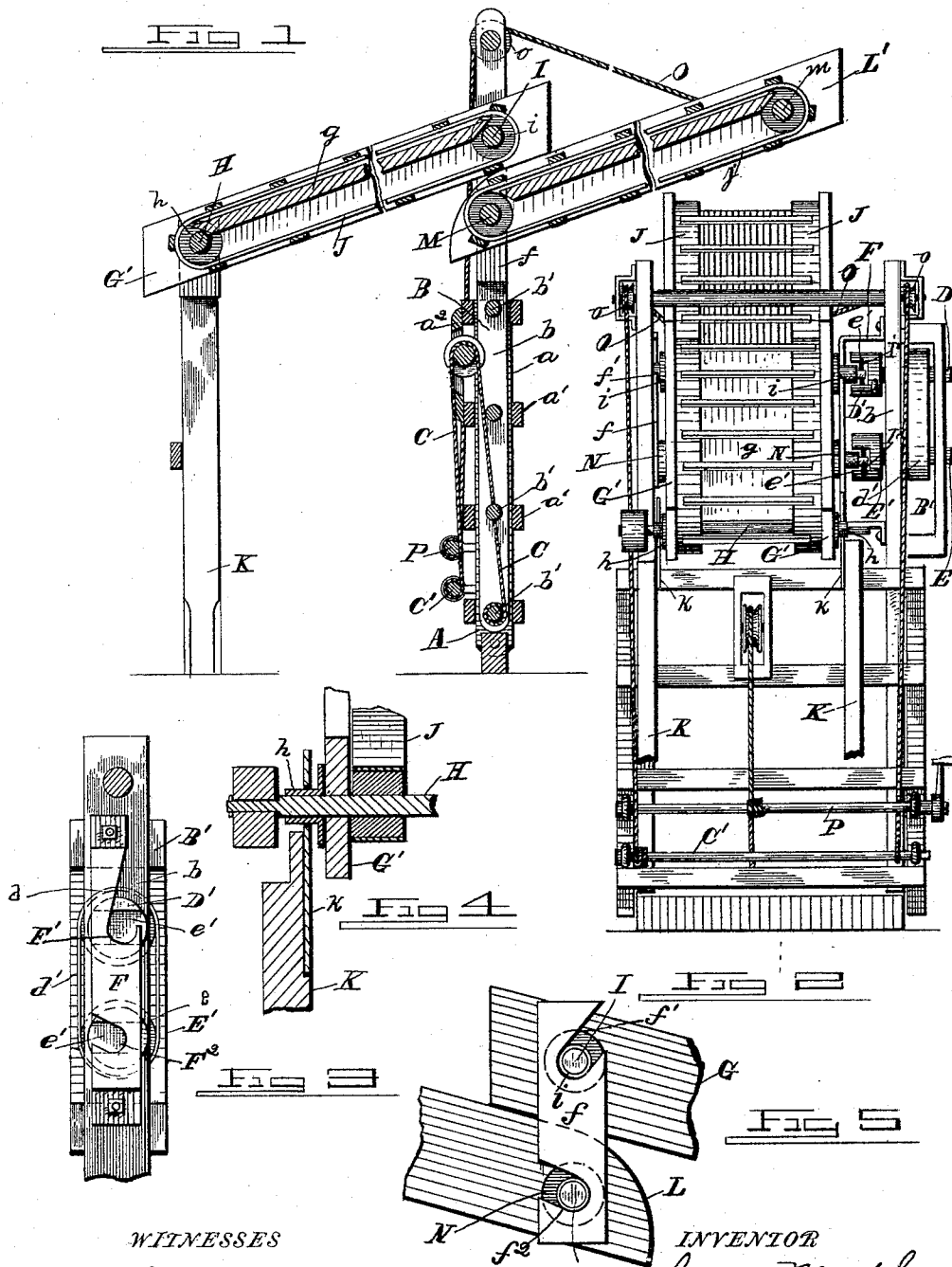


(No Model.)

S. MURPHY.
STRAW STACKER.

No. 460,153.

Patented Sept. 29, 1891.



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SIMON MURPHY, OF BRADFORD, OHIO.

STRAW-STACKER.

SPECIFICATION forming part of Letters Patent No. 460,153, dated September 29, 1891.

