

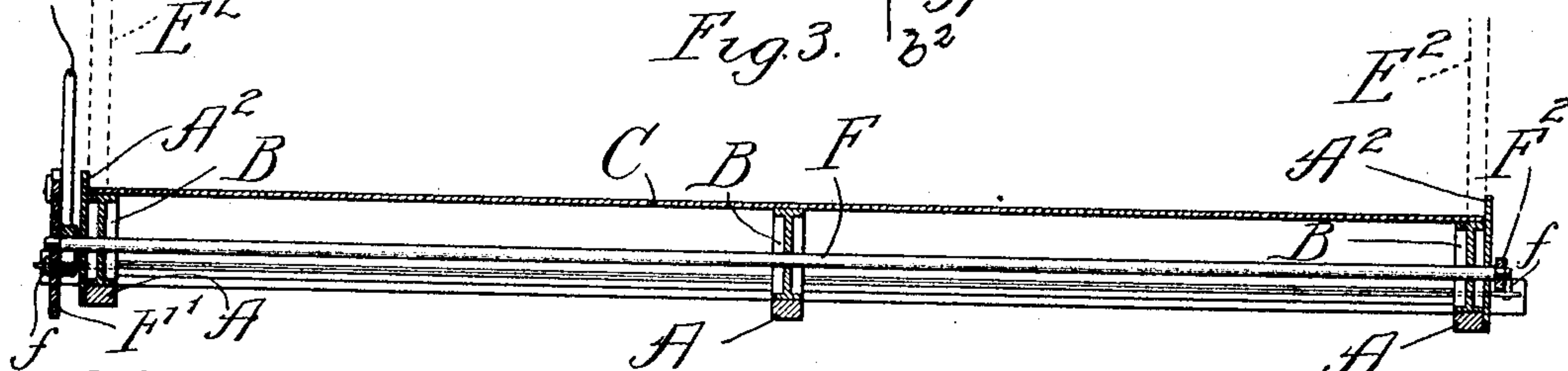
