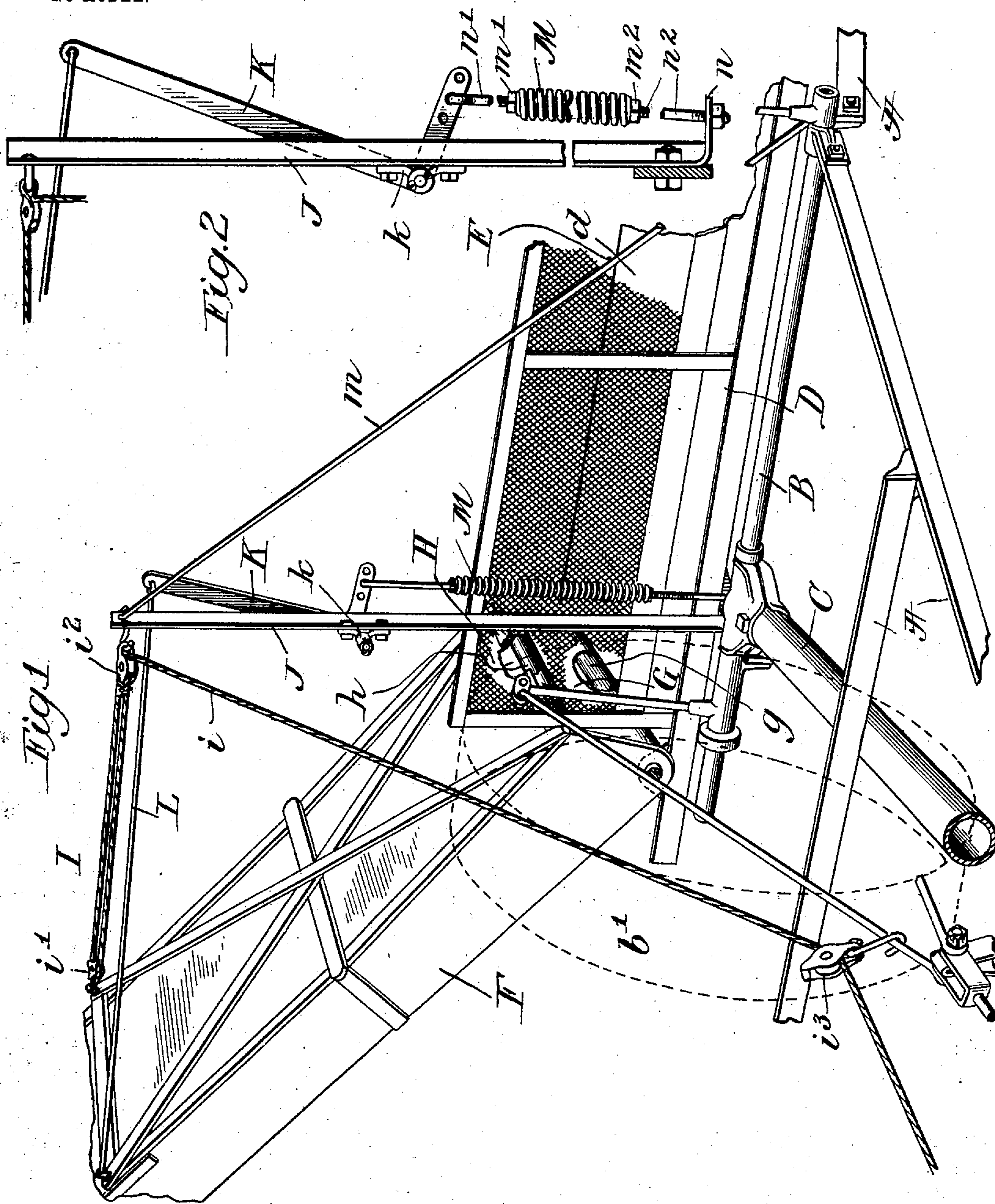


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J. F. APPLEBY.
GRAIN HARVESTER.
APPLICATION FILED MAY 17, 1902.

NO MODEL.



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GRAIN-HARVESTER.

SPECIFICATION forming part of Letters Patent No. 720,096, dated February 10, 1903.

