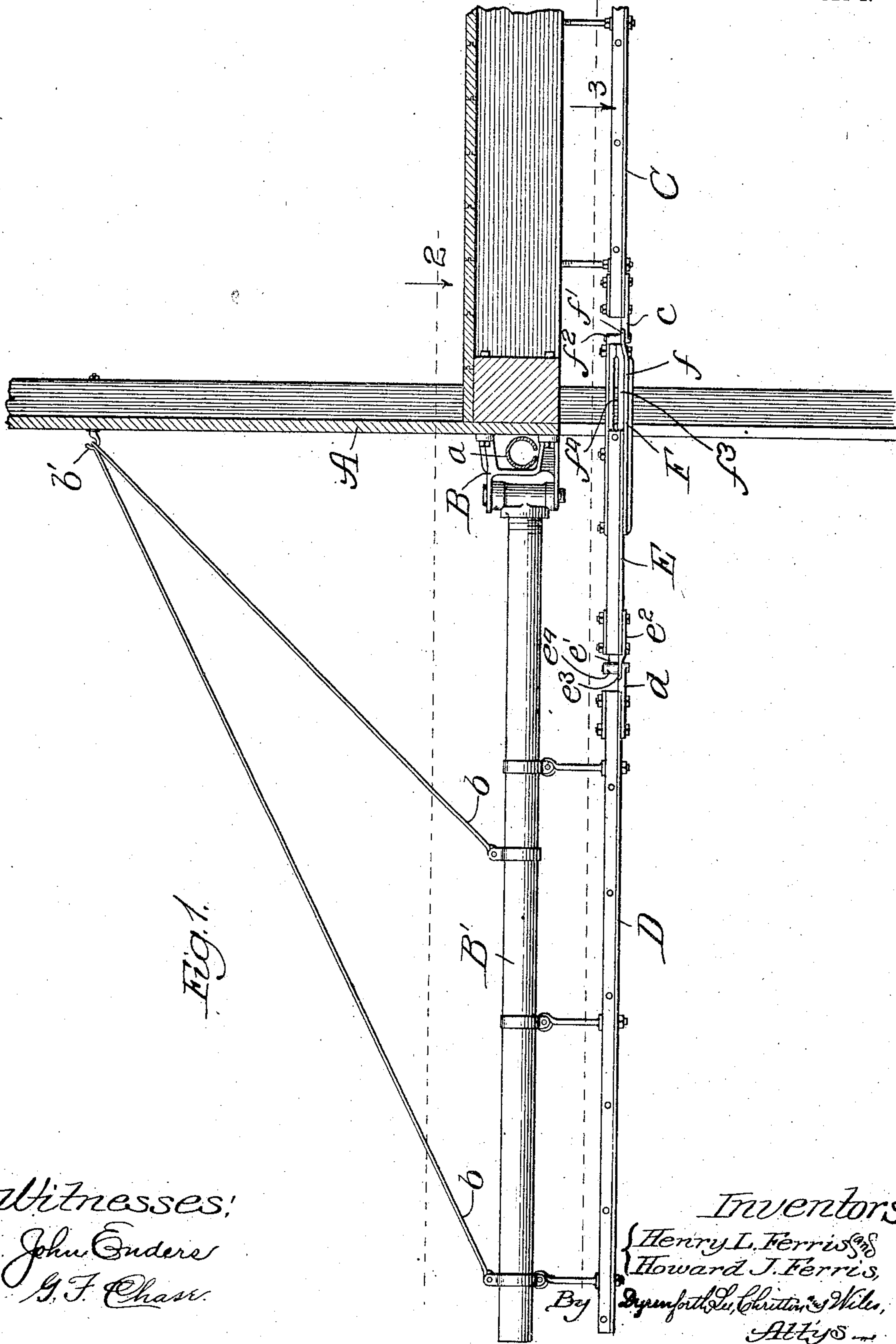


H. L. & H. J. FERRIS.
 SWINGING TRACK AND SUPPORTING BOOM THEREFOR.
 APPLICATION FILED FEB. 25, 1910.

969,465.

Patented Sept. 6, 1910.

3 SHEETS—SHEET 1.



Witnesses:
 John Enders
 G. F. Chase.