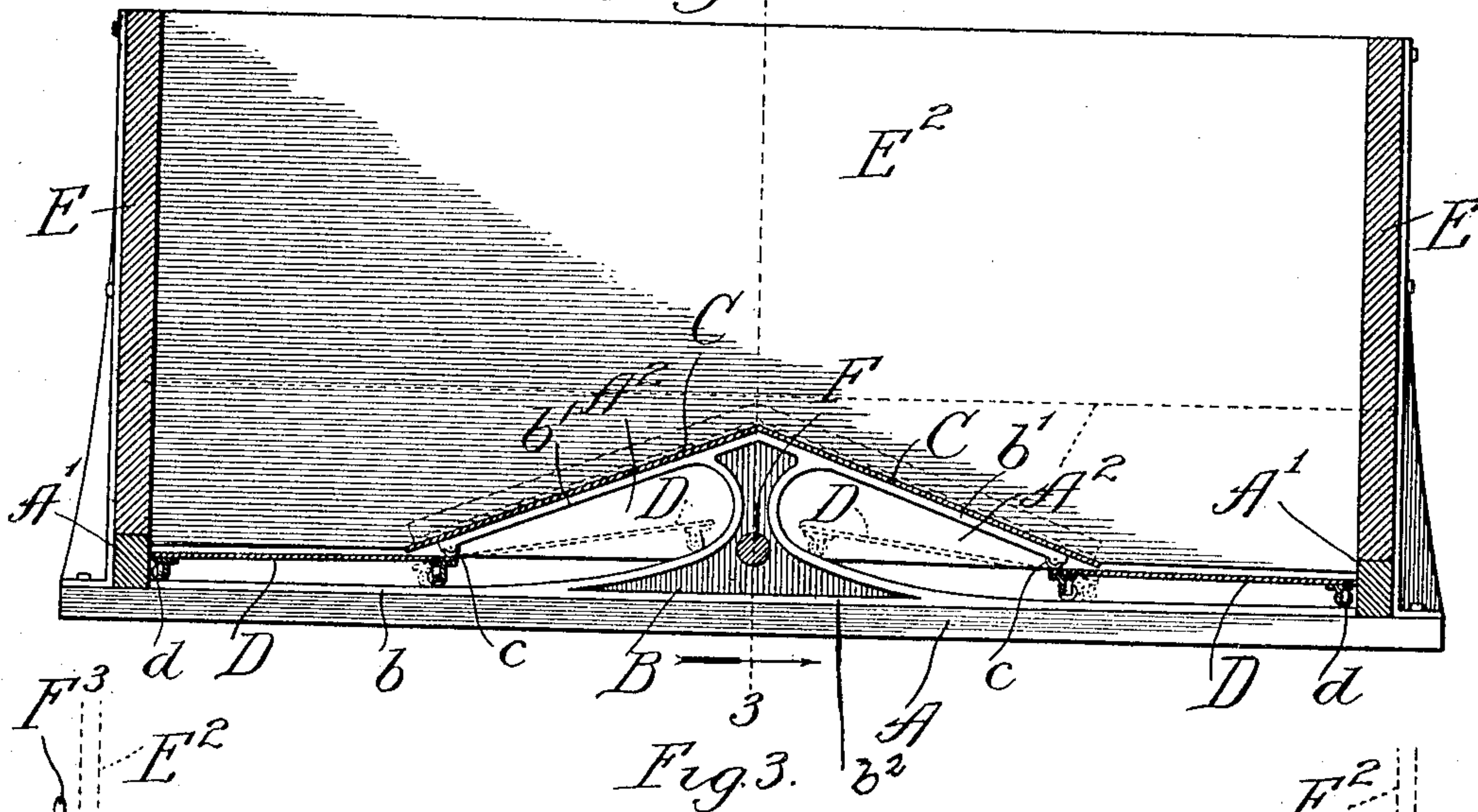
