(No Model.)

J. M. CRAWFORD & T. B. KIRKWOOD.

STRAW STACKER.

No. 273,470. Patented Mar. 6, 1883.

Fig. 1.

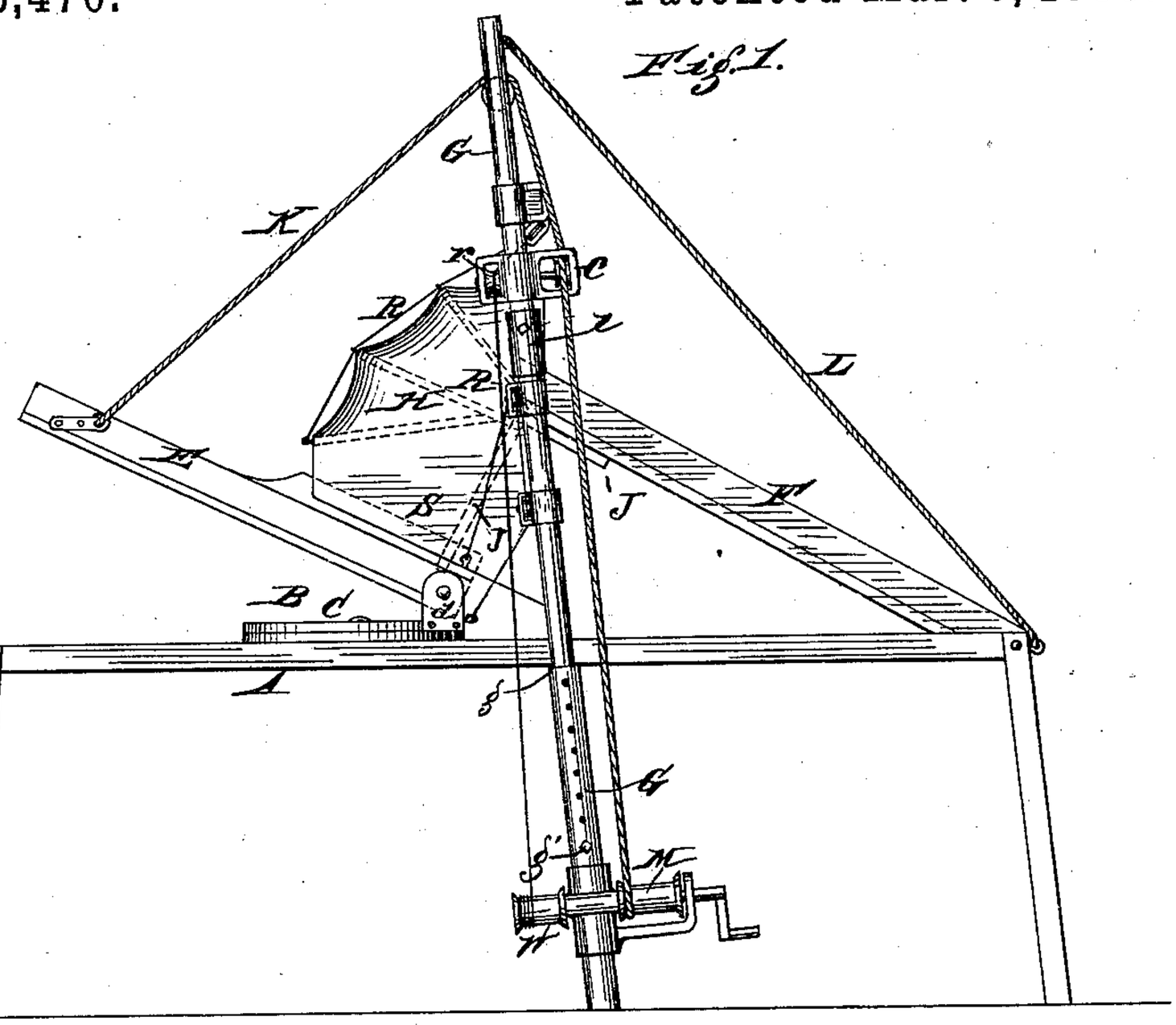


Fig. 2.

