(No Model.) 5 Sheets—Sheet 1.

C. S. JONES.

MACHINE FOR EXCAVATING.

No. 384,041. Patented June 5, 1888.

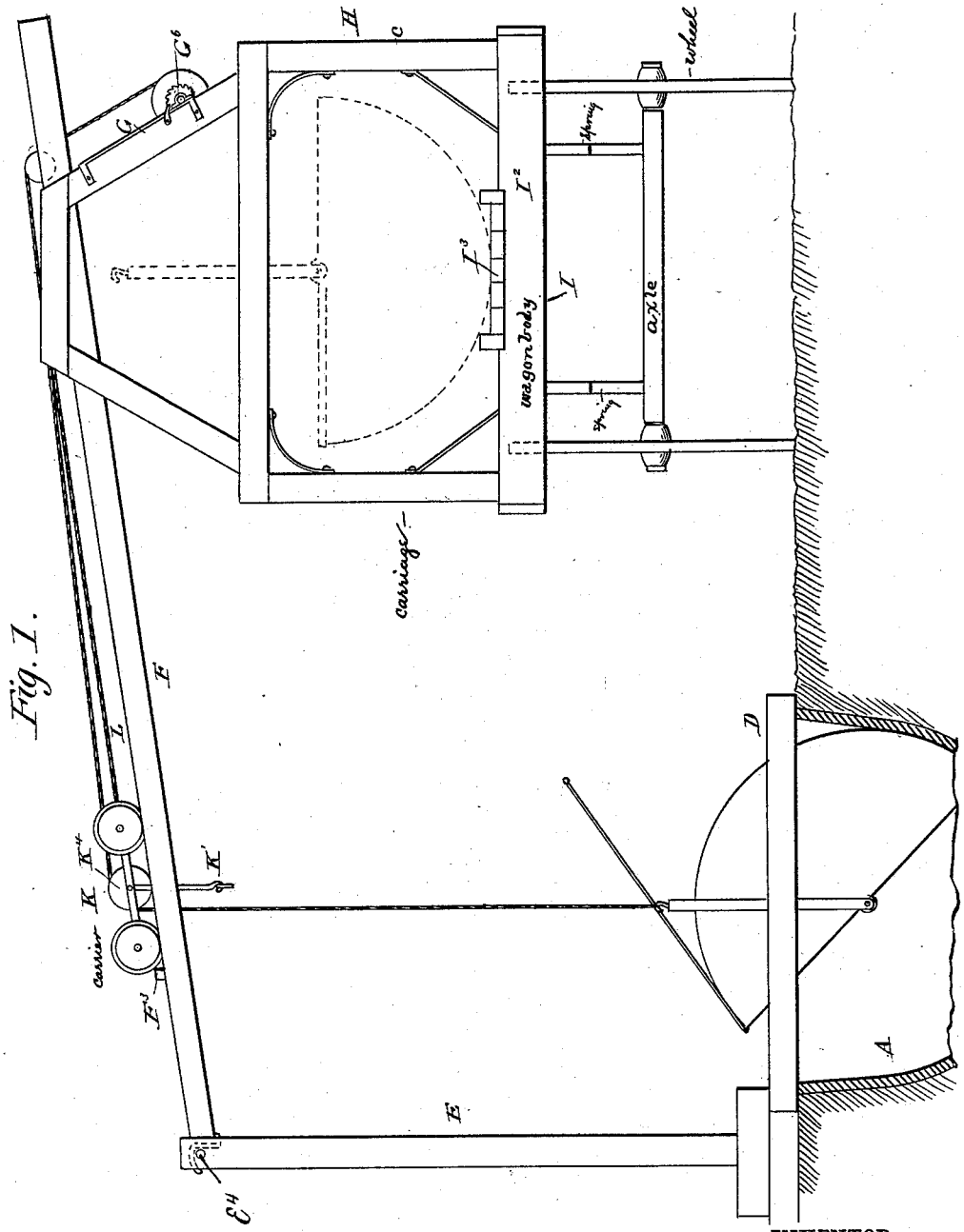

Fig. 1.

WITNESSES:

C. Clark.

C. Sedgwick

INVENTOR:

C. S. Jones.

BY Munn & Co

ATTORNEYS.

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C. S. JONES.

MACHINE FOR EXCAVATING.