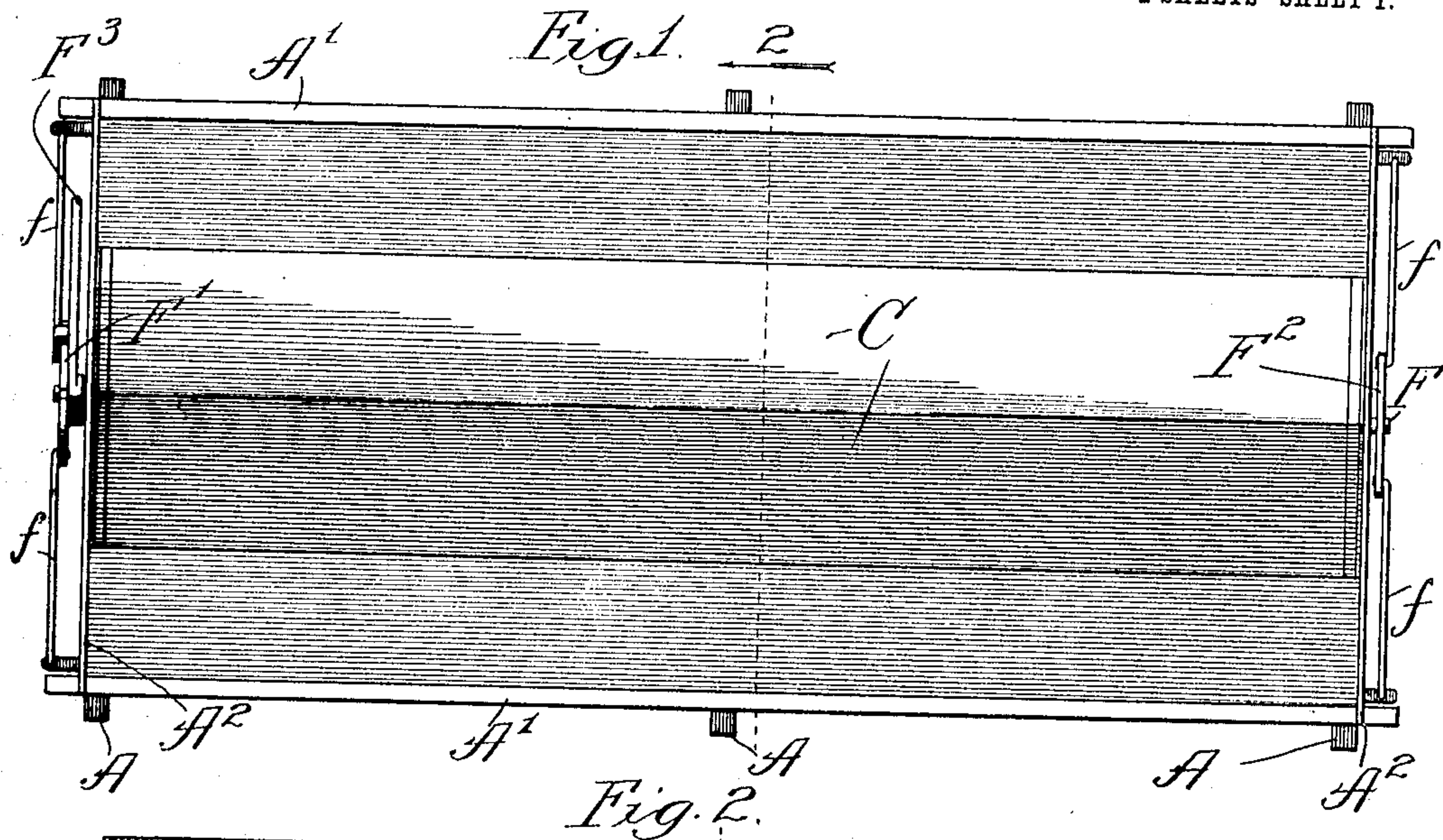
No. 887,404.

