

(No Model.)

2 Sheets—Sheet 1.

A. W. ZIMMERMAN.

CAR DOOR FASTENER.

No. 282,598.

Patented Aug. 7, 1883.

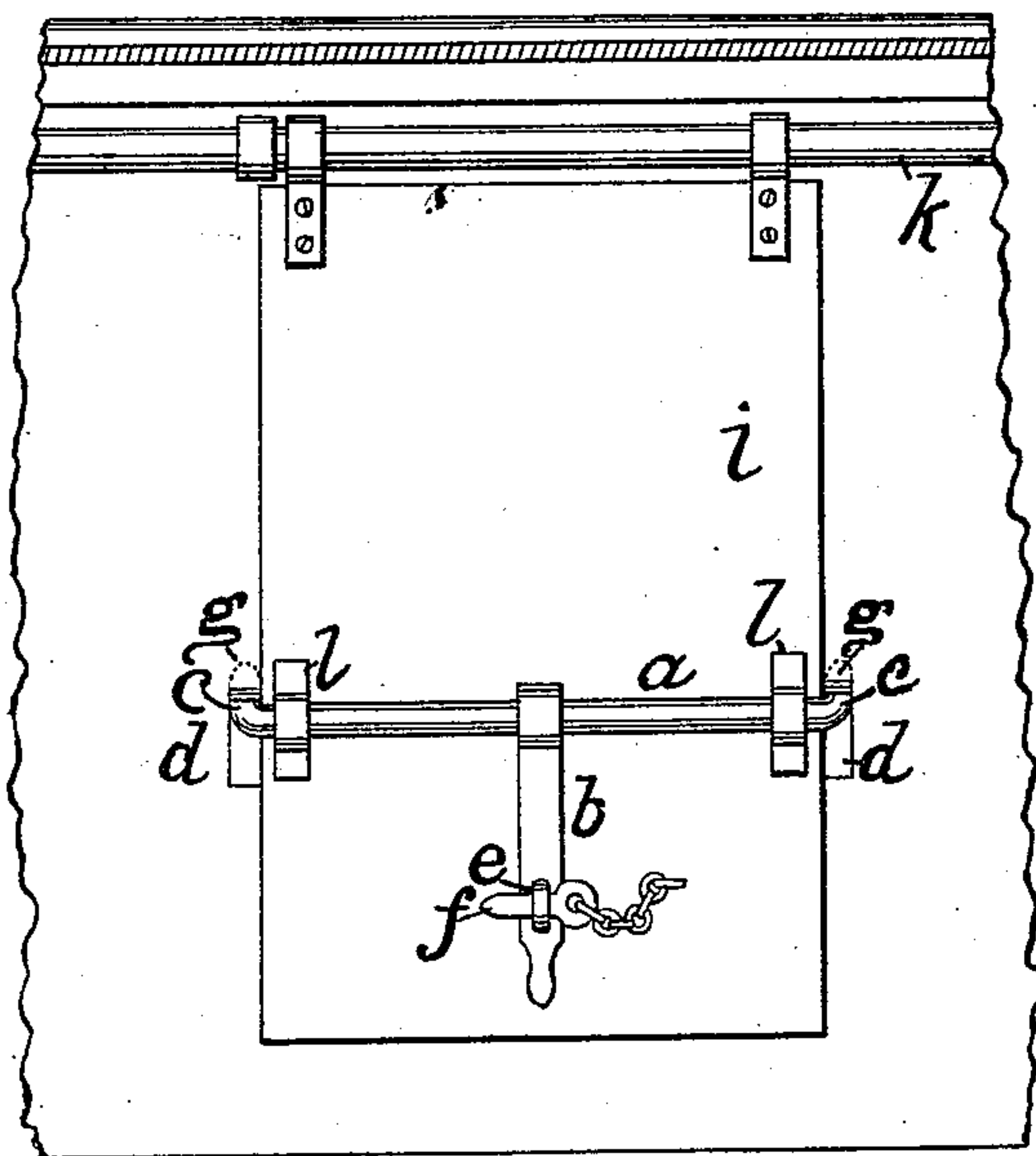


Fig 1.

