No. 698,793. Patented Apr. 29, 1902.

J. R. BUCKWALTER.

STRAW STACKER.

(Application filed Nov. 9, 1901.)

(No Model.) 2 Sheets—Sheet 1.

Fig. 1.

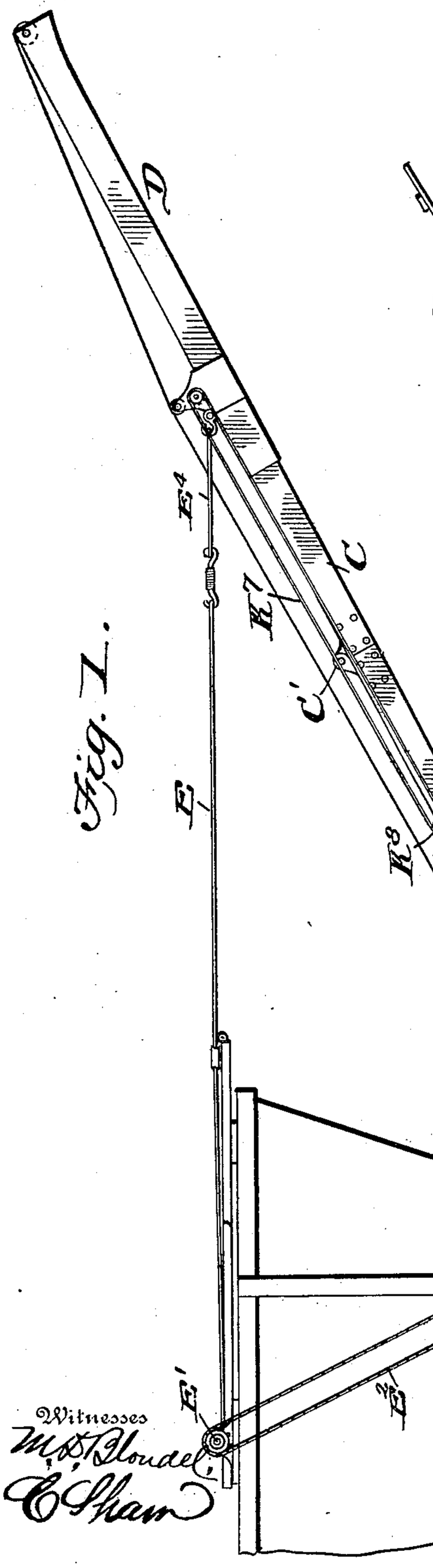

Fig. 2.

