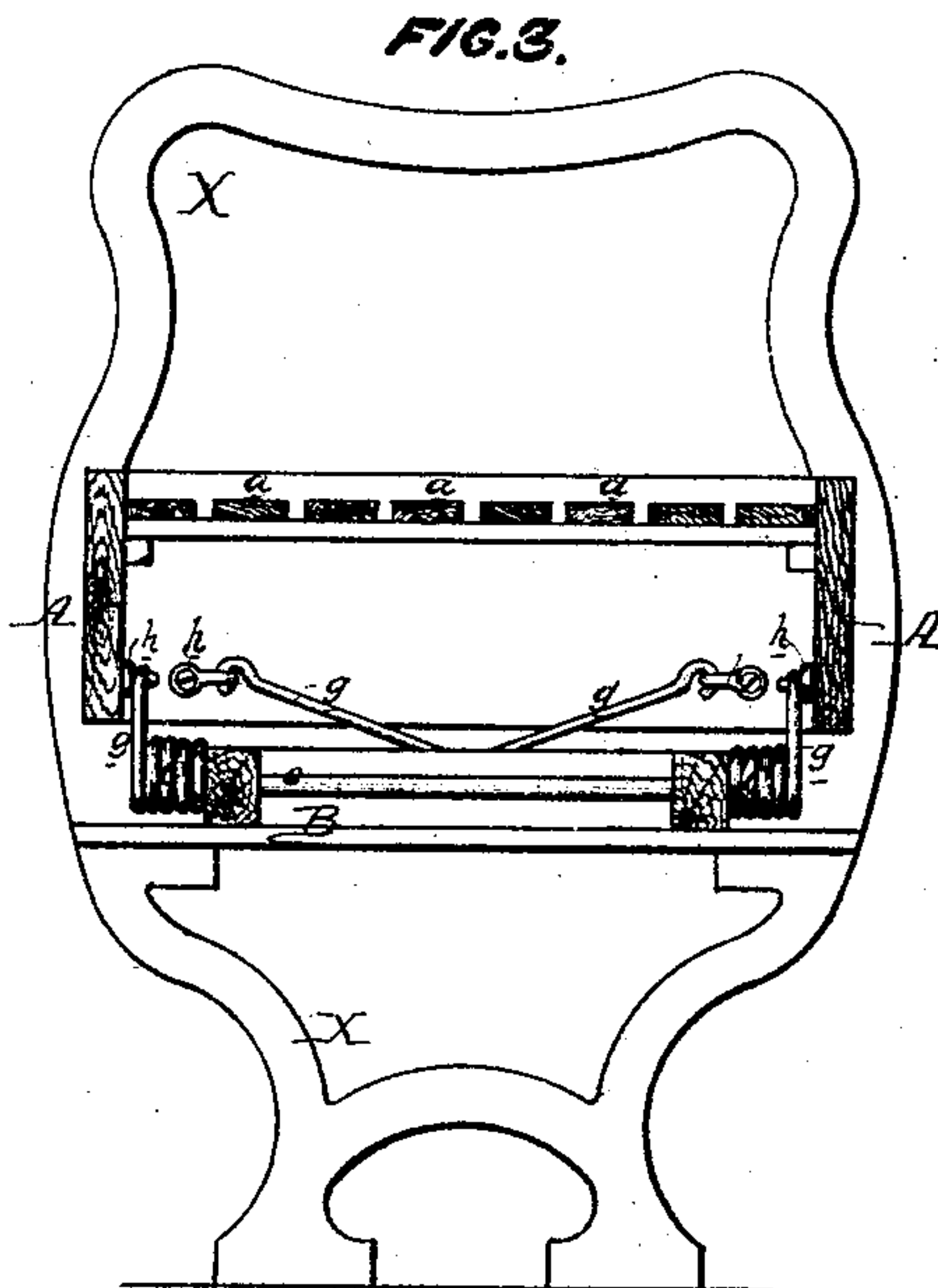
