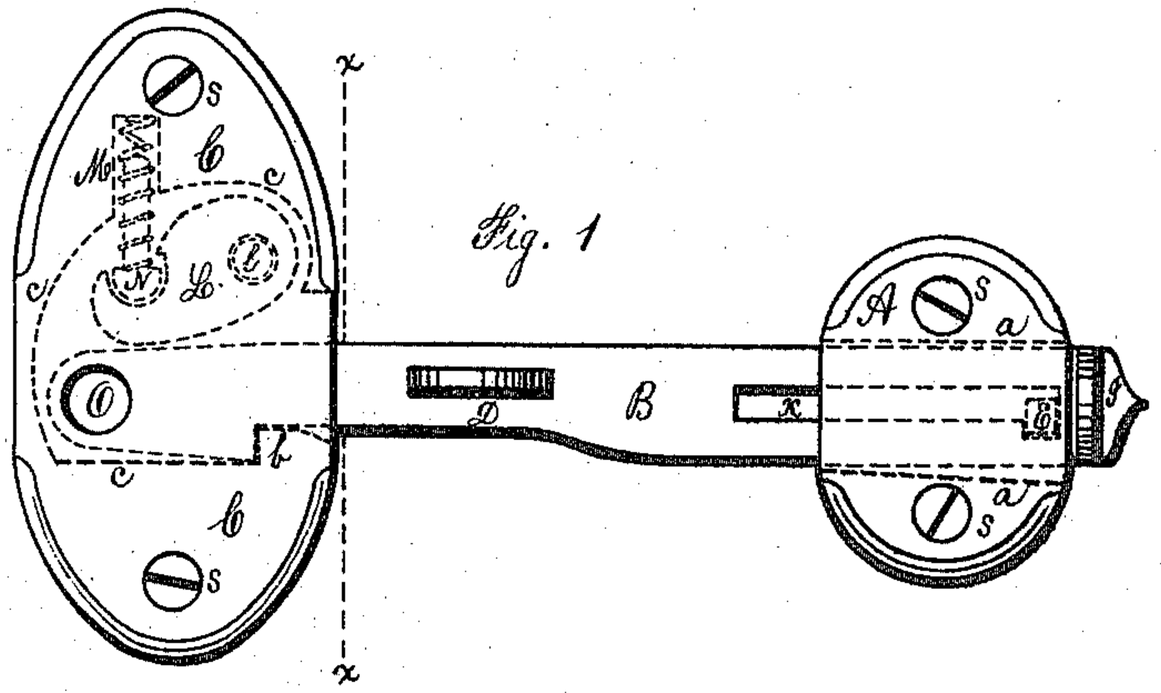


Fig. 1

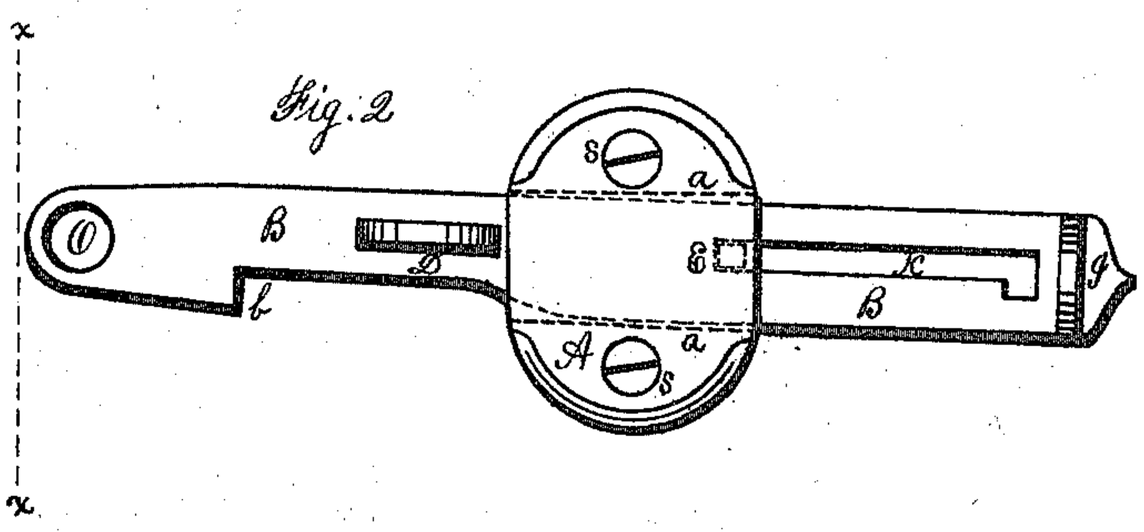
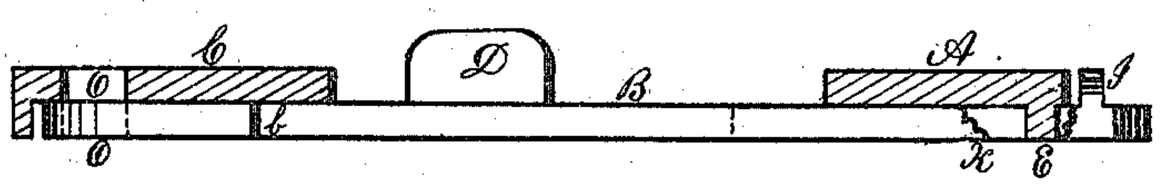


Fig. 2

Fig. 3



Witnesses.—
Webster Park
A. H. Park

Inventor—
Elias W. Staples Jr.

