No. 725,114. PATENTED APR. 14, 1903.

A. A. MINKLER.

STRAW STACKING APPARATUS.

APPLICATION FILED MAY 8, 1901.

NO MODEL. 2 SHEETS—SHEET 1.

Fig. 1.

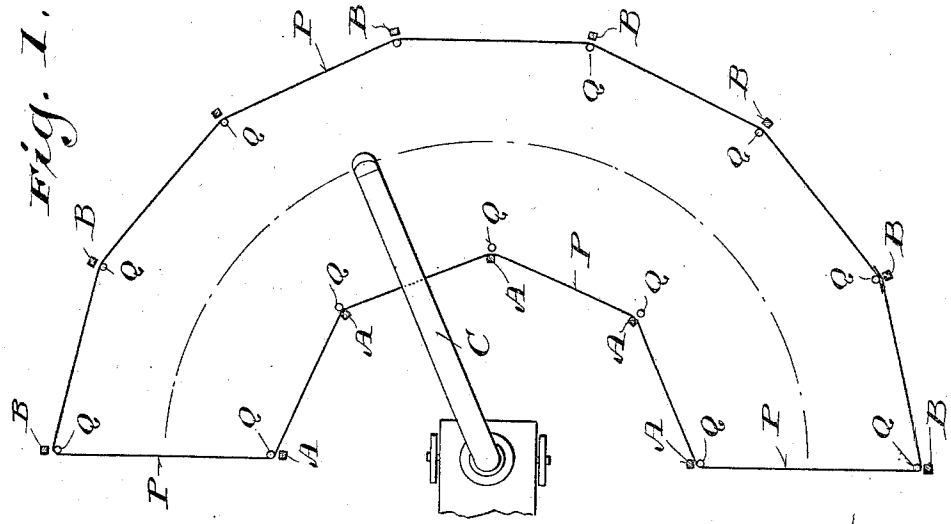
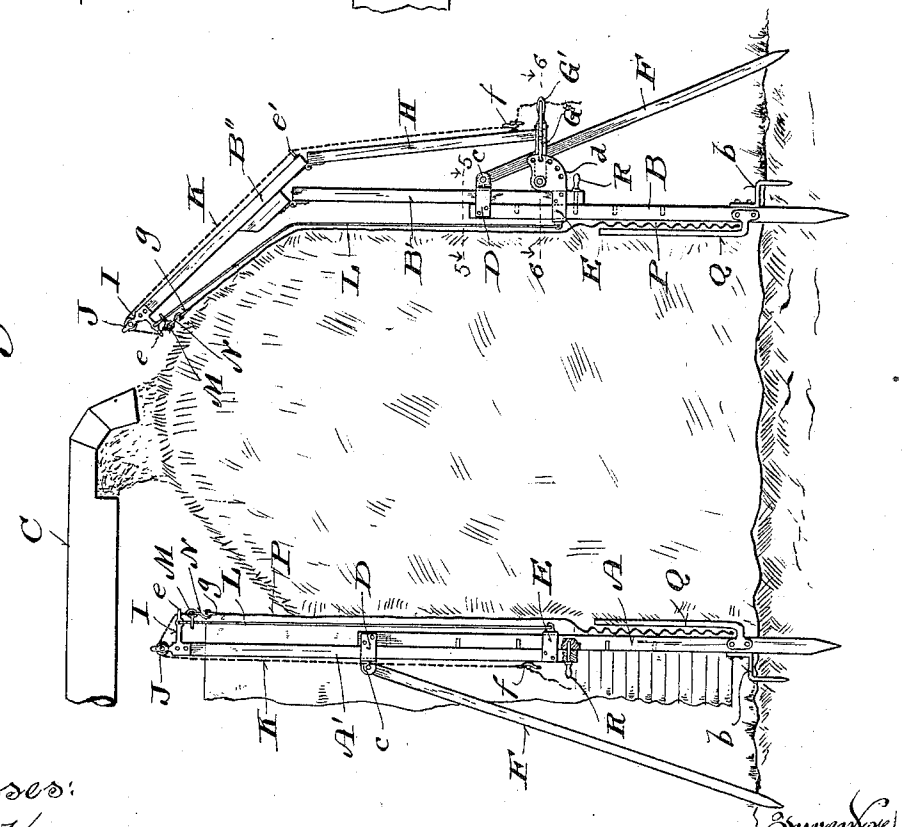


Fig. 2.