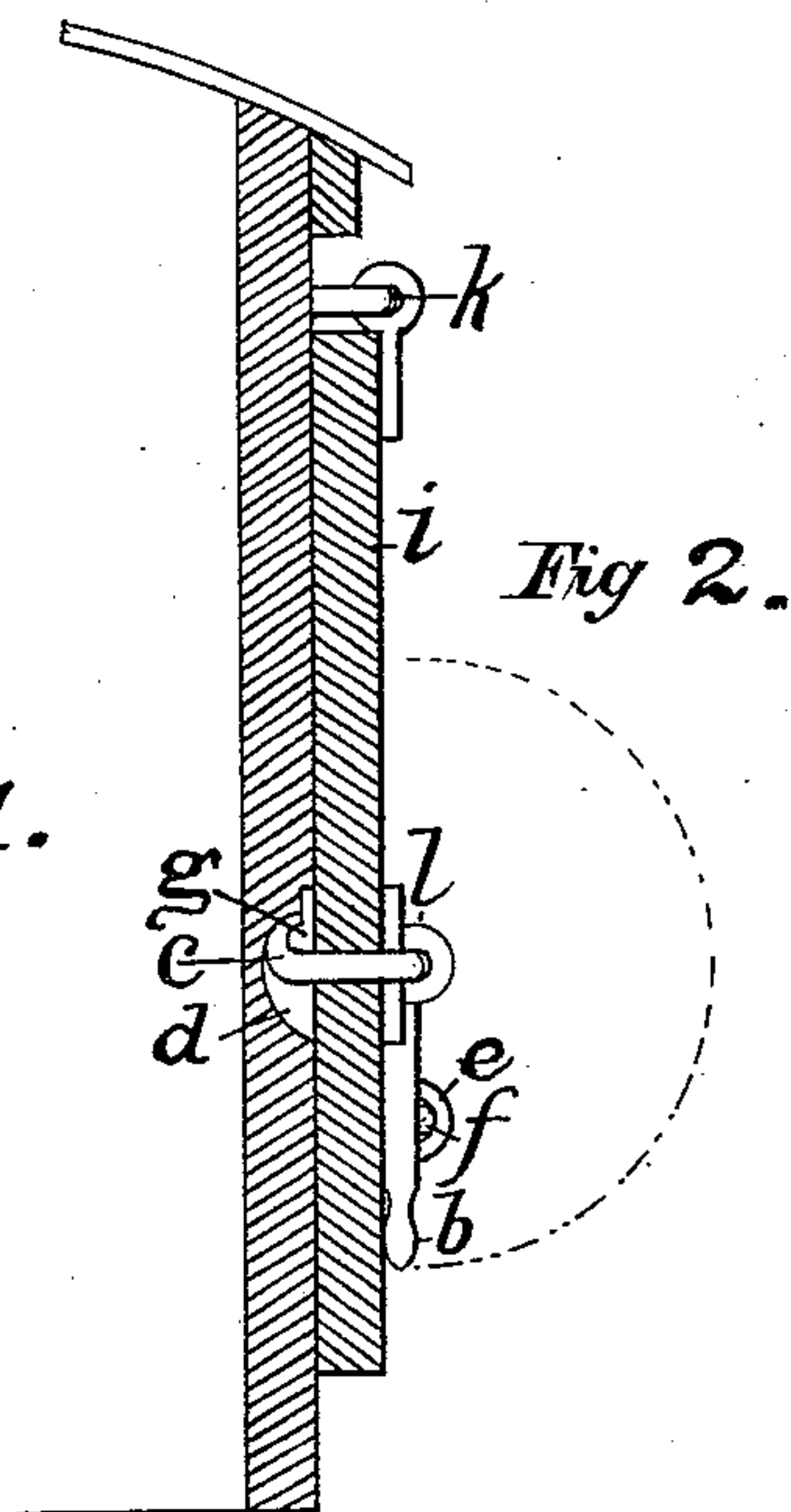


Fig 2.