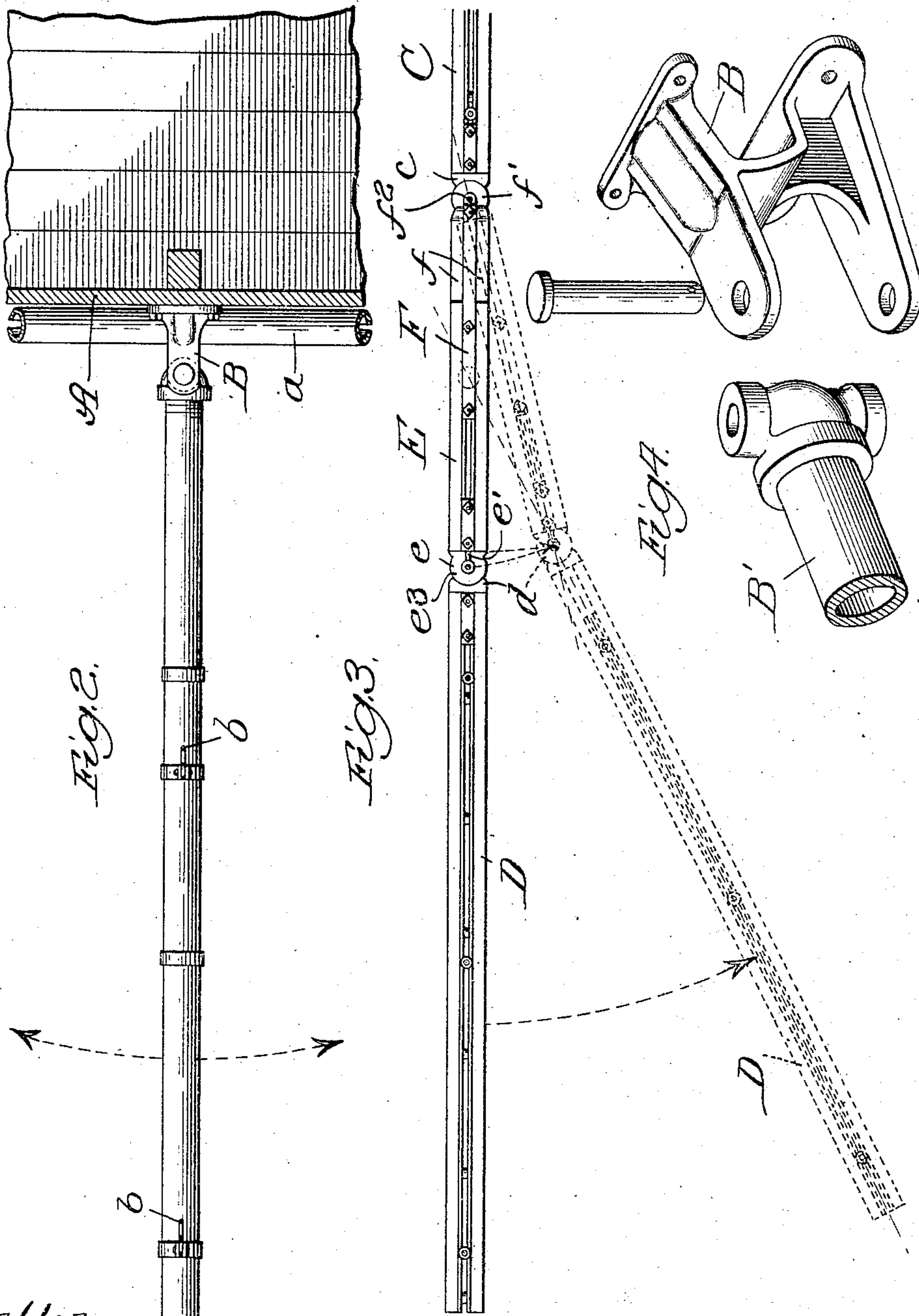
Inventors.
 Henry L. Ferris
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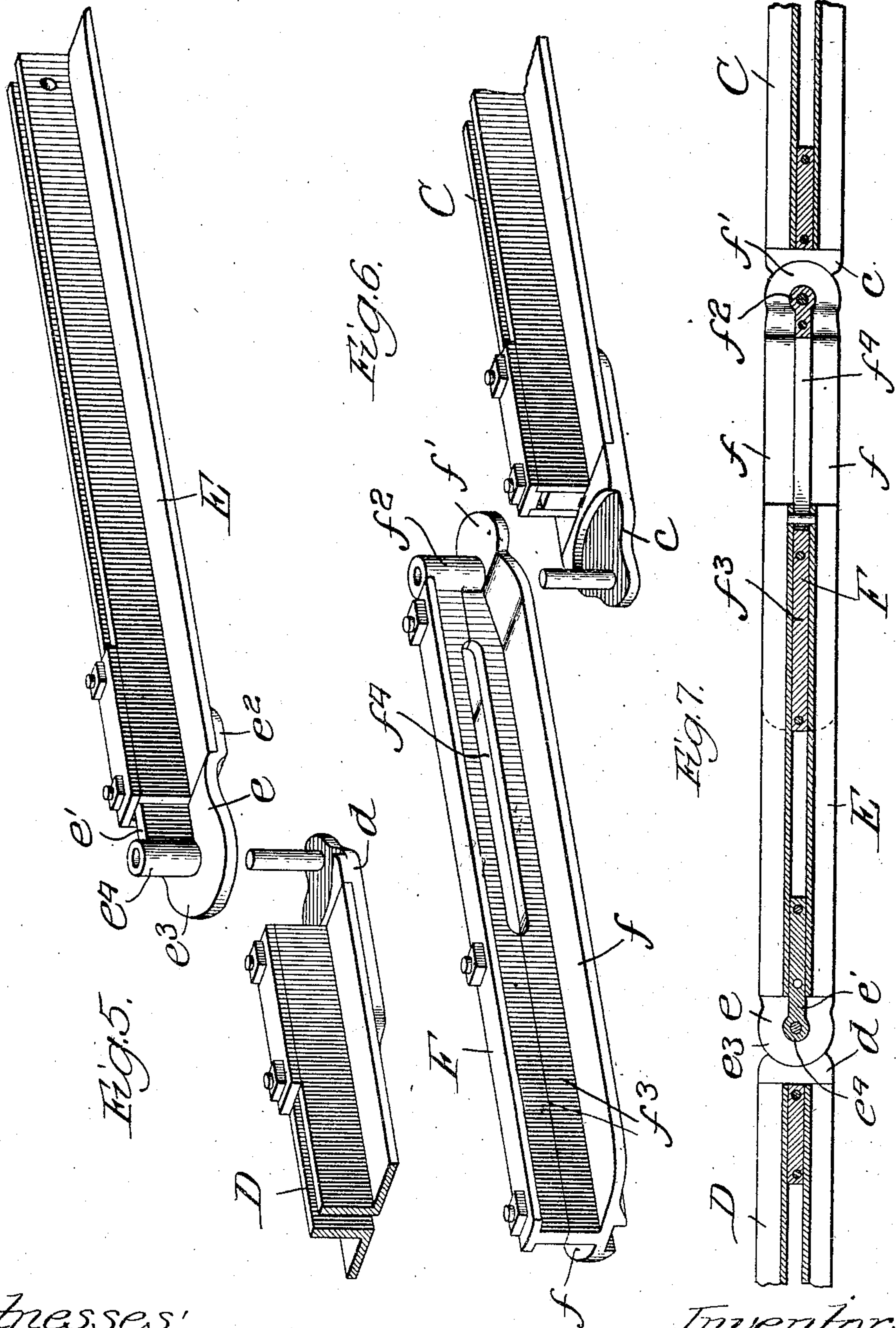
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UNITED STATES PATENT OFFICE.

