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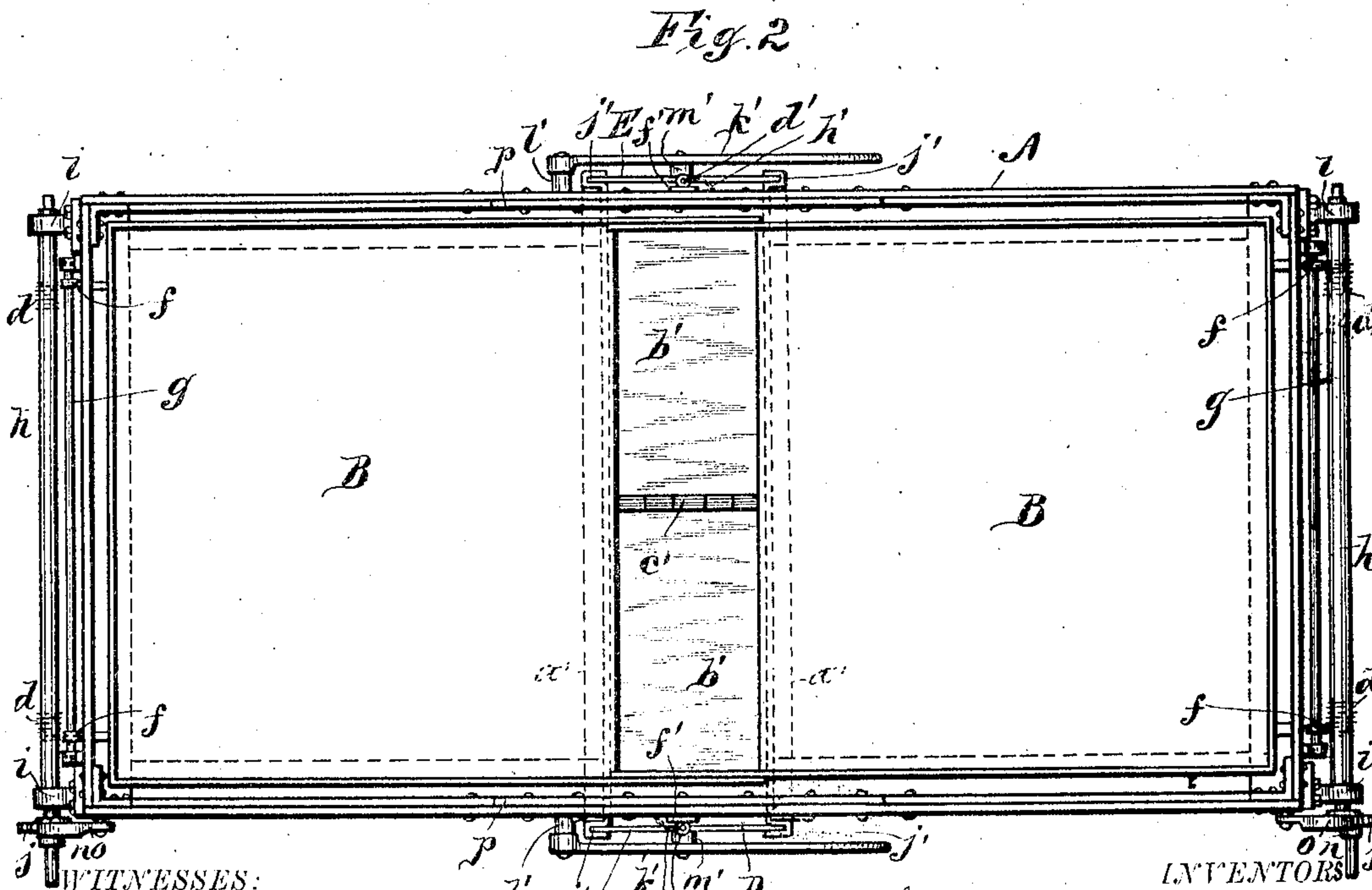
