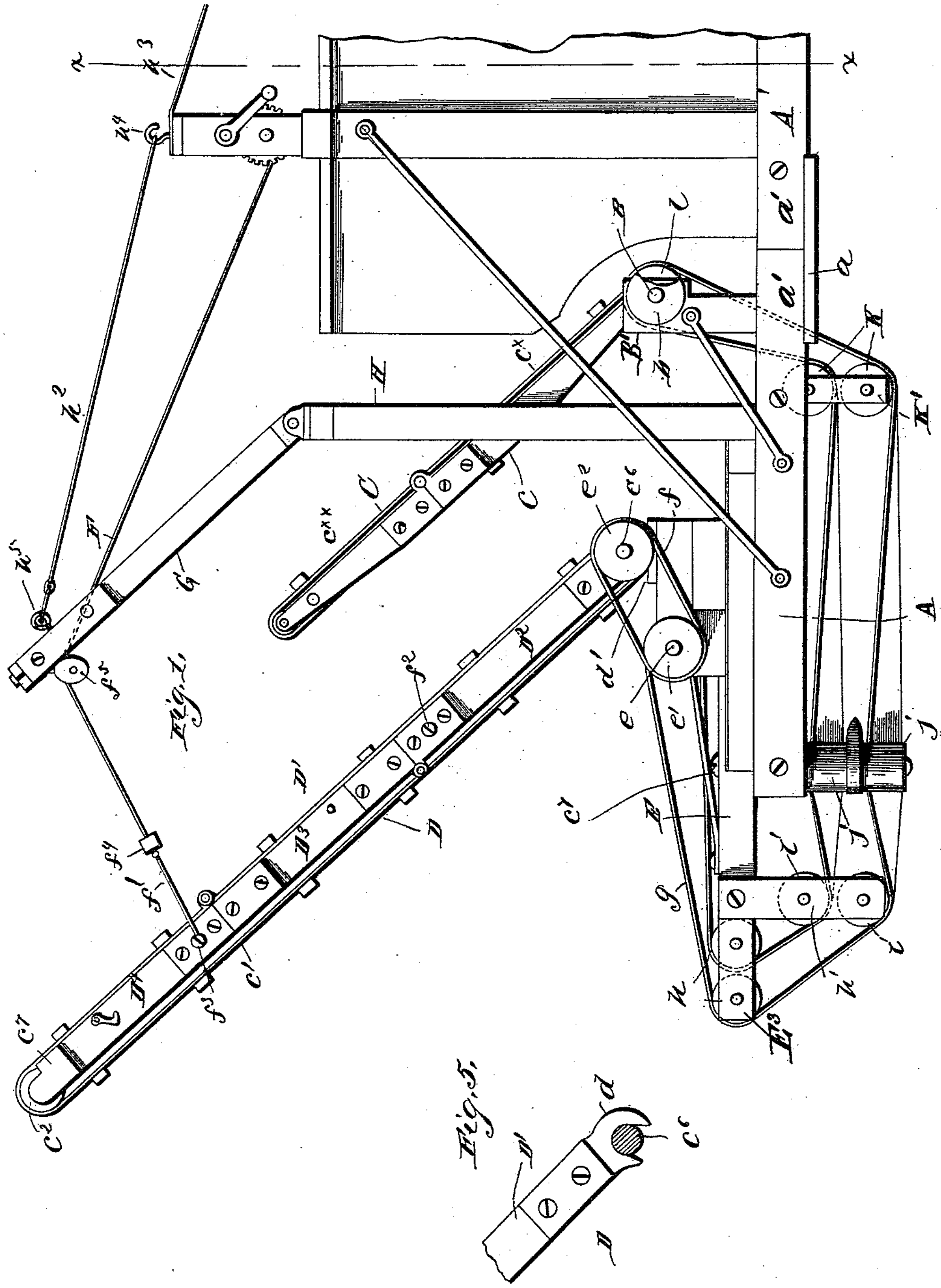
(No Model.) 4 Sheets—Sheet 1.

J. HOVEY.

SWINGING STRAW STACKER.

No. 420,301. Patented Jan. 28, 1890.



WITNESSES

C. L. Naylor

Phil. Mase.

INVENTOR

Joseph Hovey,

by E. W. Anderson,

Attorney.