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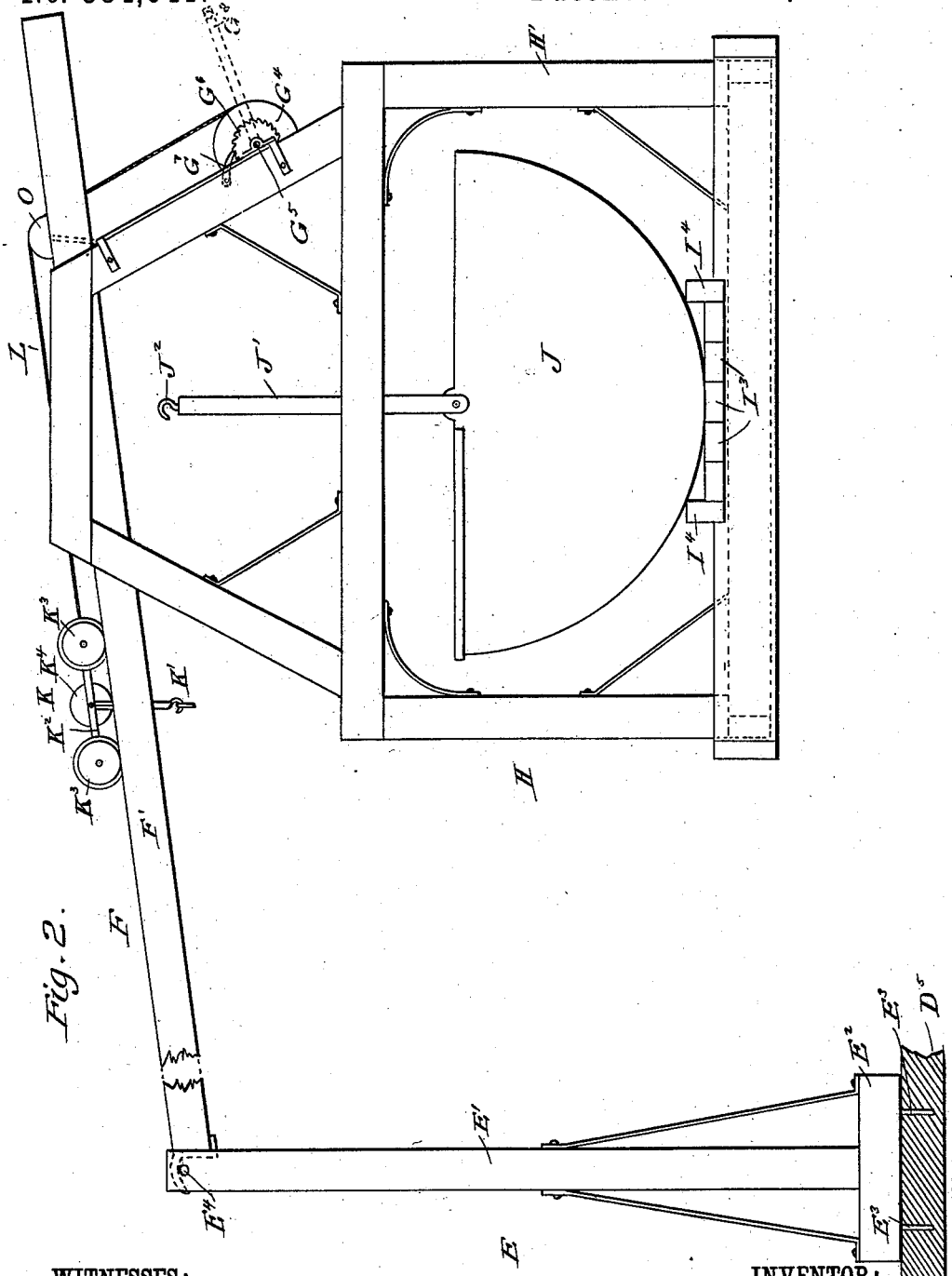

Fig. 2.