Application filed March 19, 1891. Serial No. 385,666. (No model.)

To all whom it may concern:

Be it known that I, SIMON MURPHY, of Bradford, in the county of Miami and State of Ohio, have invented certain new and useful Improvements in Straw-Stackers; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form part of this specification, in which—

Figure 1 is a central longitudinal vertical sectional view of my improved straw-stacking machine. Fig. 2 is a front elevation of the same. Fig. 3 is a detail view. Fig. 4 is a detail sectional view. Fig. 5 is a detail view.

This invention is an improvement in straw-stacking machines or attachments for harvesters, and its object is to provide an endless belt carrier or carriers which can be transported conveniently, can be elevated to deliver the straw at different heights as the stack is built, and can be conveniently folded into a small compass for transportation, and it consists in a pair of belt-carriers and a novel supporting and connecting device therefor and in certain novel details of construction thereof, as will be more clearly understood from the following description and claims.

Referring to the drawings by letter A designates a frame composed of uprights *a a*, connected by transverse pieces *a' a'*.

B designates a frame consisting of side pieces *b b*, connected by transverse pieces *b'* and telescoping with frame A, the two frames thus constituting an extensible or adjustable support for the carrier. Frame B is raised or lowered in frame A by means of a rope or chain C, attached to the lower end of frame B, running up over a pulley attached to a top piece and then down to a drum or shaft C', supported in bearings attached to frame A, as indicated in the drawings.

D and E designate short horizontal shafts arranged one below the other and journaled in one side piece *b* of frame B and in a bracket-iron B', attached to the outer side thereof, as shown. *d e* are pulleys on the said shafts between the bracket and side pieces, and *d'* is a belt connection between said pulleys. D' and E' are clutch-blocks on the inner ends of said shafts, respectively, which blocks have

diametrical slots *e'* in their outer faces, as shown.

F designates a metallic bracket attached to the inside face of piece *b* and extending over blocks D' E', and in the vertical portion of this bracket directly opposite said blocks are oppositely-bearing open slots F' F², which incline upwardly and outwardly, the upper slot F' opening toward the receiving end of the machine and slot F² toward the delivery end. On the opposite piece *b* of frame B is secured a metallic plate *f*, which has similar slots *f'* *f*² in it, corresponding to slots F' F² and directly opposite the latter.

G designates the receiving-section of the conveyer, formed of side pieces G' G', connected by a transverse partition *g*.

H and I are transverse shafts at the opposite ends of the section and journaled in metallic flanged collars *h i*, attached to the side pieces G', as shown, or in other suitable bearings, and on these shafts between the frames are suitable belt-pulleys, and over them runs an endless conveyer-belt J of ordinary construction. The collars *h* project from the side pieces G', and they rest in bearing-plates *k k*, which, as shown in the drawings, are attached to the upper ends of uprights K K, but may be attached to the thrasher or to any suitable support to uphold the rear end of the section. The collars *i i* are slipped into notches F' *f'* of bracket F and plate *f*, and thus uphold the front end of section G, as indicated. The end of shaft I at the side adjoining bracket F projects through its collar, and on it is a diametrically-arranged bolt or pin I', which engages the slot *e'* in block D', so that shafts D and I are interlocked.

L designates the upper section of the conveyer, similar to section G in construction, excepting that the lower ends of its side pieces L' L' are rounded, as indicated.

M designates a shaft journaled in collars N N, attached to the lower ends of the side pieces of section L, and *m* is a shaft journaled in the side pieces at the upper end of the section. Said shafts bear conveyer-belt pulleys, and an ordinary endless belt *j* runs thereover. The collars N N are engaged with and rest in notches F² *f*² of bracket F and plate *f*, as shown, thus supporting the lower section end of section L, and the end of shaft

M, adjoining bracket F, is provided with a transverse pin to engage slot *e'* of block E', thus interlocking shafts E and M. The outer end of section L is unsupported, but is upheld by ropes or chains O O, attached to its side pieces and running up over sheave-pulleys o o, attached to the upper ends of pieces b b, and then down to a drum or shaft P, journaled in bearings attached to frame A, as indicated in the drawings.

The power is applied to shaft H. Belt J transmits motion from this shaft to shaft I, the latter to shaft D, which, through belt *d'*, drives shaft E, and the latter shaft M, by which belt *j* is operated.

