(Model.) 2 Sheets—Sheet 1.

E. HICKMAN.

GRAIN HEADER.

No. 286,436. Patented Oct. 9, 1883.

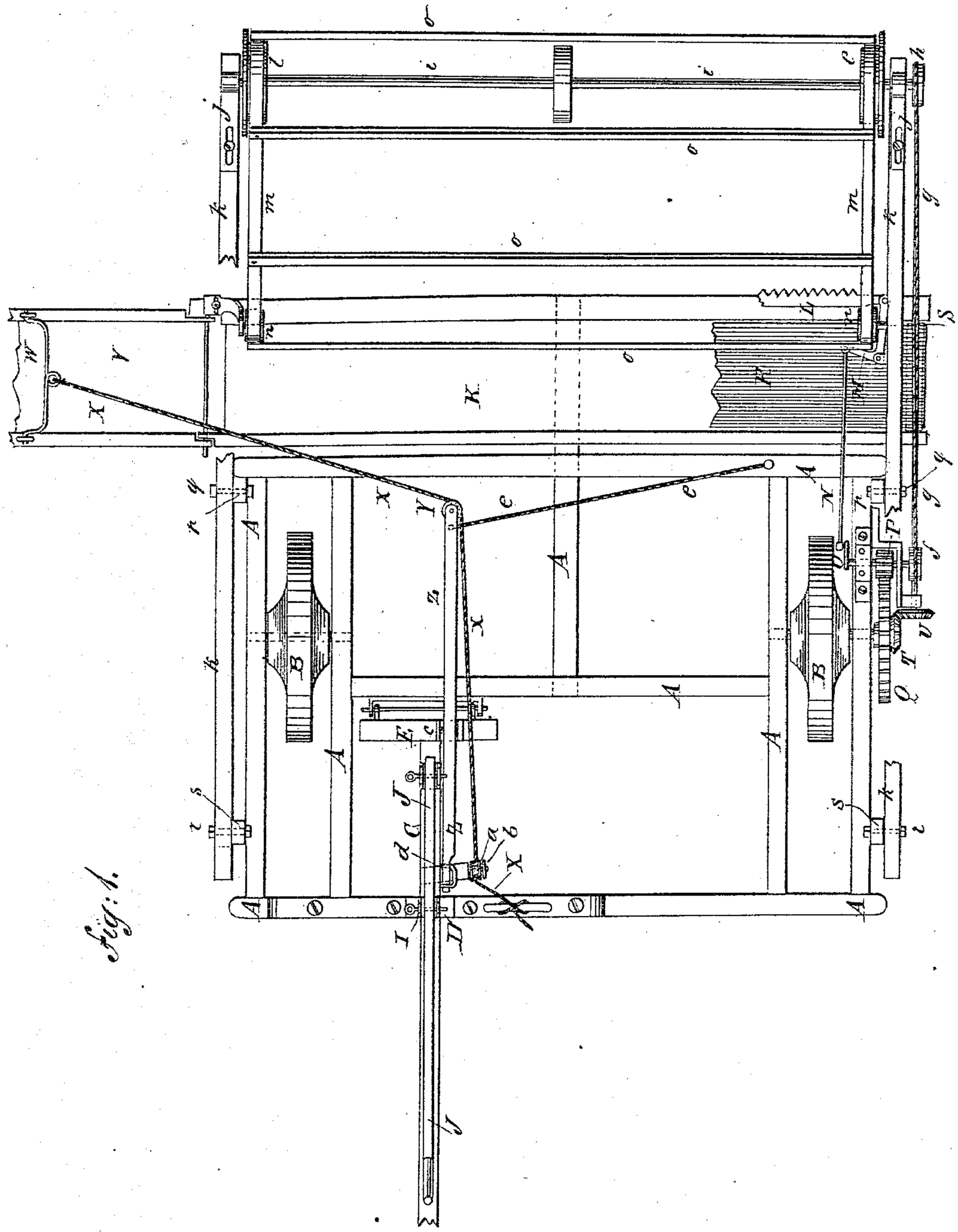
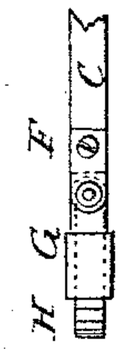


Fig. 1.