HENRY L. FERRIS AND HOWARD J. FERRIS, OF HARVARD, ILLINOIS.

SWINGING TRACK AND SUPPORTING-BOOM THEREFOR.

969,465.

Specification of Letters Patent.

Patented Sept. 6, 1910.

Application filed February 25, 1910. Serial No. 545,801.

To all whom it may concern:

Be it known that we, HENRY L. FERRIS and HOWARD J. FERRIS, citizens of the United States, residing at Harvard, in the county of McHenry and State of Illinois, have invented new and useful Improvements in Swinging Tracks and Supporting-Booms Therefor, of which the following is a specification.

Our invention relates to certain new and useful improvements in swinging track and supporting boom therefor, and is fully described and explained in the specification and shown in the accompanying drawings, in which:—

Figure 1 is a side elevation of our improved device showing the structure to which it is attached in section; Fig. 2 is a section in the line 2 of Fig. 1; Fig. 3 is a section in the line 3 of Fig. 1; Fig. 4 is a perspective view of the boom-end and pivotal support therefor; Fig. 5 is a perspective view of the inner end of the outer length of track and the adjacent portion of the intermediate length of track; Fig. 6 is a similar view of the outer end of the inner length of track and the adjacent inner end-portion of the intermediate length of track, and Fig. 7 is a detailed section through the intermediate length of track and the adjacent parts.

