

No. 654,193.

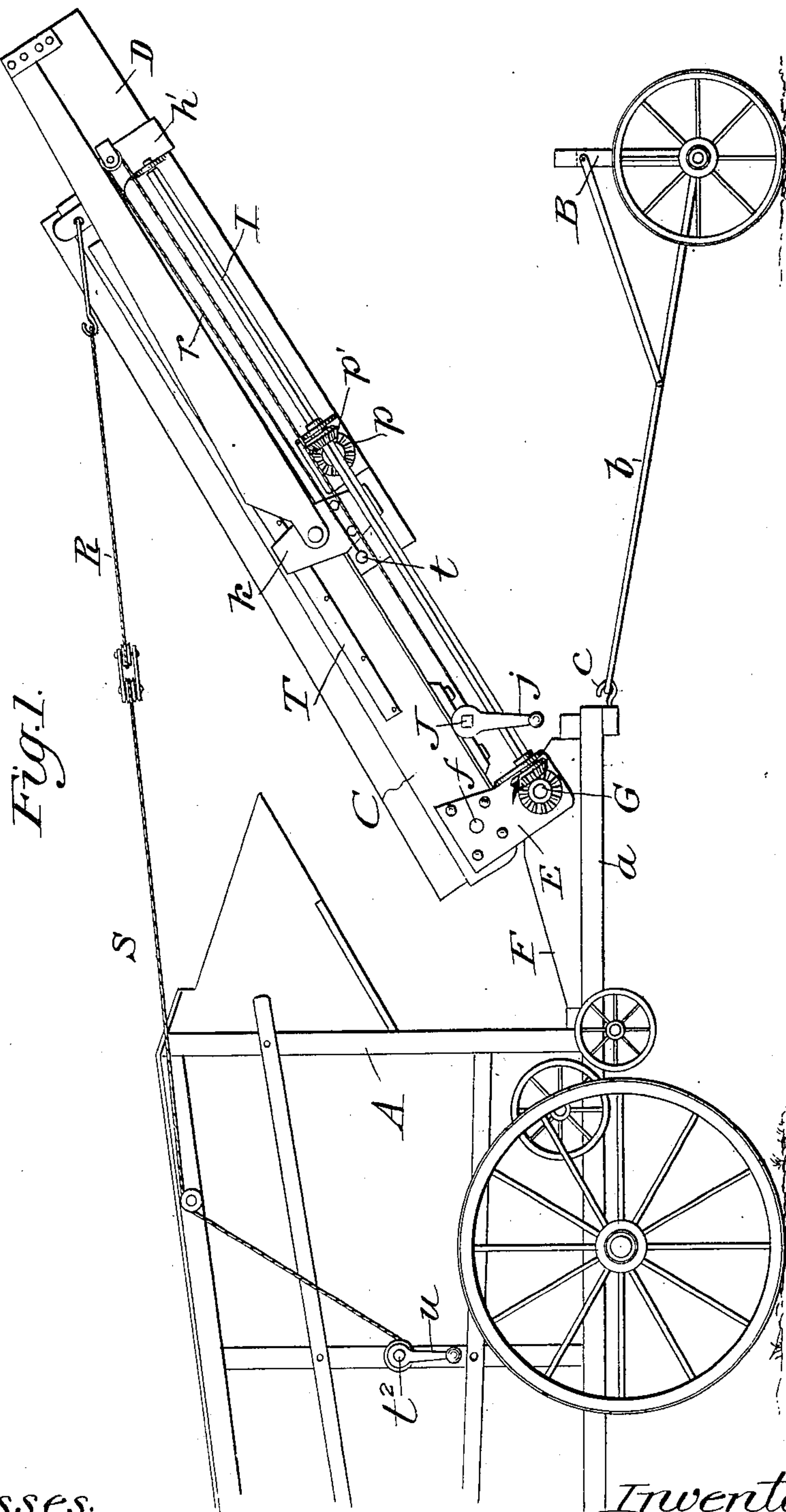
Patented July 24, 1900.

