

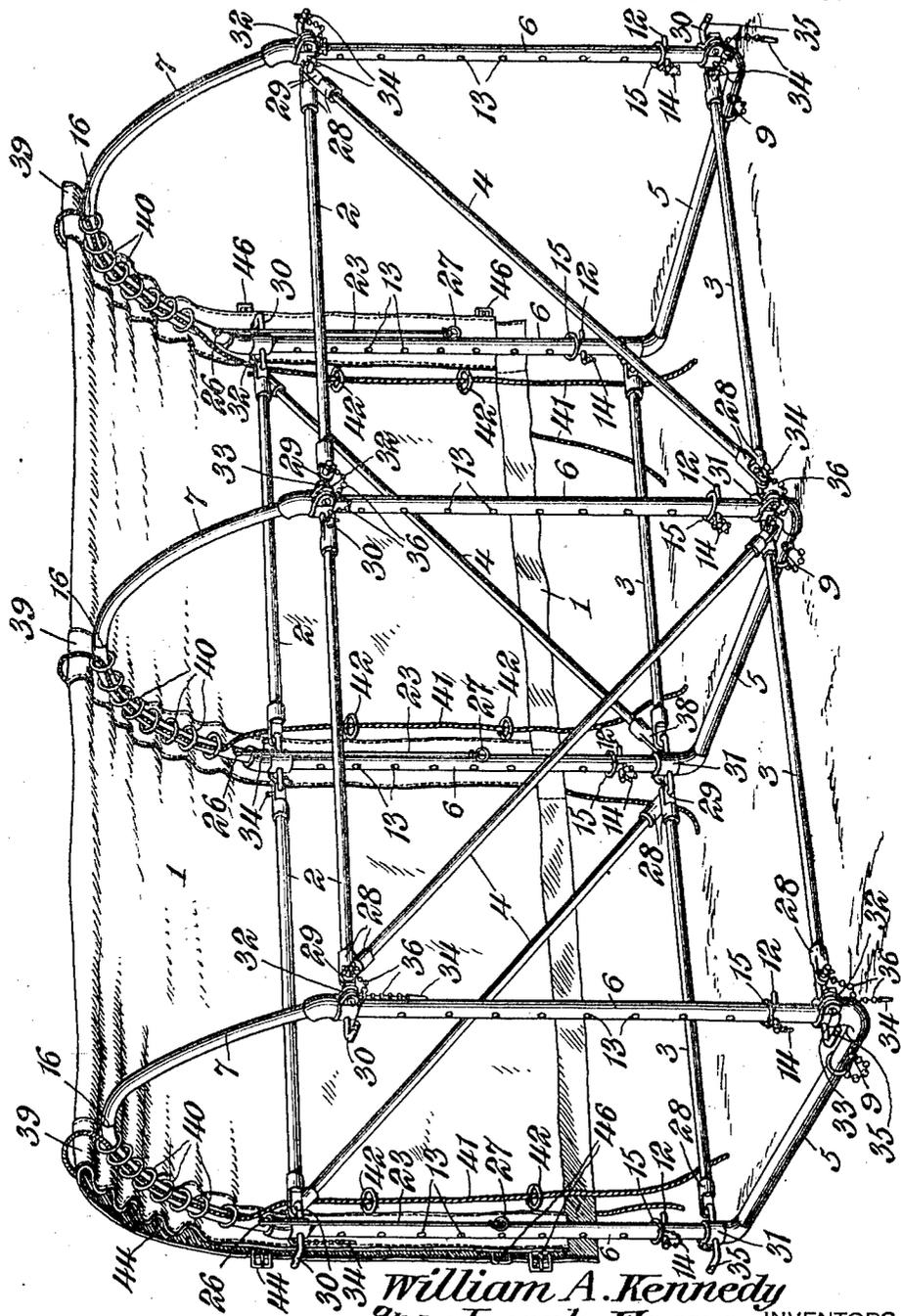
W. A. KENNEDY & J. EVANS.  
COVERING FOR HAY, GRAIN, &c.  
APPLICATION FILED FEB. 9, 1912.

1,061,547.

Patented May 13, 1913.

2 SHEETS—SHEET 1.

Fig. 1.



