(No Model.)

J. H. PRATT

HAY ELEVATOR AND CONVEYER.

No. 263,666. Patented Aug. 29, 1882.

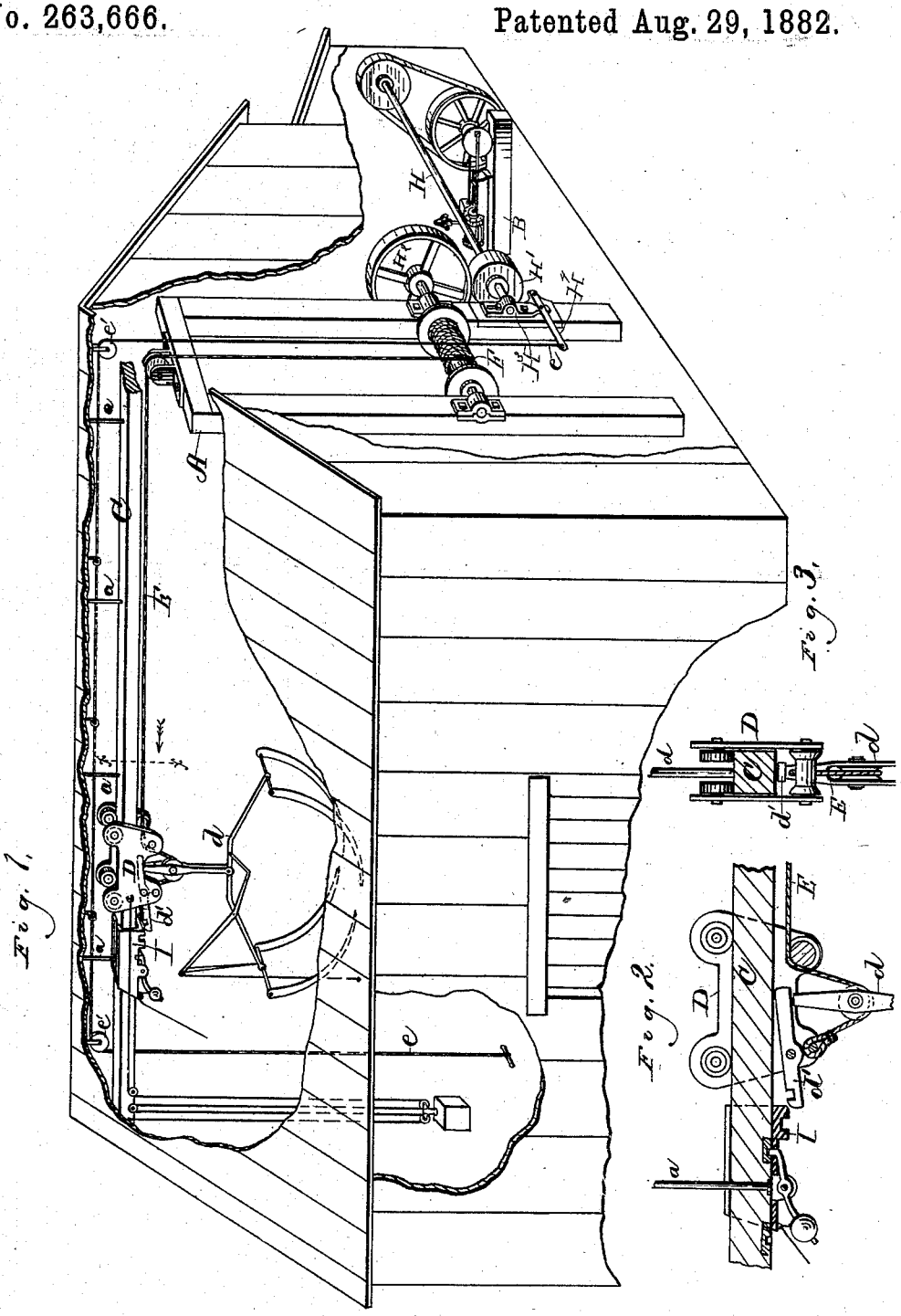

Fig. 1.

Fig. 3.

Fig. 2.

Witnesses.
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UNITED STATES PATENT OFFICE.

JAMES H. PRATT, OF PANA, ILLINOIS.

HAY ELEVATOR AND CONVEYER.

SPECIFICATION forming part of Letters Patent No. 263,666, dated August 29, 1882.

Application filed May 9, 1882. (No model.)

To all whom it may concern:

Be it known that I, JAMES H. PRATT, a citizen of the United States, residing at Pana, in the county of Christian and State of Illinois, have invented a new and useful Improvement in Hay Elevators and Conveyers, of which the following is a specification.

My invention relates to certain new and useful improvements in hay elevators and conveyers for hay-barns, the object of which is to elevate and convey hay to any part of a large hay-barn with the least possible expense, and to render it not only possible but convenient for one man to unload hay from a wagon and deposit it at any place in the barn without leaving the wagon, and also to render it equally as convenient to clean out a barn, depositing the hay on a wagon with the same device, or deliver it to a baling-press, as the case may be.

