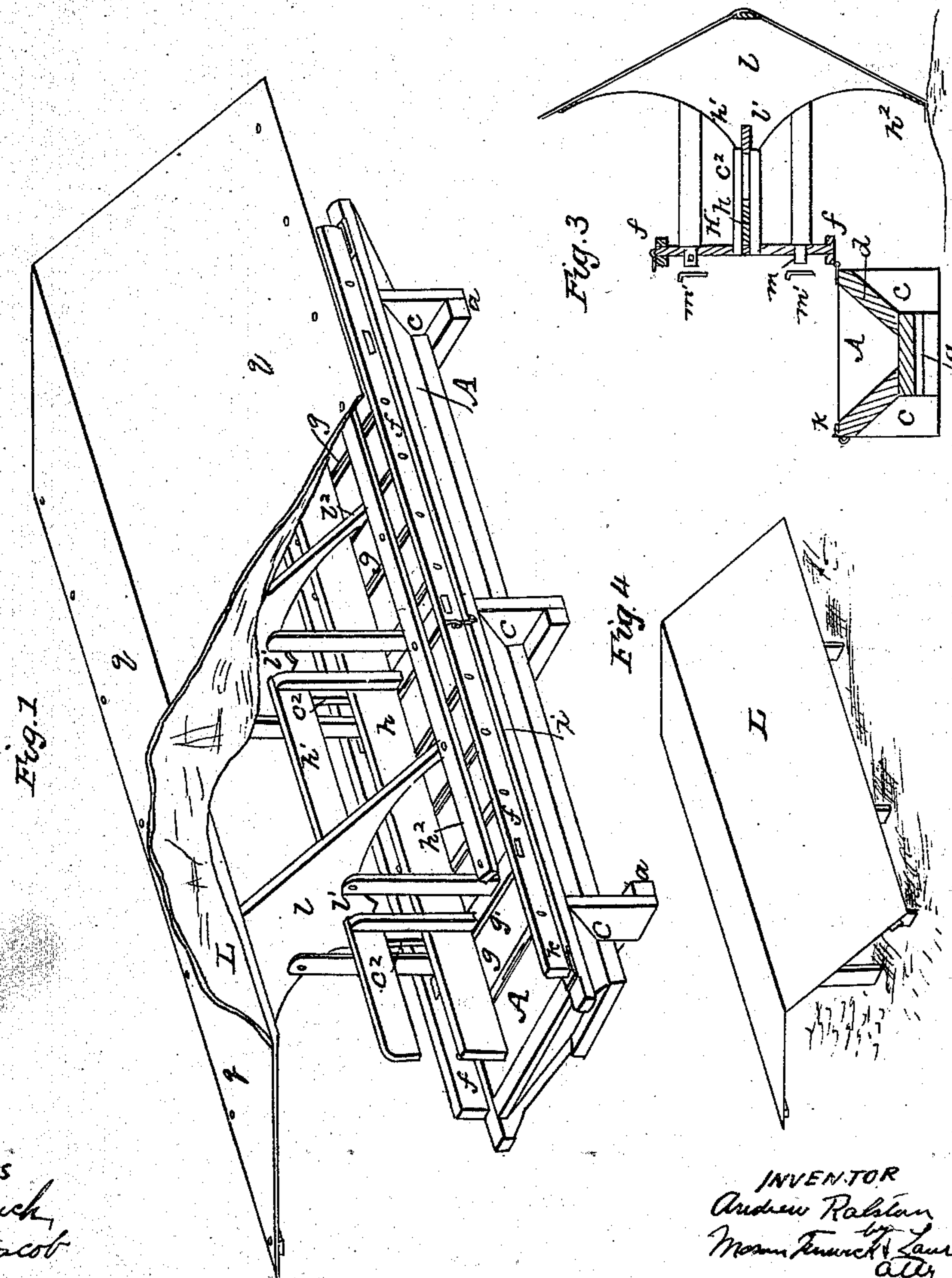
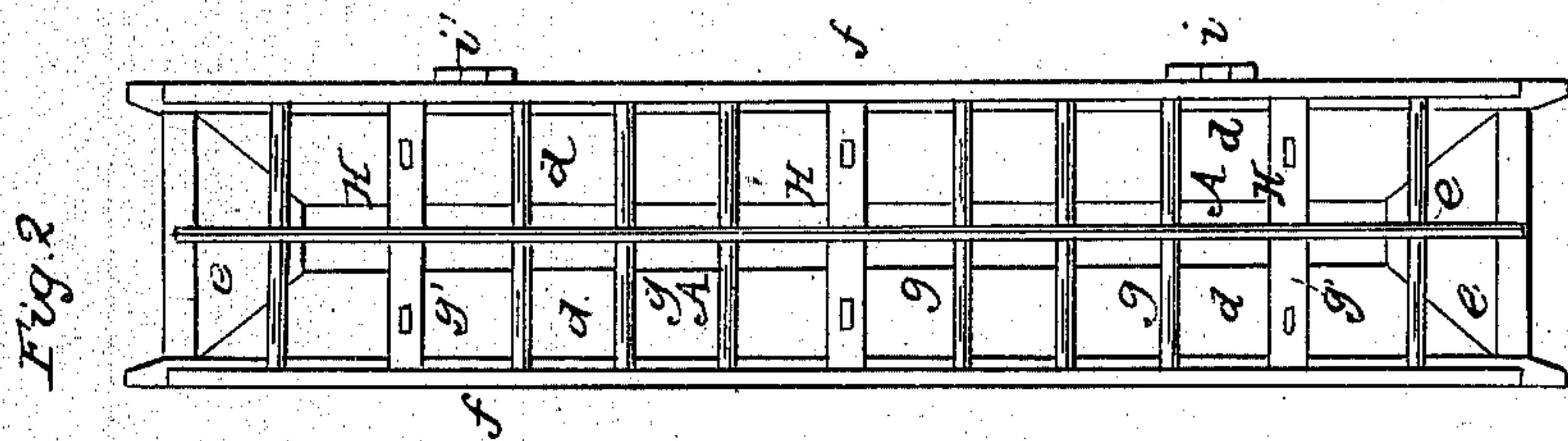