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To all whom it may concern:

Be it known that I, JOHN F. APPLEBY, of Chicago, in the county of Cook and State of Illinois, have invented a certain new and useful Improvement in Grain-Harvesters, of which the following is a specification.

This improvement relates more particularly to that class of grain-harvesters known as "headers," its object being to provide more suitable means than heretofore in use for supporting and adjusting the grain-elevator at any desired height, and particularly to facilitate the raising and lowering of the grain-elevator in order to avoid collision with the "barge" that receives the grain when it is driven alongside the elevator. This object is attained by the use of a counterpoising-spring to in part counteract the weight of the elevator.

In the accompanying drawings, Figure 1 is a perspective view of a portion of an ordinary Appleby header provided with my improvement; and Fig. 2 is a detail of my improvement, showing how I prefer to support it.

A represents the main frame of the header; B, the axle, which may be sustained in the usual supporting-wheels, the position of the main wheel *b'* shown only by dotted lines.

C is the thrust-tongue, connected at its front end to the axle and other parts of the frame and may be considered as supported on a caster-wheel at its rear end in the usual manner; D, the grain-receiving platform, supported in front of the wheels also in the usual way and provided with suitable levers for adjusting the height of same; and *d*, the platform-conveyer, which delivers the grain to the endless elevator G and H.

E is the cutting apparatus, arranged along the front side of the grain-receiving platform, involving nothing new in its design or means of operation, and hence need not be described.

F represents the vertically-adjustable elevator-frame, inclining upwardly from the delivery end of the platform conveyer and pivotally attached to the frame of the machine. In the frame F are journaled the rollers *g g'* and *h h'*, over which pass the conveyer-canvas G and H, *g'* and *h'* being broken away with upper portion of frame in Fig. 1.

I is a tackle secured to the upper end of the elevator F. The rope *i* of the tackle I passes over the blocks *i'*, *i''*, and *i'''*, thence rearward to the customary operator's stand. By means of this tackle the attendant adjusts the height of the elevator. Secured rigidly to a suitable portion of the platform-frame, forward of the axle B and extending upwardly, is the post J, preferably of angle-iron. In addition to supporting the block *i''* the post J also forms a support for the bearing *k*, in which journals the wrist of the bell-crank K. To the upwardly-extending arm of the bell-crank K is linked the elevator F through the rod L, the rod L being attached to F near its upper end by means of an eye-bolt, thus forming a flexible joint.

m is a brace-rod secured to the post J at its upper end and extending downwardly to a suitable point on the grain side of the main frame. Near the foot of the post J is secured an outreaching arm *n*, or it may be a bent extension of J. Interposed between the horizontal arm of the bell-crank K and the outreaching arm *n* is the spring M, in the ends of which are screwed the fasteners or nuts *m' m''*, adapted to be received by the spring M. The nuts *m'* and *m''* are tapped for rods or bolts. The nut *m'* receives the rod *n'*, which connects it with the horizontal arm of the bell-crank K, and the nut *m''* receives the bolt *n''*, which connects the lower end of the spring with the outreaching arm *n*. The bolt *n''* is provided with a long threaded portion at its upper end, which thus permits of an adjustment of the tension of the spring by turning the said bolt *n''*.

By the means described, whereby most of the weight of the elevator is supported by the spring M through the instrumentality of the bell-crank K and the rod L, it is seen that my improvement operates to facilitate the manipulation of the hinged elevator F.

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

1. In a harvesting-machine, a grain-receiving platform adjustable in height, a grain-elevator pivotally secured thereto at its lower end, means for adjusting the height of the said grain-receiving platform, a counter-

balancing-spring adapted to support and counterpoise the free end of the said grain-elevator, and means, independent of the said means for adjusting the height of the said grain-receiving platform, for raising and lowering the said grain-elevator at will, substantially as described.

2. In a harvesting-machine, the combination of a main frame, a vertically-adjustable elevator F, pivotally secured to the main frame, a post J secured to the main frame and extending upwardly, a tackle suitably

arranged to raise and lower said elevator, a bell-crank K pivotally connected to said post J, with connections between the vertical arm of said bell-crank K and the elevator F, and a spring connection between the horizontal arm of the bell-crank K and the frame A of the machine, all combined substantially as described.

JOHN F. APPLEBY.

In presence of—

EDWARD R. BARRETT,
J. C. WARNER.