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WITNESSES

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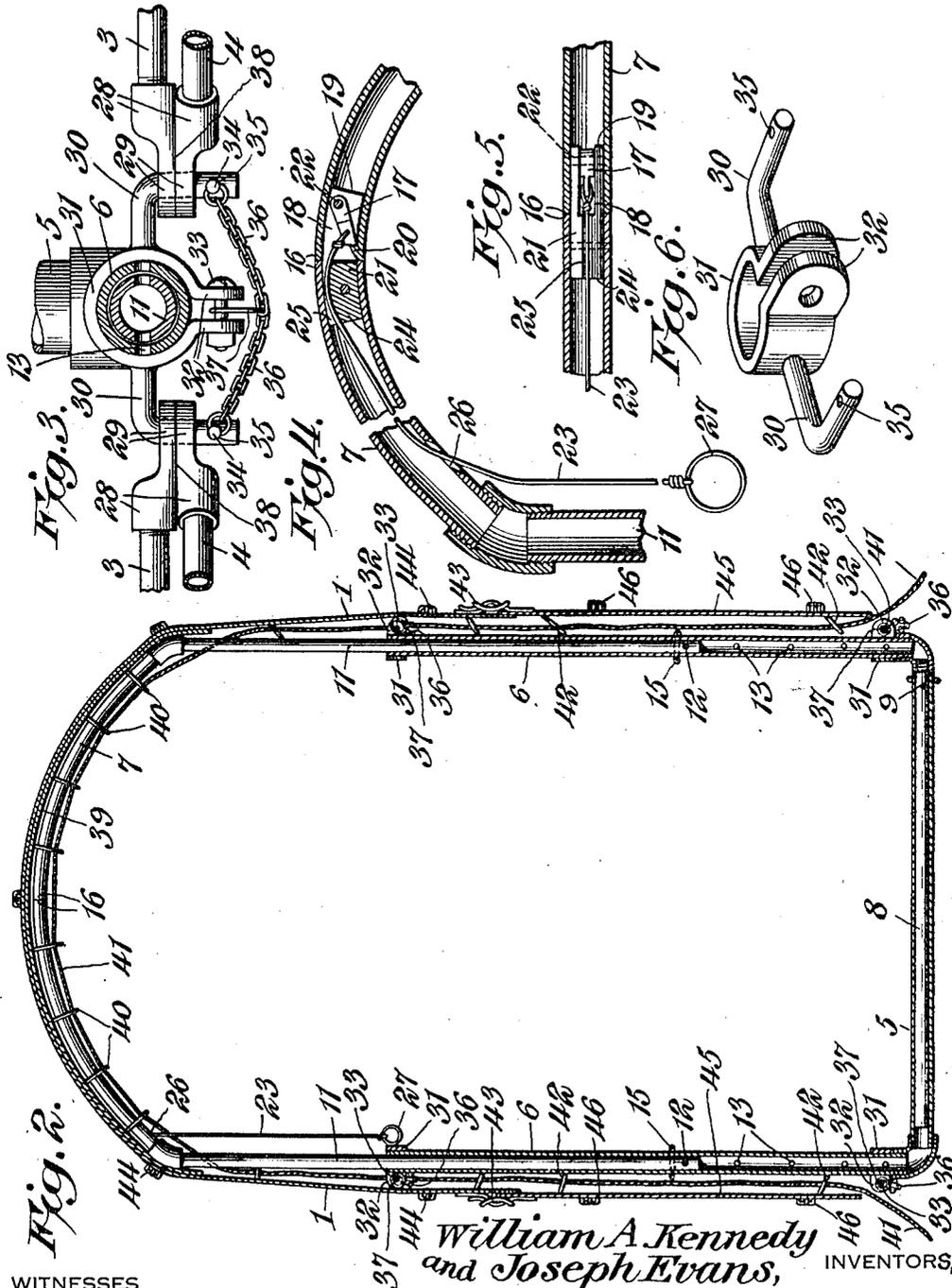
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WITNESSES

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# UNITED STATES PATENT OFFICE.

WILLIAM A. KENNEDY AND JOSEPH EVANS, OF WICHITA, KANSAS.

COVERING FOR HAY, GRAIN, &c.

1,061,547.

Specification of Letters Patent.

Patented May 13, 1913.

Application filed February 9, 1912. Serial No. 676,619.

To all whom it may concern:

Be it known that we, WILLIAM A. KENNEDY and JOSEPH EVANS, citizens of the United States, residing at Wichita, in the county of Sedgwick and State of Kansas, have invented a new and useful Covering for Hay, Grain, &c., of which the following is a specification.

The invention relates to a covering for hay and grain stacks and various other material and objects.

