No. 644,242. Patented Feb. 27. 1900.

W. F. COMBS.

GRAIN SHED.

(Application filed Nov. 11, 1899.)

(No Model.)

Fig. 1.

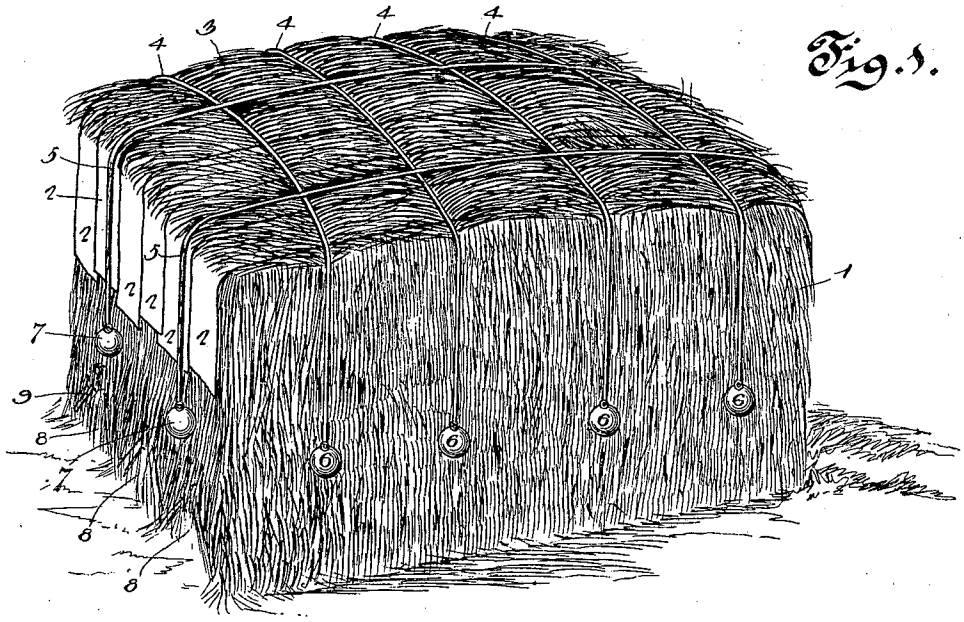


Fig. 2.

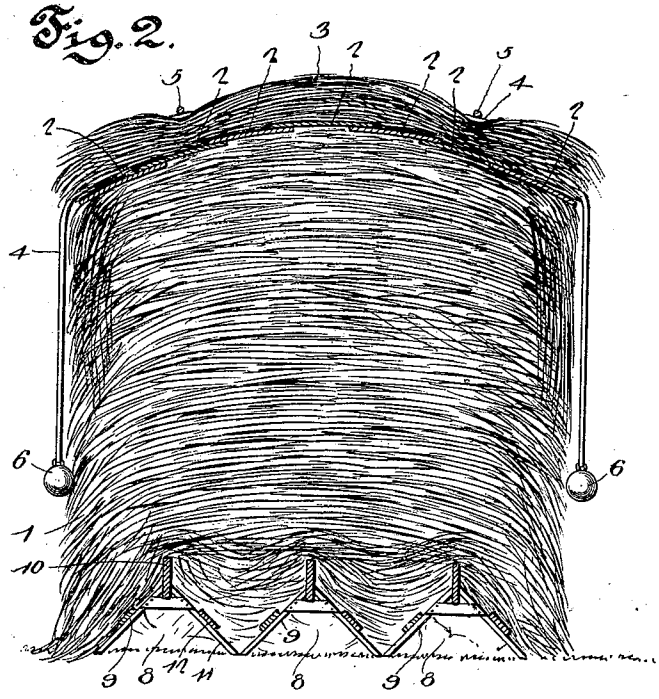
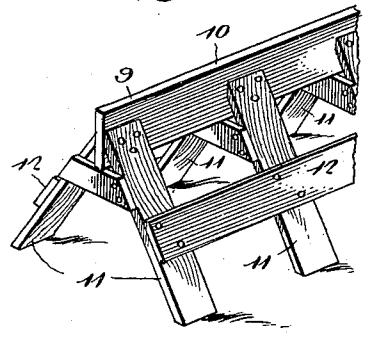


Fig. 3.



Witnesses
J. Kaufflenberwell.
T. J. Riley

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By his Attorneys,
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THE NORRIS PETERS CO., PHOTO-LITHO., WASHINGTON, D. C.

UNITED STATES PATENT OFFICE.

WILLIAM F. COMBS, OF RENO CITY, OKLAHOMA TERRITORY.

GRAIN-SHED.

SPECIFICATION forming part of Letters Patent No. 644,242, dated February 27, 1900.

Application filed November 11, 1899. Serial No. 736,637. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM F. COMBS, a citizen of the United States, residing at Reno City, in the county of Canadian and Territory of Oklahoma, have invented a new and useful Grain-Shed, of which the following is a specification.