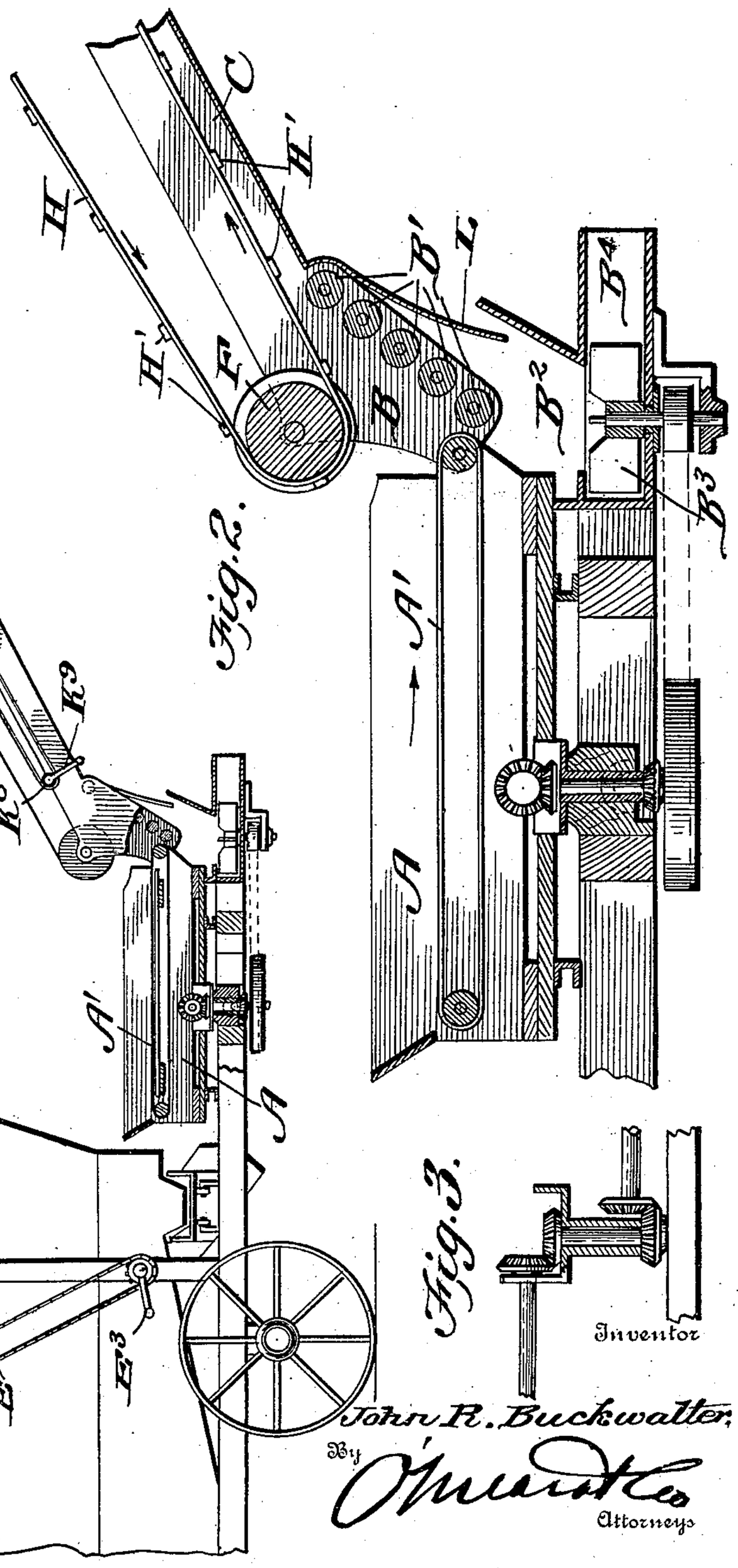

Fig. 3.

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Fig. 4.

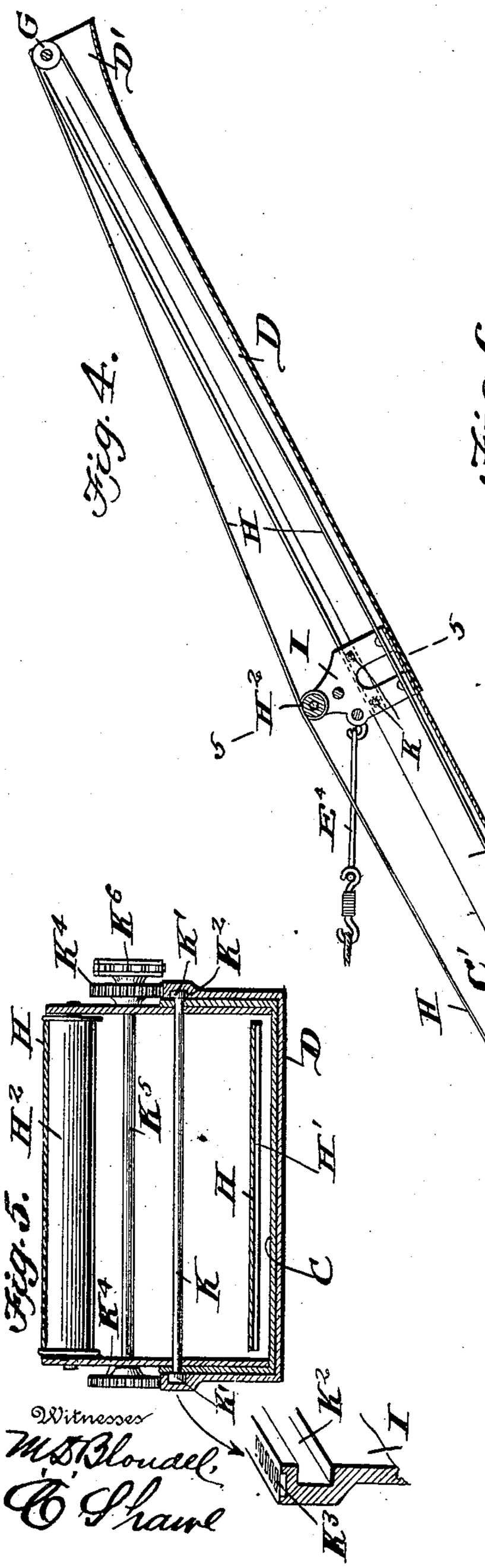

Fig. 6.