Witnesses:
Geo. W. Young.
W. E. Oliphant.

Inventor
Albert A. Minkler
By H. G. Underwood
Attorneys

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

No. 725,114. PATENTED APR. 14, 1903.

A. A. MINKLER.

STRAW STACKING APPARATUS.

APPLICATION FILED MAY 8, 1901.

NO MODEL. 2 SHEETS—SHEET 2.

Fig. 3.

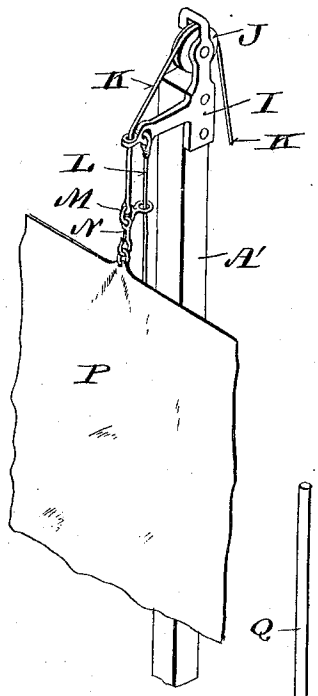


Fig. 4.

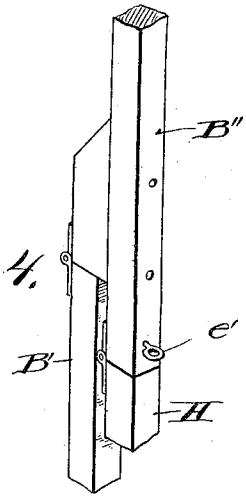
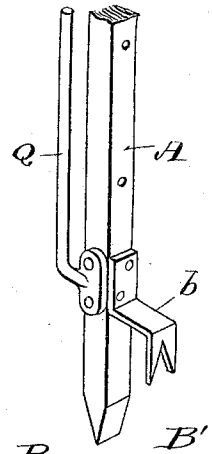


Fig. 5.



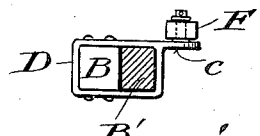
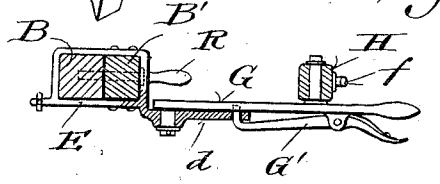


Fig. 7.

Fig. 6.



Witnesses:
Geo. W. Young.
H. E. Oliphant

Inventor
Albert A. Minkler
By H. G. Underwood.
Attorney

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

UNITED STATES PATENT OFFICE.

ALBERT A. MINKLER, OF MENDOTA, ILLINOIS.

STRAW-STACKING APPARATUS.

SPECIFICATION forming part of Letters Patent No. 725,114, dated April 14, 1903.

Application filed May 8, 1901. Serial No. 59,222. (No model.)

To all whom it may concern:

Be it known that I, ALBERT A. MINKLER, a citizen of the United States, and a resident of Mendota, in the county of Lasalle and State of Illinois, have invented certain new and useful Improvements in Straw-Stacking Apparatus; and I do hereby declare that the following is a full, clear, and exact description thereof.