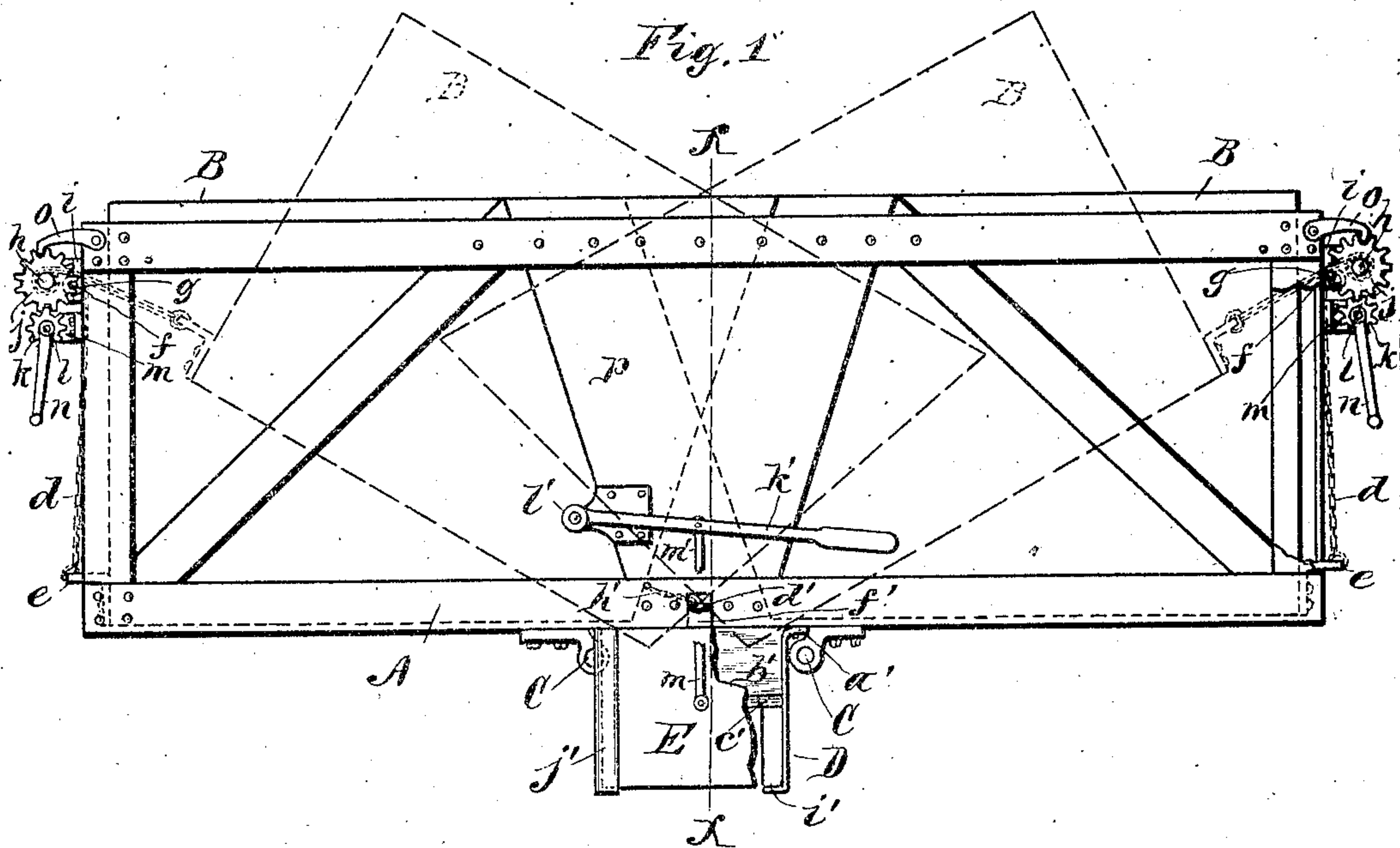
PATENTED OCT. 2, 1906.