It will be observed that the sections can be elevated or lowered with frame B to adjust the delivery end of the carrier as the stack is built; also, that the upper section can be adjusted independently of the other. Again it will be observed that the ends of the sections are very near together, so that the straw is not likely to be blown off by wind in falling from one section to the other. By the herein-described means and manner of attaching the sections to the adjustable support and the clutch connections it will be observed that either or both sections can be connected or disconnected from the support simply by lifting the end out of the slots, and at the same time the clutch connections between the driving-shafts are automatically engaged or disengaged.

While I have described independent belts on each section, yet one single belt could be employed, running over both sections. The double belts, however, do away with any need of take-up devices, which might be required if a single belt were used, and are less troublesome in folding or setting up the carrier.

My stacker may be used as an independent machine or as an attachment to thrashing-machines, the ease with which it can be erected, its compactness when dismantled, and its simplicity rendering it easily portable.

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

1. The combination of the supporting-frame having oppositely-opening slots at its sides adapted to engage shafts on the adjacent ends of conveyer-sections with the said conveyer-sections, which have their adjoining ends detachably supported on the frame by means of said slots and shafts, substantially as described.

2. The combination of the supporting-frame, the pair of clutch-blocks mounted at one side thereof, and drive connections between said clutch-blocks with conveyer-sections having their adjoining ends connected to said frame opposite the respective clutch-blocks and having the conveyer-belt shafts adjacent to said ends engaged with said clutch-blocks, substantially as set forth.

3. The combination of the telescoping frame with the pair of conveyer-sections independ-

ently and removably connected to the upper section of said frame, and the ropes for supporting and adjusting the end of the delivery-section, substantially as described.

4. The combination of the supporting-frame having a pair of shafts at one side driven one from the other and clutch-blocks on the inner ends of said shafts with the conveyer-sections removably connected to said frame opposite said shafts, the shafts journaled in the ends of said sections, the conveyer-belts thereon, and the connections between the adjoining shafts of said sections and the said clutch-blocks, substantially as specified.

5. The combination of the supporting-frame and the bracket and plate attached thereto with the conveyer-sections connected to said frames by shafts engaging oppositely-facing inclined slots in said bracket and plate, substantially as described.

6. The combination of the telescoping frame, the pair of conveyer-sections independently and removably connected to the extension-section of said frame, the independent carrier-belts on said sections, and the shaft, clutch-blocks, pulleys, and belts for driving the carrier-belt in one section from the carrier-belt in the other section, substantially as and for the purpose described.

7. The combination of the frame having oppositely-opening slots at its sides with the pair of conveyer-sections, the shafts in the adjoining ends thereof adapted to rest in said slots and thus connect the carrier-sections to the frame, substantially as set forth.

8. The combination of the frame having oppositely-opening slots at its sides with the conveyer-sections, the shafts in the ends thereof, the carrier-belts thereon, and the flanged collars on the sides of said sections adapted to serve as journal-bearings for the shafts at the adjoining ends of the sections and as trunnions to engage the slots of the frame, substantially as described.

9. The combination of the frame, the shafts D and E, attached to one side thereof, and the clutch-blocks D' E' on the inner ends of said shafts with the conveyer-sections detachably connected to said frame and having the shafts in their adjoining ends provided with pins to engage the said blocks and the carrier-belts in said sections, substantially as described.

10. The combination of the frame, the shafts D E, the bracket F, and plate *f*, slotted, substantially as described, opposite said shafts, with the conveyer-sections G L and the shafts in the ends thereof, the shafts at the adjoining ends of said sections resting in the slots in said bracket and plate, thereby supporting the sections on the frame, and said shafts being loosely engaged with shafts D E, while the sections are connected to the frame, substantially as described.

11. The combination of the telescoping frame, the shafts connected to the upper frame, the clutch-blocks on said shafts, and the pieces or brackets attached to said frame

opposite said clutch-blocks, having open slots
in their opposite sides, with the conveyer-
section G, its shafts H and I, collars *i*, and
carrier-belt, and the conveyer-section L, its
5 shafts M *m* and collars N, and carrier-belt,
all constructed and arranged to operate sub-
stantially as and for the purpose specified.

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

SIMON MURPHY.

Witnesses:

RUTH SIDERS,
J. W. SMITH.