

(No Model.)

J. H. RICE.
PORTABLE ROOF.

No. 477,701.

Patented June 28, 1892.

FIG 1

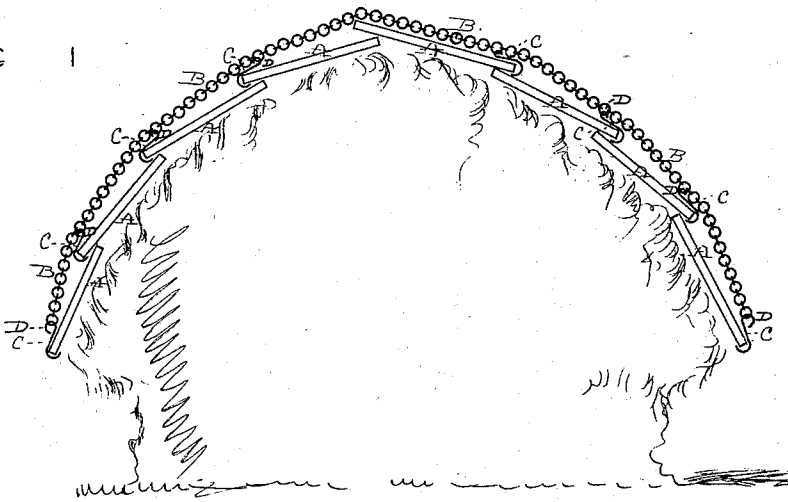


FIG 3

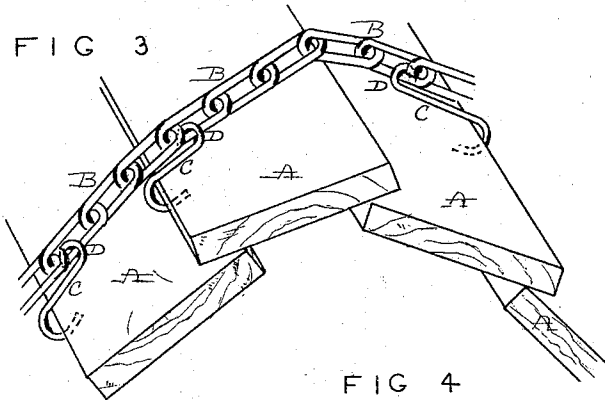


FIG 4

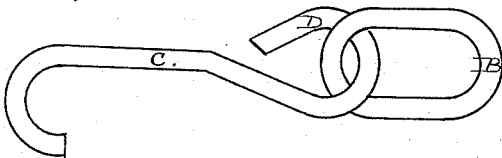
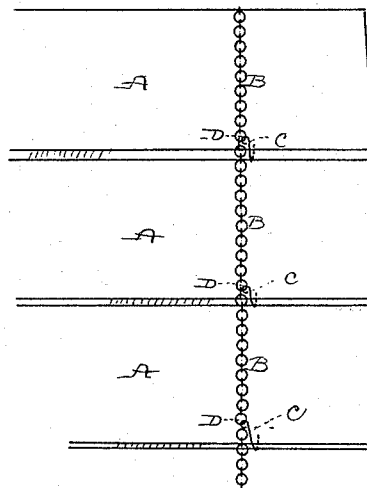


FIG 2



WITNESSES

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UNITED STATES PATENT OFFICE.

JOHN H. RICE, OF HENDERSON COUNTY, ILLINOIS.

PORTABLE ROOF.

SPECIFICATION forming part of Letters Patent No. 477,701, dated June 28, 1892.

Application filed October 9, 1890. Serial No. 367,591. (No model.)

To all whom it may concern:

Be it known that I, JOHN H. RICE, of the county of Henderson and State of Illinois, (whose post-office address is Keithsburg, Mercer county, Illinois,) have invented a certain new and useful Improved Portable Roof or Covering, suitable for the protection of ricks or stacks of hay, straw, or grain, or wherever a portable roof is desired; 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 belongs to make and use the same, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form a part of this specification.

The nature of my invention and its object consist in the construction and arrangement of a portable roof or covering suitable for the protection of stacks of hay, &c., or wherever a portable roof is desired, which shall be easily set up, taken down, and moved from place to place, and shall be easily adaptable to the size of the object covered, and in which covering-boards of different widths may be readily used, the principle of construction of which roof is that it shall consist of boards adapted to rest directly on the object covered and supported by holders adapted to receive the lower edges of the boards, said holders being shiftable on a supporting-chain, so that they may be moved to different positions on the chain in order to accommodate boards of different widths.

This my invention is embodied in and its object I attain by the novel features of construction and arrangement hereinafter described.

In the annexed drawings, Figure 1 represents an end elevation of my portable roof or covering; Fig. 2, a portion of a side elevation of said roof, showing arrangement of the chain and holders; Fig. 3, a portion of said roof, drawn in perspective, also showing arrangement of the chain and holders; and Fig. 4 represents a preferred form of the holder for supporting the boards, showing preferred means of attaching it to the chain.

The drawings show the roof composed of wooden boards A A A, which rest directly on the stack and are held in position by the hold-

ers C C C, adapted to receive the lower edges of the boards. These holders are constructed of any suitable material, preferably of stout steel wire, and in such a manner as to be readily attached to different parts of a supporting-chain B on the outside of the boards and to be moved to different positions on said chain.