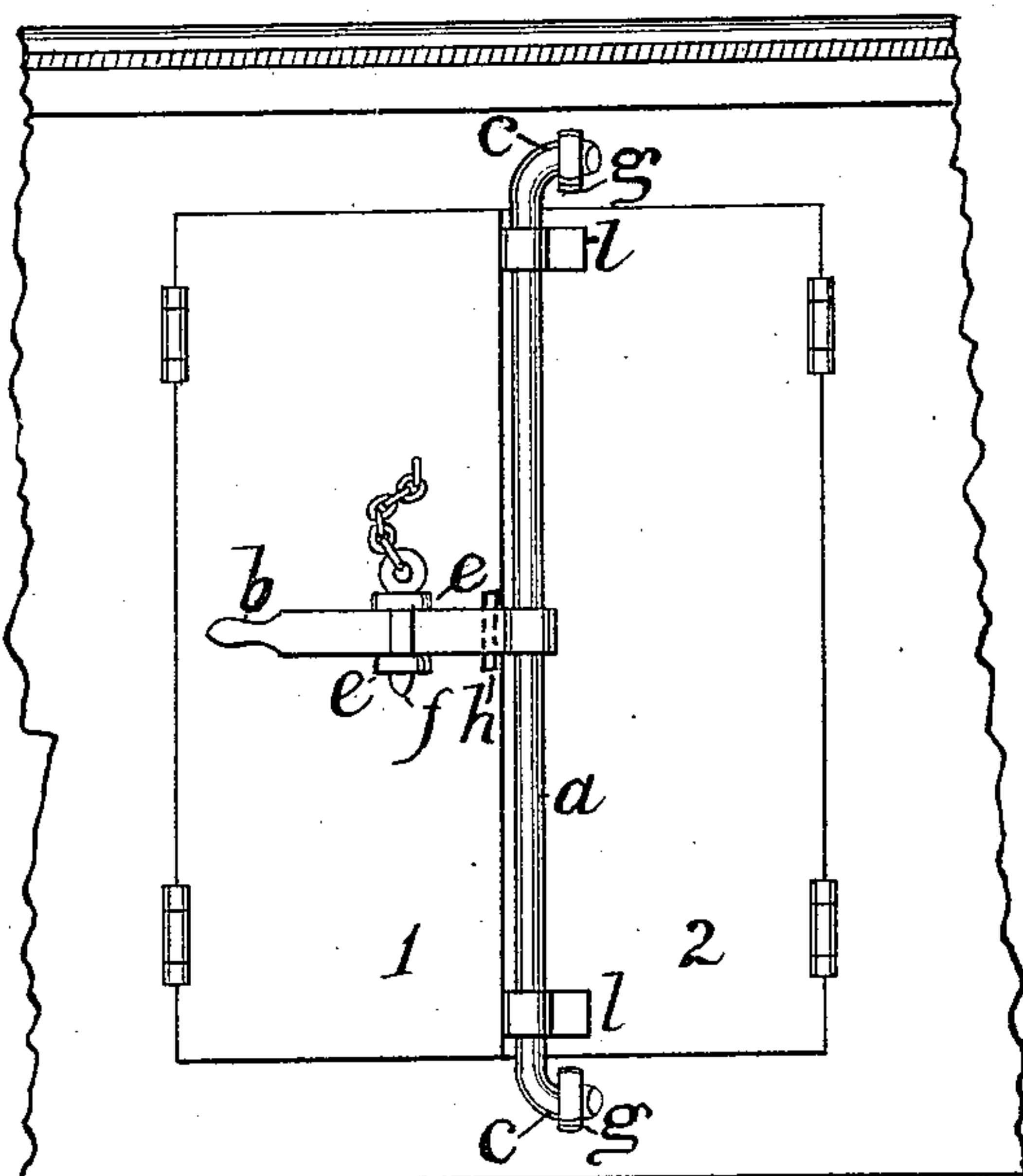


Fig 3.