WITNESSES:

Chas. Neal

C. Bedgwick

INVENTOR:

E. Hickman

BY Munn & Co

ATTORNEYS.

(Model.)

2 Sheets—Sheet 2.

E. HICKMAN.

GRAIN HEADER.

No. 286,436.

Patented Oct. 9, 1883.

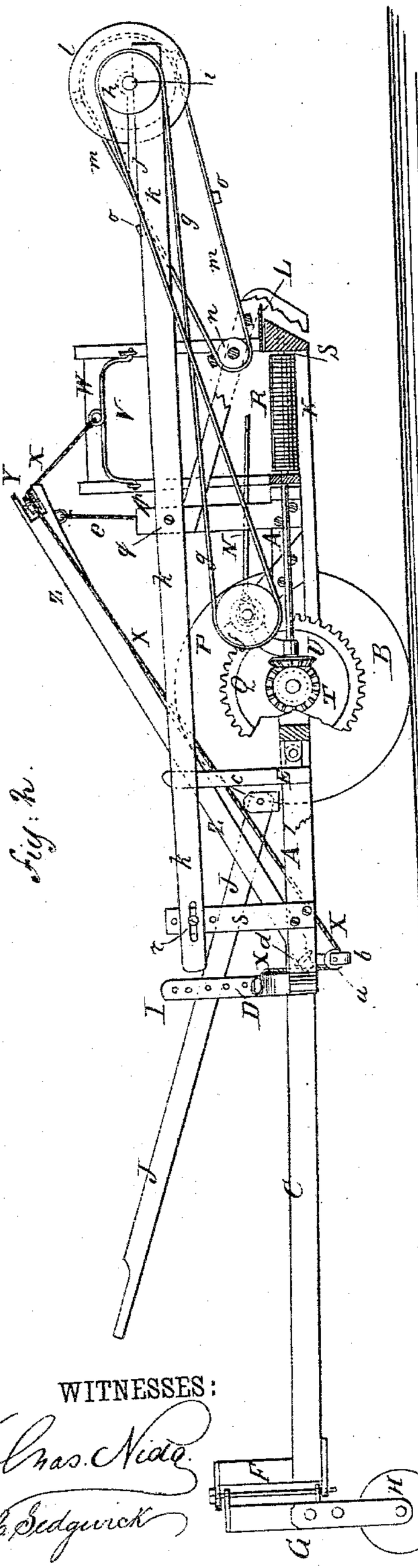


Fig. 2.