The object of the present invention is to provide a simple, inexpensive and water-proof covering, designed particularly for use in the field by farmers and others for covering stacks of hay, grain and the like, hay baled in the field, machinery, wagons and their contents, and various other objects, which are usually left exposed to the weather on account of the lack of shelter.

A further object of the invention is to provide a covering of this character, capable of easy operation and adapted to be varied in size both by adjustment and by the addition of sections to provide a covering of the desired proportions.

Another object of the invention is to provide means for supporting a canvas or similar cover above and out of contact with a stack or other contents to form an intervening ventilating or air space for enabling the cover to quickly dry out after being wet, whereby the covering is prevented from becoming moldy and rotting.

Furthermore, the invention has for its object to provide a portable covering, adapted to be readily taken apart and compactly arranged for storing during seasons of the year when it is not in use.

With these and other objects in view, the invention consists in the construction and novel combination of parts hereinafter fully described, illustrated in the accompanying drawings, and pointed out in the claims hereto appended; it being understood that various changes in the form, proportion, size and minor details of construction, within the scope of the claims, may be resorted to without departing from the spirit or sacrificing any of the advantages of the invention.

In the drawings:—Figure 1 is a perspective view of a hay and grain stack covering, constructed in accordance with this invention, the canvas cover being thrown back to illustrate the construction of the supporting

frame-work. Fig. 2 is a transverse sectional view, the canvas cover being in position. Fig. 3 is an enlarged detail view, illustrating the construction for connecting the side braces with the transverse frames. Fig. 4 is a detail vertical sectional view, illustrating the construction of the arched tops of the transverse frames and the means for locking the sections of the top together. Fig. 5 is a detail horizontal sectional view of the same, illustrating the manner of mounting the pivoted catch. Fig. 6 is a detail perspective view of one of the devices for connecting the side braces with the transverse frames.

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

In the accompanying drawings in which is illustrated the preferred embodiment of the invention, the covering is equipped with a supporting frame-work comprising a plurality of adjustable transverse frames, arranged at intervals to support the canvas cover 1 by upper, lower and inclined side braces 2, 3 and 4, which firmly maintain the adjustable transverse frames in an upright position. The canvas cover is extensible by the addition of sections, as hereinafter fully described, and the supporting frame-work is also extensible by the addition of transverse frames and connecting side braces and also through the adjustment of the transverse frames.

Each of the adjustable transverse frames is composed of a horizontal bottom tube or bar 5, vertical tubular side bars or standards 6 and an arched top 7, connecting the sides or standards 6. The horizontal bottom 5 is connected at one end by a suitable coupling with one of the vertical side bars or standards 6, and it receives a telescopic tube 8, which is connected by a suitable coupling with the lower end of the other vertical side bar or standard 6. The bottom bar or tube 5 and the inner tube or rod 8 constitute telescopic sections, and enable the frame-work to be extended laterally if desired. The telescopic sections of the bottom of the adjustable frame are secured at the limit of their inward movement by a pin 9, or other suitable fastening device, passing through registering perforations of the said sections and connected with the bottom bar 5 by a short chain, but any other suitable fastening means may be employed for this purpose. The tubular vertical bars or

standards 6 receive inner vertically adjustable telescopic rods or sections 11, connected by couplings to the ends of the arched top, and adapted to support the latter at different elevations to provide a covering of the desired height. The vertical bars or standards 6 and the inner vertically adjustable tubes or rods 11 form telescopic sections, and the tubes or rods 11 are secured in their adjustment by pins 12, or other suitable fastening devices, passing through registering perforations of the telescopic sections 6 and 11. The lower sections 11 are provided at intervals with perforations 13 to enable the pins to secure the vertically adjustable sections 11 at the desired elevation, and the pins 12 are connected by short chains 14 with rings 15, slidable on the vertical side bars or standards and adapted to be arranged at the proper perforation for securing the sections 11 in their adjustment.