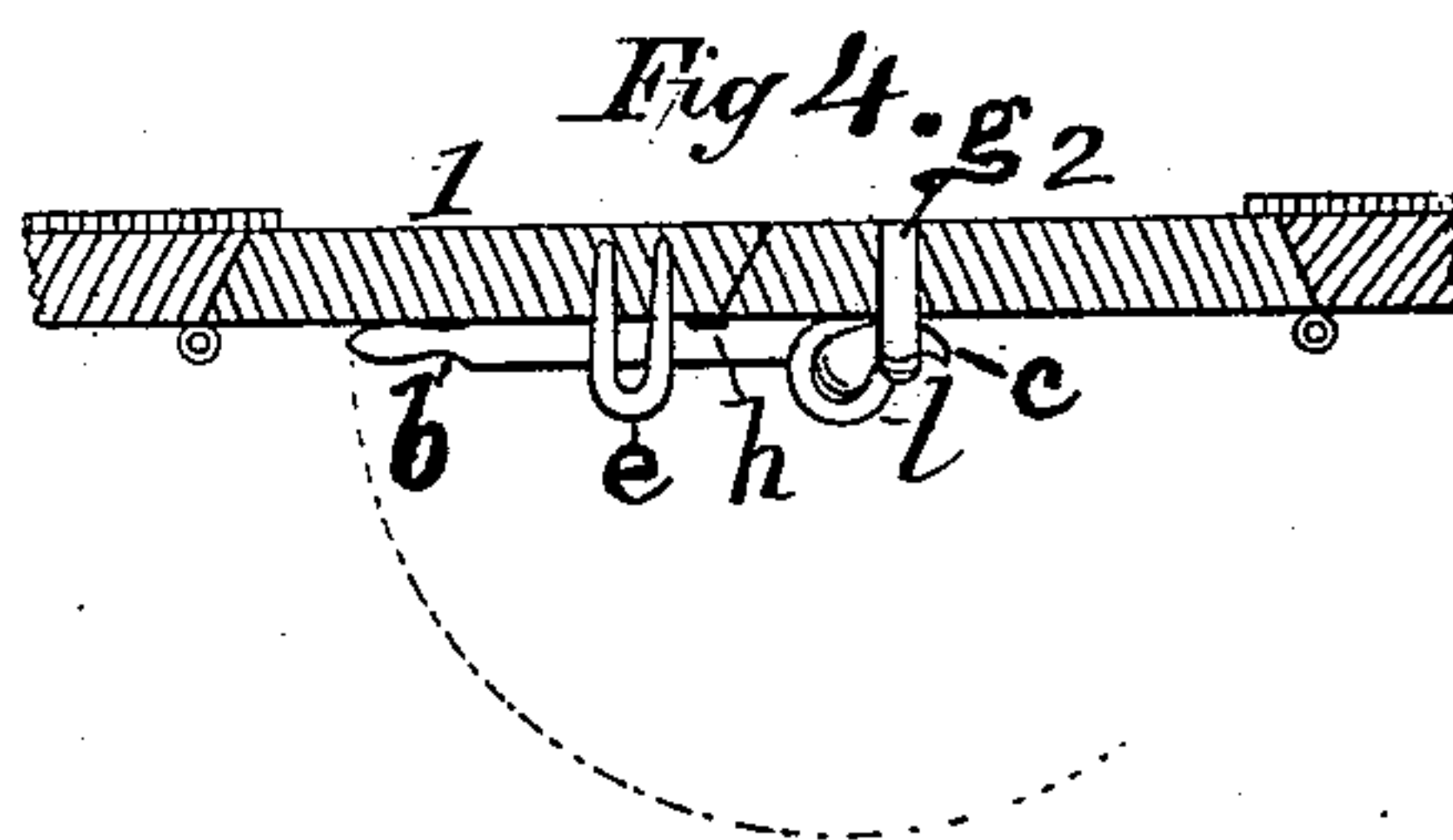


Fig 4.

Witnesses;
Orville B. Rorabough
Julius F. [Signature]

Inventor
Arnold W. Zimmerman
per W. H. Zimmerman
Attorney.

(No Model.)