PATENTED MAY 12, 1908.

H. F. LANGREDER.  
DUMP WAGON.

APPLICATION FILED NOV. 18, 1907.

2 SHEETS—SHEET 1.



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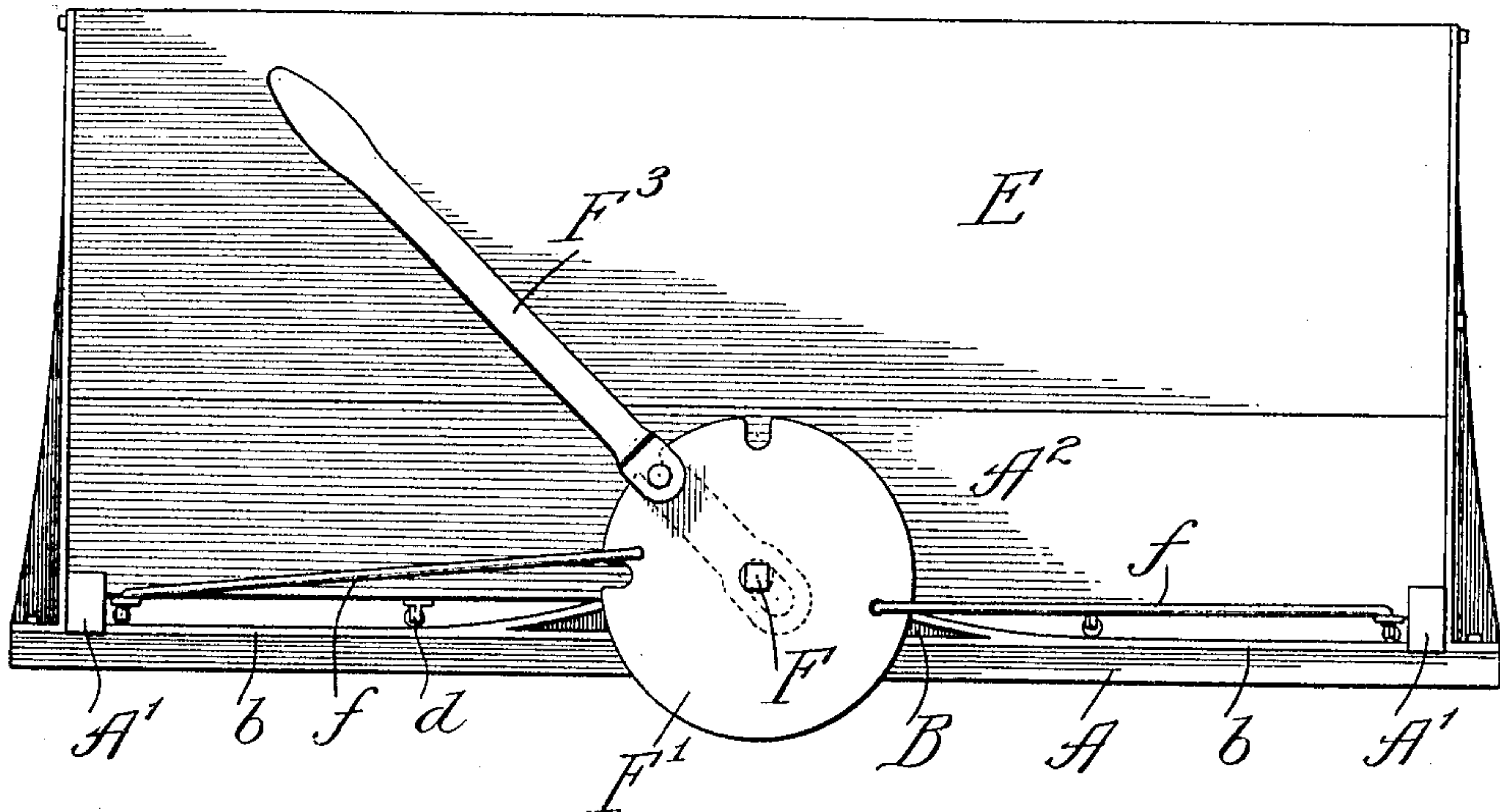