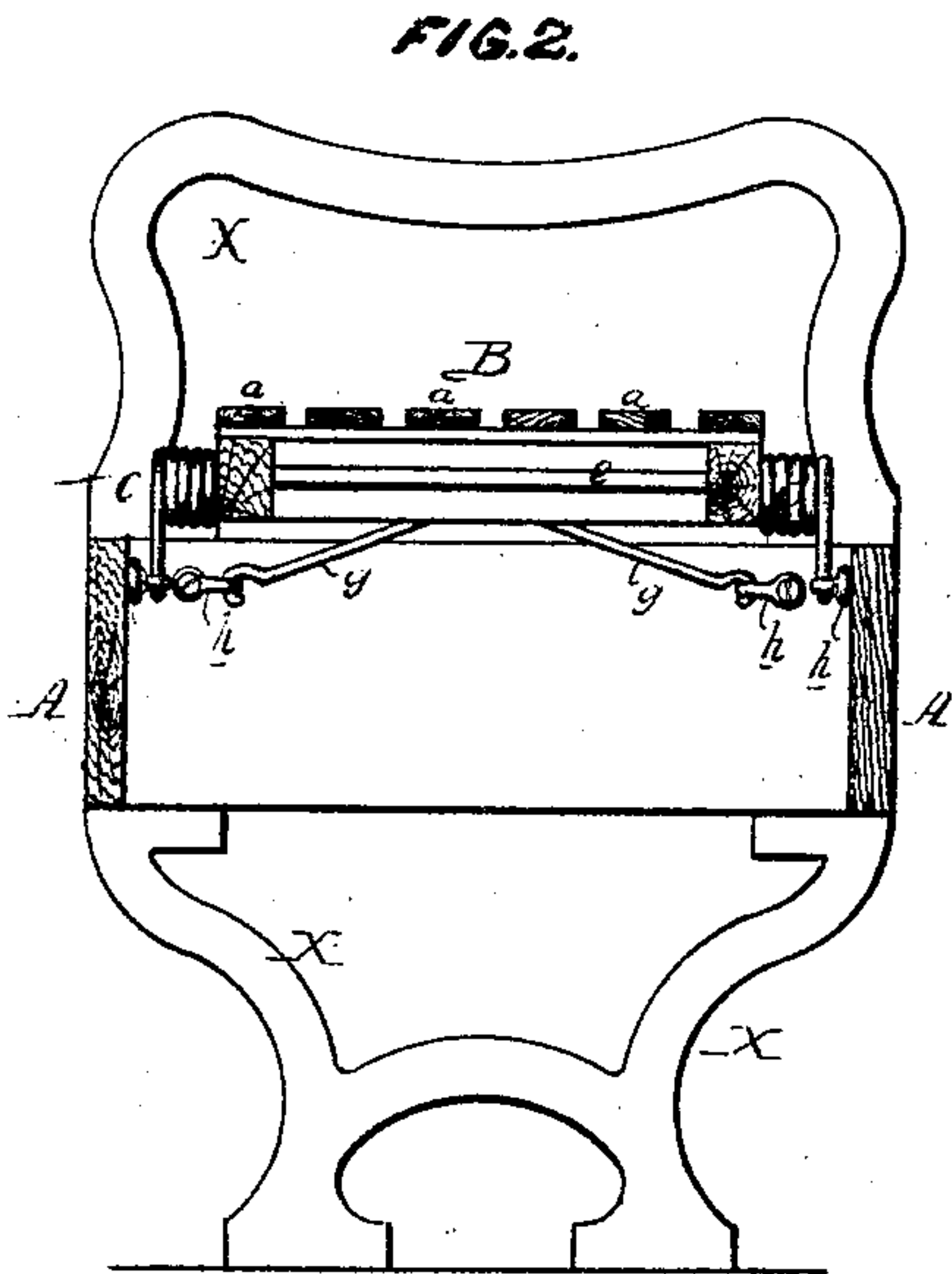
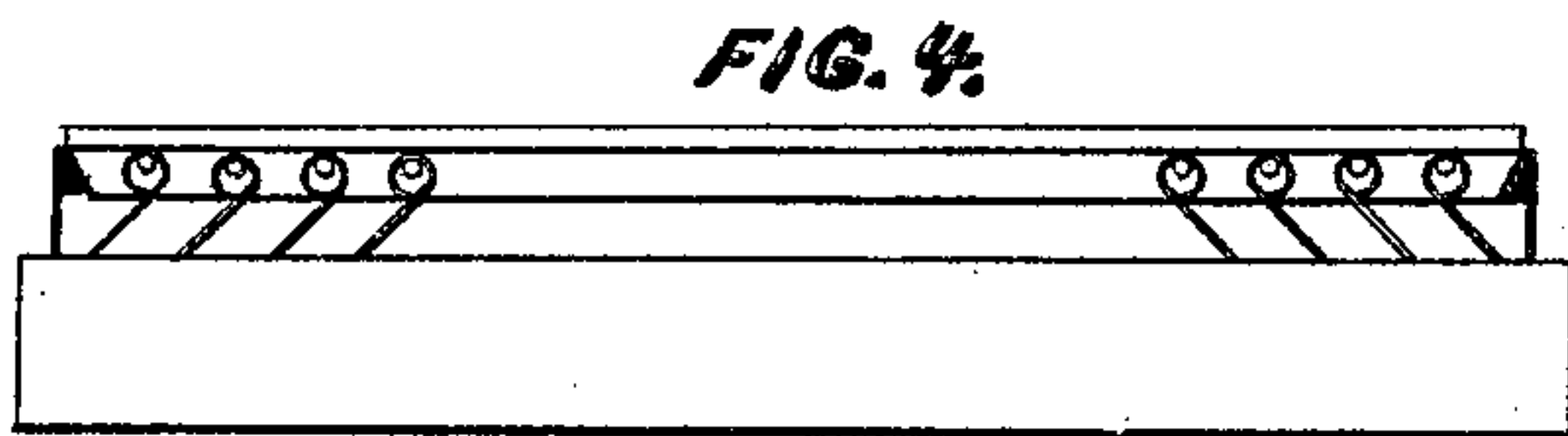
