

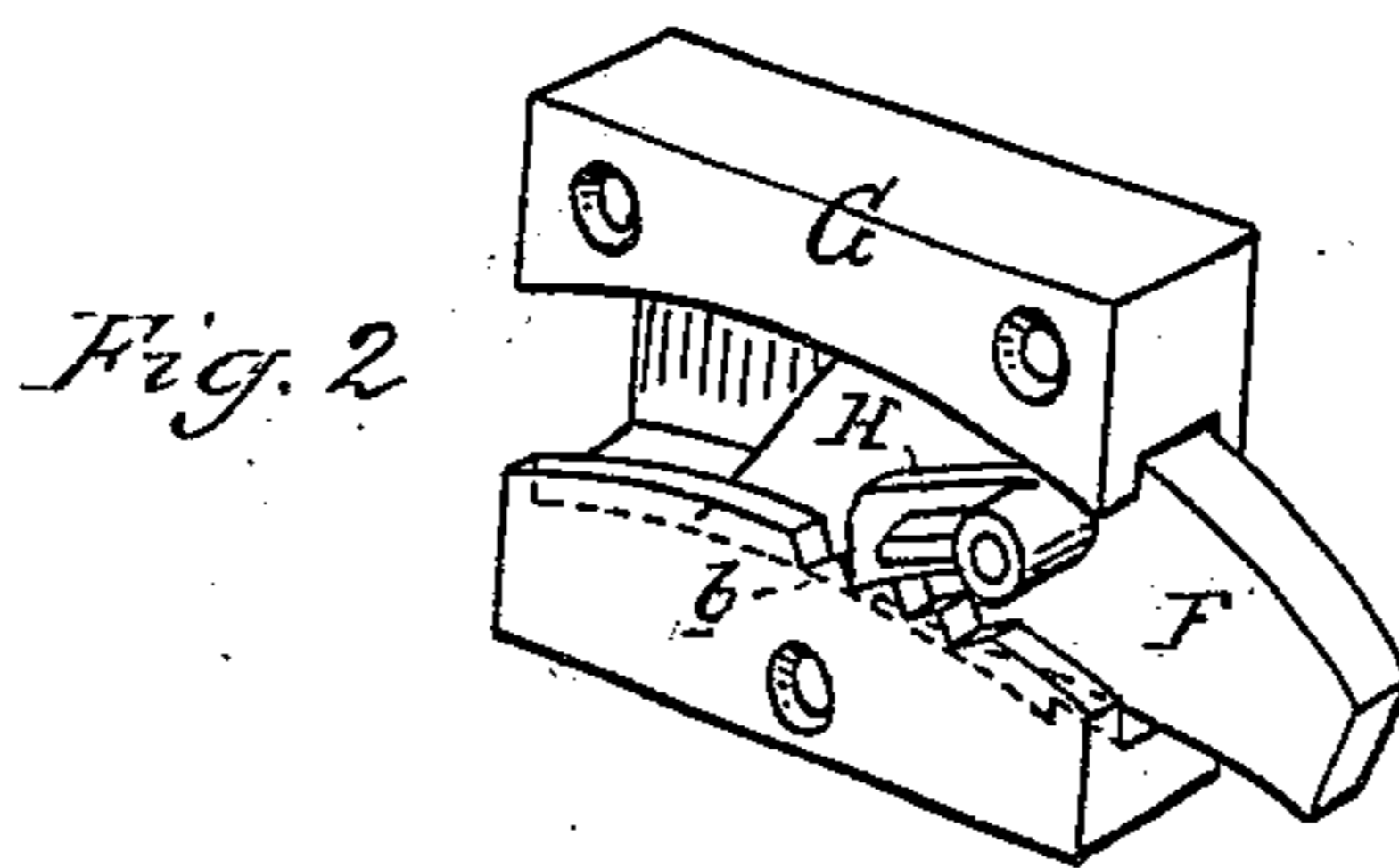
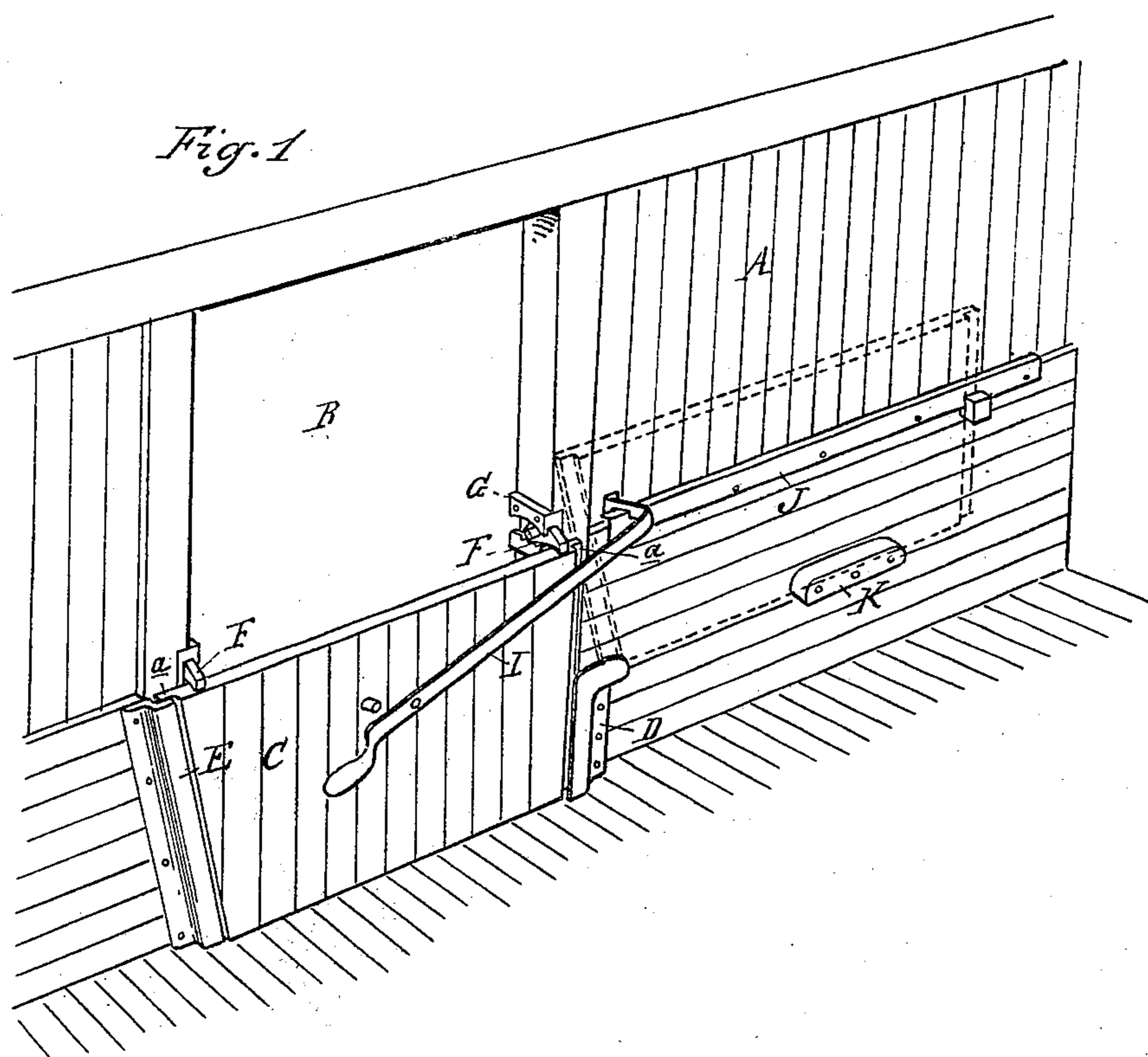
(No Model.)