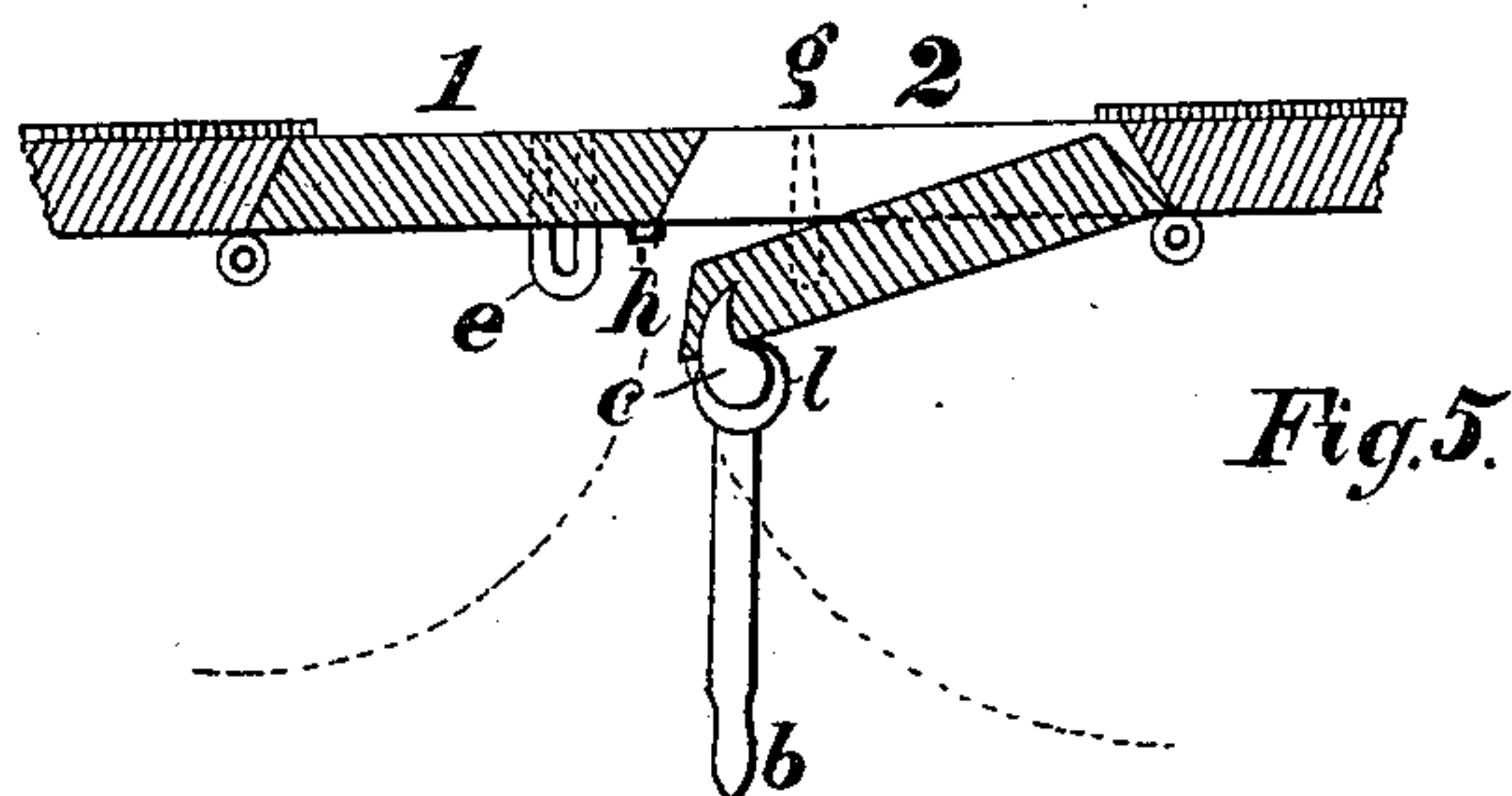
2 Sheets—Sheet 2.

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Witnesses;

H. A. Staples

M. Klein.

Inventor

Arnold W. Zimmerman

By W. Zimmerman

Attorney

UNITED STATES PATENT OFFICE.

ARNOLD W. ZIMMERMAN, OF CHICAGO, ILLINOIS.

CAR-DOOR FASTENER.