The preferred mode of forming the holders is shown in Fig. 4 of the drawings, where a holder is shown formed, preferably, of stout steel wire with a partially-open eye D at its upper end, by which it is attached to a link of the chain B. I prefer to close this eye D sufficiently so that a link of the chain B may be forced into or out of it by the hand, the wire being somewhat elastic, and yet so that the link, being in the eye D, will remain until forced out, and I prefer to so form the holders C C C that, being attached to any position on the chain, they may not become accidentally detached, and thus be liable to be lost. These holders C C C are attached, preferably, at such distance apart on the supporting-chain as will allow each of the boards to be sufficiently overlapped by the board above to protect more effectively the hay or other object covered from the weather. Such an arrangement of chain and holders as above described is of course necessary near either end of the boards in order to secure them in position, and where a very long rick of hay, &c., is to be covered several sets of boards placed end to end or with ends somewhat overlapping may be used, each set of boards being sustained by such arrangement of chains and holders. Weights may be attached to the ends of the chains in order to more completely prevent the displacement of the boards by the wind. In the construction of this chain in form above described iron rods or wires of about one-eighth or three-sixteenths of an inch in diameter may be used, and I prefer to have the links of the chain about two inches in length. In the construction of the holders in form above described steel wires of about one-fourth inch in diameter may be used. Boards of about one inch in thickness I regard preferable, and I prefer to have them overlap about two inches.

In putting this cover on the stack or object to be protected it is best to put on the two top

boards first, and having secured them in position by placing their lower edges in their holders, which are attached to proper positions on the chain, then to place the two boards
 5 next below, one on each side, in position and securing their lower edges in the proper holders attached to proper positions on the chain, and so on.

It is obvious that whenever convenient
 10 the boards may rest on a suitable frame instead of resting directly on the object protected.

It is obvious that various forms and shapes of the supporting chain and holders and of
 15 the attachments of the holders by which they are attached to the chain may be adopted and various materials may be used in the construction of this portable roof without departing from the object and scope of my invention,
 20 and I do not limit myself to these specific details of construction above described, but I claim mechanical equivalents also.

It will be seen that this roof or covering will, by reason of its weight and the flexibility
 25 of the chain B, closely adjust itself to the form of the object covered, and thus very completely protect it, and that the covering-boards may rest directly on the stack, &c., without the necessity of a supporting-frame; also, that
 30 the roof may be adjusted to any-sized object by simply increasing or decreasing the length of the chains and the number of boards and holders; also, by reason of the holders C C C being detachable to different positions on the
 35 chain at pleasure boards of any desired width may be used; also, by reason of the great flexibility of this chain the supporting device, consisting of the chain and holders, may very easily be put in position to be readily carried
 40 about and stored in small space, and, also, that said roof may be easily put up, taken down, and moved from place to place. This portable roof or covering is simple in construction, can be easily and cheaply manu-
 45 factured, and is effective and durable in operation.

I am aware that prior to this my application for patent United States Letters Patent No. 416,747, dated December 10, 1889, have
 50 been issued to me for a portable roof or covering suitable for the protection of ricks of hay, &c., (hay-caps,) covering an invention somewhat similar to this my present invention; but in that portable roof the boards are
 55 held in position by a series of rods having holders formed thereon for receiving the lower edges of the covering-boards and by which holders the rod next below is sustained, whereas in my present invention the boards are
 60 supported by a chain with shiftable holders.

I am also aware that I have applied for a patent, Serial No. 343,563, filed March 11, 1890, still pending in the United States Patent Office, for a portable roof in which the cover-
 65 ing-boards are connected by a supporting-chain provided with holders formed thereon

adapted to receive the lower edges of the covering-boards, and thus hold them in position, whereas in this my present invention the
 70 holders are shiftable to different positions on the supporting-chain in order to better accommodate boards of different widths.

I am aware that prior to this my application United States Letters Patent No. 252,168, dated January 10, 1882, were issued to
 75 James W. Angus, assignor of one-half to John Shepherd, for a hay and grain cap. My invention differs from the construction described in that patent essentially and in at least the following particulars:

First. In my roof (excepting the two top
 80 boards, which are held in position by their respective holders under their lower edges and also in the construction illustrated in the drawings by the chain over the top) the de-
 85 vice used to hold the boards in position is the holders, in which rest their lower edges, their upper edges not being secured by any special device for that purpose, but in the construction illustrated in the drawings resting be-
 90 tween the inside of the upper overlapping board and the hay, &c., covered. In the Angus patent the boards are retained in position not only by holders under their lower
 95 edges, but also by certain "under catches," which secure their upper edges.

Second. In my present invention the chain is composed of short links, thus combining great strength with great flexibility, whereas
 100 in the Angus patent the holders are supported by side rods or wires.

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

1. For sustaining and connecting the boards
 105 of a portable roof, an improved supporting device consisting of a chain of short links and holders adapted to receive the lower edges of the boards and hold them in position, said
 110 holders being attached to and detachable from the links of the chain, substantially as described, and for the purpose herein set forth.

2. The chain B, having short links and provided with the holders C for sustaining the
 115 covering-boards A of a portable roof, said holders being formed of stout wire and having the connecting part D, by which they are connected with the links of the chain, substantially as described, and for the purpose herein
 120 set forth.

3. The combination, with a chain having short links, of holders adapted to receive the
 125 lower edges of the boards of a portable roof and hold them in position, each of said holders having a connecting part by which it is connected with the links of the chain and detachable therefrom, and the covering-boards
 130 resting in said holders, substantially as described, and for the purpose herein set forth.

4. The combination, with the chain B, having short links, of the holders C, formed of
 135 stout wire and adapted to receive the lower

edges of the boards A of a portable roof and hold them in position, each of which holders having the connecting part D, by which it is attached to the links of the chain and detach-
5 able therefrom, and the covering-boards A, resting in said holders, substantially as described, and for the purpose herein set forth.

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

JOHN H. RICE.

Witnesses:

DELOSS S. BROWN,
SAMUEL Z. MARKS.