The invention relates to improvements in grain-sheds.

The object of the present invention is to improve the construction of devices for protecting stacks of grain and hay and to provide simple, inexpensive, and efficient means for thatching or covering the top of a stack to exclude water and to provide ventilating-spaces at the bottom of the stack to prevent the latter from being injured by dampness at that point.

The invention consists in the construction and novel combination and arrangement of parts hereinafter fully described, illustrated in the accompanying drawings, and pointed out in the claims hereto appended.

In the drawings, Figure 1 is a perspective view of a stack provided with a grain-shed constructed in accordance with this invention. Fig. 2 is a vertical sectional view of the same. Fig. 3 is a detail perspective view of a portion of one of the trestles which form the ventilating-spaces.

Like numerals of reference designate corresponding parts in all the figures of the drawings.

1 designates a stack provided at its top with a covering consisting of longitudinally-disposed strips or sheets 2 of waterproof paper or analogous material, overlapped at their adjacent edges and arranged to shed water and prevent the same from settling into the stack, at the top thereof, as clearly illustrated in Fig. 2 of the accompanying drawings. The strips or sheets of paper are preferably what is known as "builder's waterproof paper;" but in order to increase the strength and durability of the same they may be provided with strands of wire, fabric, or any other suitable material, disposed longitudinally and transversely of the strips or sheets to prevent the same from tearing or breaking. Two thicknesses of paper may be employed, and the strengthening-strands of wire, cord, or other material may be arranged between the layers of paper or on either side of the same, as desired. The strips or sheets are preferably overlapped about three or four inches; but this may be varied as desired, and in applying them to the top of the stack the paper, which is preferably arranged in rolls, is laid upon the said stack, at the end thereof, and overlapped to arrange it as shown in Fig. 2, the paper being preferably sloped from the center to the sides to facilitate shedding water. Three or four feet of the paper strips or sheets are unrolled and covered by a layer 3 of hay, grain, or other material of which the stack is composed, and the covered portion of the paper is weighted, by the means hereinafter described, to prevent it from blowing off. The paper is then unrolled three or four feet more and the covering and weighting operation repeated until the entire top of the stack is covered. The layer of hay or grain, which is preferably about twelve inches deep, protects the paper and prevents the same from being eaten by insects or torn by hail or heavy rain.

The covering of the stack is securely held in place by transverse and longitudinal wires 4 and 5, extending across the top of the stack at intervals at right angles to each other, and provided with weights 6 and 7, secured to their terminals and located at the sides and ends of the stack. The end portions of the wires depend from the top of the stack a sufficient distance to bind the material firmly in place and to prevent effectually any liability of the cover being blown off.

In order to prevent the material of the stack from being injured by dampness of the ground, ventilating-spaces 8 are formed by contiguous trestles 9, arranged at intervals and disposed longitudinally of the stack, as clearly illustrated in Figs. 1 and 2 of the accompanying drawings; but they may be disposed transversely of the stack, if desired. These trestles are arranged upon the ground and the stack is built up from them, and each trestle is preferably composed of a central longitudinal ridge or top bar 10, oppositely-inclined legs 11, arranged at regular intervals, and longitudinal braces 12, connecting the legs at points between their ends and disposed

parallel with the top bar 10; but the longitudinal braces 12 may be omitted where a sufficient number of trestles are employed to support the weight of the stack without such braces. These trestles form tunnel-like spaces beneath the stack and afford complete ventilation at the base of the same and effectually prevent the material from being injured by the dampness of the ground.

It will be seen that the means for protecting stacks of hay and grain are exceedingly simple and inexpensive in construction, that they are adapted to be readily applied to a stack, and that they are capable of shedding water at the top of the stack and of ventilating the base, whereby the material is effectually prevented from being injured by dampness and may be left out in the open air during all seasons. It will also be apparent that the covering may be advantageously applied to sheds and similar inclosures for stock and the like.

What is claimed is—

1. A device of the class described comprising a series of overlapped sheets of waterproof material forming a covering, a layer of grain or analogous material arranged upon the said covering, and means for weighting and binding the said layer at intervals, substantially as and for the purpose described.

2. A device of the class described comprising a series of contiguous trestles adapted to support the weight of a stack and having oppositely-inclined sides and forming a series of complete tunnels or spaces to ventilate the stack, and an independent covering for the stack, substantially as described.

3. A device of the class described comprising a series of trestles designed to be arranged at the base of the stack and forming ventilating-spaces, a covering consisting of layers or sheets of waterproof material overlapped at their adjacent edges, a layer of grain or analogous material arranged upon the said covering, and the longitudinal and transverse wires extending across the layer at right angles to each other, and depending therefrom at the sides and ends of the stack and provided with weights, substantially as described.

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

WILLIAM F. COMBS.

Witnesses:

H. A. SMITH,

T. F. CLIFFORD.