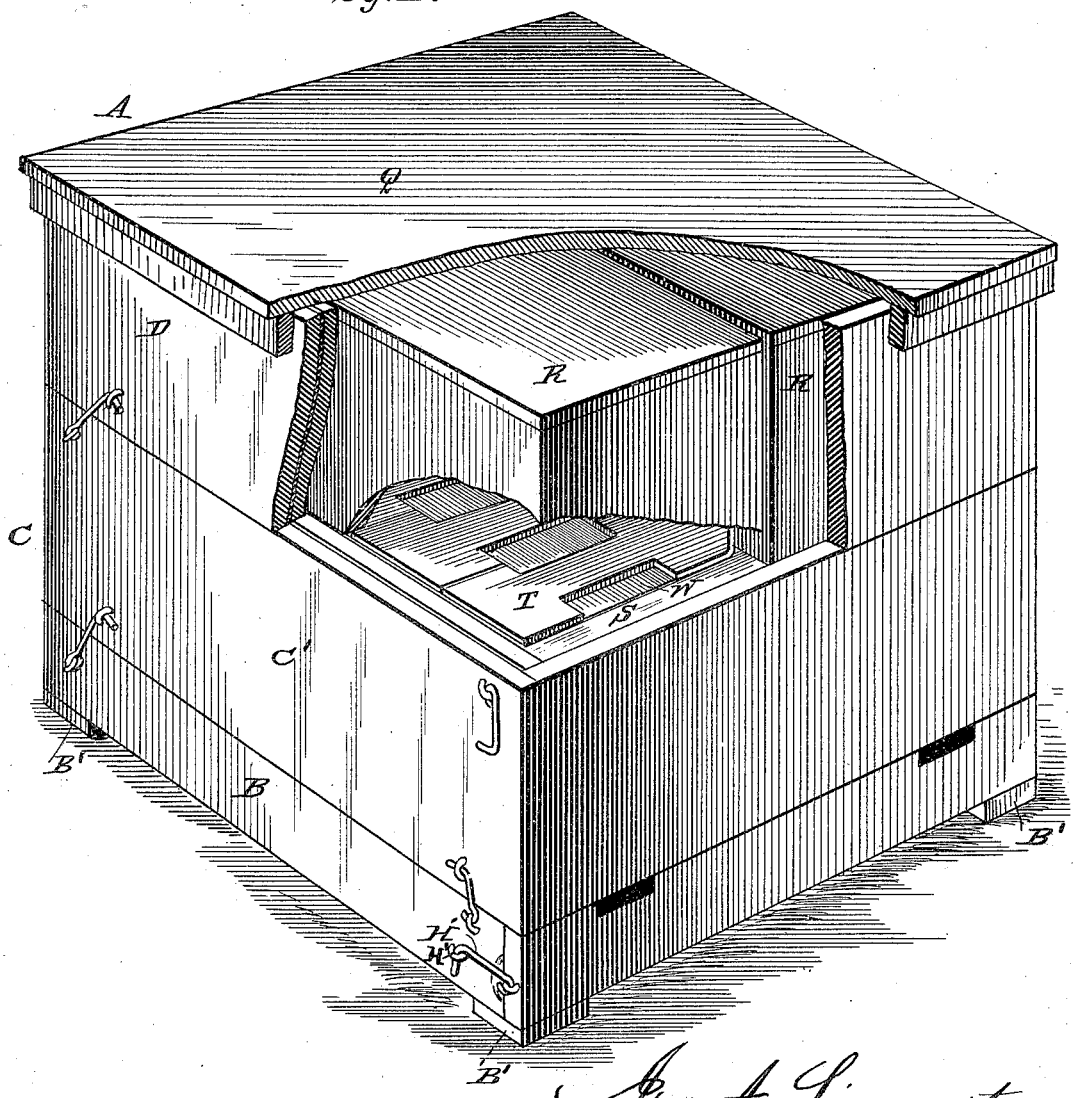
(No Model.) 4 Sheets—Sheet 1.

I. A. LIVINGSTON.

BEE HIVE.

No. 302,854. Patented July 29, 1884.

Fig. 1.



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(No Model.) 4 Sheets—Sheet 2.