F. TORBECK.
STRAW STACKER.

(Application filed May 2, 1900.)

(No Model.)

3 Sheets—Sheet 1.



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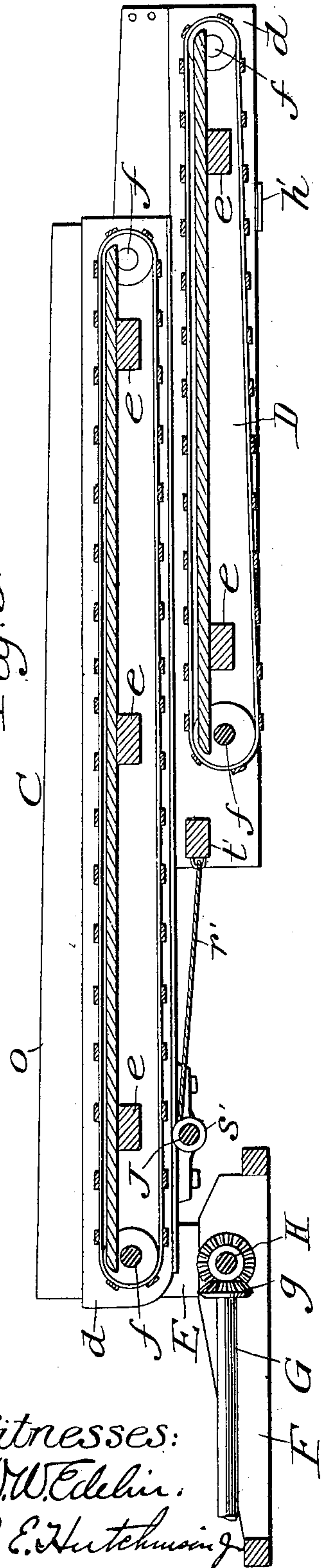
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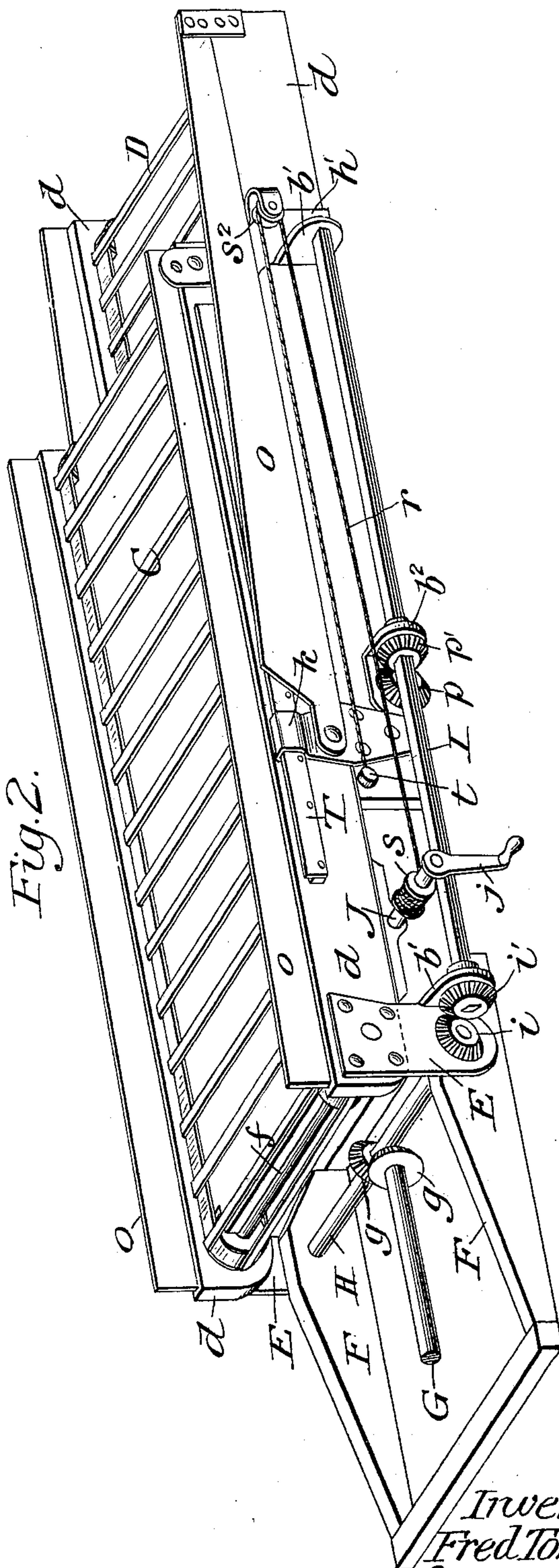
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Fig. 3.