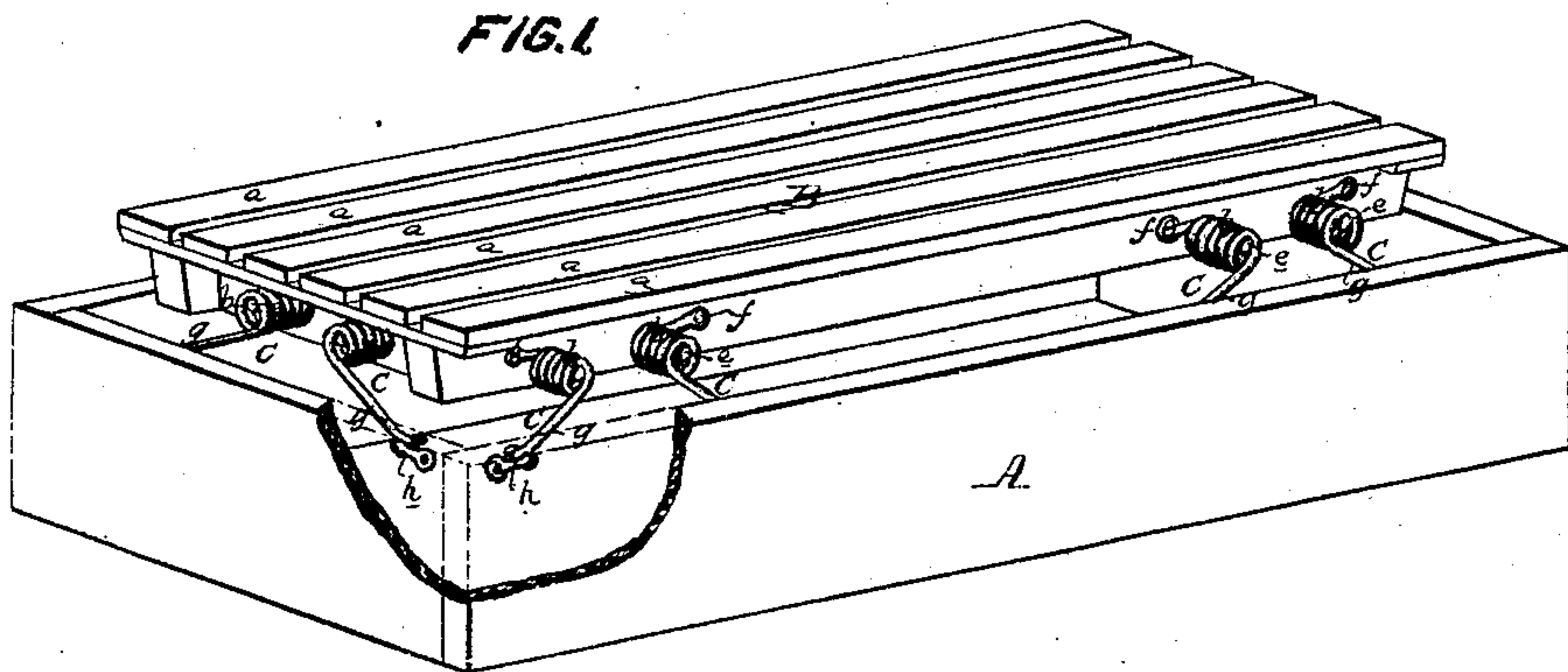