E. DALTON & H. A. TIFFANY.

DUMPING WAGON.

APPLICATION FILED SEPT. 2, 1905.

2 SHEETS—SHEET 1.



WITNESSES:

G. H. Fulmer.

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INVENTORS

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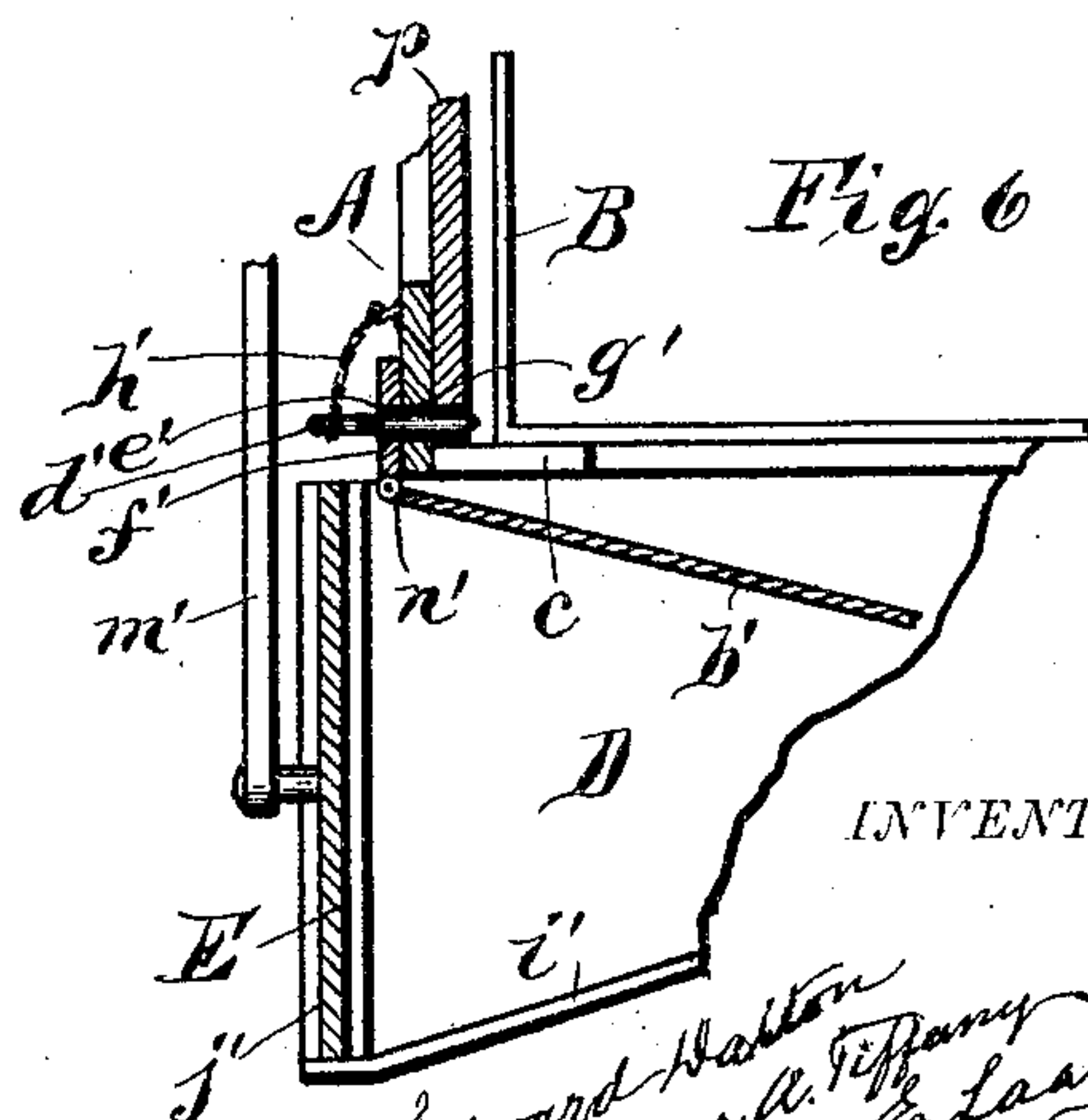
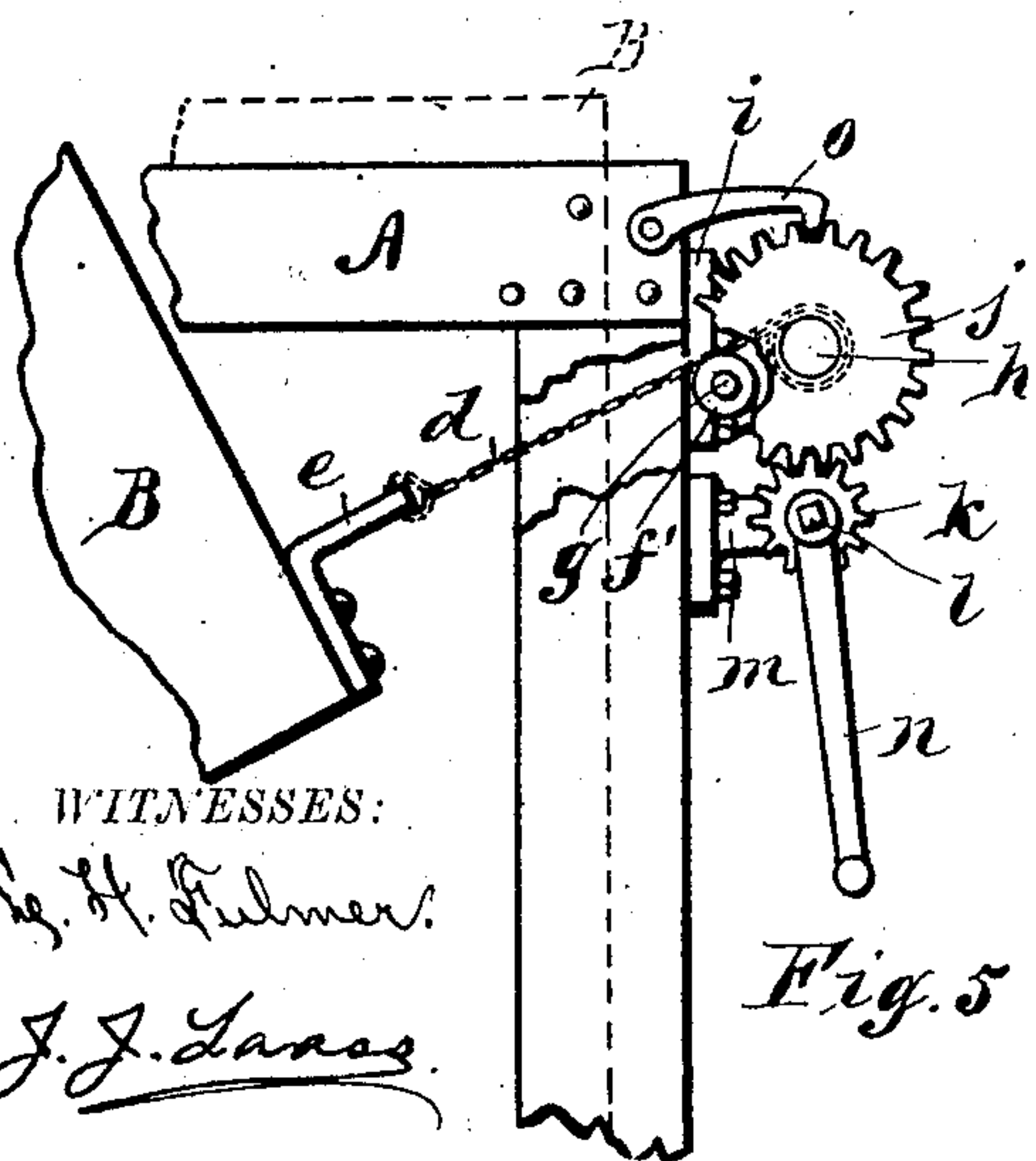
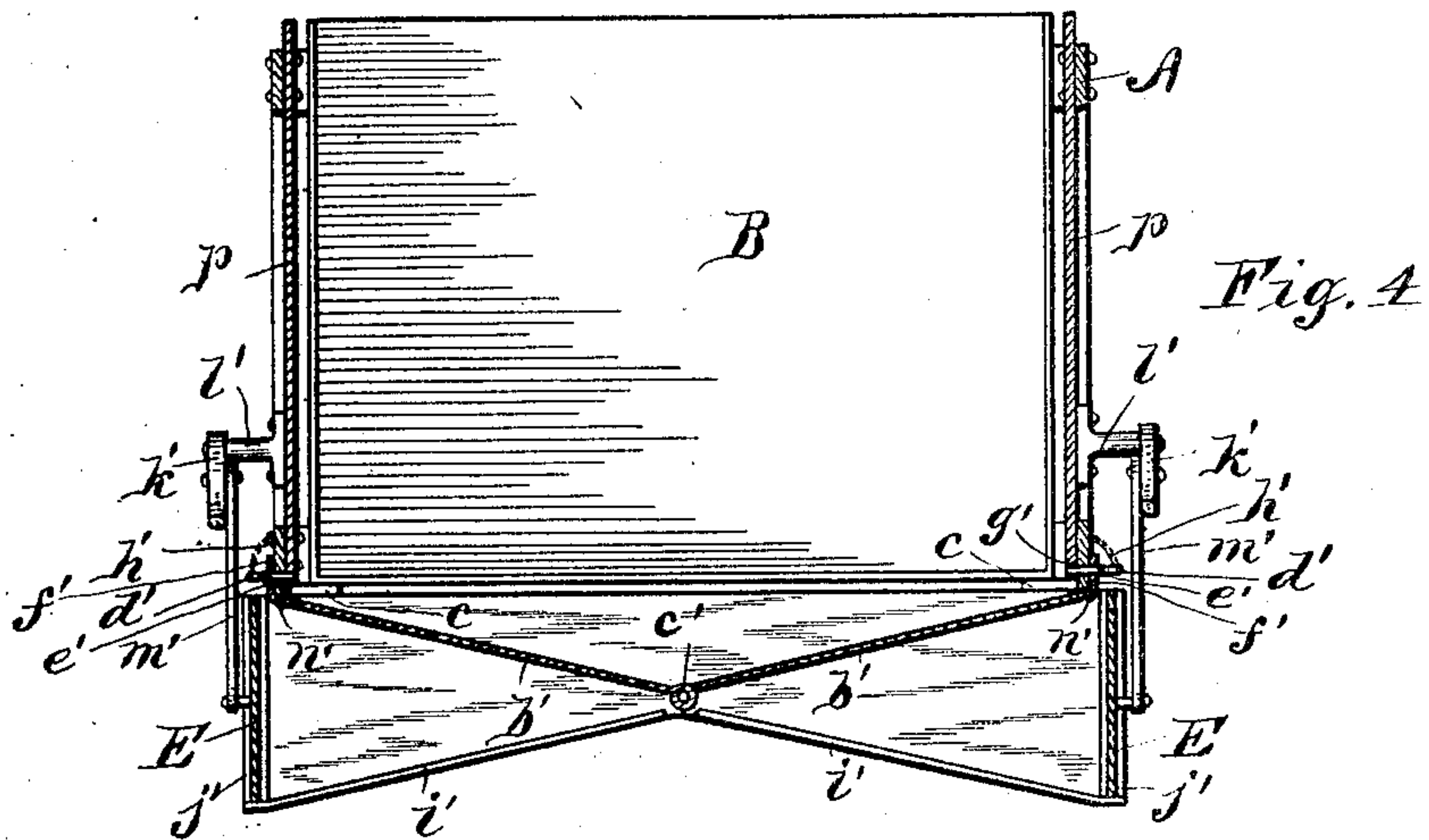
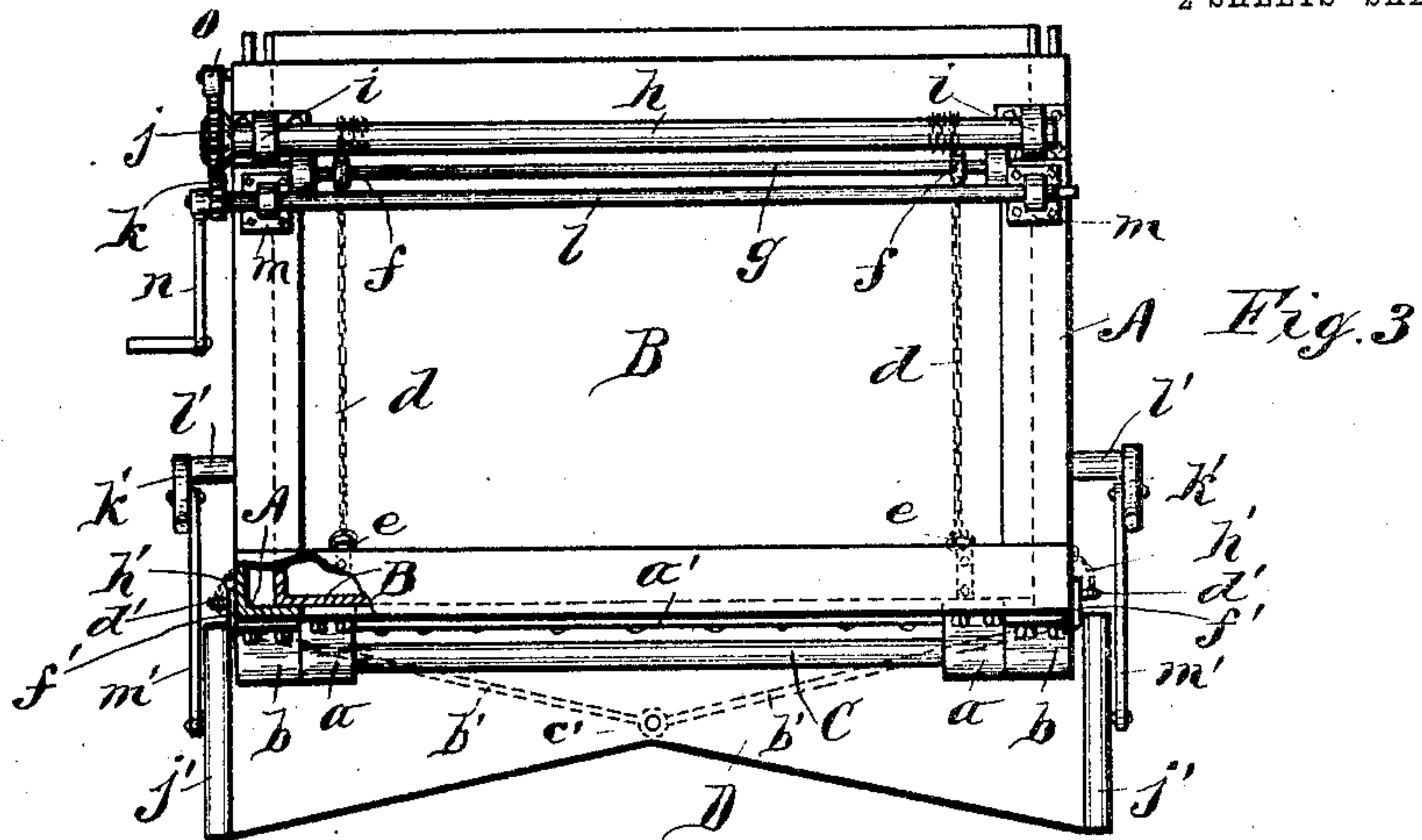
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and Homer A. Tiffany  
by J. J. Laas  
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# UNITED STATES PATENT OFFICE.