WITNESSES:

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INVENTOR:

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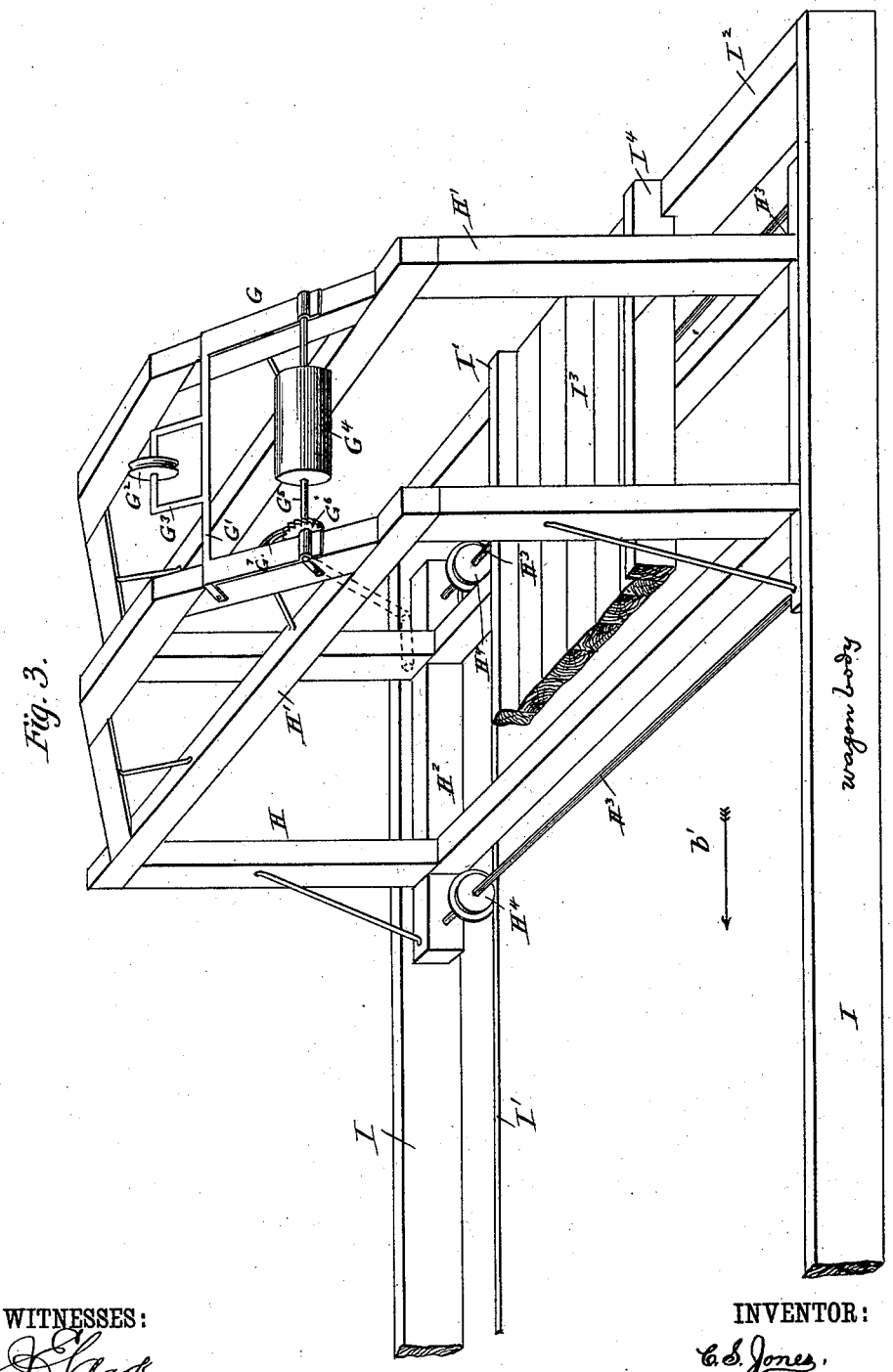
C. S. JONES.

MACHINE FOR EXCAVATING.

No. 384,041. Patented June 5, 1888.



WITNESSES:

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C. Sedgwick.

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(No Model.)

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C. S. JONES.

MACHINE FOR EXCAVATING.

No. 384,041. Patented June 5, 1888.

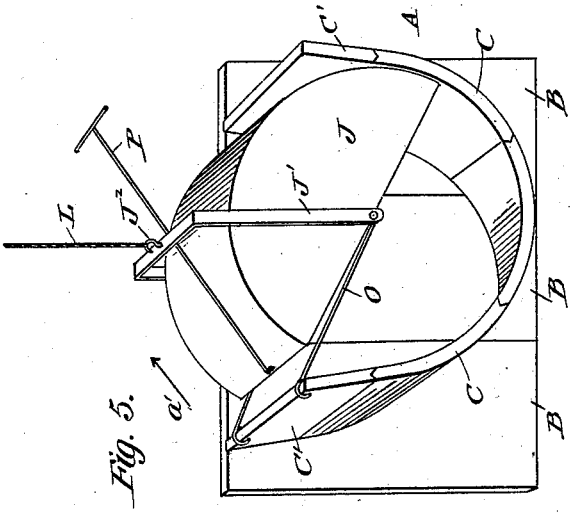

Fig. 5.