The device consists, first, in using an ordinary hay-carrier adapted to traverse a single track, consisting of a beam suspended by bolts from the rafters of the barn; and, second, the use of an adjustable stop-block attached to said beam to operate the latch of the carrier; third, in the construction and arrangement of carrier rope or cable and the operative mechanism controlling the same, consisting of a main line of shafting driven by an engine and arranged to transmit a rotary motion to a drum-shaft through the medium of two friction-wheels, by means of which the cable controlling the carrier is wound upon the drum-shaft, and of the means employed by which the drum-shaft is set in motion, all of which are arranged to operate in combination, as hereinafter described. I attain these objects by the device illustrated in the accompanying drawings, in which—

Figure 1 is a perspective view of a barn broken out in places to show the manner of applying my device. Fig. 2 is a section longitudinally through the carrier and stop-block. Fig. 3 is a cross-section of carrier.

Similar letters refer to similar parts throughout the several views.

Let A represent the frame-work of a barn, or that portion which I employ to support my device, and B the engine, located in an adjoining shed.

C is a beam suspended from the rafters or T-beams by rods or bolts *a a a a a*. Said beam C serves as a track upon which the carrier D runs, said carrier being of ordinary construction, and adapted to be drawn along the track or beam C by the cable E, which is attached to the carrier in the ordinary manner, and passes over the idler G at the end of the barn, as shown. From thence it passes down to the drum-shaft F, around which it is wound, and by so winding the cable around the drum-shaft the hay-fork *d* of the carrier D is raised, with its bundle of hay, to the carrier, and is locked thereto by the latch *d'*. The carrier is then drawn along the track by the winding of the cable on the drum-shaft to any point desired to deposit the hay. The latch of the fork is then tripped by the cord leading from the fork to the floor and the hay is dropped. Said drum-shaft is unwound by the weight of the hay-fork; but other weights may be used, if necessary, to accomplish this.

Below and parallel with the drum-shaft is a main line of shafting, H, supported in suitable bearings attached to the frame-work of the barn and adjoining shed, within which an engine is located, which may be either stationary or portable.

Mounted upon the track C is an adjustable stop-block, I, which is so constructed and arranged that it can be moved along the track and secured at any point, and is used in this manner for the purpose of stopping the carrier and to trip the latch *d'* to allow the fork to run down at any point desired, and is especially adapted for use in this adjustable manner when clearing out the barn, as the hay can be raised from any part of the barn and deposited at the press or upon a wagon.

One of the principal objects attained by my device is that of preserving the cable by winding it around a drum-shaft located inside of the barn, where the cable will always be kept dry, and, again, in having the movement of the drum-shaft under complete control of one man, either upon a load or on the floor. If he be on a wagon, he may deposit the entire load of hay in the barn without the assistance of any one by the employment of my invention in the following manner:

The main shaft H is provided with an iron pulley, H', at or near the end of that por-

tion which extends within the barn, and on a line with a wooden wheel, H^2, secured to the end of the drum-shaft, by means of which a rotary motion is transmitted to said drum-shaft by the contact of the broad faces of these two wheels H' and H^2. At the extreme end of the main shaft is a sliding box or journal, H^3, and is located directly below one of the journals of the drum-shaft. Attached to the lower end of this sliding journal is a lever, H^4, fulcrumed at *b* on the base or bed plate, upon which the journal H^3 slides. At the outer end of this lever H^4 is a loop, to which the cord *e* is attached, which runs up to the top of the barn and passes along the lower side of the ridge-pole through sheave-pulleys *e'*. At the opposite end of the barn the cord runs down through an eyebolt or sheave-pulley on the side of stop-block nearly to the floor and within the reach of the operator. By this construction and arrangement of the parts the operator, by pulling down on the loose end of the rope *e*, which is attached to the lever, as before stated, springs the main shaft upward enough to bring the two friction-pulleys H' and H^2 in contact with each other. The wheel H', being in constant motion, actuates the wheel H^2 on the drum-shaft and winds up the cable, carrying the fork to the carrier and running it along on the track to the point where it is desired to deliver the hay. The cord *e* is then slackened and the drum-shaft is unwound by the weight of the fork and the cable upon which it rides.

I am aware that the use of the cable in connection with the carrier is old. So, also, is the employment of friction-wheels old. I therefore do not claim this, broadly; but

What I do claim as new, and desire to secure by Letters Patent, is—

1. The combination, in a hay elevator and carrier, of a drum-shaft suspended in suitable bearings attached to the frame-work of a barn, and provided with a friction-wheel, H^2, to operate in conjunction with a friction-wheel, H', secured to the main shaft, by means of which motion is transmitted from the main shaft to the drum-shaft for the purpose of winding up the cable, as shown, and for the purposes described.

2. The combination, with the main shaft and drum-shaft of the sliding journal operated by the lever H^4, of the cord *e*, attached to the outer end of said lever, and rising therefrom to the ridge-pole, and conducted along its under side through sheave-pulleys and down nearly to the floor of the barn, substantially as and for the purpose specified.

In testimony that I claim the foregoing-described combinations as my invention I hereunto set my hand in the presence of two witnesses.

JAMES H. PRATT.

Witnesses:
W. WOOD POWELL,
W. S. DODGE.