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Fig. 2.



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Fig. 4.

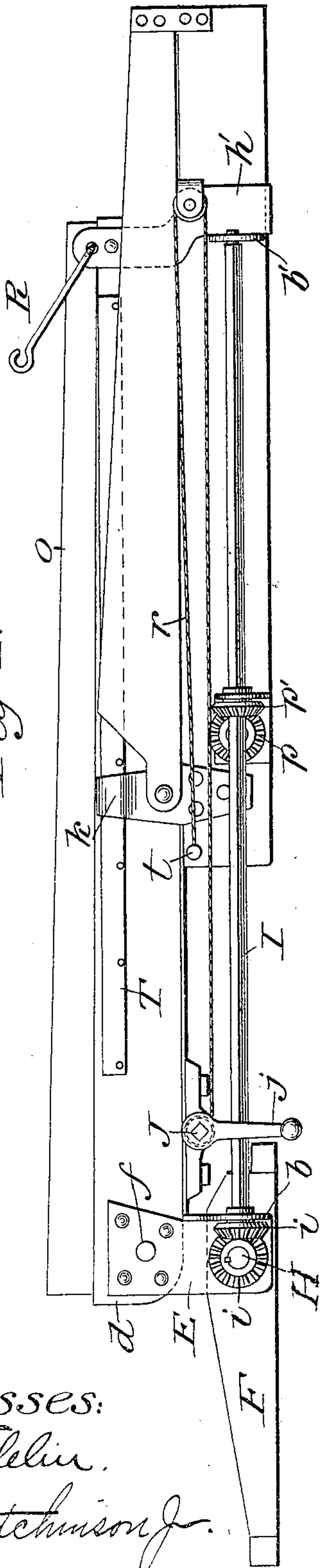
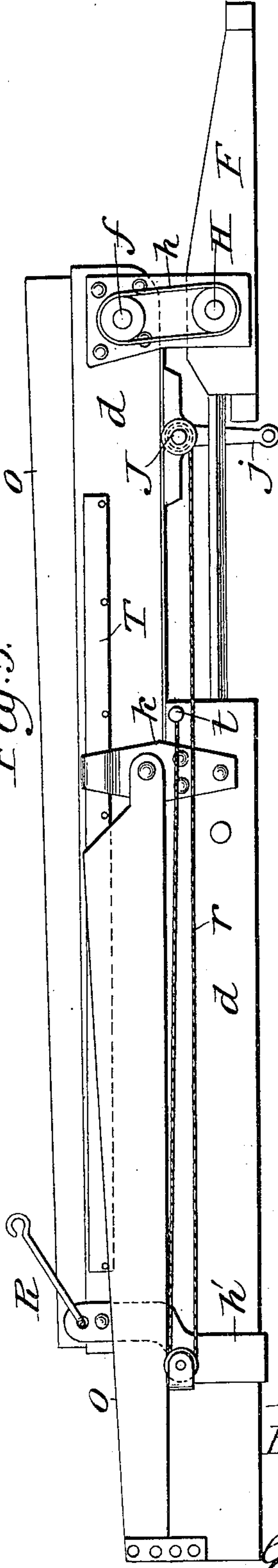


Fig. 5.



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UNITED STATES PATENT OFFICE.

FRED TORBECK, OF GATCH, ILLINOIS.

STRAW-STACKER.

SPECIFICATION forming part of Letters Patent No. 654,193, dated July 24, 1900.