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Combined Rack and Trough for Feeding Stock.

No. 35,259.

Patented May 13, 1862.



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# UNITED STATES PATENT OFFICE.

ANDREW RALSTON, OF WEST MIDDLETOWN, PENNSYLVANIA.

## IMPROVEMENT IN COMBINED RACK AND TROUGH FOR FEEDING STOCK.

Specification forming part of Letters Patent No. 35,259, dated May 13, 1862.

### *To all whom it may concern:*

Be it known that I, ANDREW RALSTON, of West Middletown, in the county of Washington and State of Pennsylvania, have invented a Combined Rack and Trough for Feeding Sheep and other Stock; and I do hereby declare that the following is a full and exact description thereof, reference being had to the accompanying drawings, and to the letters of reference marked thereon, like letters in the several figures indicating the same parts, and in which drawings—

Figure 1 is a perspective view of my improved rack and trough with its stock-protector adjusted thereto; Fig. 2, a plan view of same with the protector removed; Fig. 3, a transverse section of Fig. 1, with the rack and protector thrown back for the insertion of hay, cornstalks, or like fodder within the trough; and Fig. 4, a perspective view of the convertible protector removed from the rack and in position as used for the purposes of a shed or outhouse for sheep during stormy or inclement weather.

The nature of my invention consists in so constructing a feed-trough for "stock," particularly sheep, that they may be allowed to range themselves around it while feeding thereout, and yet not be permitted to interfere with each other or jump into the trough, while the food, if of coarse fodder, is properly retained in the trough by the superincumbent rack, and the sheep while being fed are protected from the "weather," a portion of said "feed-trough" being capable of removal and separately used as a shed or outhouse for their protection.

My improved feed-trough consists, principally, of a trough, A, a rack, H, and a convertible protector, L; and to enable others skilled in the arts to make and use my invention, I will proceed to describe its construction and operation.