AM. PHOTO-LITHOGRAPHIC CO. N.Y. (OSBORNE'S PROCESS.)

UNITED STATES PATENT OFFICE.

ELIAS W. STAPLES, JR., OF NORWICH, CONNECTICUT.

IMPROVEMENT IN FASTENINGS FOR SLIDING DOORS.

Specification forming part of Letters Patent No. **141,019**, dated July 22, 1873; application filed May 13, 1873.

To all whom it may concern:

Be it known that I, ELIAS W. STAPLES, Jr., of Norwich, in New London county, and State of Connecticut, have invented a certain Improved Fastener for the Doors of Freight-Cars, of which the following is a specification:

My invention consists in the construction and arrangement of a sliding bar, in such a manner that when the bar is slid forward it forms a self-operating fastener whenever the door is closed; but when the bar is slid back the door may be closed without being fastened, and opened again; or while closed this bar may be slid forward by the hand, when it will secure the door, as before. This bar also may be unfastened, and slid back simultaneously with the door; or it may be slid back before the door is opened, if desired. This fastener also leaves the whole space of the open door free, since there is no projection beyond the edge of the door.

Figure 1 is a front view of my fastener as applied to a car-door, the dotted lines showing the form of those parts which are covered. Fig. 2 shows the bar slid back into the position it occupies to leave the opened door unobstructed. Fig. 3 shows the lower edge of the sliding bar and a section through the center of the other parts.

A is the guide-piece, which is secured upon the door by the bolts S S, being recessed out through the back, as shown by the dotted lines *a a*, through which recess slides the bar B. C is the catch-piece, which is also secured by bolts S S upon the frame of the door, being recessed out upon the back, as shown by the dotted lines *c c* in Fig. 1. D is a thumb-piece upon the bar B; and I is a stop across the end of the bar, which, with the piece D, form stops to limit the sliding of the bar in case the pin E, hereafter described, should break. K is a slot made through the bar, having a small notch at the outer end. E is a square pin made solid in the guide-piece A, which extends through the slot in the bar, and allows the bar to slide in and out the whole distance between the stops D I; and when the bar is slid out the weight of its outer end lifts the notch in the slot K against the square pin E, thus locking the bar, as shown in Fig. 1, until the outer end has been raised by the hand sufficient to free the notch from the pin E, when the bar may be slid back, as shown in Fig. 2. *b* is a notch made in the lower edge of the bar B, which catches over the corresponding notch in the catch-piece C, Fig. 1. L is a cam pivoted upon the pin *l*, which is made solid in the piece C; and M is the spring pressing down the pin N and the cam L, to give greater security to the locking of the bar B, in case the weight of the bar B alone should not be sufficient; or the bar may be made heavier, so as to operate by its own gravity. O is a hole made through the catch-piece C, and also through the end of the bar B, so that the car may be locked securely, either by inserting the ordinary padlock through this hole, or any of the ordinary seals, as may be preferred.

The dotted lines *x x* in Figs. 1 and 2 represent the front edge of the sliding door, showing, also, the position of the various parts of my fastener in regard to the front edge of the door, and how the bar is slid back so as to leave the door-way entirely unobstructed, in which position of the bar the door may be closed and opened without fastening; but when the bar is slid out and the pin E is in the notch of the slot K, the closing of the door will force the bar into the catch-piece C and fasten it, because in this case the bar is not raised high enough to free the notch from the pin E; but when desired, by raising the front end of the bar to the top of the recess in the catch-piece C, the notch will be freed from the pin E, so that the bar B may be slid out or in while the door remains closed, thus being adapted to all the various requirements of use.

I claim as my invention—

1. The combination and arrangement of the catch-piece C and the guide-piece A with the sliding bar B having stops D I, the catch-notch *b*, and the locking-hole O extending

through both the bar B and the catch-piece C, when so constructed that the bar B slides through the guide-piece A and catches, substantially as herein set forth.

2. The combination, with the sliding bar B and catch-piece C, of the cam L, pin N, and spring M, substantially as and for the purpose described.

3. The combination, with the guide-piece A and sliding bar B, of the pin E and notch and slot K, substantially as and for the purposes specified.

ELIAS W. STAPLES, JR.

Witnesses:

JAMES WOODMANSEE,

WEBSTER PARK.