Application filed May 2, 1900. Serial No. 15,257. (No model.)

To all whom it may concern:

Be it known that I, FRED TORBECK, a citizen of the United States, residing at Gatch, county of Fayette, State of Illinois, have invented certain new and useful Improvements in Straw-Stackers; and I do hereby 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.

The invention is illustrated in the accompanying drawings, wherein—

Figure 1 shows a side elevation of the rear end of a thresher with my improved stacker.

Fig. 2 is a perspective view of the stacker detached. Fig. 3 is a longitudinal vertical section of the stacker. Figs. 4 and 5 are side views of the stacker from opposite sides of the same.

The purpose of the invention is to provide a stacker adapted for attachment to a threshing-machine and composed of sections sliding one upon another, so as to deliver the straw at points more or less remote from the thresher and to provide a simple and convenient means for driving the aprons of the stacker-sections in all positions of adjustment of the extensible section or sections.

Referring to the accompanying drawings, A denotes a thresher of any preferred type and construction, and *a* denotes an extension of the bottom sills of the thresher, forming a platform or support for the stacker, to be presently described.

B denotes a two-wheeled truck having a tongue *b*, which is pivotally connected by a hook *c* or other means to the extension *a* of the thresher-frame, the object of this truck being to receive and support the stacker when lowered into horizontal position, as will be more fully described later on.

The stacker consists of two apron-carrying frames C and D, each consisting, as usual, of side pieces *d*, connected by transverse pieces *e*. At opposite ends of each frame the apron-carrying rollers *f* are journaled, and around these travel usual endless elevator-belts.

Secured to the inner ends of the side pieces of the main apron-carrying frame C are brackets E E, each adapted, as shown in the drawings, to form the means for pivotally connecting the stacker to a supporting-frame F,

which is rigidly fastened upon the extension *a* of the thresher or may be pivotally attached to said extension, so as to allow the stacker to be oscillated horizontally. A shaft G is suitably connected to the thresher-gearing and extends into the frame F, where it is connected by miter-gears *g* to a counter-shaft H, journaled in the side pieces of the frame F, and which also forms a convenient pivot for the brackets E E of the main apron-carrying frame C.

Motion is communicated to the apron-driving roller of the main frame C by means of a short belt *h* from a pulley on one end of the shaft H, and a miter-gear *i* on the other end of the shaft H meshes with a similar gear *i'* on the inner end of a line-shaft I, which extends the length of the main apron-carrying frame C and is journaled at its opposite ends in brackets *b' b'*.

On either side piece of the main apron-carrying frame there is secured a track-rail T, and on the corresponding side pieces of the supplemental apron-frame D there are secured hangers *k*, the upper ends of which engage the track-rails and support the rear end of the supplemental apron-frame. The forward end of the supplemental frame is supported by depending brackets *h'*, which are secured to the side pieces of the main frame C at their outer ends and extend down and under the side pieces of the supplemental frame, so that this supplemental frame slides in and out underneath the main frame and is at all times firmly supported by the hangers *k* and the brackets *h'*.

Journaled in bearings near the rear end of the main apron-carrying frame C is a winding-shaft J, operated by means of a hand-crank *j*. This shaft is provided with two ropes or cords *r r*, wound, respectively, around pulleys *s s* near opposite ends of the shaft and outside of the side pieces of the stacker-frames. One end of each rope or cord is attached to the shaft and the opposite end of each is attached to the supplemental apron-carrying frame D. The ropes *r r* are wound around the pulleys, so that turning the shaft in one direction causes the supplemental frame to be extended outwardly, and for this purpose ropes are carried forward around pulleys *s² s²*, secured to the side pieces of the

main apron-carrying frame near their outer ends, whence they extend backwardly and are connected to the rear ends of the side pieces of the supplemental frame at the points
 5 *t t*. At a point about midway of the length of the shaft J there is a pulley *s'*, and another rope *r'* is wound around this pulley in the opposite direction to that of the ropes on the pulleys *s s*. The rear end of this rope *r'* is
 10 attached to a cross-piece *t'* of the supplemental apron-carrying frame D. The rotation of the shaft in the reversed direction to that above described causes the supplemental frame to be pulled backwardly by the rope
 15 *r'*, the ropes *r r* being meanwhile unwound.