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Fig. 2

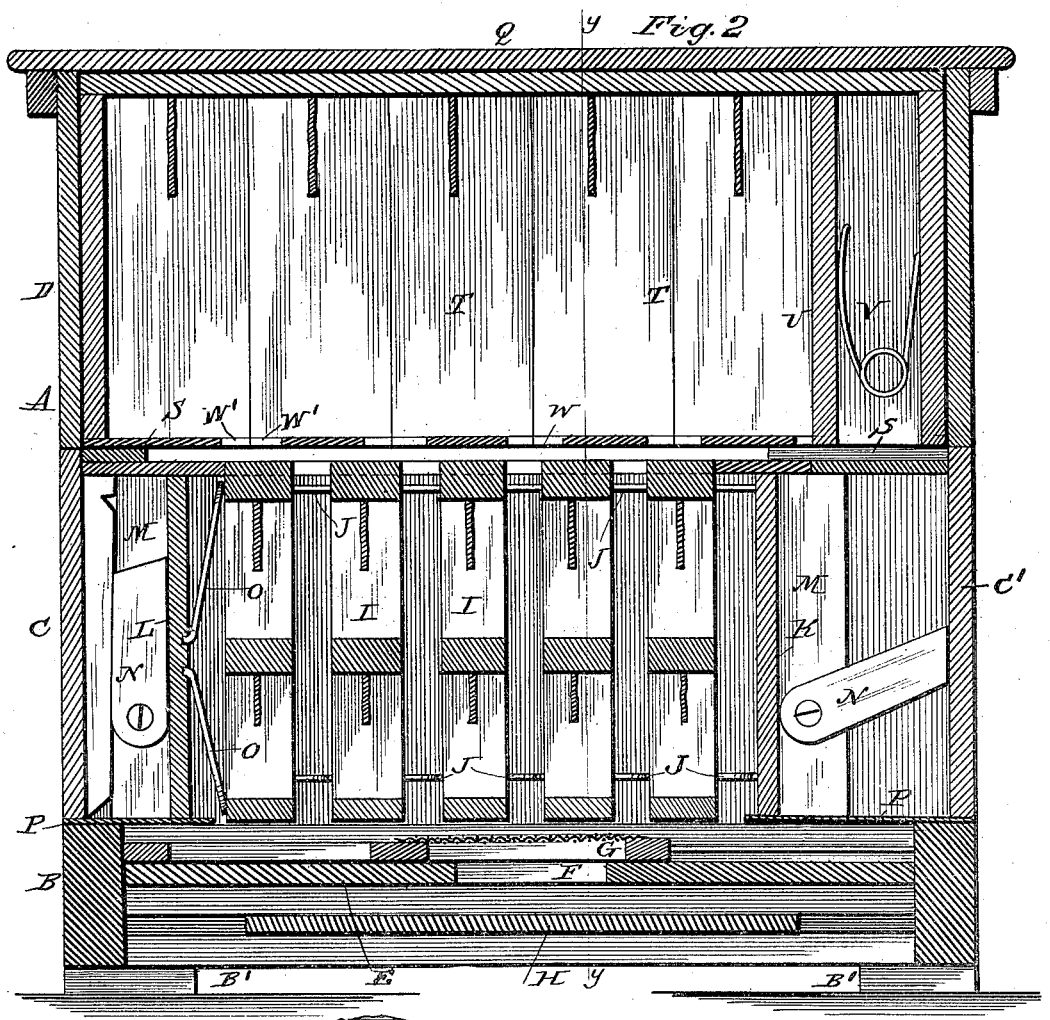
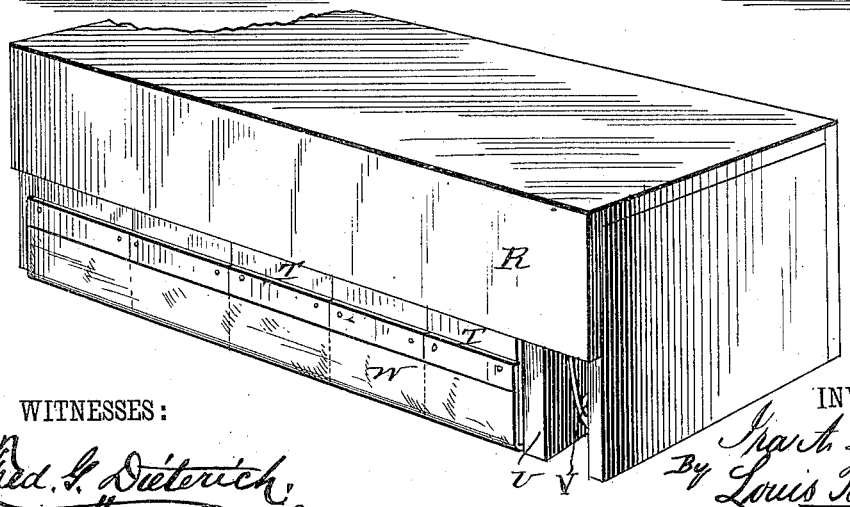