The arched top 7 is composed of two separable sections having abutting inner ends 16 and secured in abutting relation by a catch 17, pivoted in a slot or bifurcation 18 of a projecting support or tongue 19 of one of the sections of the arched top 7 and engaging a lug 20 of the other section of the arched top 7. The slotted or bifurcated support 19 is preferably formed integral with a block or plug 21, secured by a transverse rivet, or other suitable fastening means within the inner end of one of the separable sections of the arched top 7. The lug 20, which is arranged at the bottom of its section of the arched top, is beveled at the front and forms a shoulder at the back or inner side for engagement by the pivoted catch. The catch, which is arranged at a slight inclination, preferably operates by gravity and is connected at its upper end by a pivot 22 to the sides of the projecting tongue or support. The lower engaging end of the catch drops back of the lug when the sections of the arched top are brought together, and they are securely locked in such position by the catch. The tongue or support in which the catch is mounted fits within the section having the lug 20, and is adapted to hold the inner ends of the sections of the arched top against lateral movement with relation to each other. The lower end of the catch is connected to one end of a wire 23, or other suitable flexible connection, which extends upward from the engaging end of the catch to the top of the block or shank 24 of the tongue or support 19, and it passes through a groove 25 in the top of the same and downwardly and outwardly through the adjacent section of the arched top to the lower portion of such section, which is provided at the bottom with an opening 26. The flexible operating means or connection 23 extends downwardly through the opening 26 and is equipped at

its lower end with a ring 27, or other suitable form of handle and is arranged within easy reach to enable the catches to be readily swung upwardly out of engagement with the lugs or projections 20. When the catch is disengaged from the lug or projection, the sections of the arched top 7 may be disconnected and separated different distances to provide a frame-work of the desired width.

The upper and lower braces 2 and 3, which may be either solid or tubular rods, are arranged horizontally at the top and bottom of the sides of the frame-work, and the braces 4, which are similar in construction, are designed to be alternately inclined in opposite directions, as clearly shown in Fig. 1 of the drawings. The braces are equipped at their ends with caps 28, having eyes 29 arranged on horizontal pivots, formed by L-shaped arms 30 of clamping collars 31. The clamping collars 31, which are arranged at the upper and lower ends of the vertical bars or standards 6, have extended terminals 32 spaced apart and perforated to receive connecting bolts 33, which are adapted to be adjusted to cause the collars to clamp firmly the vertical bars or standards 6. The L-shaped arms have inner longitudinally disposed portions and outer laterally projecting portions, which pass through the eyes or openings 29 of the side braces. The ends of the side braces are retained on the laterally projecting horizontal pivot portions of the arms by pins 34, arranged in perforations 35 and connected by short chains 36 with rings 37, mounted upon the bolts 33 and arranged between the projecting terminal portions of the clamping collars. The projecting portions, which contain the eyes or openings 29 of the caps, each have a flat side face 38, arranged in flush relation with one side of the cap and adapted to fit against the flat face of the contiguous cap when two of the caps are mounted upon the same pivot, as clearly illustrated in Fig. 3 of the drawings. The locking pins or keys 34 detachably connect the ends of the braces with the transverse frames, and enable the parts of the frame-work to be readily separated, when it is desired to take the same down for storing, shipping or other purpose. As each of the transverse frames is equipped with clamping pivot carrying arms, any number of transverse frames may be connected together to provide a supporting frame-work of the desired length, and the transverse frames and the connecting side braces may be constructed of any desired dimensions. Also the means for detachably connecting the transverse frames and the separable sections of the arched top will enable one side of the frame-work to be disconnected and swung

down out of the way to permit the use of a stacker, and after the stack has been formed the frame-work may be connected up and the cover 1 of canvas, or other suitable material arranged in position.

The cover 1, which may be constructed of any suitable material and preferably reinforced at the arched top of the transverse frames, as shown at 39 in Fig. 2 of the drawings, is provided at its inner face with a plurality of rings 40, arranged on the arched portions of the transverse frames and suitably connected with the reinforced portions 39 of the cover. By this construction, the top of the flexible cover 1 is securely connected to the arched top of the supporting frame-work and is slidable on the same to arrange it at one side of the frame-work, and when in position there is no liability of the cover being blown from the frame-work and soiled or lost. The rings are adapted to be readily introduced on the arched top portions of the transverse frames at the inner ends of the separable sections. The cover is also equipped with ropes 41, located at the inner face of the cover at intervals and extending through the top rings 40 and also through side rings 42, secured to the inner faces of the sides of the cover and connecting the side portions with the ropes, so that the sides of the cover may be securely fastened to the frame-work by tying the ends of the ropes around the bottom side braces, or other portions of the frame-work. In order to enable the cover 1 to be increased in size both laterally and longitudinally, it is provided with side and end buckles 43 and 44 for enabling sections of canvas, or other flexible material to be secured to the cover 1. Side sections 45 are secured to the cover 1 by the buckles 43 when the top of the frame-work is elevated, as illustrated in Fig. 2 of the drawings, and by means of the end buckles 44 of the cover 1 and end buckles 46 of the side sections 45, the sections or portions may be connected with the cover 1 and the side sections thereof for closing the ends of the device.