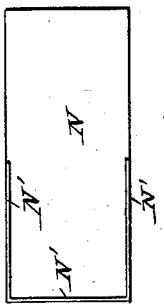

Fig. 15.

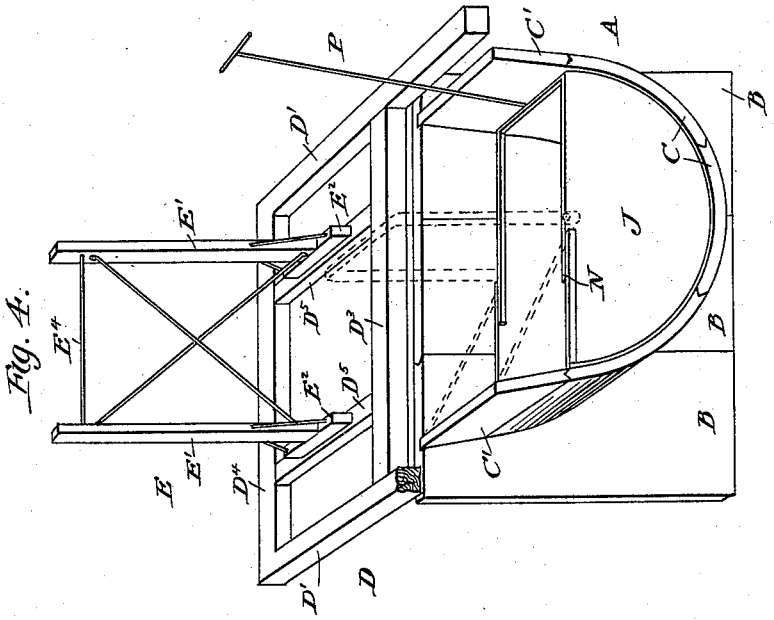

Fig. 4.

WITNESSES:

J. L. Clark.

C. Sedgwick.

INVENTOR:

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(No Model.) 5 Sheets—Sheet 5.

C. S. JONES.

MACHINE FOR EXCAVATING.

No. 384,041. Patented June 5, 1888.

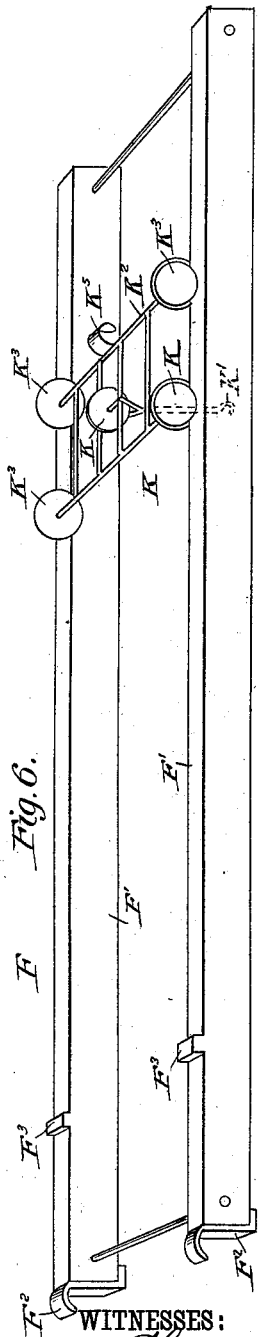

Fig. 6.

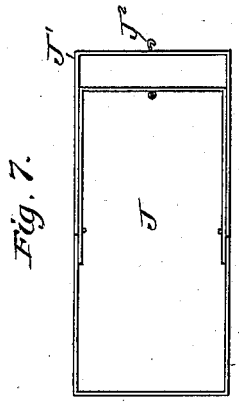

Fig. 7.

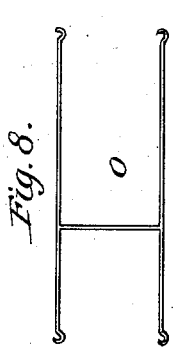

Fig. 8.

