

(No Model.)

W. R. TEBOW.
MEANS FOR BINDING CORN FODDER.

No. 548,237.

Patented Oct. 22, 1895.

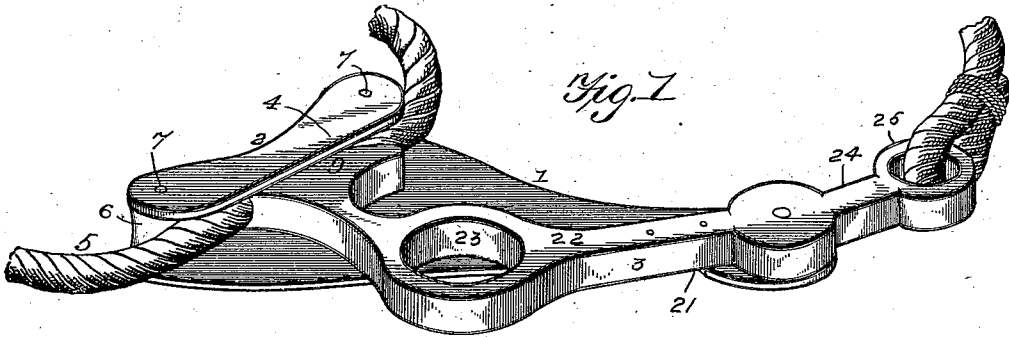


Fig. 1

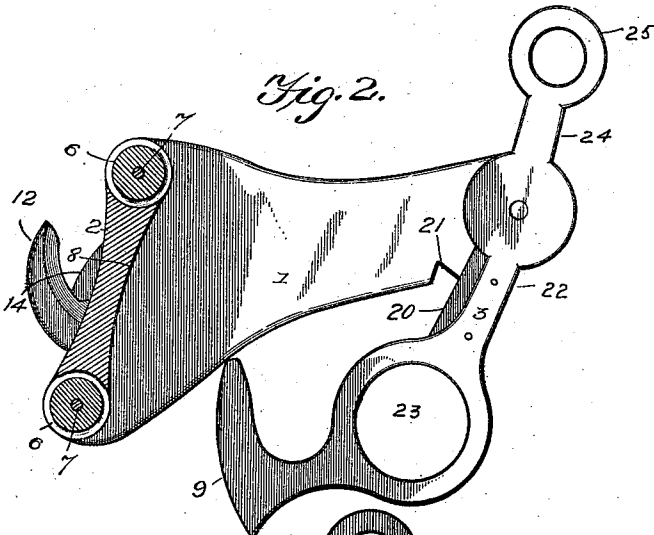


Fig. 2

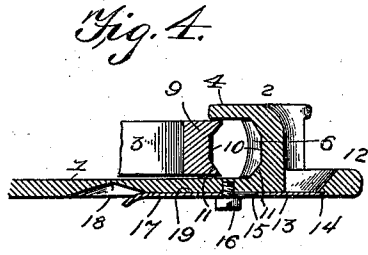


Fig. 4

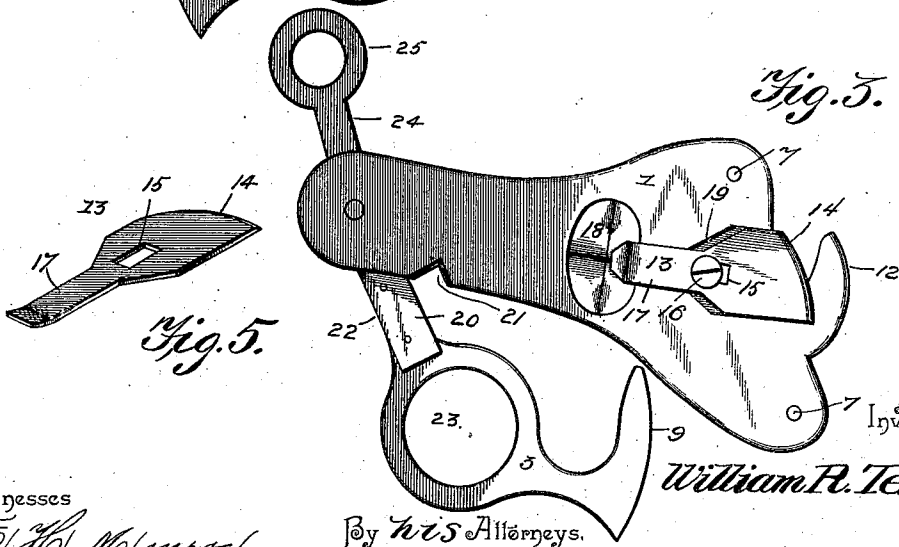


Fig. 5

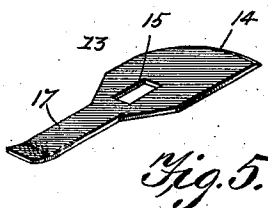


Fig. 5

Witnesses
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UNITED STATES PATENT OFFICE.

WILLIAM R. TEBOW, OF TISKILWA, ILLINOIS.

MEANS FOR BINDING CORN-FODDER.

SPECIFICATION forming part of Letters Patent No. 548,237, dated October 22, 1895.

Application filed March 13, 1895. Serial No. 541,600. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM R. TEBOW, a citizen of the United States, residing at Tiskilwa, in the county of Bureau and State of Illinois, have invented a new and useful Means for Binding Corn-Fodder, of which the following is a specification.

This invention relates to that class of devices to facilitate the binding of fodder and grain in shocks, and which are used as temporary holders to compress the fodder or grain until the permanent binder is placed in position.

The objects of the invention are, first, to provide a device for the aforesaid purposes which will obviate injury to the compressing-ropes; second, be positive in its action and grip the compressor-rope instantly on the release of the same after the grain or fodder has been sufficiently compressed; third, to combine therewith means for cutting the permanent binder, whether it be cord, rope, or wire; fourth, to provide and combine with the structure a holder for temporarily securing the end of the permanent binder while passing the latter around the shock, and, fifth, to devise a structure which will be simple, light, and durable and effect the desired results in a satisfactory manner.

Referring to the accompanying drawings for a more complete explanation of the invention, Figure 1 is a perspective view showing the relative position of the parts when the device is in use. Fig. 2 is a top plan view of the device, showing the clamping-dog thrown out a short distance from its co-operating fixed jaw, the retaining-flange of the latter being broken away. Fig. 3 is a view of the device from the reverse side shown in Fig. 2, the parts occupying the same relative position. Fig. 4 is a cross-section of the clamping-jaws between which the compressor-rope is held. Fig. 5 is a detail view of the combined rope or twine cutter and temporary holder for the binder.