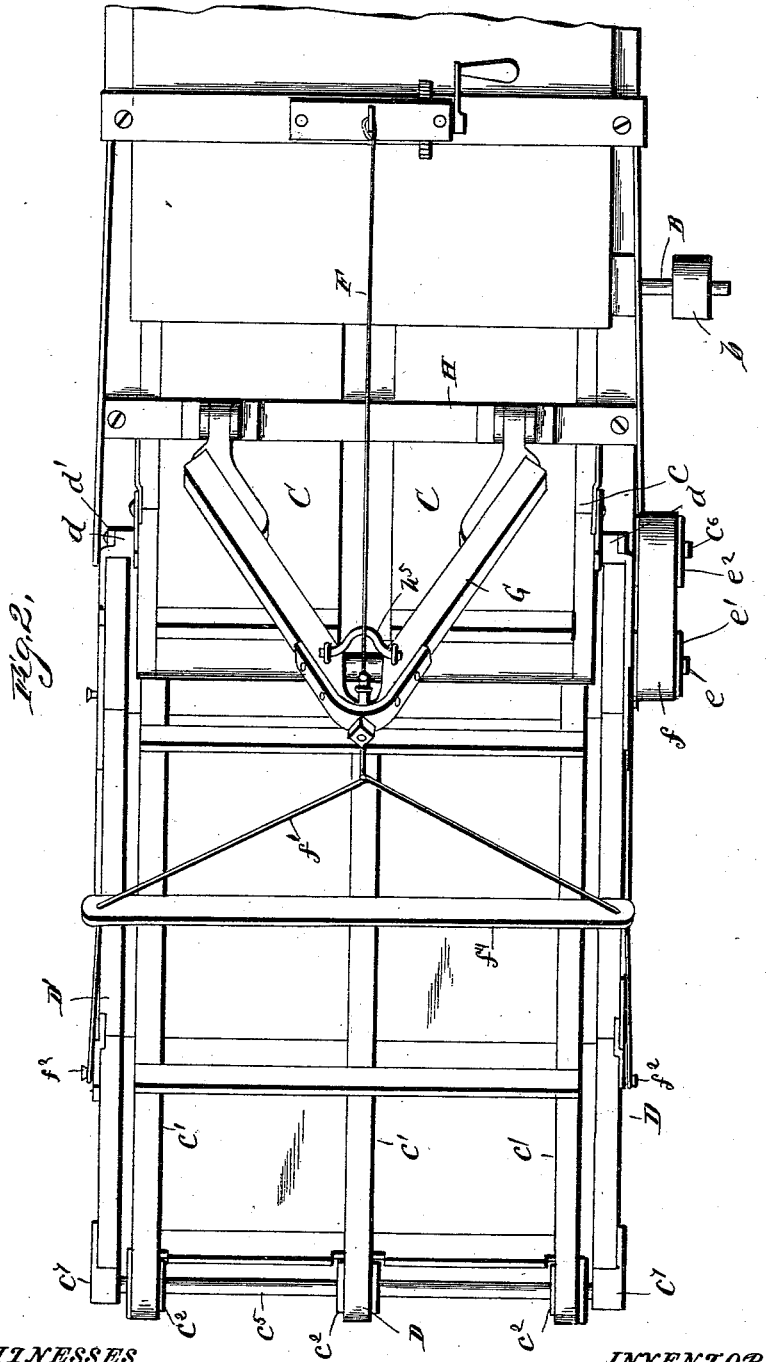
(No Model.) 4 Sheets—Sheet 2.

J. HOVEY.

SWINGING STRAW STACKER.

No. 420,301. Patented Jan. 28, 1890.

Fig. 2.



WITNESSES

P. L. Taylor

Phil. E. Masi.