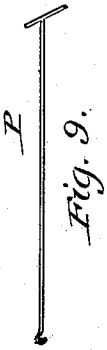

Fig. 9.

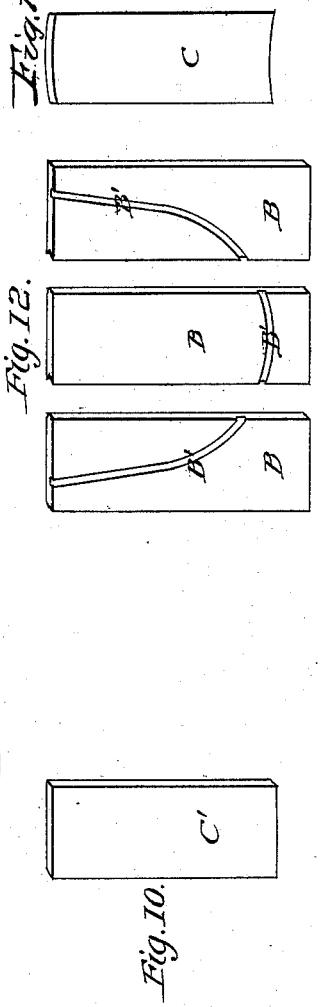

Fig. 11. Fig. 12. Fig. 10.

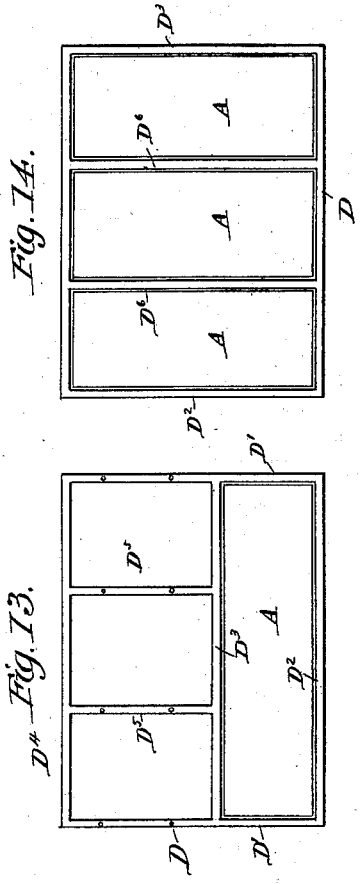

Fig. 14. Fig. 13.

WITNESSES:

C. Clark.

E. Sedgwick.

INVENTOR:

C. S. Jones.

BY Munn & Co.

ATTORNEYS.

UNITED STATES PATENT OFFICE.

CHARLES S. JONES, OF YATES CENTRE, KANSAS.

MACHINE FOR EXCAVATING.

SPECIFICATION forming part of Letters Patent No. 384,041, dated June 5, 1888.

Application filed July 2, 1887. Serial No. 243,262. (No model.)

To all whom it may concern:

Be it known that I, CHARLES S. JONES, of Yates Centre, in the county of Woodson and State of Kansas, have invented a new and Improved Scavenger, of which the following is a full, clear, and exact description.

The object of my invention is to provide a new and improved scavenger by which privy-vaults can be conveniently emptied of all their contents and the latter transported to any desired place.

The invention consists in the construction and arrangement of various parts and details and combinations of the same, as will be fully described hereinafter, and then pointed out in the claims.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar letters of reference indicate corresponding parts in all the figures.

Figure 1 is a side elevation of my improvement in position at the privy-vault. Fig. 2 is an enlarged side elevation of my improvement. Fig. 3 is a perspective view of the supporting-frame. Fig. 4 is a perspective view of the pan or scoop in position in the vault. Fig. 5 is a similar view of the same, with the pan or scoop in another position. Fig. 6 is a perspective view of the carrier and its frame. Fig. 7 is a plan view of the pan. Fig. 8 is a perspective view of the hook-frame for keeping the pan or scoop in place in the vault. Fig. 9 is a perspective view of the handle for turning the pan. Figs. 10 and 11 are perspective views of the bottom plates of the vault. Fig. 12 represents perspective views of the end plates of the vault. Figs. 13 and 14 are plan views of sills for different-shaped vaults, and Fig. 15 is a plan view of the pan-lid.