Fig. 6.



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(No Model.) 4 Sheets—Sheet 3.

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BEE HIVE.

No. 302,854. Patented July 29, 1884.

Fig. 3

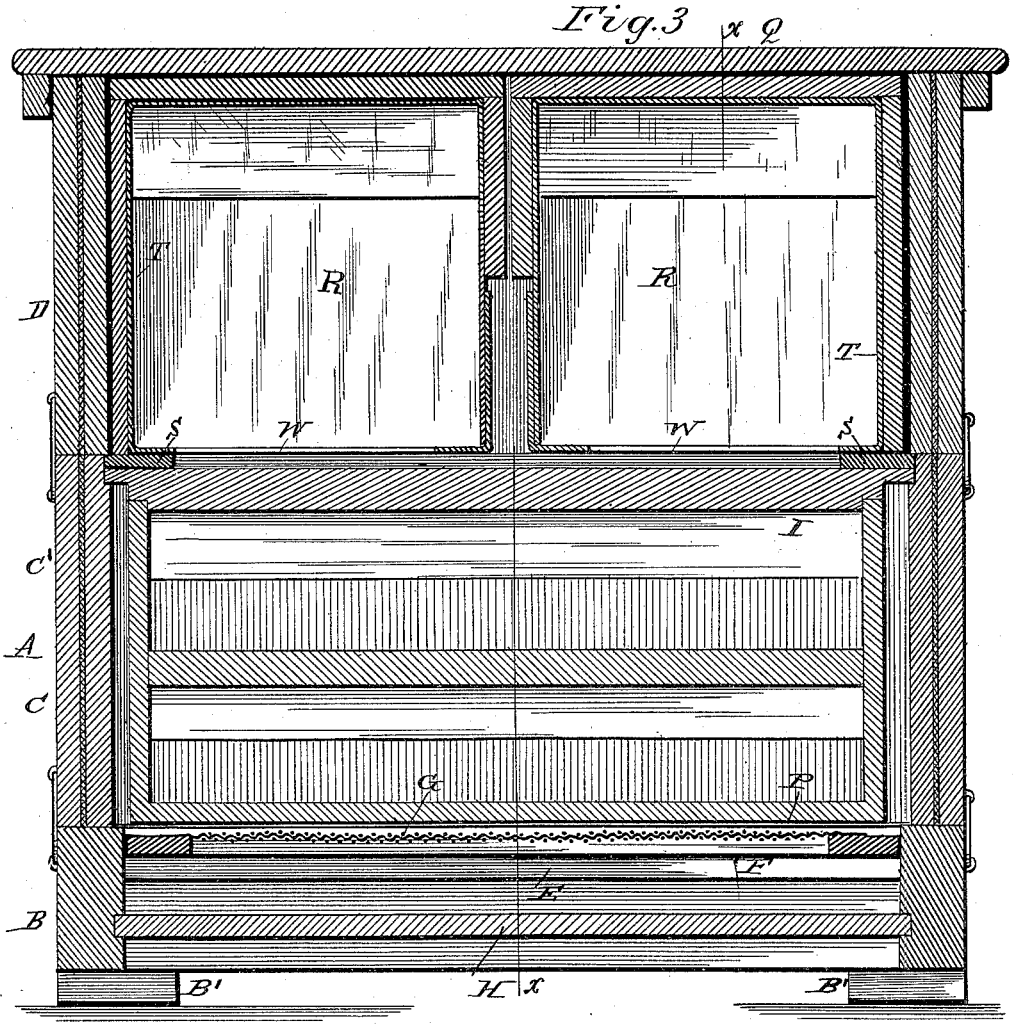

Fig. 7.