The device comprises in its organization a plate 1, having a jaw 2 at one end and a clamping-dog 3 pivoted between its ends to the opposite extremity of the plate 1 to that at which the jaw 2 is located. The plate 1 and jaw 2 are integrally formed, and the latter has a retaining-flange 4 to prevent the lateral dis-

placement of the compressor-rope 5. Grooved pulleys 6 are located at the extremities of the jaw 2 and journaled on pins 7, supported at their ends in the plate 1 and the end portions of the flange 4. The extremities of the flange 4 and the corresponding portions of the plate 1 are extended beyond the ends of the jaw 2 to provide spaces for the reception of the pulleys 6. The inner face 8 of the jaw is curved inward between the pulleys 6 to avoid contact thereof with the compressor-rope 5 when the latter is stretched taut over the said pulleys 6, as when drawing thereon to compress the shock of grain or fodder. The clamping-face of the jaw 9 of the clamping-dog 3 is slightly convexed to co-operate with the concave face 8 of the jaw 2, so as to clamp the compressor-rope at a point between the pulleys 6. This construction has been found to give the best results, because if the clamping occurred between either pulley and the jaw 9 the compressor-rope would be subjected to greater wear than results when clamping it between the jaws 9 and 2. The opposing faces of the jaws 9 and 2 are similarly formed and are oppositely depressed between their edges, the inner walls being straight and the side walls oppositely flaring, thereby providing an approximately octagonal-shaped figure when the two jaws are brought in operative relation. This is shown most clearly in Fig. 4. This formation of the active faces of the clamping-jaws has been found to give the best results and obviates flattening or otherwise distorting the compressor-rope when the latter is subjected to pressure between the clamping-jaws 9 and 2.