SPECIFICATION forming part of Letters Patent No. 282,598, dated August 7, 1883.

Application filed April 9, 1883. (No model.)

To all whom it may concern:

Be it known that I, ARNOLD W. ZIMMERMAN, of Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Car-Door Fasteners; and I hereby declare the following to be a full, clear, and exact description of the same, reference being had to the accompanying drawings, forming a part hereof, and in which—

Figure 1 represents a front view of my fastener attached to a sliding car-door, and the same locked. Fig. 2 shows an end sectional view of Fig. 1. Fig. 3 represents my fastener attached to a pair of hinged and horizontally-swinging car-doors. Fig. 4 represents a plan view of Fig. 3, in which the doors are shown closed. Fig. 5 represents a plan view of Fig. 3, in which one door is shown partly open.

Like letters of reference indicate like parts.

In the drawings, *a* represents a bar or shaft extending across the width or length of the door, and fastened to the same in suitable bearings, *b*, and provided on its ends with hooks *c*, which enter into eyebolts or catches *g*, attached to the side of the car. Said hook *c* is formed wedge-shaped or eccentric, so that its point may more readily take hold of the catch *g*, and so that as the door closes with increasing resistance its power to overcome the same may be increased, and, also, that it may the more firmly hold the door when closed.

To the center of the shaft *a* is attached a lever, *b*, by means of which the rod *a* is oscillated or partially rotated on its axis, and near the end of said lever is attached to the door a staple, *e*, through which a bolt, *f*, may be passed to hold the fastener closed; or a pad-lock may be applied.

When the door is hung on a sliding rail or track, *k*, and so as to rest on the outer side of the car, as shown at *i* in Fig. 1, the catch *g*, on one side of the door at least, has to be sunk into the side of the car, so as to permit the door to pass over it; but when the door swings on hinges, as shown in Fig. 3, the eyebolt or catch is placed upon the outside of the wall of the car.

The eccentric form of the hook *c* is clearly shown in Figs. 4 and 5. To the door 1 may also be attached a fulcrum, *h*, for the purpose of closing said door in the same operation with door 2, to which the fastener is attached;

or the doors may be joined by a lap or bevel, as shown, or in any other well-known manner. 55

When it is desired to close the doors, they are swung in place, the lever *b* being first thrown out, as shown in Fig. 5, so that the end of the hook *c* may catch in the eyebolt or catch *g*. Said lever is then thrown over upon the fulcrum *h* and fastened. During this operation the hook *c*, as it enters the catch *g*, draws closer to it, and so constantly increases its power until the door is closed. 60

When the door is to be opened, the back of the hook *c* presses upon the bolt *g*, and thus starts the door outward until the hook is relieved from the bolt or catch, as shown in Fig. 5, and thus forms a very powerful door-opener, especially for tightly jammed or sticking and frozen doors. 70

The hooks *c* may enter eyebolts or catches, or staples or other catches may be used. When staples or such other catches are used, the notches *d*, cut out of the door-frame, must be cut so that the hooks *c*, in opening, will press upon the bottom of them. The eyebolt answers both purposes—either to force the door open or to tightly close it. 75

What I claim as new is— 80

1. A car-door fastener consisting of an oscillating rod, *a*, provided with lever *b* and hooks *c*, constructed so as to give increasing force when closing the same, in combination with the catch *g*. 85

2. The oscillating rod *a*, provided with lever *b* and eccentric hooks *c*, in combination with the catch *g*.

3. The oscillating rod *a*, provided with lever *b* and eccentric hooks *c*, in combination with the catch *g* and staple *e*. 90

4. The oscillating rod *a*, provided with lever *b* and eccentric hooks *c*, in combination with the beveled doors 1 and 2 and parts *g* and *e*. 95

5. A car-door fastener consisting of a rod capable of oscillating or rocking on its longitudinal axis, and provided with hooks *c*, constructed so as to give increasing force when closing the same, in combination with the eyebolt or catch *g*, substantially as specified. 100

ARNOLD W. ZIMMERMAN.

Witnesses:

WM. ZIMMERMAN,
ORVILLE C. RORABAUGH.