The privy-vault A, for which my improved scavenger is intended, has each end made of a number of plates, B, each provided with a groove into which fit the segmental bottom plates, C, so as to form a semicircular bottom, which is continued into the outwardly-inclined straight sides C′, fitted in a corresponding groove in the outermost end plate, B. The end and bottom plates of the vault are preferably of clay molded and burned in the usual manner, or may be of clay, cement, and gravel or coal-cinders of equal parts, also to be composed entirely of cast or sheet iron. In some places it may be necessary to use iron instead of the composition as above. Over the top edges of the vault A fits a sill-frame, D, consisting of the side beams D′ D′, connected with each other by the end beams, D^2 and D^3. The side beams D′ are lengthened rearwardly and are connected at their extreme ends by the beam D^4, which, with the beam D^3, supports the longitudinal beams D^5, supporting the frame E, consisting of the standards E′, united with each other and strengthened by suitable braces.

The standards E′ are each provided with a foot, E^2, having on its under side the downwardly-projecting pins E^3, which fit into corresponding apertures formed on the tops of the beams D^5 to hold the frame E securely in place on the sill-frame D. To the upper ends of the standards E′ is secured the transverse rod E^4, which supports one end of the carrier frame F, provided with the side beams F′ F′ united at their ends by suitable cross-rods, and each being provided on one end with a hook, F^2, adapted to be hooked over the cross-rod E^4 of the frame E. The other ends of the side beams F′ of the carrier frame F rest on the cross-rod G′ of the metallic frame G, (see Fig. 3,) secured to the rear of the side frames, H′ H′, of the carriage H. The side frames, H′ H′, are fastened to the open bottom frame, H^2, on the front and rear of which are mounted the shafts H^3, carrying the flanged wheels H^4, traveling on the rod I′, secured to the ends I^2 of the wagon-bed I, mounted on a wagon-truck of any approved construction. On the end beams, I^2, of the wagon-bed I is secured the floor I^3, having its side beams I^4 slightly raised, as shown in Fig. 3.

On the floor I^3 is to be placed the pan J after being filled with the contents of the vault A. The pan J is a semicircular receptacle open at the top and hung in its middle on the bail J′, provided at its upper end with the hook J^2, adapted to be hooked onto a hook or ring formed on the lower end of the rod K′, extending from the frame K^2 of the carrier K.

The frame K^2 is mounted on the wheels K^3, traveling on the beams F′ of the carrier-frame F, above described. In the middle of the frame K^2 is mounted to rotate the pulley K^4,

used for raising or lowering the pan J from or into the vault A. A hook, K^5, is formed on the frame K^2 of the carrier K, and is detachably connected with one end of the rope L, extending rearwardly and passing over the pulley G^2, mounted to rotate on the bracket G^3, fastened on the rod G′ of the frame G, above described. The rope L then passes over and around the drum G^4 of the windlass G^5 of any approved construction and mounted on the frame G. The windlass G^5 carries the usual ratchet-wheel, G^6, and the pawl G^7 to lock the drum G^4 in position, and the latter is operated by the crank-arm G^8 in the usual manner.

The pan J is provided with a cover, N, having the flanges N′ fitting over one-half of the top edges of the pan J. In order to hold the pan J in position in the vault A, I employ the hook-frame O, (shown in perspective in Fig. 8,) and provided at the ends with hooks, which fit over the pivot-pin of the bail J′ and the upper edge of the vault A, as shown in Fig. 5. To turn the pan J in the vault A, I make use of the handle-hook P, (illustrated in perspective in Figs. 4, 5, and 9.)