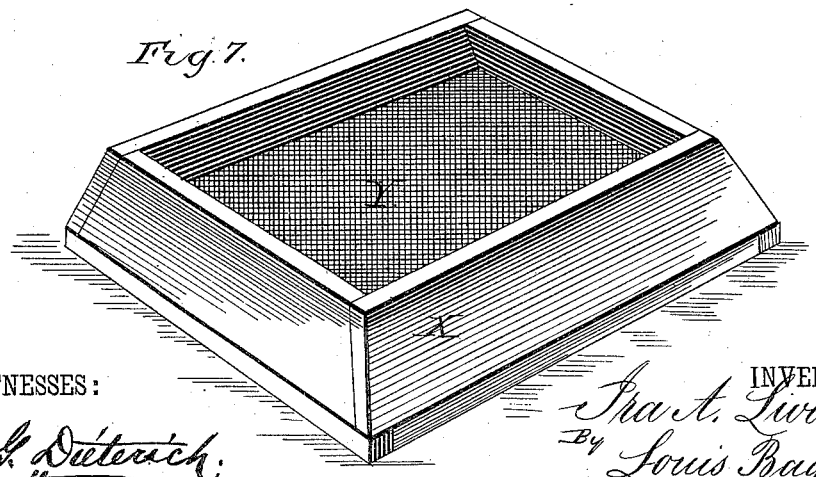

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Fig. 4.

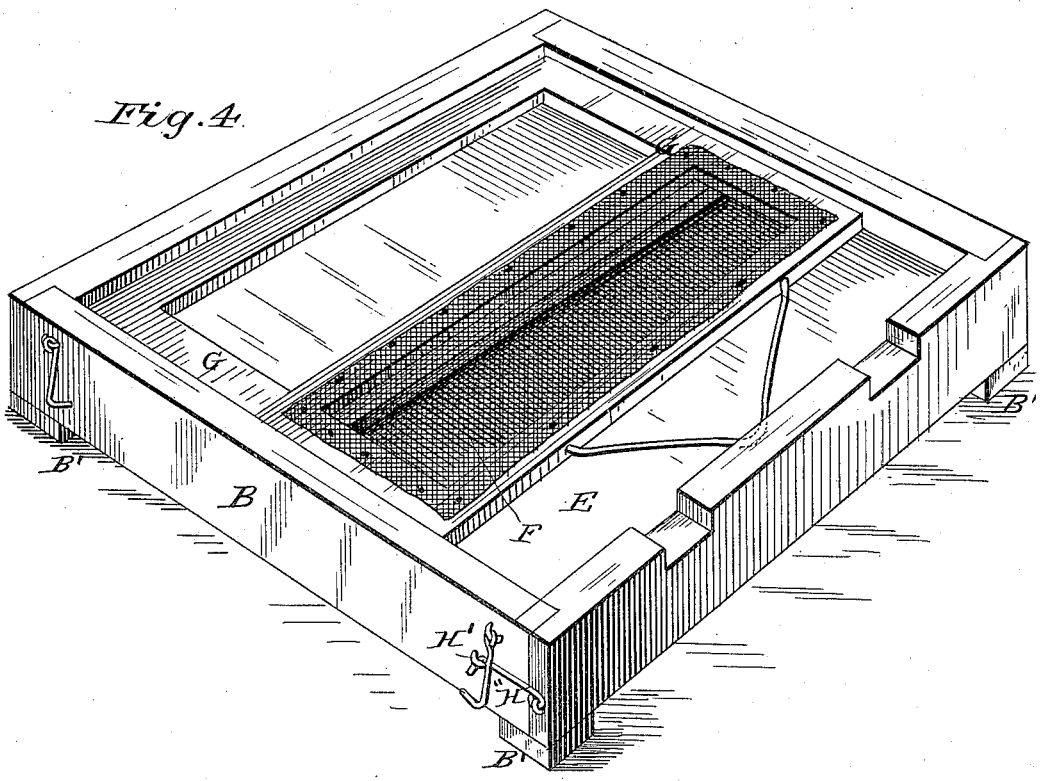
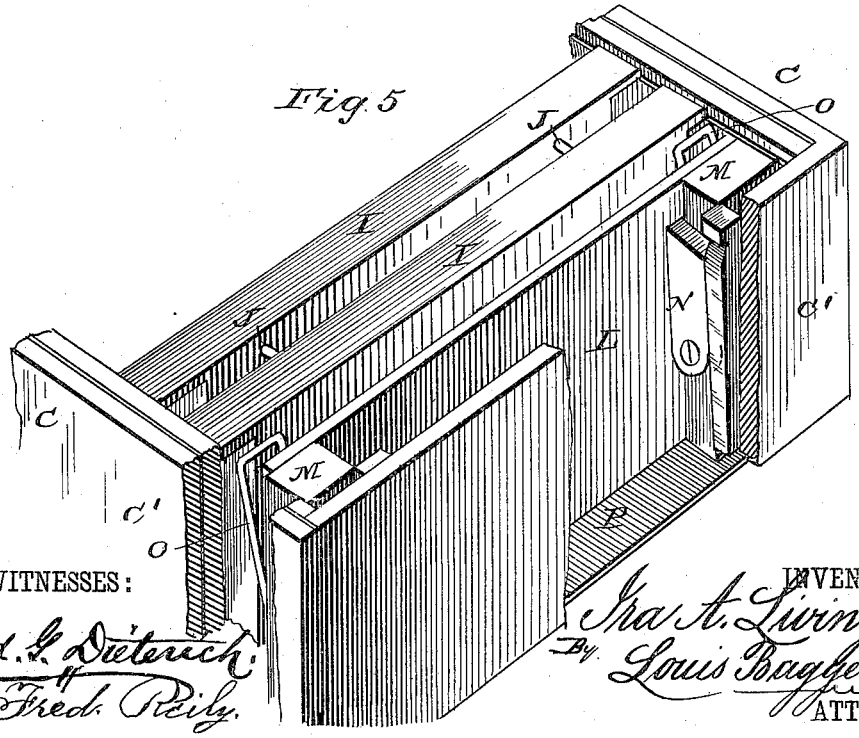