Referring to the drawings A is the wall of a barn or other structure to which the device forming the subject of this application is secured, the same being provided with a door-opening of usual form, adapted to be closed by doors (not shown), the doors running upon hangers which are supported by a track *a* secured to the wall of the building.

B is a bracket which is arched or hollowed so as to pass over the track, thereby making it unnecessary to cut the track or notch the doors to receive the pivotal boom. Pivoted in the bracket B is a boom *B*¹ of suitable length for the intended purpose, and supported at its outer end by means of guy-rods *b* which are connected to a pivot *b*¹ on the wall of the building, above the bracket B.

C is a track within the building, the same being secured to the floor joists in the usual manner, and D is a track secured to the boom, the two tracks terminating at their adjacent ends at substantially equal distances from two sides of the pivot of the

boom, that is, so that the pivot of the boom is about midway between the two adjacent ends of the two track sections.

The track of the type herein shown is clearly illustrated in Fig. 5, and consists of two angle irons, each with one vertical flange and one horizontal flange; the horizontal flanges being outwardly turned and the vertical flanges being spaced apart to provide a space therebetween for the reception of supporting means. The track D bears at its rear end, that is the end adjacent to the wall of the barn, a pivot casting *d* consisting of a member secured to the underside of the track D, provided with a forward projection or ear provided with a vertical pin. E is an intermediate track made of the same material and in the same way as the track D and the same carries at its forward or outer end, a pivot casting *e* having a web *e*¹ between the vertical flanges of the track E a flat portion *e*² beneath the end of the intermediate track E, a flattened portion *e*³ pivoted at its end and raised above the level of the portion *e*² to bring its upper surface into the plane of the upper surface of the horizontal flanges of the intermediate track E, and a vertical boss *e*⁴ adapted to slip over the pin of the pivot casting *d*. The pivot casting *d* it will be noted is cut away at its rear end to receive the flat portion *e*³ of the pivot casting *e*, so that the tread of the track and pivot casting will all lie in the same plane.

The outer end of the track C is provided with a pivot casting *c*, which is in all respects similar to the pivot casting *d*. A telescoping member F of the form shown in Fig. 6 is interposed between the members of the intermediate track F. The telescoping member is shown to be made of two separate pieces bolted together and this construction is desirable simply from a mechanical point of view, inasmuch as it can be more simply cast in that way, but inasmuch as it moves and operates as a single piece it will be described without any reference to the fact that it is made of two pieces. It has a pair of laterally projecting flanges *f* of the width of the horizontal flanges of all the tracks. The flanges are carried up at their end and terminate in a flat portion *f*¹ curved at its end and provided with a boss *f*² adapted to fit over the pin of the pivot cast-

ing *c*. The member is also provided with a vertical web f^3 laterally flanged at its upper end. This web is slotted at f^4 .

The construction is assembled as illustrated at Fig. 7, that is to say the telescoping member *F* is placed between the members of the intermediate track *E*, the vertical webs thereof being embraced between the lower horizontal flanges f and the flanges at the upper edge of the web f^3 . When so placed the tread of the intermediate track will lie in the same plane with the treads of the tracks *C* and *D* and the pivot members and the raised flat portion f^1 of the telescoping member will form connections between the track treads all in the same plane therewith. The parts are of such sizes that when the boom extends straight forward from the barn and all the track sections are in line, the intermediate track will be drawn partially out of the portion f^1 of the telescoping member so that there is no substantial break in the continuity of the tread. When the boom is swung laterally the intermediate section will be closed up more or less in an obvious manner, a practically continuous track being maintained. Relative movement between the intermediate track and the telescoping member is prevented by means of a pin passed through holes in the vertical webs of the intermediate track and the slot f^4 .