J. F. Haasz,
Spring Seat.
No. 102678. Patented May 3. 1870



WITNESSES { *Wm. A. Steel,* *J. F. Haasz*
Jno. B. Harding, *By his Atty*
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United States Patent Office.

DANIEL FREDERICK HAASZ, OF PHILADELPHIA, PENNSYLVANIA, ASSIGNOR TO HIMSELF AND EMILIUS NICHOLAS SCHERR, JR., OF SAME PLACE.

Letters Patent No. 102,678, dated May 3, 1870.

IMPROVED SPRING SEAT.

The Schedule referred to in these Letters Patent and making part of the same.

I, DANIEL FREDERICK HAASZ, of Philadelphia, county of Philadelphia, State of Pennsylvania, have invented an Improved Spring Seat for Cars, &c., of which the following is a specification.

Nature and Object of the Invention.

My invention consists of a spring seat for cars, &c., composed of a stationary and a movable frame, connected together by springs of peculiar construction, which are attached directly to one of the said frames, and to the other by movable links, so that, while the seat is permitted to yield vertically with the greatest freedom, any objectionable swaying of the same, either laterally or longitudinally, will be prevented.

Description of the Accompanying Drawing.

Figure 1 is a perspective view of my improved spring seat for cars, &c.;

Figure 2, a transverse sectional view of the same;

Figure 3, a transverse section of a modified arrangement of seat; and

Figure 4, a view of another modification.

General Description.

A is an open, box-like frame, which may, in the present instance, be supposed to represent the stationary portion of a railroad-car seat, and to be secured to the end frames *xx* of the same in the usual manner.

The movable portion of the seat consists of a frame, B, upon which are arranged strips or slats *a*, for the support of a cushion or of any suitable covering.

This frame B is connected to the stationary frame by a series of springs, C, which are arranged, in the present instance, in sets of twos, one set at each end of the seat, and two sets at each of the opposite sides of the same.

Each spring C consists of a coil, *b*, wound upon a rod or pin, *e*, of the frame B, of a projecting end, *f*, secured directly to the latter, and of an arm or extension, *g*, which is hung to a movable link, *h*, of the frame A.

The arms *g g* of each set of springs are inclined in opposite directions, and are consequently opposed to each other, so that, if it were not for the links *h*, which permit the outer ends of these arms to yield in opposite directions, the springs would remain perfectly

rigid, and would prevent any movement whatever of the frame B.

By the use of these links, however, in connection with the above-described springs, arranged at both the sides and ends of the seat, the latter is permitted to yield vertically with the greatest freedom, while any objectionable swaying of the same, either laterally or longitudinally, is effectually prevented.

It is not absolutely necessary that the springs should be arranged precisely as shown in fig. 1, as their number might be increased or diminished; or, instead of being placed in sets of twos, several springs, having their arms *g* inclined in one direction, might be arranged to act in conjunction with other springs having their arms inclined in an opposite direction, as shown in fig. 4.

It is essential, however, in every case, that there should be at least two springs on each side and end of the seat, opposed to each other in the manner above described.

In some cases the arrangement illustrated in figs. 1 and 2 might be reversed, so as to form a seat such as shown in fig. 3, where the frame A becomes the movable portion of the seat, and is provided with suitable slats and cushions, &c., while the frame B is permanently secured to the end frames X.

It should be understood, also, that I do not confine myself to the above application of my invention, as it can be adapted to the seats of street-cars and other vehicles, as well as to sofas, lounges, &c., and it might also be applied to beds.

Claims.

1. A spring seat, consisting of frames A and B, connected together by springs C, when the latter are attached directly to one of the said frames, and to the other by links *h*, all substantially as set forth.

2. The said springs C, arranged at the sides of the frame, when the arms of adjacent springs are inclined in opposite directions, as set forth.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

DANIEL FRED. HAASZ.

Witnesses:

FRANK B. RICHARDS,
WM. A. STEEL.