Fig. 5



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UNITED STATES PATENT OFFICE.

IRA A. LIVINGSTON, OF EASTMANSVILLE, MICHIGAN.

BEE-HIVE.

SPECIFICATION forming part of Letters Patent No. 302,854, dated July 29, 1884.

Application filed September 24, 1883. (No model.)

To all whom it may concern:

Be it known that I, IRA A. LIVINGSTON, a citizen of the United States, and a resident of Eastmansville, in the county of Ottawa and State of Michigan, have invented certain new and useful Improvements in Bee-Hives; and I do hereby declare that the following is a full, clear, and exact description of the invention, which will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, which form a part of this specification, and in which—

Figure 1 is a perspective top view of my improved bee-hive, with part of the upper casing broken away. Fig. 2 is a vertical sectional view of the same on line *x x*, Fig. 3. Fig. 3 is a similar view on line *y y*, Fig. 2, and Figs. 4, 5, 6, and 7 are perspective detail views, respectively, of the winter bottom, main body, surplus-honey box, and feeder, forming parts of my invention.

Similar letters of reference indicate corresponding parts in all the figures.

My invention has relation to improvements in bee-hives; and it consists in the improved construction and combination of parts of the same, as will be hereinafter more fully described and claimed.

In the accompanying drawings, A represents my improved bee-hive, which is made in three divisions or sections, B, C, and D.

B represents the lower section or wintering bottom, which is preferably used only in winter. The square frame of the section B is mounted upon blocks B′, and is provided near its top with a partition, E, having a slot, F, in its center, through which the bees may obtain access to the hive, the slot F being covered, when desired, by a sliding frame, G, covered with wire-cloth, which acts as a moth-trap. A second partition, H, is secured in the lower part of the casing B, at a little distance below the slot F, the said partition being of a less width than the frame B. One side of the frame of the lower section B is removably held in position by means of hooks H″, engaging with or fitting into staples H′, for the purpose of allowing the side to be removed when it is desired to slide back or open the frame G.