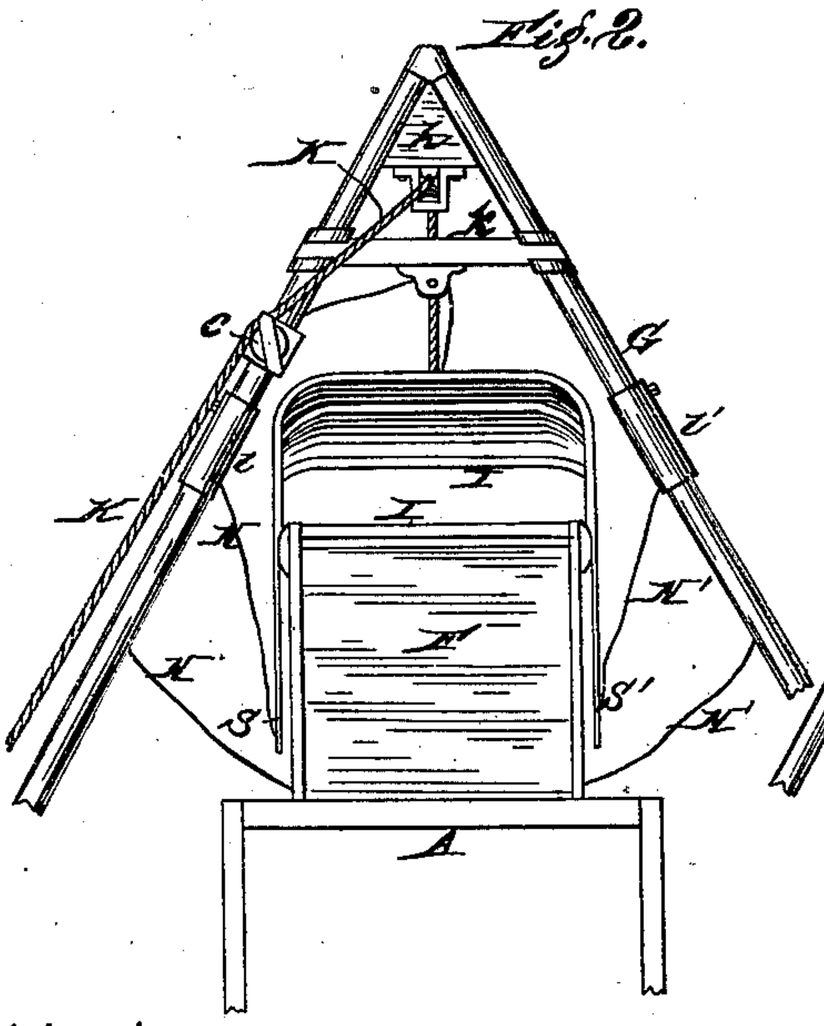
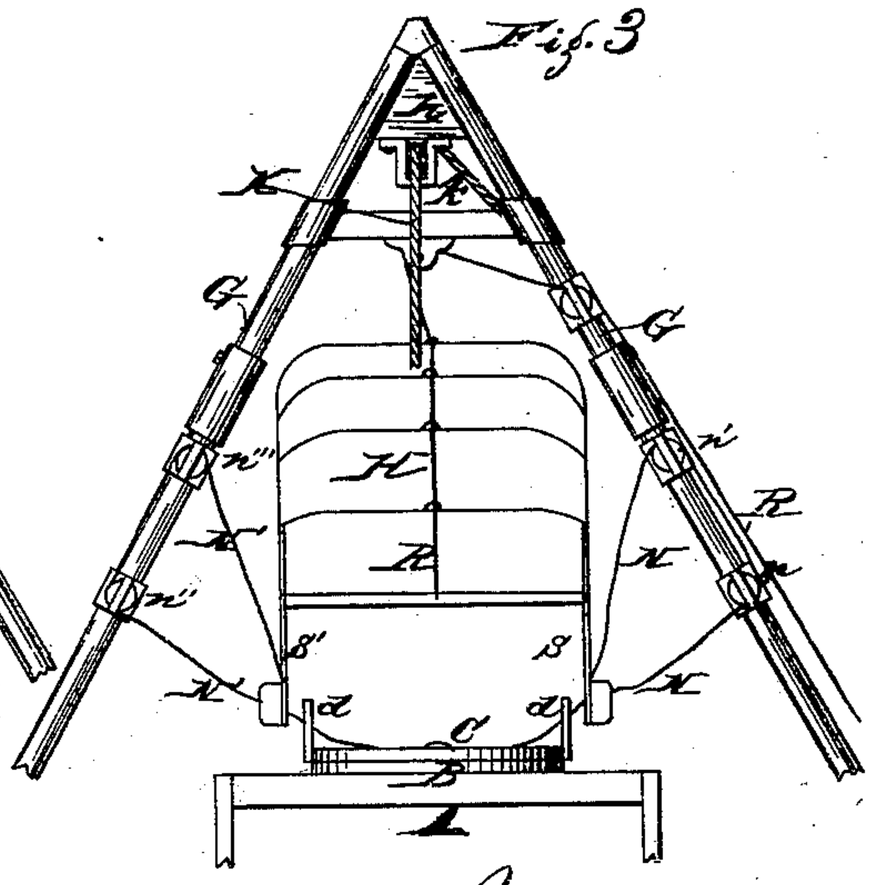


Fig. 3.



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UNITED STATES PATENT OFFICE.

JAMES M. CRAWFORD, OF BENTONVILLE, AND THOMAS B. KIRKWOOD, OF MILTON, INDIANA.

STRAW-STACKER.

SPECIFICATION forming part of Letters Patent No. 273,470, dated March 6, 1883.

Application filed October 17, 1882. (No model.)

To all whom it may concern:

Be it known that we, JAMES M. CRAWFORD and THOMAS B. KIRKWOOD, both citizens of the United States, and residents, respectively, of Bentonville, in the county of Fayette and State of Indiana, and Milton, in the county of Wayne and State of Indiana, have invented certain new and useful Improvements in Straw-Stackers, of which the following is a specification.

