

HENRY STAHLNECKER.
Improvement in Grain Doors for Cars.
 No. 123,055. Patented Jan. 23, 1872.

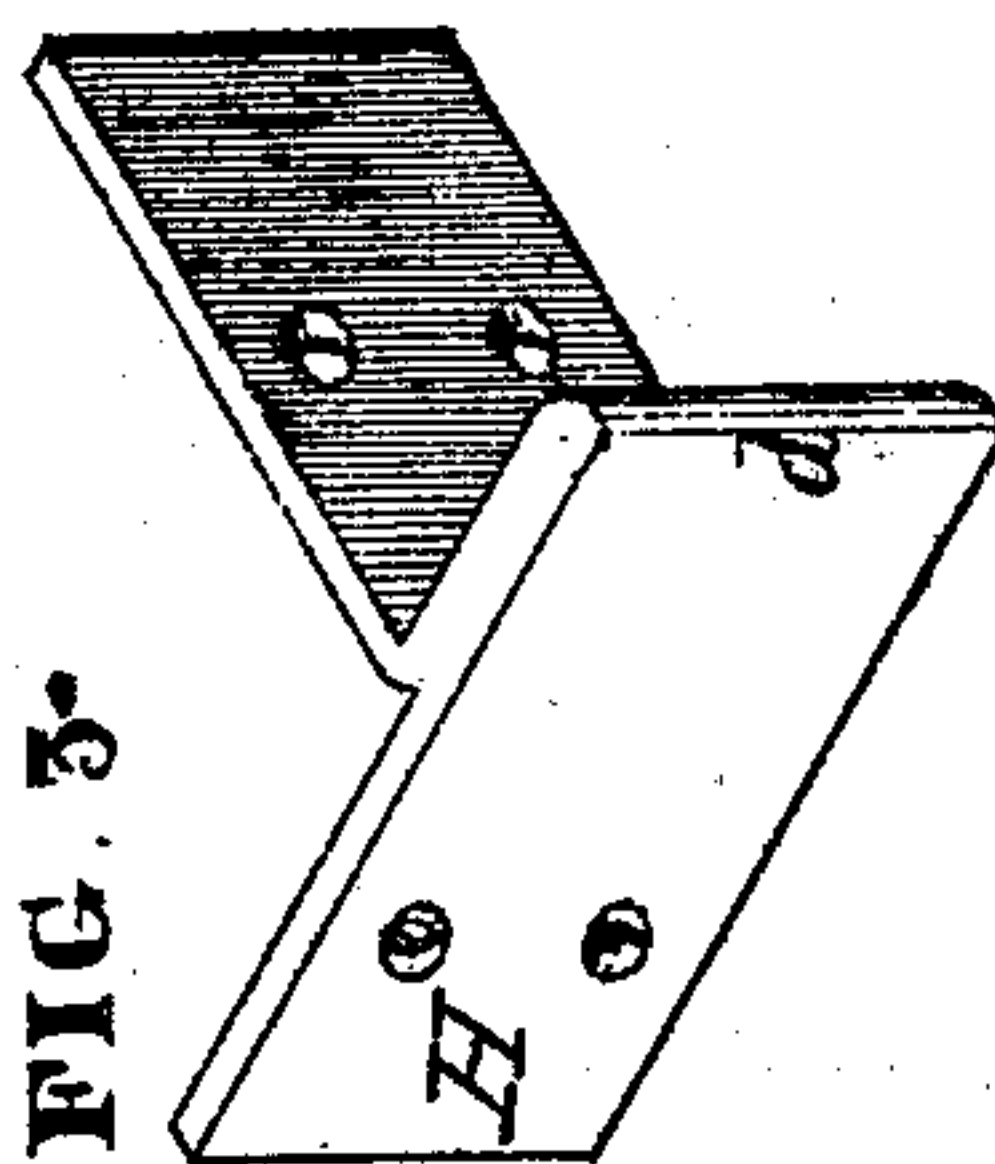


FIG. 3-

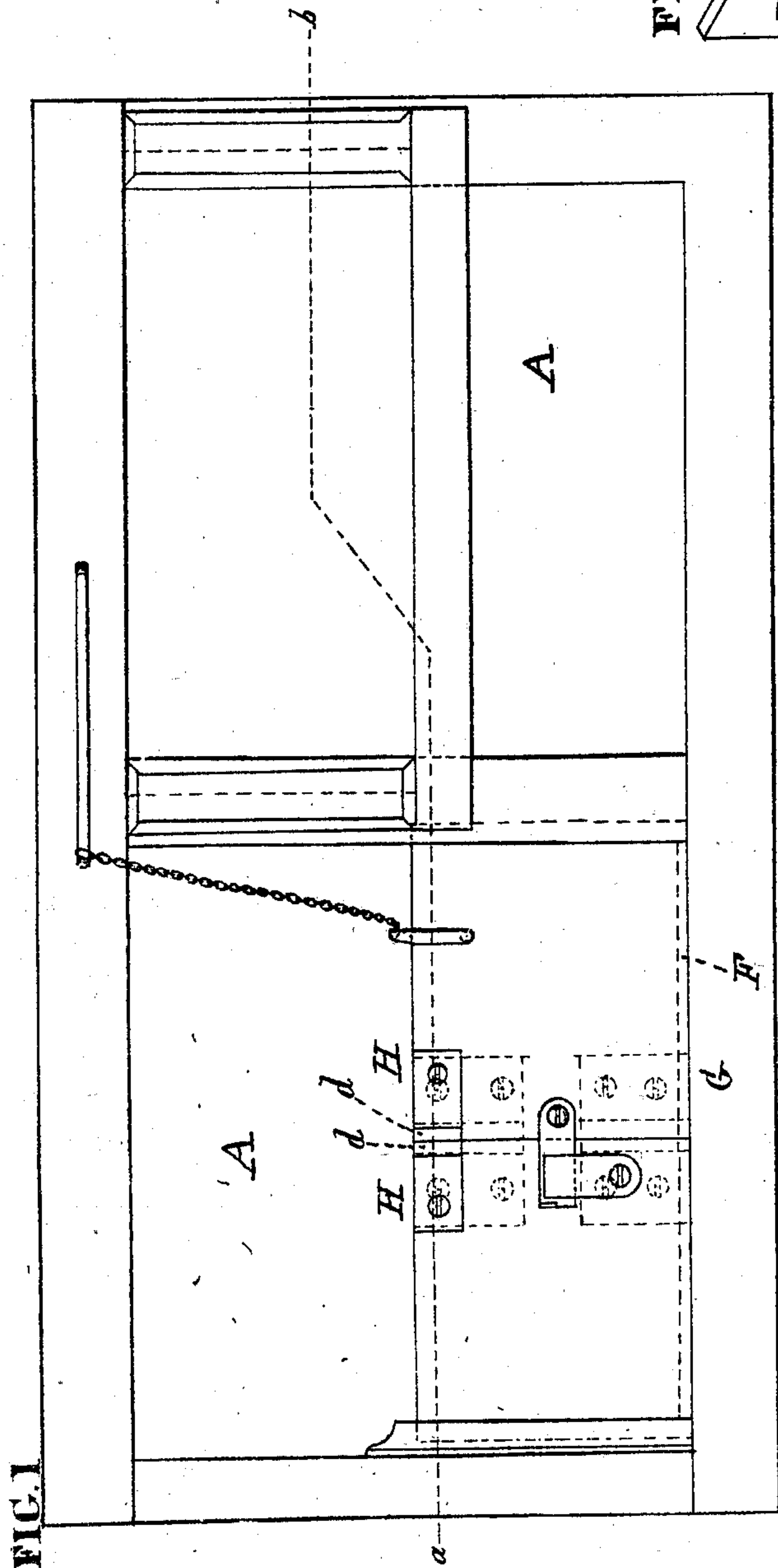


FIG. 1

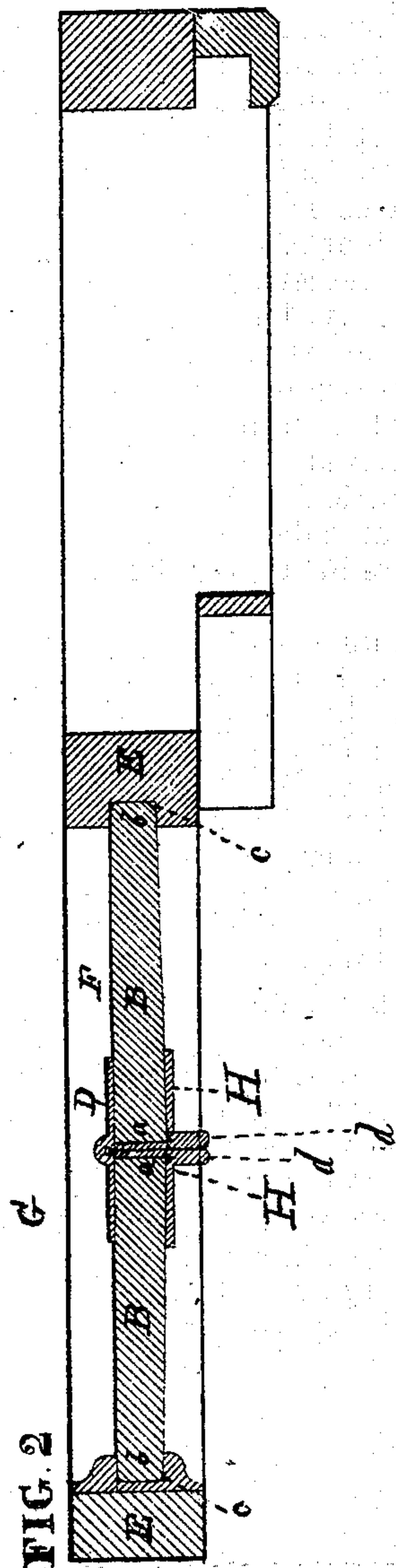


FIG. 2

WITNESSES
Geac P. Wendell
Thomas J. Bewley

INVENTOR.
Henry Stahlnecker
 by his attorney
Stephen Ustick

UNITED STATES PATENT OFFICE.

HENRY STAHLNECKER, OF ALLENTOWN, ASSIGNOR TO HIMSELF AND JOHN SMYLIE, JR., OF PHILADELPHIA, PENNSYLVANIA.

IMPROVEMENT IN GRAIN-DOORS FOR CARS.

Specification forming part of Letters Patent No. 123,055, dated January 23, 1872.

Specification describing an Improvement in Doors for Grain-Cars, &c., invented by HENRY STAHLNECKER, of Allentown, in the county of Lehigh and State of Pennsylvania.

My invention consists in the combination of a pair of knees or abutments with the inside of a double door of a grain-car, &c., at the top edge and at the central hinge-joint, to take the strain caused by the outward pressure of the grain off the hinge, as hereinafter described.

Figure 1 is a side elevation of a portion of the inside of a grain-car. Fig. 2 is a longitudinal section at the line *a b* of Fig. 1. Fig. 3 is an isometrical view of one of the abutting-knees *H* on an enlarged scale.