C represents the comb-box or breeding-box, which consists of a square frame, C′, in which the comb-frames I are placed. The breeding-box C, and also the upper section, D, are made with double sides or walls packed with paper, of any number of thicknesses, coated with a composition of bees-wax, rosin, and tallow, making the wall of the main body of the hive perfectly frost-proof. The comb-frames I are of ordinary construction, and consist of a rectangular frame having its upper edges extended to adapt them to rest upon the upper edges of the comb-box C, the comb-frames being provided with projecting pins J on one side, which serve to keep the said frames at a proper distance apart in the comb-box.

K L represent movable partitions, having space-blocks M and hinged arms N, by which the width of the space between the front and back walls of the breeding-box and the movable partitions may be regulated, the rear partition, L, being further provided with spring-arms O, upon its front side, which bear against the rear comb-frame and hold the same at a proper distance from the said partition. A metal plate or strip, P, is secured upon the lower side of the breeding-frame at either end, for the purpose of closing the bottom of the spaces between the front and back wall of the breeding-box and the movable partitions K L.

D represents the top section, which consists of a frame similar in construction to the frame of the section C, and upon which is placed the cover Q. Within this section are placed in summer the surplus-honey boxes, and in winter the feeder.

R represents the surplus-honey box, which is placed within the top section, D, with its lower edges resting upon wooden strips or pieces S, placed upon the top of the section C for that purpose. Within the surplus-honey box R are placed the removable honey-frames T, consisting of a single piece or strip of wood or other suitable material bent to form a square frame of such a size as to adapt it to fit closely within the honey-box R. A movable partition, U, is placed in one end of the honey-box, and a spring, V, secured between the end of the said box and the movable partition, presses the slide or partition firmly against the honey-frames in the box, so as to hold the said frames securely in position while

the surplus-honey box is being removed from the hive. The lower side of each frame is recessed on either edge at W', so that when the frames are placed in the honey-box an opening is left between each of the frames to admit the bees. The lower side of the frames T has a covering, W, preferably of paper, which prevents the bees from waxing the honey-frames fast to the main breeding-frames.

My improved feeder used in winter consists of a frame, X, having secured across it, near its lower edge, a wire screen or cloth, Y. This feeder is placed within the upper section, D, with its lower edges resting directly upon the upper edges of the comb-frames I, so as to allow the bees to cluster freely over the entire bottom of the feeder.

From the foregoing description, taken in connection with the accompanying drawings, the construction of my improved bee-hive will readily be understood without requiring further explanation. It will be seen that by constructing the lower section or winter bottom B in the manner described the partitions E and H will break the force of the wind and prevent it from directly striking the bees, while the sliding frame G gives the apiarian perfect control over his bees, allowing them to fly only at such times as he may deem advisable. The movable partitions K L serve to hold the comb-frames firmly in position, while in case of the hive becoming overcrowded late in the fall the movable partitions can be removed and additional comb-frames or breeding-frames placed in the comb-box. It will be seen that the honey-frames T can be readily and easily removed from the surplus-honey box, when filled with honey, without breaking the honey-comb, and at once packed for sale or shipment. The partition U can be moved back or forth, according to the number of frames in the honey-box, and will always serve to hold the said frames firmly in position.

Having thus described my invention, I claim and desire to secure by Letters Patent of the United States—

1. The combination, with the surplus-honey boxes R, of the removable honey-frames T, movable partition U, and spring V, adapted to hold the movable partition in position, as and for the purpose shown and set forth.

2. The lower section or winter bottom herein shown and described, consisting of a square frame provided with a partition, E, having a central slot, F, lower partition, H, and sliding moth-trap G, adapted to cover slot F, as and for the purpose shown and set forth.

3. The combination of the lower section, B, provided with a partition, E, having a central slot, F, lower partition, H, and sliding moth-trap G, adapted to cover slot F, comb-boxes or breeding-boxes C, having comb-frames I, provided with spacing-pins J, and movable partitions K L, provided with hinged arms N, and upper section, D, having a cover, Q, all constructed and arranged to operate substantially in the manner and for the purpose shown and described.

In testimony that I claim the foregoing as my own I have hereunto affixed my signature in presence of two witnesses.

IRA A. LIVINGSTON.

Witnesses:
CHARLES W. CALKINS,
JOHN A. OTTE.