Our invention relates to the construction of straw-stackers which are used as attachments to thrashing-machines.

It consists of a hood combined with the adjustable sections of the stacker with the two frames, so as to be automatically adjustable with said frames, forming a guide for straw, all of which will be fully explained in the description of the accompanying drawings and set forth in the claims.

In the drawings, Figure 1 is a side elevation, showing our improvements. Fig. 2 is a front elevation; Fig. 3, a broken rear elevation.

A represents a stand or support for the outer section of the straw-stacker. It is shown provided with a swivel or other means of moving horizontally. We do not in this invention intend to limit ourselves to any particular kind of horizontal adjusting devices and means of communicating motion to the straw-carrier on the upper section.

G represents a frame for supporting the straw-stacker and adjusting devices. It is shown made of gas-pipe, with telescopic joint *g*, so as to be extended or contracted, *g'* representing set-screws for securing the sections in any desired position. The sections are also constructed so as to be readily taken apart. The joints may be made after the manner of joints in a fish-pole; or the parts may be made of different sizes, and the top section, *h*, is preferably made with a V-angle, so as to form a brace for the frame. *k* represents a detachable brace affixed to the jointed sections *l l'*.

E represents the upper section or delivery end of the stacker, and F the lower end, which is attached to the thrashing-machine. Straw-carriers made in the usual manner, of course, will be attached thereto.

Great difficulty has been experienced in the use of vertically and horizontally adjusting stackers, as the two sections have to be separated far enough apart to allow the operation of the carrier devices, and to provide for the angular adjustment the lower end of the upper section must be dropped some distance below the upper end of the lower section. Hence wind is liable to blow the straw away, and when the upper frame, E, is turned at an acute angle to the lower carrier-frame, F, straw is strewn over the frame E, instead of being delivered upon it. To overcome this difficulty we have provided an automatically-adjustable hood, H, which is shown as adjustable vertically simultaneously with the frame E in the following manner:

K represents a rope passing from windlass M through guides *c* in the frame, and attached to frame E near its upper end. Frame E is raised or lowered by turning windlass M.

W represents a windlass on the same shaft as windlass M; R, a rope passing through guides *r* in the frame and connecting with hood H at any convenient point. Hood H is hinged at P to frame G, so that as the windlass M is turned to raise and lower the frame E the hood H is raised and lowered at one and the same time. Hood H is made of bows I and leather or canvas covering attached thereto, similar to the construction of a carriage-top, so that the hood may be folded for transportation.

S represents a flap or skirt attached to the bows I, as shown in Fig. 1. These flaps extend over the side of frame E, *a* representing weights to hold them down. In lieu of weights, whalebone or metal spring-strips may be used to hold the skirts or flaps S against the sides of the frame E, and at the same time allow the frame E to be turned at any angle. The forward part of the hood will project over frame F, while the skirts will rest against the frame E and guide the straw from frame F to frame E.

J represents a hinged shelf attached to the upper end of frame, F, and depending down nearly to the carrier on frame E, so as to prevent straw from dropping out short of the carrier E.

A modification of one feature of our invention would be to provide separate shafts and cranks for windlasses M and W; but this would not be as convenient as the plan here shown.

In Fig. 3 are shown automatic devices for

raising the flaps S S′ when the frame E is swung to right or left for lateral adjustment.

B represents a stationary and C a revolving disk or track, on which the frame E is adjusted.

N N′ represent cords attached to the front of frame E; or they might be attached to the disk C or the standard D. Cord N passes through guides *n n′* on the frame G, thence to the flap S, to which it is attached on one side. Rope N′ in a similar manner passes through guides *n″ n‴* and connects with the opposite flap, S′. As the frame E is turned to the right the rope N′ raises the flap S′, and when the frame E is turned in the opposite direction rope N raises the flap S.

We claim—

1. The combination of the carrier-frame F, adjustable carrier-frame E, hood H, and means whereby said hood is adjusted automatically along with carrier E, substantially as described.

2. In combination with the carrier-frames E F and stationary rods G, the hood H and means for adjusting the frame E and hood H vertically, substantially as herein set forth.

3. In combination with the horizontally-adjustable frame E of a straw-stacker, the hood with adjustable flaps S S′, substantially as herein set forth.

4. In combination with the horizontally and vertically adjustable frame E of a straw-stacker, the hood H, with flaps S S′, and ropes N N′ for the automatic adjustment of the flaps S S′, and stationary bearings or pulleys, said ropes being each fastened at one end to its flap and at the other end to a fixed support, and made to pass over one of said stationary pulleys or bearings, substantially as herein set forth.

5. The V-shaped stacker-frame, composed of stationary frame G and the extension-pieces *g g′*, sliding on the stationary frame, constructed and combined substantially as herein set forth.

6. The V-shaped stacker-frame, composed of the angle-piece *h*, jointed sections *l l′*, and detachable braces *k*, combined so as to form a knockdown frame, substantially as herein set forth.

In testimony whereof we have hereunto set our hands in the presence of two subscribing witnesses.

JAMES M. CRAWFORD.
THOMAS B. KIRKWOOD.

Witnesses:
GEORGE FRAZER,
CLEM STILES.