The construction above described is advantageous for several reasons. We are aware that swinging booms for carriers have been heretofore made, but the tracks and booms have heretofore been pivoted in the same plane or direct vertical line, with the result that the track forms a very sharp angle if the boom is swung to any considerable extent one way or the other. With the present construction, while the boom swings only at one point, the track swings upon two different pivots and therefore the angle between adjacent sections is at all times comparatively obtuse. Furthermore, the intermediate portion between the two pivots, that is the intermediate track and the telescoping members are loosely supported by the pivots of the two tracks *C* and *D* and can be lifted as a whole out of place to permit the barn-doors to be closed. This is a peculiar advantage, and it is of more value when the particular form of double pivoting here shown is used. The absence of some kind of a movable section from the track at its pivot makes the provision of a notch in the door necessary, and with the double pivoted construction of the track here shown, where the boom is permitted to swing a very long distance, a notch in the barn-door, if provided, would have to be of very great size to accommodate the track when the boom was swung very far to one side. It will be understood that this point is of sub-

stantial importance because the purpose of the swinging boom is largely to permit the material carried from the barn in carriers to be dumped at different points in the barn-yard and the boom may be left in the same angular position for several days at a time. To return it to the center each time for the purpose of closing the doors would be very inconvenient and it will therefore be seen that the making of this section removable adds greatly to the convenience of the device. The forming of the boom pivot through the medium of a bracket arching over the track upon which the barn-door runs is also of importance. It is desirable to bring the boom as low as possible in order that the connections between the boom and track *D* may be as short and firm as is possible. If the track was placed above the boom pivot the doors would have to be notched to receive it. If it were placed below the boom pivot, the boom pivot and boom would be elevated considerably above the track. The present construction is such that the desired position is attained and the lower leg of the bracket of the boom pivot is given support in the space which normally exists between the track and the door.

We realize that considerable variation is possible in the details of construction of our improved device, without departing from the spirit of our invention, and we do not intend, therefore, to limit ourselves to the specific form herein shown and described.

What we claim as new and desire to secure by Letters Patent is:—

1. The combination with a door-hanger track, of a bracket arched to straddle the same, a boom pivoted to the bracket, a stationary track, a track carried by the boom, and means of connection between the two tracks.

2. The combination with a pivotally supported swinging boom, of a stationary track and a boom-carried track, terminating at the two sides of the vertical line of the boom-pivot, and a telescoping track connecting said two tracks.

3. The combination with a pivotally-supported swinging boom, of a stationary track and a boom-carried track, terminating at the two sides of the vertical line of the boom-pivot, and a telescoping track, connecting said two tracks, and removable from place therebetween.

4. The combination with a pivotally-supported swinging boom, of a stationary track and a boom-carried track, terminating at the two sides of the vertical line of the boom-pivot, an intermediate track, and a telescoping-member slidable therein, the intermediate track and telescoping-member having pivotal connections with the stationary track and boom-carried track respectively.

5. The combination with a pivotally-sup-

ported swinging-boom, of a stationary track and a boom-supported track, an intermediate track, pivotally connected to one of said tracks and composed of two angle-irons, having horizontal flanges outwardly turned and a telescoping-member having flanges at the bottom, immediately below and forming practical continuations of the flanges of the intermediate track, a central web between the members of the intermediate track, and flanges above the vertical portions of the intermediate track, whereby the telescoping-member is guided slidably between the parts of the intermediate track.

6. The combination with a stationary track, a swinging-boom and a boom-carried track, the said tracks terminating to the two sides of the pivot of the boom, of an intermediate section of adjustable length adapted to connect said tracks when the boom is in varying position.

7. The combination with a pivoted boom, of a boom-carried track, and a stationary track terminating on opposite sides of the boom pivot, and an intermediate device consisting of two parts, one of which is adapted for attachment to the end of each of said tracks, the two parts being adjustably connected together so as to form a continuous connection between said tracks when the boom is in various angular positions.

8. The combination with a pivoted boom, a stationary track and a boom-carried track terminating on opposite sides of the boom pivot of two connecting members adjustably

connected together and each connected to one of said tracks.

9. The combination with a pivoted boom, a stationary track and a boom-carried track terminating on opposite sides of the pivot of the boom of a removable device adjustably connecting the ends of said tracks.

10. The combination with a stationary track, a pivoted boom and a boom-carried track, the said tracks terminating on opposite sides of the boom pivot, of means for adjustably connecting the ends of said tracks.

11. The combination with a swinging boom, a boom-carried track and a stationary track which terminate upon opposite sides of the boom pivot, so that as the boom is swung the distance between their ends varies, of means for connecting said tracks in varying positions of the boom.

12. The combination with a swinging boom, a boom-carried track and a stationary track which terminate upon opposite sides of the boom pivot, so that as the boom is swung the distance between their ends varies, of means for connecting said tracks in varying positions of the boom, said means being movable from position to afford a gap in the track to permit the closing of the barn-doors.

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HOWARD J. FERRIS.

In presence of—

E. B. HUNT,
R. A. HEMENWAY.