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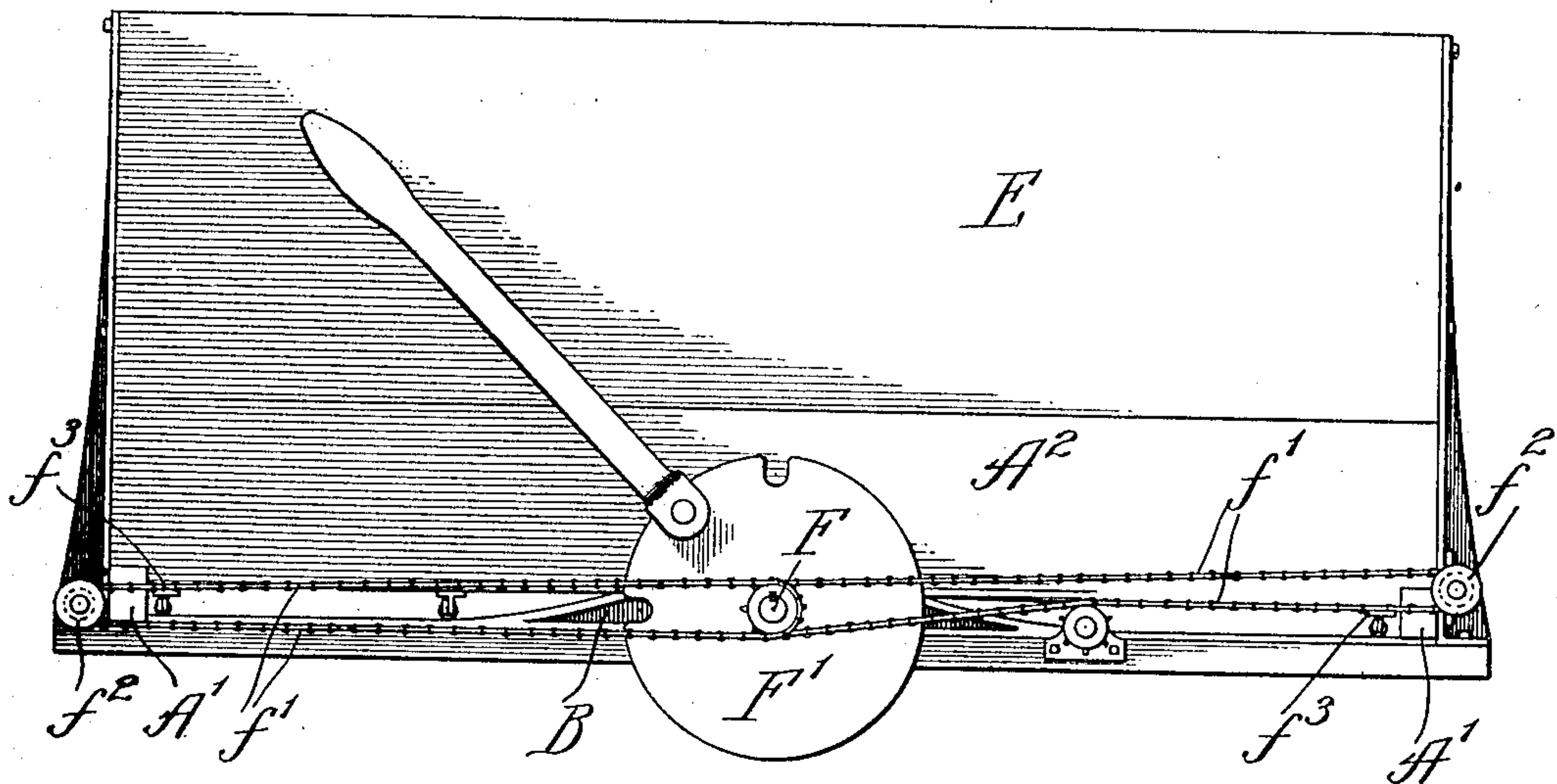
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2 SHEETS—SHEET 2.