EDWARD DALTON AND HOMER A. TIFFANY, OF SYRACUSE, NEW YORK.

## DUMPING-WAGON.

No. 832,538.

Specification of Letters Patent.

Patented Oct. 2, 1906.

Application filed September 2, 1905. Serial No. 278,789.

*To all whom it may concern:*

Be it known that we, EDWARD DALTON and HOMER A. TIFFANY, of Syracuse, in the county of Onondaga, in the State of New York, have invented new and useful Improvements in Dumping-Wagons, of which the following, taken in connection with the accompanying drawings, is a full, clear, and exact description.

This invention relates to wagons of that class in which the box is composed of two sections pivotally supported upon a frame and adapted to be tilted independently endwise toward each other to dump the load at the center of the wagon.

The purpose of this invention is to provide a wagon of this character with simple, efficient, and easily-operated mechanism for tilting the box-sections and to provide a chute by which the discharge of the load can be readily and conveniently controlled and which shall serve to permit discharging at either side of the wagon.

To that end the invention consists in the novel construction and combination of the component parts of the dumping-wagon hereinafter described, and set forth in the claims.

In the accompanying drawings, Figure 1 is a side view of a portion of a dumping-wagon embodying our improvements and showing by dotted lines the box-sections in dumping positions. Figs. 2 and 3 are plan and end views, respectively, of the same. Fig. 4 is a transverse section taken on the dotted line X X in Fig. 1. Fig. 5 is an enlarged detail view of the mechanism for tilting a box-section, and Fig. 6 is an enlarged longitudinal section of an end portion of the chute.

Similar letters of reference indicate corresponding parts.