Like letters in all the figures indicate the same parts.

A represents a portion of a side of a grain-car constructed in the usual manner, with the exception of the double doors *B B*. The inner edges *a a* of the doors are connected by means of hinges *D*. The outer edges *b b* are connected with the vertical grooves *c c* in the inside of the door-posts *E E*. The lower edges of the doors are supported on the outside by means of the cleat or strip *F* on the sill *G*. The inner edges *a a* are brought flat against each other when hinged, so as to take the strain off the hinges as much as possible. So far the description is applicable to another application of mine for Letters Patent.

The object of the present invention is the giving a complete support to the central hinged joint of the doors at the upper edge of the same, so as to prevent the outward pressure of the grain breaking or weakening the hinge. I accomplish the object by means of a projecting

iron on the inside of each door, securely fastened to the same, the two irons meeting together when the doors are in their place.

In the drawing, *H H* represent knee-irons confined by means of screws to the edges and sides of the doors. One of the knees is shown in detail on an enlarged scale in Fig. 3.

It will readily appear that the projections *d d* of the irons, meeting together at a point inside of a straight line drawn from the bottom or inner side of the grooves *c c* which support the inner edges of the door *B B*, that the hinge is relieved completely of the strain which would otherwise occur by the outward pressure of the grain, as the resisting points are arranged in arch form.

I do not confine myself to the construction of the abutting-irons *H H*, as they may be made and confined in a variety of ways and answer the purpose.

The abutting-irons *H H* are only shown at the top edges of the door; but, if desired, the lower edges may be supported in the same manner and the cleat *F* dispensed with.

The abutting-irons *H H*, arranged as described, may be used to advantage on double doors for other purposes or other hinged devices.

I claim as my invention—

The combination and arrangement of the abutting-irons *H* with double doors for relieving the central hinge *D* of side pressure, substantially as described.

HENRY STAHLNECKER.

Witnesses:

HIRAM ZELLNER,
HENRY T. KLECKNER.