On the end of the driving-roller of the apron of the frame D next to the shaft I there is a miter-gear *p*, and journaled in a bracket *b*², secured to the side piece of the supplemental
 20 frame, is a similar portion *p'*, which meshes with the pinion *p*. This pinion *p'* is arranged to slide upon the shaft I as the supplemental frame is adjusted in and out and is so connected with the shaft that it is revolved there-
 25 by in all positions of adjustment of the supplemental frame. In the construction herein illustrated the shaft I is squared in cross-section; but it is to be understood that it may be of any other angular form in cross-section
 30 or that the pinion *p'* may be connected with it by means of an ordinary spline and groove.

Each of the apron-carrying frames is provided with side guards *o*, which are detachably secured to the side pieces of the frames
 35 by any suitable means, and the guards of the supplemental frame D embrace the sides of the main apron-carrying frame when the stacker is not distended.

Such being the construction of my extensible stacker, the operation will be readily understood without further explanation. The stacker is pivoted, as before stated, upon the shaft H, and, as usual in this class of devices, the outer end is supported by means of a bail
 45 R, from which a rope S extends to a small pulley *t*² on the side of the thrasher-frame, so that by means of a hand-crank *u* the outer end of the stacker may be elevated or depressed, as desired.

When it is desired to transport the machine from one place to another, the stacker may be lowered into horizontal position, so that its outer end will rest upon the truck B, and in this and all positions of elevation the aprons
 55 of the stacker-frames are operated continuously, the apron of the main frame C being driven, as before described, from the shaft H by means of the belt *h* and the apron of the supplemental frame D being driven by the
 60 line-shaft I through the intermediacy of the

miter-gears *pp'*, as before described, this shaft I being also driven from the shaft H.

Having thus described my invention, what I claim, and desire to secure, is—

1. In a stacker, the combination of a main 65 apron-carrying frame, a supplemental frame also carrying an apron and connected to the main frame so as to be adjustable longitudinally thereof, a line-shaft journaled in bearings on and extending lengthwise the main 70 frame, and a pinion carried by the supplemental frame and geared to the apron-driving roller thereof, said pinion being adapted to slide on the shaft as the supplemental frame is adjusted so as to drive its apron in any po- 75 sition of adjustment.

2. In a stacker, the combination of a main apron-carrying frame, track-rails on the sides thereof, an underlying supplemental frame 80 also carrying an apron and supported by hangers engaging the track-rails, a line-shaft journaled in bearings on and extending lengthwise the main frame, a pinion sliding on said shaft and geared to the apron-driving roller 85 of the supplemental frame, and mechanism for adjusting said frame longitudinally of the main frame.

3. In a stacker, the combination of a main apron-carrying frame, a drive-shaft concentric with which the frame is pivotally con- 90 nected to the thrasher, and by means of which the apron of said frame is driven, a supplemental frame also carrying an apron and adjustable longitudinally of the main frame, a 95 line-shaft journaled in bearings on and extending lengthwise the main frame and geared to the drive-shaft, and a pinion carried by the supplemental frame and sliding on the line-shaft and geared to the apron-driving 100 roller of said supplemental frame.

4. In a stacker, the combination of a main apron-carrying frame, track-rails on the sides thereof, an underlying supplemental frame 105 also carrying an apron and supported by hangers engaging the track-rails, a winding-shaft journaled on the main frame and having its ropes or cords connected with the supplemental frame so as to adjust the same longitudi- 110 nally of the main frame, a line-shaft journaled in bearings on and extending the length of the main frame, and a pinion sliding on said shaft and carried by the supplemental frame, said pinion being geared to the apron-driving roller of said frame.

In testimony whereof I affix my signature 115 in presence of two witnesses.

FRED TORBECK.

Witnesses:

J. C. TORBECK,
 JOHN W. OPPAS.