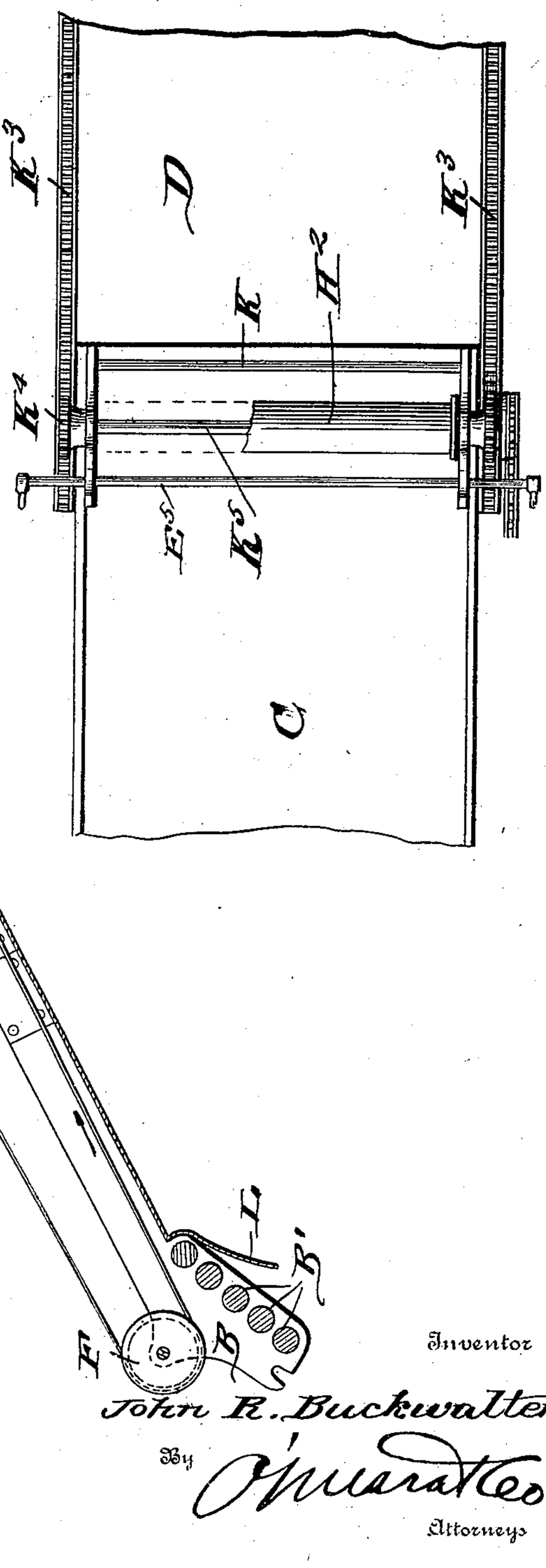

Fig. 5.

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JOHN R. BUCKWALTER, OF KINZERS, PENNSYLVANIA.

STRAW-STACKER.

SPECIFICATION forming part of Letters Patent No. 698,793, dated April 29, 1902.

Application filed November 9, 1901. Serial No. 81,714. (No model.)

To all whom it may concern:

Be it known that I, JOHN R. BUCKWALTER, a citizen of the United States, residing at Kinzers, in the county of Lancaster and State of Pennsylvania, have invented a new and useful Improvement in Straw-Stackers, of which the following is a specification.

This invention is a straw-stacker adapted to be used in connection with a thresher-machine, the object of the invention being to provide a novel construction of stacker capable of separating the chaff from the straw; and another object is to provide a stacker which owing to its construction is not liable to become clogged, as stackers now in use, even when elevating the straw perpendicularly.

Another object of the invention is to provide a stacker which can be constructed to accommodate stacks of different heights and also one which can be folded back upon the thresher when not in use.

With these objects in view the invention consists in the novel points of construction and combination hereinafter fully described, and pointed out in the claims.

In the drawings forming part of this specification, Figure 1 is a view showing the rear end of a thresher in elevation, the stacker in elevation, and the mechanism for conveying the straw to the stacker and for separating the chaff being shown in section. Fig. 2 is an enlarged view showing the lower end of the stacker, the chaff-blower, and the conveyer for carrying the straw to the stacker. Fig. 3 is a detail view illustrating a portion of the driving mechanism. Fig. 4 is an enlarged sectional view of the stacker or conveyer. Fig. 5 is a sectional view on the line 5 5 of Fig. 4. Fig. 6 is a detail plan view illustrating the telescoping ends of the conveyer-sections.