A denotes a metallic frame which may be of any suitable construction and is designed to be supported upon the running-gear of the wagon in any convenient manner. (Not necessary to be shown.) However, in order to combine lightness and strength we prefer to form this frame partly of the well-known angle-bars, particularly the bottom members which support the wagon-box. The said wagon-box is composed of two sections B B, preferably formed of suitable sheet metal and provided with adjacent open ends and with a space between their bottoms. These box-sections normally rest with the marginal portions upon the horizontal portions of the bottom angle-bars of said frame,

and they are of different widths, so as to permit one to pass within the other during the operation of dumping the same, as more clearly shown in Fig. 2 of the drawings.

To the bottom of each section B adjacent to its inner end is rigidly secured a pair of cranks *a a*, which are in turn fastened to a transverse shaft C, mounted in suitable journal-boxes *b b*, secured to the bottoms of the longitudinal angle-bars of the frame, as shown in Figs. 1 and 3 of the drawings. The said box-sections B B, normally resting upon the lower bars of the frame and pivoted thereto, as described, are adapted to be tilted endwise toward each other, and thereby dump their contents at the center of the wagon, as indicated by dotted lines in Fig. 1 of the drawings. To permit this tilting of the sections, the horizontal portions of the aforesaid angle-bars are cut away below the pivoted ends of the sections, as indicated at *c c*.

The inner edges of the sides of the box-sections are inclined from the corresponding edges of the bottoms so as to cause the sides of one section to slightly overlap those of the other, and thereby insure their passing one within the other during their tilting movements. We provide the said box-sections with separate mechanisms, by which the same may be tilted independently into dumping positions. Each of said mechanisms consists of a pair of chains or cables *d d*, connected at one end to the outer end of the section near the lower corners thereof, and preferably attached to short arms *e e*, projecting from the section. These chains *d d* extend upwardly and over grooved wheels *f f*, journaled on a transverse shaft *g*, secured suitably to the frame A, and they are connected at their upper ends to a transverse shaft *h*, journaled in brackets or boxes *i i*, mounted on the frame and disposed slightly above the shaft *g*. To one end of the shaft *h* is fastened a gear *j*, which meshes with a pinion *k*, secured to a shaft *l*, disposed below the shaft *h* and journaled in brackets *m m*, fastened to the said frame, as more clearly shown in Figs. 3 and 5 of the drawings. The shaft *l* is provided with a hand-crank *n* for turning the same, whereby the shaft *h* is rotated in opposite direction and the chains *d d* caused to be wound thereon, which tilts the box-section into dumping position. The aforesaid grooved wheels *f f* are adapted to shift longitudinally on the shaft *g*, so as to allow the chains *d d* to be wound evenly on



the shaft *h*, and thus prevent binding of the chains.

To sustain the box-section in its tilted position, we employ a dog *a*, pivoted to the frame *A* and adapted to engage the teeth of the gear *j*. To the inner sides of the said frame are rigidly secured vertical plates *p p*, which overlap the sides of the box-sections and serve to prevent leakage of the material thereat. To the under side of the frame *A* is secured a transverse chute *D*, disposed under the inner or dumping ends of the said box-sections *B B*. Said chute consists, preferably, of a sheet-metal box having the upper edges of its sides formed with outwardly-extending flanges *a' a'*, which are riveted or bolted to the horizontal portions of the lower angle-bars of the frame, as more clearly shown in Fig. 1 of the drawings. The bottom of this chute is divided transversely to form sections or plates *b' b'*, which are normally inclined toward each other and are hinged together, as indicated at *c'*. These bottom sections or plates of the chute are held in their normal positions by means of pins *d' d'*, inserted removably through apertures *e' e'*, provided in tongues *f' f'* on the outer edges, and through coinciding apertures *g' g'*, provided in the vertical portions of the lower angle-bars of the frame *A*. When the bottom sections or plates of the chute are in this position, they form part of the bottom of the wagon-box. The aforesaid pins *d' d'* are preferably connected to the frame *A* by means of chains *h' h'* or other means to prevent their being lost when removed. By hinging the bottom sections of the chute as described it will be seen that each can be dropped into outwardly-inclined position independently of the other, and thus permit discharging the load at either side of the wagon by simply removing the said pin *d'*. The bottom sections are supported in the latter position by means of flanges *i' i'*, extending inwardly from the correspondingly-inclined edges of the sides of the chute, as more clearly shown in Fig. 4 of the drawings. To effectually control the discharge of the load, we provide the ends of the chute with vertically-sliding gates *E E*, supported in guides *j' j'*, consisting, preferably, of grooves or channels formed at the end edges of the sides of the chute, as more clearly shown in Figs. 2, 4, and 6 of the drawings. Each of the said gates is operated by means of a hand-lever *k'*, pivoted to the plate *p*, as indicated at *l'*, and connected intermediate its ends to the gate by a vertical rod *m'*, as clearly illustrated in Figs. 1 and 4 of the drawings. To prevent the aforesaid tongues *f' f'* from binding on the inner faces of the gates when the bottom sections of the chute are dropped to discharging positions and to guard against their being bent or broken, we prefer to hinge the same to the bottom sections, as indicated at *n'*.