What is claimed is:—

1. A device of the class described comprising a flexible cover, a supporting frame-work including a plurality of adjustable transverse frames composed of extensible horizontal bottom bars having telescopic sections, vertical side bars connected with and carried by the sections of the bottom bars, and arched top bars supporting the flexible cover and connected with the upper ends of the side bars and composed of separable sections movable with the vertical side bars in the adjustment of the bottom bars, and braces located at opposite sides of the supporting framework and detachably connecting the transverse frames.

2. A device of the class described compris-

ing a flexible cover, and a supporting frame-work including adjustable transverse frames composed of horizontal bottom bars having telescopic sections, vertical side bars also provided with telescopic sections and connected with the sections of the bottom bars, and arched top bars connected with sections of the side bars and composed of separable sections, and braces located at opposite sides of the frame-work and connecting the transverse frames.

3. A device of the class described comprising a flexible cover, and a supporting frame-work including transverse frames having side bars and provided with arched top bars consisting of separable tubular sections, a catch carried by one of the separable sections of each arched top bar and engaging the interior of the other separable section thereof and concealed within the said sections, braces located at opposite sides of the supporting frame-work and connecting the transverse frames, and means for operating the catches.

4. A device of the class described comprising a flexible cover, and a supporting frame-work including transverse frames having side bars and provided with arched top bars consisting of separable tubular sections, a catch carried by one of the separable sections of each arched top bar and engaging the interior of the other separable section thereof and concealed within the said sections, flexible operating means connected with the catch and extending through the tubular sections of the arched top bars to the side of the frame-work and having exteriorly arranged portions, and braces located at the sides of the frame-work and connecting the transverse frames.

5. A device of the class described comprising a flexible cover, and a supporting frame-work including transverse frames having arched tubular top bars composed of separable sections, and braces arranged at the sides of the frame-work and connecting the transverse frames, a lug arranged within one of the sections of each of the top bars, a support projecting from the other section and having a slot or bifurcation, a catch mounted in the slot or bifurcation and engaging the lug and concealed within the separable sections when the latter are locked, and means for operating the catches of the arched top bars.

6. A device of the class described comprising a flexible cover, and a supporting frame-work including transverse frames composed of vertical side bars and arched top bars, upper and lower clamping collars secured to the side bars and provided with projecting arms, clamping collars mounted on the transverse frames and provided at opposite sides with approximately L-shaped arms having laterally disposed terminal portions,

and side braces provided at their ends with eyes or openings and arranged on the terminal portions of the arms and connecting the transverse frames.

5 7. A device of the class described comprising a flexible cover, and a supporting frame-  
work including transverse frames, clamping  
collars mounted on the frames and having  
10 spaced projecting terminals and provided  
with opposite arms, fastening devices adjust-  
ably connecting the spaced terminals of the  
clamping collars, side braces provided with  
eyes or openings and arranged on the arms,  
15 pins retaining the side braces on the said  
arms, rings supported by the fastening de-  
vices and arranged between the terminals of  
the clamping collars, and chains linked into  
the rings and connected with the said pins.

20 8. A device of the class described includ-  
ing a supporting framework provided with  
a plurality of transverse frames having  
spaced sides and connecting top portions  
composed of separable sections, a detachable  
flexible cover supported by the framework  
25 and provided with rings slidable on the con-  
necting top portions of the transverse frames  
and removable therefrom when the sections  
thereof are separated to permit the cover to

be detached, and catches for connecting the  
sections of the top portions of the transverse 30  
frames.

9. A device of the class described compris-  
ing a flexible cover provided with rings, a  
supporting frame-work including a plural-  
ity of adjustable transverse frames composed 35  
of extensible horizontal bottom bars having  
telescopic sections, vertical side bars con-  
nected with and carried by the sections of  
the bottom bars, and arched top bars con-  
necting the vertical side bars and composed 40  
of separable sections carried by the side bars  
in the adjustment of the bottom bars, said  
arched top bars supporting the flexible cover  
and receiving the ring thereof and permit-  
ing the same to be removed to detach the 45  
cover when the sections of the top bars are  
separated, and means for holding the sec-  
tions of the top bars together.

In testimony, that we claim the foregoing  
as our own, we have hereto affixed our sig- 50  
natures in the presence of two witnesses.

WILLIAM A. KENNEDY.  
JOSEPH EVANS.

Witnesses:

CHAS. A. WALDORF,  
B. W. SMITH.