My invention has for its object to save straw, facilitate stacking, and improve the appearance as well as weather resistance of the stacks, said invention consisting in certain peculiarities of construction and combination of parts hereinafter particularly set forth with reference to the accompanying drawings and subsequently claimed.

Figure 1 of the drawings is a diagram illustrating a plan view of a pneumatic-stacker attachment of a threshing-machine and a temporary vertically-extensible inclosure for a straw-stack, the construction and arrangement of parts constituting this inclosure being in accordance with my invention; Fig. 2, a vertical transverse sectional view of the inclosure extended about a straw-stack and partly inclined to cause a taper of the outer upper portion of the stack, the nozzle end of the pivotally-adjustable delivery-flue of a pneumatic stacker being shown in this figure. Figs. 3, 4, and 5 are perspective views illustrating details of said inclosure; and Figs. 6 and 7 are detail horizontal sectional views, respectively indicated by lines 5 5 and 6 6 in the second figure of the series.

Referring by letter to the drawings, A B indicate posts that are set on arcs of concentric circles struck from the swing-center of the delivery-flue C, that constitutes part of a pneumatic-stacker attachment of a threshing-machine, the nozzle end of the flue being midway between the post-lines. Each of the several posts is preferably pointed at its lower end to be easily pushed into the ground. A step *b*, having a depending outer prong, is made fast to each post above the lower end of same, the prong being run in the ground to brace said post. Each post is set by standing the same upright and pushing with a foot on the corresponding step to force the lower end of said post and the prong of said step into the ground.

Fast to the upper portion of the posts A B are bands D for telescopic extensions A′ B′ of said posts, and fast to the lower end of each of these post extensions is a band E, engaged by the adjacent post. In pivotal connection with an ear *c* of each band D is a brace-stake F, and each of the bands E, engaging the posts of the outer series, is provided with a segmental wing *d*, with which a lever G is in pivotal connection, each lever being of itself provided with a spring-latch G′, engageable with any one of a series of apertures in said band-wing, these apertures being at intervals of an arc of a circle struck from the lever-pivot. In hinge connection with the upper end of each post extension B′ is an arm B″, that folds inward, and in like connection with this arm is a link H in pivotal union with one of the levers G aforesaid. The posts, their extensions, and arms B″ where they occur combine to form supports for hoisting mechanism and a shield hereinafter specified.

A bracket I is made fast to the upper end of each post extension A′ and arm B″, each bracket being a hanger for a sheave J and provided with an eye *e*, through which is run a halyard K, supported by the sheave. The arms B″ aforesaid are also provided with eyes *e′*, through which halyards K are run, and a cleat *f* for each halyard is conveniently arranged. A guide L connects each bracket I and an ear of a band E, the inner guides being preferably stiff and the outer ones necessarily flexible. A traveler M, loose on each guide, is in connection with a halyard K, and a snap-hook N, suspended from each traveler, is engageable with an eye *g* of a flexible continuous shield P, that is normally in folds adjacent to the ground between the several posts, and vertical arms Q, having offset lower ends made fast to said posts, the ends of the shield being lapped, as shown in Fig. 1, or joined together by suitable means.

Each of the posts A B is provided at intervals in a vertical direction with recesses for the engagement of pins R, that extend through apertures in the post extensions A′ B′, said pins serving to hold said post exten-

sions in vertically-adjusted position. However, other means may be employed for the same purpose.

When the apparatus above specified is set up, the shield P is extended from time to time above the arms Q of posts A B, as straw delivered within the confines of said shield accumulates to form a stack, the post extensions A′ B′ having been pushed up and secured at a desirable height. To taper the top of the stack at the side farthest from the straw-blower, the levers G are operated to fold inward the arms B″ with the upper portion of the shield P to the desired angle, this adjustment of said shield being shown in Fig. 2. The inner side of the top of the stack tapers automatically as the straw is deposited.