In carrying out my invention I extend the timbers of the thresher-machine and arrange thereon a turn-table A, carrying an endless belt A′. Track-castings B are pivotally connected to the rear end of the turn-table, said tracks having a series of idle rollers B′ journaled therein, said rollers being separated a short distance apart, so as to permit any chaff or dirt to drop therethrough into the hopper B^2, in which operates a rotary blower B^3, discharging chaff or dirt through the spout B^4. The stacker or conveyer is rigidly connected to the casting-tracks B and made integral therewith or connected thereto in any suitable manner. The conveyer or stacker is preferably constructed of a lower section C and the upper section D, said upper section being adapted to telescope upon the lower section, as fully described hereinafter, and it is also preferred to make the lower section in two parts connected by a hinged joint at C′, the purpose of said joint being to permit the conveyer being folded back upon the thresher when not in use. The conveyer is supported in its operative position by means of a cable E, connected to the shaft E′, arranged upon the thresher and operated by the sprocket-chain E^2 and crank E^3, so that said stacker can be raised or lowered, as desired, the said cable E being connected to the belt E^4, which in turn is connected to the outer ends of a rod E^5, attached to the upper end of the lower section of the stacker or conveyer.

The lower section of the conveyer has a roller F at its lower end, and the upper section has a roller G at its upper end, and traveling around these rollers is the endless elevator or conveyer belt H, having the transverse slats H′. This belt is driven by any suitable mechanism, the upwardly-moving flight traveling next to the bottom of a conveyer, which is closed, thereby carrying the straw upwardly along the closed bottom, and in this manner all danger of carrying over any of the straw is avoided; the outer or upper end of the upper section being enlarged, as shown at D′, for the purpose of facilitating the discharge of the straw at the said end, and inasmuch as the bottom of the conveyer is preferably made of smooth sheet metal straw can be easily dragged upwardly thereon. So far as I am aware all straw-stackers heretofore constructed have moved in exactly the reverse direction—that is, the straw has been carried upwardly upon the outer flight of the conveyer-belt—and it is well known that in stackers constructed in such manner the straw is frequently carried over and down into the conveyer, thereby choking the same. The upper flight of the belt H travels over a roller H^2, carried in the track I, arranged at the upper end of the lower section of conveyer, said track also having a

shaft K journaled therein, said shaft having guide-rollers K′ at its outer ends, said rollers traveling in the guideways K^2, produced in the inner sides of the upper section D, the upper edges of said sides being provided with rack-teeth K^3, adapted for engagement with the pinions K^4, carried upon the outer ends of the shaft K^5, which is also journaled in the track I, and the sprocket K^6 is also arranged upon the outer end of the shaft K^5, said sprocket having a chain K^7 arranged thereon, said sprocket-chain passing also around another sprocket K^8, mounted upon the lower section of the conveyer and provided with an operating-crank K^9, so that by turning the said crank in either direction the upper section D of the conveyer or stacker can be lengthened or shortened, inasmuch as the turning of said crank operates the shaft K^5, which drives the pinions, and these pinions meshing with the rack-teeth upon the upper edges of the sides of the upper section of conveyer move the said sections up or down, the guide-rollers K′, traveling in the guideways K^2, serving to guide and steady the movements of the said upper section. In operation the straw is discharged upon the belt A′ and is carried rearwardly to the shaft-rolls B′ and directed upwardly into the lower section of the stacker or conveyer. In passing over the rolls B′ all the chaff and dirt drops between the rolls into the hopper, from which it is blown by means of the rotary blower. The straw is then elevated or carried upwardly along the bottom of the conveyer or stacker and discharged at the upper or enlarged end of the upper section. The upper section telescopes readily upon the lower section, and by turning the crank K^9 in the desired direction the said section can be lengthened or shortened until the exact adjustment is obtained. When not in use, the stacker can be turned back upon the top of the thresher, the hinged joint C′ permitting such manipulation. In case it is desired to elevate the chaff with the straw for separation an apron L may be stretched beneath the chaff-rollers, thereby cutting off the escape of the said chaff, which will thus be passed upwardly into the stacker or conveyer along with the straw.

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

1. A straw-stacker, comprising in combination the elevator or conveyer and the idle rolls arranged at the lower end of said conveyer and between which the chaff is adapted to fall, substantially as set forth.

2. A straw-stacker, comprising in combination a conveyer or elevator, the rollers arranged at the lower end thereof, and the blower arranged beneath the rollers for the purpose described.

3. In a straw-stacker, the combination with the conveyer, of the rollers arranged at the bottom thereof, the endless belt for delivering the straw to the said rollers, a conveyer, and a rotary blower arranged beneath the rollers for the purpose described.

4. In a straw-stacker, a conveyer, comprising the upper and lower sections, the upper section telescoping upon the lower section, the sides of said upper section having guideways and rack-teeth, guide-rollers, pinions and operating mechanism carried by the lower section, as and for the purpose described.

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