A hook 12 is formed at the end of the plate 1, having the jaw 2, and co-operates with a knife 13 to sever the binding cord or rope used in permanently binding the shock. The knife 13 is provided with a curved cutting-edge 14 at its end, which serves, in conjunction with the hook 12, to form an approximately V-shaped space, into which the permanent binder is forced when it is desired to sever the same. This knife has a slot through which a binding-screw 16 passes, by means of which it is adjustably secured to the plate 1 and by means of which the said plate can be removed for purposes of

sharpening. An extension or shank portion 17 is formed at the inner end of the knife and is designed to serve as a temporary holder for the end of the permanent binder when applying the latter to the shock. This shank or extension 17 is elastic and is curved outward at its extremity to facilitate the passage of the end of the binder between it and the opposing side of the plate 1. A depression 18 is formed in the side of the plate 1, opposite the curved end of the shank 17, to further facilitate the entrance of the binding-cord between the plate and the part 17. A recess 19 is formed in the side of the plate to receive the knife 13, and is of sufficient depth to admit of the latter coming flush at its outer side with the surface of the plate 1. The edges of this recess 19, engaging with the edges of the knife 13, prevent the latter from turning upon the binding-screw 16 when the knife is in active service.

A cutting-plate 20 is attached to the inner side of the clamping-dog 3 near the pivotal point of the latter, and is constructed to cooperate with an approximately-V-shaped notch 21 in the edge of the plate 1 to form therewith a cutter to sever the permanent binder in the event of the latter being wire. This cutting-plate 20 may be attached to the clamping-dog in any desired manner, preferably by rivets, because it can be readily sharpened without the necessity of detaching it from the clamping-dog 3.

The clamping-dog comprises a curved arm 22, having the jaw 9 at its outer end and a ring 23 midway of its ends. A straight arm 24 projects outward from the pivoted end of the clamping-dog and terminates in an eye 25, to which the end of the compressor rope or cord 5 is permanently attached. The component parts 1 and 3 are preferably cast, and when assembled in the manner herein set forth form simple and efficient means for attaining the desired results.

The operation of the invention is as follows: In using the invention the compressor-rope 5 is passed around the shock of grain or fodder and over the pulleys 6 and between the jaws 9 and 2. When drawing upon the free end of the compressor-rope that portion comprised between the pulleys 6 is straightened and held from engagement with the concave face 8 of the jaw 2. On subjecting the compressor-rope 5 to tension the end 24 of the clamping-dog will be drawn upon and tend to hold the jaw 9 in engagement with that portion of the rope comprised between the pulleys 6. Hence when the compressor-rope is released the clamping-dog will instantly force that portion of the rope with which it is in engagement against the face 8 with sufficient pressure to hold it securely. After the shock has been temporarily bound the end of the permanent binder is passed under the shank or extension 17 of the knife 13 and is temporarily secured until the said binder is completely passed around the shock, when it

is fastened in any desired manner, it being severed by means of the knife 13 if of rope or cord or by the cutter 20 should the said binder be wire. After the shock is permanently bound a finger of the hand is inserted in the ring 23 and the clamping-dog drawn upon, so as to move the jaw 9 outward and away from the jaw 2 to release the compressor-rope 5, after which the device is removed from the shock and is adapted to be used again in the manner set forth.

It will be seen that the pulleys 6 obviate injurious friction on the compressor-rope 5 in the operation of the device; also, that by grooving the said pulleys the compressor-rope is centralized between the plate 1 and the flange 4, and is prevented from rubbing against either in the movement of the compressor-rope over the jaw 2 in either direction.

The construction herein specifically defined has been found to give the best results. However, changes in the form, proportion, and the minor details of construction may be resorted to without departing from the principle or sacrificing any of the advantages of this invention.

Having thus described the invention, what is claimed as new is—

1. A fodder, or grain, binder comprising a plate having a clamping jaw provided at its extremities with pulleys, and having the clamping face concave, or curved inward, between the said pulleys, a clamping dog pivotally attached to the plate, and having a convex jaw to co-operate with the concave jaw of the plate, and a compressor rope attached at one end to the device, and adapted to have its other end portion passed over the pulleys and between the convex and concave jaws, substantially as set forth.