*Fig. 4.*



*Fig. 5.*



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# UNITED STATES PATENT OFFICE.

HENRY F. LANGREDER, OF CHICAGO, ILLINOIS.

## DUMP-WAGON.

No. 887,404.

Specification of Letters Patent.

Patented May 12, 1908.

Application filed November 18, 1907. Serial No. 402,670.

*To all whom it may concern:*

Be it known that I, HENRY F. LANGREDER, a citizen of the United States, residing at 11923 Halsted street, Chicago, in the county of Cook and State of Illinois, have invented a new and useful Improvement in Dump-Wagons, of which the following is a specification.

My invention relates to certain new and useful improvements in dump wagons and is fully described and explained in the specification and shown in the accompanying drawing, in which:

Figure 1 is a top plan of my improved wagon with the sides and ends thereof removed; Fig. 2 is a transverse section in the line 2 of Fig. 1; Fig. 3 is a longitudinal section in the line 3 of Fig. 2; Fig. 4 is a front elevation of the wagon and Fig. 5 is a front elevation of a modified form of the wagon showing the plate shifting mechanism.

Referring to the drawings A is a series of transversely extending bolsters which are connected by longitudinally extending sills A<sup>1</sup> at the two sides of the wagon-bed. At the front and rear of these sills are placed end-gates A<sup>2</sup> of sheet-metal, the said end-gates extending transversely of the wagon-bed from side to side and in a vertical direction from the bolsters to a height of about one-third of the desired wagon-box. Upon bolsters A are placed castings B each of which comprises curved track portions *b* one to each side of the center and two diagonally disposed bottom supporting webs *b*<sup>1</sup> which meet at an angle centrally disposed with respect to the bolsters. The track portions *b* are curved upward to meet the diagonally disposed bottom supporting portions *b*<sup>1</sup> to afford strength to the same and they are also mutually connected together by portions *b*<sup>2</sup> lying upon the corresponding bolster so that a single rigid unitary casting is provided. One of the castings B lies just inside of the front end gate A<sup>2</sup> as illustrated, another is centrally disposed upon the medial bolster A in the preferred form of construction although if desired other medial castings and medial bolsters could be provided, and the third lies just inside the rear gate A<sup>2</sup>. Upon the diagonally disposed bottom supporting portions of the castings B are supported two diagonally disposed bottom-plates C which slope downwards from a central-longitudinal line of the wagon to lines slightly more than half of the distance from the center of the wagon-body

to the sides thereof, the edges of the said bottom-plates being elevated a slight distance above the track portions *b* of the castings B as illustrated. Upon the track portions *b* of the castings B are carried movable bottom plates D running upon rollers *d* which bear upon the track portions *b*, the said plates being capable of being drawn inward laterally on said track portions to positions underneath the central stationary bottom-plate C as illustrated in dotted lines in Fig. 2. Rollers *c* are provided on the castings B at the outer ends of the diagonally disposed portions *b*<sup>1</sup> thereof to give a substantially frictionless bearing to said movable bottom-plates as they are drawn in.

In order to complete the wagon body side-boards E are placed upon the sills A<sup>1</sup> and secured to these side-boards are end boards E<sup>2</sup> which lie just inside the end-gates as illustrated in dotted lines in Fig. 3 and are notched out to rest upon the diagonally disposed bottom-plates C, the lower edges of the end-boards being just above the level of the laterally movable bottom-plates D.

It will be seen that when the wagon-body so constructed is loaded with loose material such as is commonly placed in dumping-wagons, the body can very readily be evacuated by drawing in the movable bottom plates D to the position shown in dotted lines in Fig. 2. Such lateral movement of the bottom plates can be performed without any substantial raising of the load, the only force which needs to be overcome being the friction of the load on said plates. When the plates are drawn into this position a very wide dumping space is provided at each side of the wagon and the slant of the central or stationary bottom plate C is such as to cause the material situated thereover to roll by gravity downward to the dumping spaces as provided.

The preferred means for causing the lateral movement of the plates D is illustrated in Figs. 1 to 4 from which it will be seen that a rock-shaft F extends longitudinally of the wagon-bed, the same passing through the castings B and the end-gate A<sup>2</sup>. On the front of the said rock-shaft is mounted the disk F<sup>1</sup> connected by links *f* with the outer lateral edges of the shiftable bottom-plates D and at the rear of the rock-shaft is mounted a cross-bar F<sup>2</sup> similarly connected by links *f* to the shiftable bottom-plates as illustrated. A hand-lever F<sup>3</sup> is provided, the same being se-



cured to the rock-shaft  $F$  and having means for securing it to the periphery of the disk  $F^1$  whereby the shaft may be rocked. Thus when the lever  $F^3$  is moved to the right as viewed in Fig. 4 the links will be drawn together and the shiftable bottom-plates retracted underneath the diagonally disposed and stationary bottom-plates to dump the contents of the wagon.

10 In the modified form of construction shown in Fig. 5, the wagon-bed construction including the shiftable and stationary bottom-plates is identical with that shown in the other figures. The rock-shaft is also arranged as in the other form of construction and is provided with the same disk at its forward end and the same rocking lever. The rock-shaft is, however, provided at its front and rear ends with sprocket-wheels over which run sprocket chains  $f^1$  which in turn pass over idlers  $f^2$  suitably supported by the wagon-bed. The chains are attached by clips  $f^3$  to the shiftable bottom-plates so that when the shaft is rocked the bottom-plates will be moved in and out by the said sprocket-chains instead of the links  $f$  as in the form of construction already described.