INVENTOR

Joseph Hovey,

by E. W. Anderson,

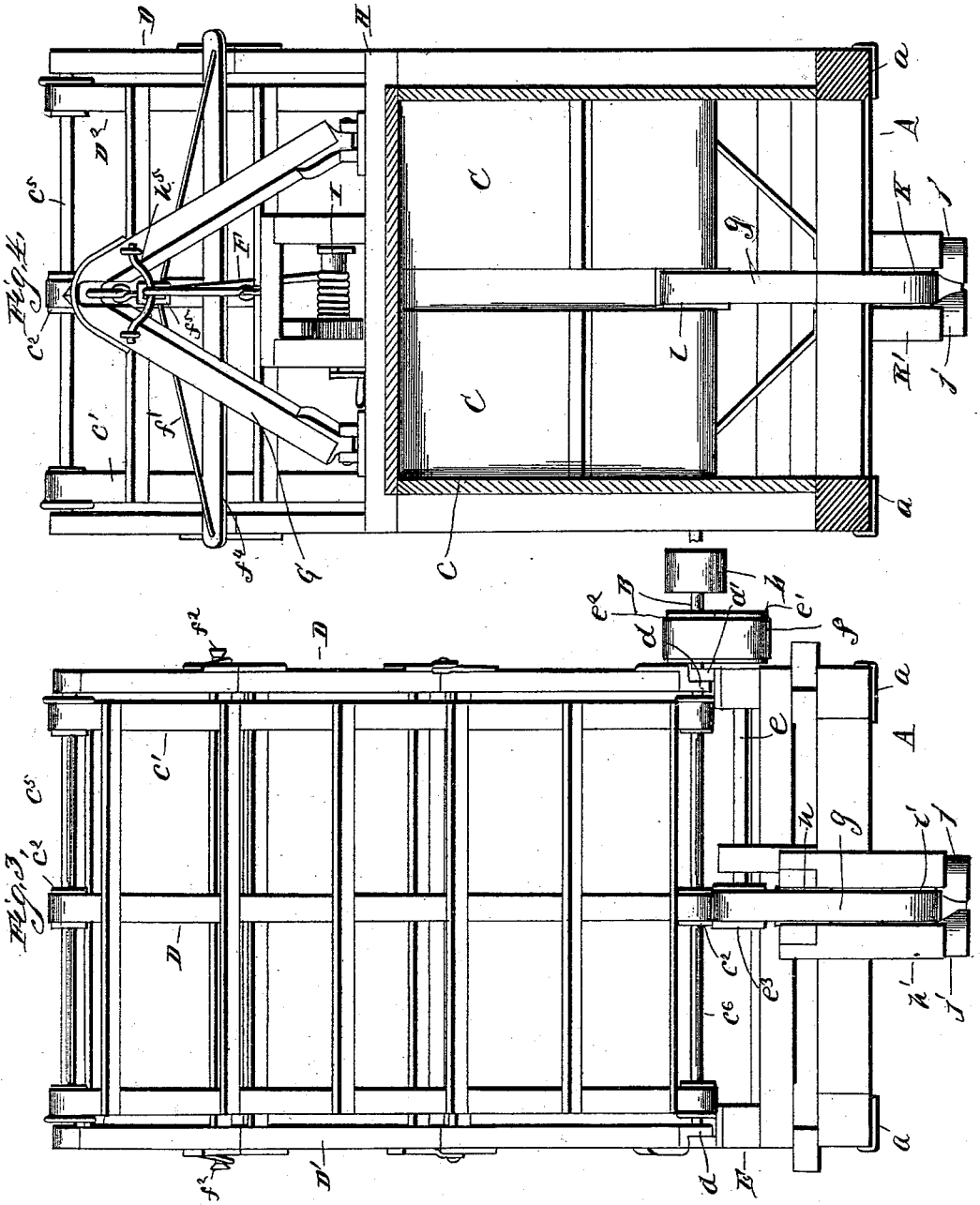
Attorney

(No Model.) 4 Sheets—Sheet 3.

J. HOVEY.

SWINGING STRAW STACKER.

No. 420,301. Patented Jan. 28, 1890.



WITNESSES

C. L. Taylor

Phill. Masi.

INVENTOR

Joseph Hovey,

by E. W. Anderson,

Attorney

(No Model.) 4 Sheets—Sheet 4.

J. HOVEY.

SWINGING STRAW STACKER.

No. 420,301. Patented Jan. 28, 1890.

Fig. 6.