From the foregoing it will be understood that the straw to form the stack is deposited within an inclosure and is thus prevented from scattering and at the same time it packs evenly as the flue C of the blower is swung from end to end of said inclosure. The finished stack presents a smooth exterior and has better weather resistance than the ordinary stack.

A stack having been completed, the above-described inclosure can be readily removed and as readily set up for another stack, or for storage or transportation the posts of said apparatus with their attachments and the halyards can be packed together and rolled up in the shield to form a compact bundle.

While I have shown and described a practical construction and arrangement of parts in accordance with my invention, the same may be varied in the matter of minor details without departure from the scope of said invention.

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

1. A portable straw-stack inclosure comprising a series of supports, a flexible shield normally contracted in folds adjacent to the ground in which the supports are set, and means in conjunction with said supports and the shield for unfolding said shield in a vertical direction from time to time as straw delivered within the inclosure accumulates to form a stack.

2. A portable straw-stack inclosure comprising a series of inner and outer supports the outer ones having inwardly-folding upper portions, a flexible shield normally contracted in folds adjacent to the ground in which the supports are set, means in conjunction with said supports and the shield for unfolding said shield in a vertical direction from time to time as straw delivered within the inclosure accumulates to form a stack, and other means for regulating the angle of the inwardly-folding portions of the outer supports and adjacent portion of the extended shield.

3. A portable straw-stack inclosure comprising a series of supports each in sections telescopically connected, a flexible shield normally contracted in folds adjacent to the ground in which the supports are set, means in conjunction with said supports and the shield for unfolding said shield in a vertical direction from time to time as straw delivered within the inclosure accumulates to form a stack, and other means for maintaining the telescopic adjustment of support-sections.

4. A portable straw-stack inclosure comprising a series of supports each in sections telescopically connected, the sliding sections of some being jointed to have their upper portions fold inward; a flexible shield normally contracted in folds adjacent to the ground in which the supports are set, means in conjunction with said supports and shield for unfolding said shield in a vertical direction from time to time as straw delivered within the inclosure accumulates to form a stack, means for maintaining vertical adjustment of the sliding sections of the aforesaid supports, and means for regulating the angle of the inwardly-folding portions of support-sections and the adjacent portion of the extended shield.

5. A portable straw-stack inclosure comprising a series of supports, brace-stakes in pivotal connection with the supports, a flexible shield normally contracted in folds adjacent to the ground in which the supports are set, and means in conjunction with said supports and the shield for unfolding said shield in a vertical direction from time to time as straw delivered within the inclosure accumulates to form a stack.

6. A portable straw-stack inclosure comprising a series of supports provided with lower steps having depending prongs, a flexible shield normally contracted in folds adjacent to the ground in which the supports and step-prongs are set, and means in conjunction with said supports and the shield for unfolding said shield in a vertical direction from time to time as straw delivered within the inclosure accumulates to form a stack.

7. A portable straw-stack inclosure comprising a series of supports provided with offset parallel lower arms, a flexible shield normally contracted in folds between the support and arms, and means in conjunction with said supports and the shield for unfolding said shield in a vertical direction from time to time as straw delivered within the inclosure accumulates to form a stack.

8. A portable straw-stack inclosure comprising inner and outer telescopic supports, the upper portions of the outer supports being hinged to swing inward, means for bracing all the supports, levers in connection with said outer supports and linked to the upper hinged portions of same, means for holding the levers in adjusted position, guides in connection with the aforesaid supports,

travelers on the guides, a flexible shield attachable to the travelers and normally contracted in folds adjacent to the ground in which the supports are set, halyards in connection with said travelers, means for supporting and guiding the halyards, and other means for maintaining telescopic adjustment of support-sections.

In testimony that I claim the foregoing I have hereunto set my hand, at Mendota, in the county of Lasalle and State of Illinois, in the presence of two witnesses.

ALBERT A. MINKLER.

Witnesses:

FRED H. HASKELL, Jr.,

JOHN R. WOODS.