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

What I claim as new and desire to secure by Letters Patent, is—

35 1. The combination with the sides and ends of a wagon-body of two stationary bottom-plates sloping laterally downward from a centrally disposed longitudinally extending line, two movable bottom-portions at the sides of the stationary portions and extending therefrom to the sides of the wagon-body, and means for sliding said movable bottom-portions laterally inward beneath said stationary bottom-portions.

45 2. The combination with the sides and ends of a wagon-body of two longitudinally extending stationary portions slanting laterally from a longitudinally extending centrally disposed line within the wagon-body, tracks running beneath said stationary portions and extending to the sides of the wagon-body, two movable bottom-portions running upon said tracks extending from the stationary bottom-portion to the sides of the wagon-body and means for drawing said movable bottom-portions beneath the stationary portions to dump the contents of the wagon.

60 3. The combination with a series of transversely extending bolsters of side and end portions of a wagon box, tracks resting upon said bolsters, longitudinally extending stationary bottom-portions sloping laterally downward from the line centrally disposed

with respect to the sides of the wagon and terminating inside the sides of the wagon to leave spaces between their outer edges and sides of the wagon, laterally movable bottom-portions underneath said stationary bottom-portions and extending therefrom to the sides of the wagon-body and resting upon said tracks and means for moving said movable bottom-portions laterally beneath the stationary portions to dump the wagon.

75 4. The combination with transverse bolsters of the sides and ends of a wagon, castings mounted upon said bolsters and each comprising track-portions and diagonally disposed portions overhanging the track-portions and sloping downward laterally from centrally disposed points on said bolsters, stationary bottom-portions secured to the angularly disposed portions of said castings whereby they are given a lateral slope downwards in two directions from a central line of the wagon-body, movable bottom-portions resting upon the track-portions of said castings and means for drawing said movable bottom-portions beneath the stationary bottom-portions to dump the wagon.

90 5. The combination with the sides and ends of a wagon of two stationary bottom-portions sloping downwards laterally in opposite directions from a centrally disposed line running longitudinally of the wagon-body, two longitudinally extending and laterally movable bottom-portions extending outwards from the outer edges of said stationary bottom-portions to the sides of the wagon, a rock-shaft extending centrally of the wagon, and means of connection between said rock-shaft and said laterally movable bottom-portions whereby the rocking of the shaft will draw said portions together beneath the stationary members of the bottom to discharge the load.

105 6. The combination with the sides and ends of a wagon of stationary bottom portions sloping downward laterally from a longitudinally extending centrally disposed line within the wagon-body, two movable bottom-portions extending inward from the sides of the wagon to points underneath the outer edges of the stationary bottom-portions, a rock-shaft extending longitudinally of the wagon-body, links having eccentric connection with the rock shaft and connected at their opposite ends to the movable bottom-portions whereby the rocking of the shaft will draw said portions together beneath the stationary bottom-portions and means for rocking said shaft.

120 7. In a device of the class described a series of transversely extending bolsters, castings upon the bolsters each comprising two track portions extending inward from the ends of the castings toward the center thereof and slanting portions overhanging the track-portions, stationary bottom-portion 130



tions supported by said slanting portions and sloping downward laterally in opposite directions from a longitudinally disposed centrally extending line within the wagon-body, 5 movable bottom-portions extending inward from the sides of the wagon-body underneath the outer edges of said stationary bottom-portions and running upon said tracks, a rock-shaft extending longitudinally 10 of the wagon and journaled in said castings,

and means of connection between said rock-shaft and said laterally movable bottom-portions whereby the rocking of the shaft will draw said movable bottom-portions inward beneath the stationary sloping bottom- 15 portions to dump the contents of the wagon.

HENRY F. LANGREDER.

In presence of—

RALPH SCHAEFER,  
W. T. JONES.