To make a feed-trough, say, sixteen feet in length, I take three cross-pieces, *a a a*, one and one-half inch thick, two and one-half inches deep, and two feet in length, placed parallel with each other, and at equal distances apart, as indicated in the drawings. On these cross-pieces I nail a bottom board, *b*, which should be ten inches wide, so that the ends of the cross-pieces will extend out an

equal distance on each side of the bottom board, as clearly shown in Fig. 1. Close to each edge of the bottom board I nail uprights *c* of inch-stuff, wide enough to fill out to the ends of the cross-pieces, as shown. These uprights are intended to support the side boards, *d*, and should be so shaped as to throw the side board at a sufficient angle to make the trough A two feet wide at the top, the side boards being ten inches wide. The end boards, *e*, should stand at about the same angle as the side boards, so that the trough may be easily cleaned out by sweeping from end to end with a broom or wisp of hay.

The rack part H should be made similar to a common ladder, and consists of side pieces, *f*, two and one-half inches wide, with "rungs" *g* two feet long and seven inches apart, the second rung, *g'*, from each end and the rung at the center of the rack being large enough to allow uprights *c' c'* to be mortised into them, and to support partition-boards *h* and *h'*, as shown, in order to prevent sheep from getting into the trough or jumping over. These partition-boards *h* and *h'* should be about two feet high. The rack should be so hinged to the trough, as clearly shown in Figs. 2 and 3, that when shut down there will be at least half an inch of space, as at *i*, between the trough and rack, in order that hay or other rough feed may not bind the joints of the hinges *i'* and hinder the rack from shutting down. For this purpose blocks *k* are secured on top of the side pieces, *d*, near their ends, as shown in Fig. 1, and upon which blocks the pieces *f* rest when the rack is in the position shown in last-named figure.

L, Fig. 4, designates the separate use of a convertible protector, it being detached from the rack and trough and utilized to screen stock, more especially sheep, during rainy and inclement weather. For this purpose, after being removed from the rack, the tenon ends of its uprights are firmly thrust into the ground, thus leaving the rack and trough in the condition as shown in Fig. 2. This protector L, which constitutes a part of my improved feed-trough for stock, is shown in position upon the rack and trough in Fig. 1, and consists of roof-supports *l l l*, (one not shown in the figure,) with slots or mortises cut out at their lower portions, as at *l'*, so as to em-



brace and fit upon the longitudinal partition-board  $h'$ , as shown. These roof-supports  $l$  are secured to uprights  $c^3 c^4$ , having their lower ends tenoned, as clearly shown in Fig. 3, and passing through mortises in the cross-pieces or rungs  $g'$ , and therein may be secured by wedges, as indicated, openings, as at  $m$ , being made in the tenons for the insertion of the wedges  $m'$ . To the ends of the supports  $l$ , as at  $l^2$ , longitudinal strips  $h^2$  are secured, and over which a water-proof covering,  $q$ , is stretched and permanently fastened, as illustrated in the figures.

It will thus be seen that when my improved feed-trough is in the condition as in part shown in Fig. 1 sheep may be fed and at the same time protected from the weather, and that when desired the protector may be removed and used separately, as indicated in Fig. 4.

For inserting coarse feed, as hay or corn-stalks, in the trough A, the rack may be thrown back, as in Fig. 3; but for ground or crushed feed this is not necessary. When coarse feed is placed in the trough, the rack may be turned down upon it, and secured in such position by a hook and staple, as shown, the cross-pieces  $g$  and  $g'$  in such case pressing upon the fodder and properly holding it in position to be fed to the sheep from between said cross-pieces, and so preserve the fodder from being too readily withdrawn from

the trough and wasted. The spaces between these cross-pieces are arranged so that but one animal will feed therein at one time, and the covering  $q$  extending over the animal while feeding, and thus affording a protection from foul weather, disposes him to quietly occupy but one position at the trough, so that the feed is economized by falling back into the trough instead of the surplus taken in the mouths of the animals being wasted by their usual constant change of position while in the act of feeding.

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

1. So combining a rack and trough that the superincumbent pressure of the rack shall hold coarse fodder in place in the trough, in the manner and for the purpose substantially as set forth.

2. A removable protector, L, adapted to be used upon the rack and trough or separate therefrom, in the manner and for the purpose substantially as set forth.

3. In combination with the rack H, having partitions  $h h'$ , the removable weather-protector L, substantially in the manner and for the purpose set forth.

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