2. A fodder, or grain, binder comprising a plate having a clamping jaw and grooved pulleys at the extremities of the said jaw, the latter having its active face concave between the pulleys, and a clamping dog pivoted to the plate, and provided with a convex clamping jaw, the opposing faces of the two jaws being similarly formed in cross section, and comprising an inner straight face and oppositely-flared sides, substantially as described for the purpose set forth.

3. In a fodder, or grain, binder, the combination with the plate provided with the clamping devices, of a knife attached to the said plate, and provided with an extension, the end portion of which curves outward from the said plate to facilitate the passage of the end of the temporary binder between it and the said plate, substantially as and for the purpose set forth.

4. In a fodder, or grain, binder, the combination with the plate provided with the clamping devices, and having a recess and a depression in its side, of a knife held in the said recess, and provided with an extension which curves outwardly opposite the said depression to enable the end of the permanent

binder to be easily passed under the said extension of the knife, substantially as described.

5 In a grain, or fodder, binder, the combination with the plate provided with the clamping devices, and having a hook projected therefrom, of a knife attached to the plate and having its cutting edge extending into the space formed between the hook and
10 the plate, and disposed to co-operate with the said hook to facilitate the cutting of the permanent binder, substantially in the manner specified.

15 6. In a fodder, or grain, binder, the combination with the plate provided with the clamping devices, which comprise a fixed jaw and a pivoted clamping dog, the edge of the plate having an approximately V-shaped notch close to the pivotal support of the
20 clamping dog, of a cutting plate attached to and carried by the clamping dog, and adapted to co-operate with the said notch to facilitate the separation, or cutting, of the permanent binder, substantially as set forth.

25 7. In a fodder, or grain, binder, the combination with a plate provided at one end with a clamping jaw, of a clamping dog pivoted to the opposite end of the said plate, and comprising a jaw and a curved arm, the latter
30 provided midway of its ends with a ring for the insertion of a finger of the hand to enable the ready disengagement of the clamping dog from the compressor rope, and a compressor rope having attachment with an outwardly-
35 extending arm of the clamping dog, substantially in the manner set forth.

8. In a fodder, or grain, binder, the combination with a plate having a jaw at one end provided with a flange having a portion parallel with the said plate, the clamping face of
40 the jaw being concaved between its ends, grooved pulleys journaled between the end portions of the said flange and corresponding parts of the plate, a clamping dog pivoted to
45 the plate, and provided with a convex clamping jaw, the opposing faces of the two jaws

being similarly formed and having straight inner walls and oppositely-flaring sides, and a compressor rope attached at one end to an arm extension of the clamping dog, and
50 adapted to have its other end portion passed between the jaws and over the said grooved pulleys, substantially as set forth.

9. The herein shown and described fodder, or grain, binder, comprising a plate having a
55 jaw at one end which is flanged at its outer edge and concaved between its ends, and having an outwardly-extending hook, grooved pulleys located at the extremities of the said jaw and journaled between the ends of the
60 flange and corresponding parts of the plate, a clamping dog pivoted to the plate, and having a convex jaw to co-operate with the concave portion of the fixed jaw, and comprising a curved arm having a ring midway of its ends
65 for the purposes described, and having an arm extending rearwardly from its pivotal end and terminating in a ring to which one end of the compressor cord, or rope, is permanently attached, the opposing faces of the jaws having
70 straight inner walls at oppositely-flaring sides, a knife adjustably secured to the plate, and adapted to co-operate with the aforesaid hook, and having an extension, or shank portion, to provide a temporary holder for the permanent
75 binder, a cutting plate attached to the clamping dog, and adapted to co-operate with an approximately V-shaped notch in the edge of the plate, and a compressor rope attached at one end to the arm extension of the dog, and
80 adapted to have its other end portion pass over the grooved pulleys and between the two jaws, substantially as described for the purpose set forth.

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

WILLIAM R. TEBOW.

Witnesses:

FRANK H. SMALL,
CHARLES F. LEE.