W. J. ARNDT.

GRAIN CAR DOOR.

No. 271,677.

Patented Feb. 6, 1883.



Attest:

A. Barthel
[Signature]

Inventor:

Wm J. Arndt

by his Att'y

Thos A. Sprague

UNITED STATES PATENT OFFICE.

WILLIAM J. ARNDT, OF DETROIT, MICHIGAN.

GRAIN-CAR DOOR.

SPECIFICATION forming part of Letters Patent No. 271,677, dated February 6, 1883.

Application filed September 16, 1882. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM J. ARNDT, of Detroit, in the county of Wayne and State of Michigan, have invented new and useful Improvements in Grain-Car Doors; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, which form a part of this specification.

The nature of this invention relates to certain new and useful improvements in the construction of doors designed particularly to be employed in cars used for transporting grain; and the invention consists in the peculiar construction of the device for securing the door in its closed position, and in the peculiar construction, arrangement, and combination of the various parts, all as more fully hereinafter set forth.

Figure 1 is a perspective view of a section of a car from the inside, provided with my improved grain-door. Fig. 2 is an enlarged perspective of the latch or lock detached.

In the accompanying drawings, A represents a section of the side of a grain-car provided with the usual door-opening, B.

C represents my grain-door, the rear edge of which is at right angles to its base, while its forward end is inclined, as shown, thus making the door wider or longer at the top than at the bottom, and each of these ends of the door is provided with a tongue, *a*, the rear end being designed, when the door is closed, to rest within the grooved stop D, while the front end rests within the grooved incline stop E. To retain the door in its position and against accidental displacement, I employ two latch-bolts, F, which are constructed as follows:

G represents a slotted plate, being secured to the inner face of the door-post in any suitable manner. The latch-bar F slides within this grooved plate G, and is wider in cross-section at its outer end than at the inner, being somewhat wedge-shaped, and upon the outer face of the latch-plate F there is pivotally secured a dog, H, which, as the latch is pushed inward to engage with the upper edge of the

door, C, as shown in Fig. 2, engages with the ratchet *b* on the plate G, holding it against the retrograde movement until such dog is released, while a notch or shoulder upon the lower edge of the latch engages with a suitable stop in the bottom of the groove of the plate to prevent the latch from falling out.

I is a lever or bar pivotally secured to the inner face of the door C, near its longitudinal center thereof, while the opposite end of such lever engages with a guide-bar, J, secured to the inner wall or sheathing of the car, as shown. This lever assists the operator in raising the door from its closed position, and in sliding it back against the inner wall of the car, where it rests upon the stop K, such lever I preventing the door from falling inward.

In practice, when it is desired to close the door it is inserted in the grooved stops D E, respectively, when the latch-bars F are pushed inward over the upper edge of the door, as shown, the dogs H, engaging with the ratchets upon the plates G, preventing a retrograde movement. If the latch should by the jar of the car slide farther inward, it will by its gradual increase in width firmly hold the door in place and effectually prevent the leaking of grain through any of the joints.

What I claim as my invention is—

1. A lock for a grain-door, consisting of a latch-bar, F, gradually increasing in width from point to heel, sliding within a grooved plate, G, and provided with a dog, H, substantially as and for the purposes specified.

2. A door for a grain-car, consisting of the door C, adapted to rest within the grooved stops D E, and provided with the lever I, one end of which engages with the guide-bar J, substantially as and for the purposes specified.

In witness that I claim the foregoing as my invention I have hereto set my hand this 4th day of September, 1882.

WM. J. ARNDT.

Witnesses:

H. S. SPRAGUE,
E. SCULLY.