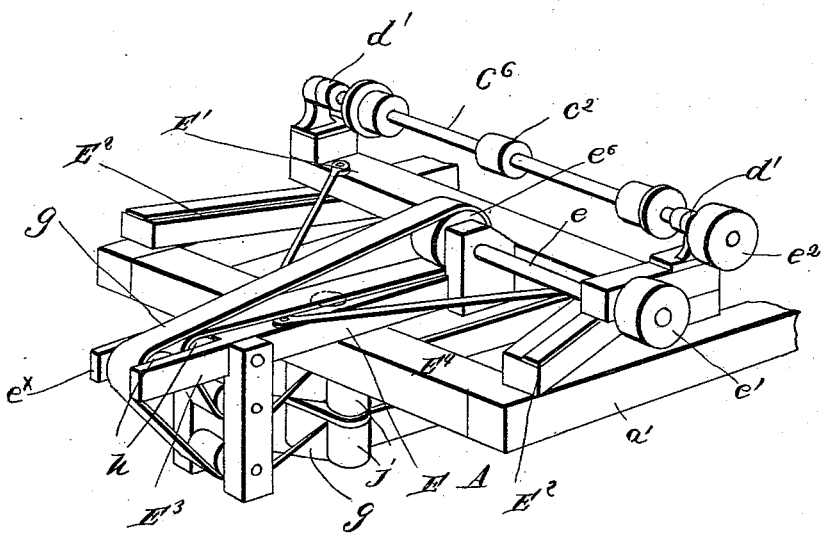
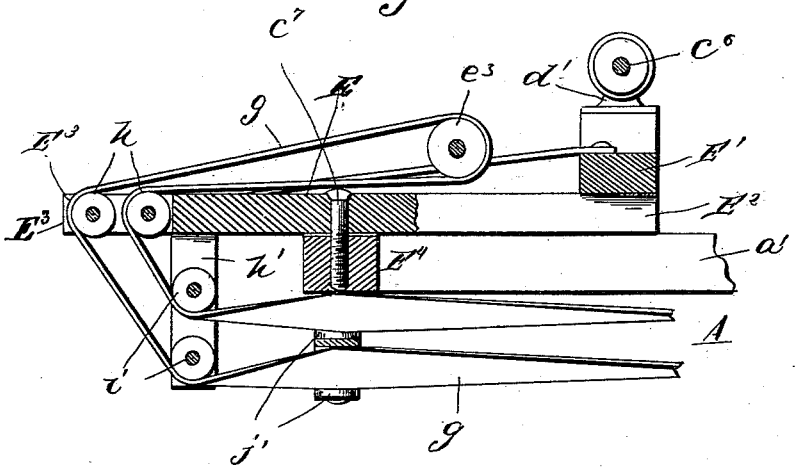


Fig. 7.



Witnesses

C. L. Taylor

Phil. C. Kasi.

Inventor

Joseph Hovey

By his Attorney

E. W. Anderson.

UNITED STATES PATENT OFFICE.

JOSEPH HOVEY, OF FLORIDA, OHIO.

SWINGING STRAW-STACKER.

SPECIFICATION forming part of Letters Patent No. 420,301, dated January 28, 1890.

Application filed May 20, 1889. Serial No. 311,365. (No model.)

To all whom it may concern:

Be it known that I, JOSEPH HOVEY, a citizen of the United States, and a resident of Florida, in the county of Henry and State of Ohio, have invented certain new and useful Improvements in Swinging Straw-Stackers; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to letters of reference marked thereon, which form a part of this specification.

Figure 1 of the drawings is a side elevation of the machine. Fig. 2 is a top plan view. Fig. 3 is an end view. Fig. 4 is a vertical section on the line X X of Fig. 1. Fig. 5 is a sectional detail. Fig. 6 is an enlarged detail perspective view showing more particularly the turn-table and adjunctive parts. Fig. 7 is an enlarged detail sectional view thereof.

In the embodiment of my invention I employ a base-frame A, of suitable construction, which is bolted at its inner lower end to the rear end of the frame *a* of the grain-separator, preferably by plates *a a*, one applied to the under side of each sill *a'* of the two frames at their meeting points and bolted in place thereto, thus uniting the stacker and separator.

B is the driving-shaft for the stacker, having a pulley *b* on one end driven by a belt (not shown) in turn driven from the separator. Applied to the bearings B' of this shaft is the folding frame *c* of an endless belt or belts C, which first receive the straw from the separator and convey or deposit it upon the stacker-belt D. The first or lower section $C^{\times}$ of the belt-bearing frame *c* is fixed or stationary, the upper section $C^{\times\times}$ folding against the derrick-frame H, hereinafter referred to.