The operation is as follows: In order to empty the vault A, the privy which stands above the same is tipped over to the front—that is, in an opposite direction from the rearward extension of the sill-frame D. The standards E′ of the frame E are then set upon the beams D^5, as above described, after which the hooks F^2 of the carrier-frame F are hooked over the rod E^4, and the rear ends of the side beams F′ of the said carrier-frame K are placed on the rod G′ of the frame G, secured to the carriage H, which is held in proper position on the wagon-bed I, which is placed in a parallel line with the vault A. The empty pan J, held on the floor I^3, is now connected by its bail-hook J^2 with the hook or ring of the rod K′ of the carrier K, which is moved vertically over the pan J by operating the windlass G^5. The empty pan is now swung off of the floor I^3, and the windlass G^5 is operated so that the carrier K, which now supports the pan J, travels down the inclined side beams, F′, of the frame F until the front wheels, K^3, rest against the stop-blocks F^3. The end of the rope L, connected with the hook K^5 of the carrier K, is now disconnected and passed over the pulley K^4, and is then hooked on the hook J^2 of the bail J′, which is then disconnected from the rod K′. The windlass G^5 is operated so that the pan J now descends into the semicircular vault A, which is of corresponding size with said pan J. The latter is revolved on its bail J′ by the handle-hook P until it assumes the position shown in Fig. 5, the hook-frame O being in place to prevent the bail J′ from moving endwise. When the pan is in this upside-down position, then the operator pulls on the handle-hook P in the direction of the arrow *a′*, so that the pan J turns on its pivot on the bail J′ and scoops in all the contents of the vault A. The handle-hook P and the frame O are now disconnected, and the pan J is raised out of the vault A by operating the windlass G^5. The hook J^2 of the bail J′ is then again connected with the rod K′, and the rope L is disconnected from said hook J^2 and hooked over the hook K^5 of the carrier K, which is now caused to travel upward on the carrier-frame F by operating the windlass G^5 until the filled pan is placed on the floor I^3. The raised side beams, I^4, prevent the pan J from tipping over. The carrier-frame F and the frame E are now removed and packed onto the wagon-bed I, and then the privy is replaced over the vault A. Instead of using the rope L for raising and lowering the pan J into the vault A, I may use a separate rope passed over the pulley K^4 and connected with the bail J′ and operated by hand from the ground. The wagon carrying my machine and the filled pan J is then moved to another privy, and the above-described operation is repeated, and a second pan J is filled and placed alongside of the other filled pan J on the floor I^3 by moving the carriage H, with its wheels H^4 on the track-rods I′, the required distance in the direction of the arrow *b′*.

If two, three, or more vaults, A, are placed alongside of each other, as shown in Fig. 14, then the frame E is set up on the partition-beams D^6 or on the side beams, D^2 and D^3.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. The combination, with a semicircular vault, of a semicircular revoluble pan concentric with the inside curve of the vault, whereby by inserting one edge of the pan into the vault at one end thereof and rotating it therein, as described, the contents of the vault may be transferred to the pan at a single operation, substantially as set forth.

2. The combination, with the semicircular vault and the semicircular pan to fit therein provided with the bail, between the arms of which it may be rotated in the vault, of the holding-frame engaging the vault and the bail to hold the pan at about the center of the vault without interfering with the rotation of the pan, substantially as set forth.

3. The combination, with the semicircular vault and the semicircular pan having the bail pivoted centrally thereto, and between the arms of which the pan may be rotated, of the holding-frame having hooks engaging the vault and the axis of the pan, substantially as set forth.

4. The combination of the semicircular vault and the semicircular pan having the bail pivoted centrally thereto, and between the arms of which the pan may be rotated, and the hooked operating-rod for rotating the pan in the vault, substantially as set forth.

5. The combination, with the wagon-bed having a carriage movable longitudinally thereon, a longitudinal central flooring on the

wagon-bed between the opposite sides of the carriage, and a windlass on the carriage, of the carrier traveling at right angles to the wagon-bed and operated from the windlass, and a frame on which the carrier travels, whereby the carriage may travel on the wagon-bed without interfering with the load deposited thereon by said carrier, substantially as set forth.

6. The combination of the rectangular wagon-body I, having longitudinal rods or tracks I′ parallel with its side beams, the carriage traveling on said tracks, the floor I^3, secured to the end beams of the wagon-body between the tracks and above the base of the carriage, with the frame F, supported at its inner end on the said carriage at right angles to its direction of movement, and the carrier traveling on the frame F and operated from the carriage, substantially as set forth.

7. The combination, with the wagon-body I, tracks I′, parallel with the side beams, and the floor I^3, of less width than the space between the tracks, of the carriage H, consisting of the bottom frame, H^2, under the floor I^3, and having wheels mounted on the tracks, the side frames, H′, extending up from the bottom frame at opposite sides of the floor, and the windlass mounted on the side frames at right angles to their line of movement, substantially as set forth.

8. The combination, with the carriage H and its windlass, of the frame F, the carrier K, having wheels K^3, central pulley, K^4, hook K^5 on its rear end, and depending hooked rod K′, the rope L, extending from the windlass and detachably connected to the hook K^5, and the pan having a bail detachably suspended from the hooked rod, whereby, when the carrier reaches the desired point, the rope may be disconnected from the hook and passed over the central pulley and the pan removed from the hooked rod and connected with the rope, substantially as set forth.

CHARLES S. JONES.

Witnesses:
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J. W. DEPEW.