What we claim as our invention is—

1. In a dumping-wagon, the combination with a frame comprising longitudinal bottom bars, of a box composed of two independent sections having their bottoms normally resting upon said bars and pivotally connected to the under sides thereof, said sections being adapted to be tilted endwise toward each other and to pass one within the other, whereby the inner ends of the bottoms are carried below the said bars, separate mechanisms for independently tilting the sections, and a chute consisting of a box having its sides rigidly fastened to the under side of the frame and a movable bottom serving to normally support part of the load and operative for discharging at either side of the wagon as set forth.

2. In a dumping-wagon, the combination with a rigid frame comprising longitudinal bottom bars, of a box composed of two independent sections having open inner ends and normally resting upon said bars and pivotally connected to the under sides thereof, whereby they may be tilted endwise toward each other to pass one within the other, separate mechanisms for independently tilting the box-sections, each comprising a suitably-rotated transverse shaft journaled on the upper portion of the end of the frame, suitably-supported wheels disposed back of and slightly below said shaft, and chains connected at one end to the lower portion of the outer end of the section and traveling over said wheels and connected at their other ends to said shaft to be wound thereon as set forth.

3. In a dumping-wagon, the combination with a suitable frame, of a box composed of two independently-tiltable sections, separate mechanisms for tilting the sections, each consisting of a transverse shaft journaled on the upper portion of the end of the frame, a grooved wheel supported on the frame adjacent to said shaft and adapted to shift longitudinally in relation thereto, a chain connected at one end to the outer end of the section near the bottom thereof and traveling over said wheel and connected at its opposite end to the said shaft, and suitably-operated gears for rotating said shaft, and a chute supported transversely under the aforesaid frame normally serving to support part of the load and adapted to discharge at either side of the wagon as set forth.

4. In a dumping-wagon the combination with a box composed of two sections adapted to be tilted toward each other, of a chute supported transversely under the dumping ends of said sections and having its bottom formed of two hinged plates normally sustaining part of the load and adapted to be operated independently for discharging the load at either side of the wagon as set forth.

5. In a dumping-wagon, the combination with a box composed of two sections having pivotal supports, and means for tilting the



same endwise, one toward the other, of a chute supported transversely under the dumping ends of the sections and provided with a bottom composed of two pivoted  
 5 plates normally inclined toward each other to sustain part of the load and adapted to be independently inclined outward to discharge the load at either side of the wagon, means independent of the chute for sustaining the  
 10 plates in their normal positions, and means on the said chute for sustaining the plates in discharging positions as set forth.

6. In a dumping-wagon, the combination with a box composed of two sections adapted  
 15 to be tilted endwise toward each other, and means for tilting the same, of a sheet-metal chute supported transversely under the dumping ends of the sections and composed of a box having rigid sides and hinged bottom  
 20 sections adapted to discharge the load at either side of the wagon, vertical guides formed on the ends of the chute, and suitably-operated gates sliding in said guides as set forth.

7. In a dumping-wagon, the combination 25 with a frame, and the box supported thereon and having an opening in its bottom, of a suitably-supported chute disposed transversely under said opening and consisting of a sheet-metal box having its sides rigidly se- 30 cured to the underside of the said frame, each side being formed at its lower edge with two flanges inclined from the center toward the opposite ends of the chute, and the bottom composed of two hinged plates normally in- 35 clined toward the center to support part of the load, said bottom plates being adapted to be independently inclined outwardly to rest upon the flanges of the sides, and thereby discharge the load at either side of the wagon, 40 and means for sustaining the bottom plates in their normal positions as set forth.

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Witnesses:

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