The stacker-belt frame D' is shown composed of three hinged-together or folding sections D^2 D^3 D^4; but it may be formed of more or less sections, if desired, and is designed to fold up compactly closely to the belt or apron C when also folded. The stacker apron or belt D consists, preferably, of a series of supplementary endless belts *c'*, connected together by transverse slats or bars, and encompassing rolls or pulleys c^2 c^3 upon two shafts c^5 c^6, the upper shaft c^5 being hung in suitable boxes c^7 at the upper ends of the sectional side pieces of the stacker-belt frame D'. Upon the lower shaft c^6 is supported the lower or bottom section of the stacker-belt frame D', the side bars of said section having applied thereto at their lower ends eyes or boxes *d d*, through which said shaft passes, but without affecting the said section. This shaft c^6 is supported or journaled in suitable boxes *d'* *d'*, secured upon slightly upwardly-extending portions of a turn-table E, giving the stacker a pivotal movement to permit the shifting of the latter, so as to deliver its load or contents in any desired direction, building the stack to the best advantage, or in widening or building outward without requiring movement of the separator. This turn-table is preferably formed in T shape, having its cross-piece E' supported upon oblique bars E^2, secured upon the frame A, and having its longitudinal arm or portion E^3 centrally pivoted by a pivot-bolt c^7 upon the rear cross-piece or sill E^4 of the frame A, said longitudinal portion carrying a shaft *e*, supported in any suitable manner thereon. The longitudinal portion or arm E^3 of the turn-table has in its outer end a recess $e^{\times}$, and from the same at its sides depends pendants *h'*. A short endless belt *f* encompasses a roll or pulley *e'* on the outer end of the shaft *e*, and a roll or pulley e^2 upon and driving the lower stacker-belt shaft c^6. The opposite end of the shaft *e* also carries a pulley or roll e^3, and around this pulley is passed an endless belt *g*, which also passes around or over two other pulleys *h h*, journaled in the recess $e^{\times}$ in the outer end of the turn-table E. Said belt *g* thence passes down under two more pulleys or rolls *i i*, hung in the pendants *h'* of the turn-table E, and from there it passes between two series of pulleys or rolls *j j*, hung upon the under side of the frame A. Passing from these it is carried under two other pulleys or rolls K K, journaled between pendants K' K' of a sill of the frame A. From here the belt is carried up and over a central pulley or roll *l* upon the driving-shaft B, from which said belt receives its motion and through which primarily the stacker-belt receives motion. This arrangement of or manner of passing the belt *g* is made necessary by reason of the location of the point

from which the motion is taken, the point of application of the same, and the employment of the turn-table.

For the adjustment or raising and lowering of the stacker D D′, I employ a rope or chain F, which is connected to a branch rope or chain f', having its looped ends caught or slipped upon either of two sets of headed pins or projections f^2 f^3 upon the sides of the stacker-belt frame. In an extended position of the stacker-belt frame the branch rope f' is applied to the projections or pins f^3; but in its folded position the branch rope is applied to the pins or projections f^2. The branch rope or chain f' is held with its portions spread apart by the apertured cross-bar f^4, through whose aperture said rope passes. The rope or chain F passes over a pulley f^5, swiveled in the under side of the apex of the derrick G, pivotally supported upon the upper cross-bar of an upright stationary frame H, secured upon the horizontal base-frame A. The rope or chain F is wound upon the drum or cylinder of a windlass I, secured upon the top of the grain-separator, and the windlass may be suitably braced in position by a chain or rope h^3, connected to a staple or hook h^4 upon the windlass-frame, and to a ring or staple (not shown) secured farther on to the top of the grain-separator. From this hook or staple h^4 is also extended a brace chain or rope h^2, connecting with a bail h^5, hung upon the derrick G near its apex.

In lieu of the rolls or pulleys e' e^2 and the belt f, as shown, may be substituted sprocket wheels or pinions and an endless chain, respectively.

Having described this invention, what I claim, and desire to secure by Letters Patent, is—

1. The combination, with the supporting or base frame, of the turn-table pivoted thereon, the shifting stacker-belt frame supported upon a shaft upon the turn-table, said shaft being driven by a band from a second shaft upon said turn-table, and an endless band driving said second shaft, and said endless band being driven from the main driving-shaft, the latter band being carried over four or more intermediate series of pulleys or rolls, substantially as shown and described, and for the purpose set forth.

2. The combination, with the supporting or base frame, of the turn-table pivoted thereon, the shifting stacker-belt frame supported upon a shaft upon the turn-table, said shaft being driven by a band from a second shaft upon said turn-table, an endless band driving said second shaft, and said endless band being driven from the main driving-shaft, the latter band being carried over an intermediate series of pulleys or rolls, the folding frame supported upon the base-frame, and the endless belt or apron of said latter folding frame also driven by the main driving-shaft, substantially as set forth.

In testimony whereof I affix my signature in presence of two witnesses.

JOSEPH HOVEY.

Witnesses:
GEO. W. LEONHART,
A. M. PHERSON.