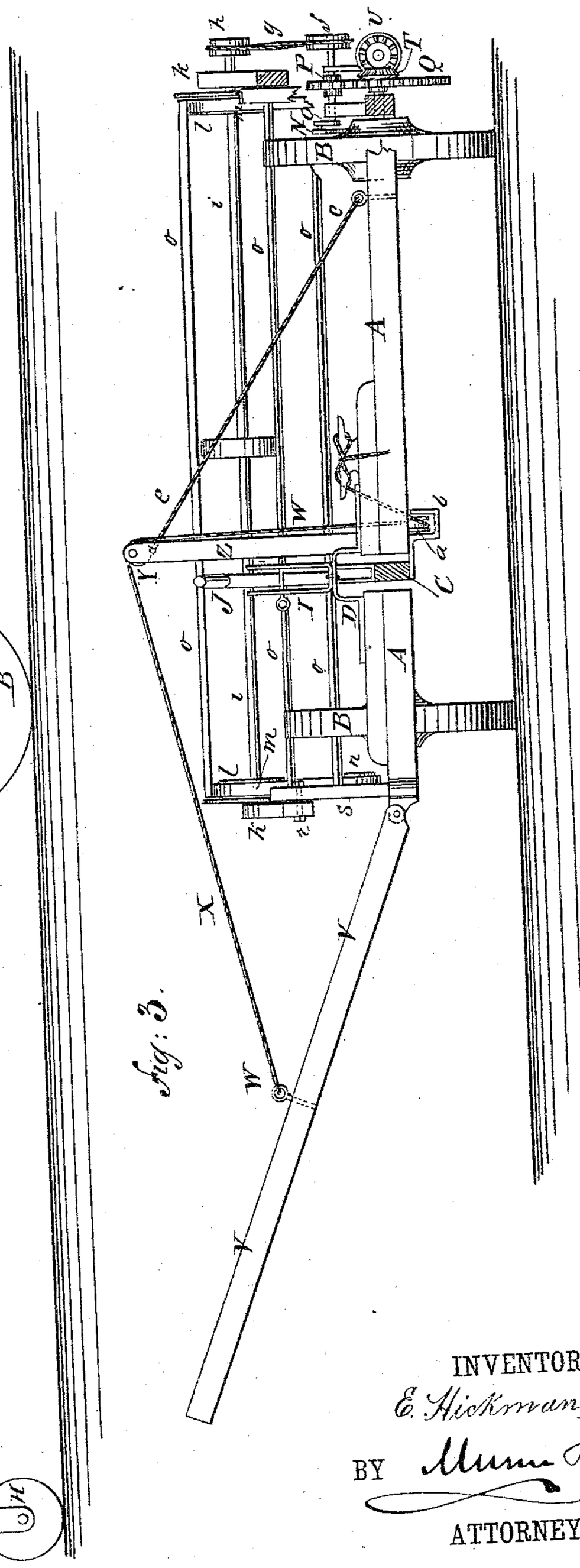


Fig. 3.

WITNESSES:

Chas. Neale.

C. Sedgwick

INVENTOR:

E. Hickman

BY Munn & Co

ATTORNEYS.

UNITED STATES PATENT OFFICE.

ELIJAH HICKMAN, OF RED BLUFF, CALIFORNIA.

GRAIN-HEADER.

SPECIFICATION forming part of Letters Patent No. 286,436, dated October 9, 1883.

Application filed May 3, 1883. (Model.)

To all whom it may concern:

Be it known that I, ELIJAH HICKMAN, of Red Bluff, in the county of Tehama and State of California, have invented a new and useful Improvement in Grain-Headers, of which the following is a full, clear, and exact description.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar letters of reference indicate corresponding parts in all the figures.

Figure 1, Sheet 1, is a plan view of my improvement, parts being broken away. Fig. 2, Sheet 2, is a side elevation of the same, parts being broken away. Fig. 3, Sheet 2, is a rear elevation of the same, parts being broken away and the tongue being shown in section.

The object of this invention is to promote efficiency in the operation of headers, and also to promote convenience in controlling and operating the said headers.

The invention consists in the peculiar construction and arrangement of the parts, as hereinafter more fully set forth, and pointed out in the claims.

A represents the frame of the machine, in bearings in the side parts of which revolve the journals of the wheel B.

The rear cross-bar of the frame A, at a little distance from its center, is cut away to receive the tongue C, and the parts of the said cross-bar are connected by a bar, D, attached to their upper sides, and which is arched to give the said tongue C a free vertical movement.

To the forward end of the tongue C is attached a horizontal cross-head, E, which is hinged to the middle cross-bar of the frame A, so as to allow the front end of the tongue a free vertical play on its cross-head E.

To the rear end of the tongue C, or to an upright, F, attached to the said end, is hinged or pivoted the standard G, to the slotted lower end of which is pivoted a caster-wheel, H. The rear end of the tongue C is designed to be provided with a platform for the driver to ride upon.

To a slotted standard, I, attached to the connecting-bar D, is fulcrumed a lever, J, the said standard I having a number of holes formed in it to receive the fulcrum-bolt, so that the position of the said lever J can be adjusted as required. The forward end of the lever J is hinged to a support attached to the tongue C at or near its cross-head E, and the rear end of the said lever projects into such a position that it can be readily reached and operated by the driver to raise and lower the front of the machine.

To the front of the frame A is attached the platform K, the forward edge of which is provided with a sickle-bar, L. The sickle-bar L is driven from the drive-wheel B by a bent lever, M, a connecting-rod, N, a crank, O, and gear-wheels P Q, or by other suitable gearing. The platform K is also provided with an endless apron, R, which passes around rollers S, pivoted to the frame of the platform or to bearings attached to the said frome.

The endless apron R is driven from the drive-wheel B by gear-wheels T U, attached, respectively, to the journal of the said drive-wheel and to the rearwardly-extended journal of one of the rollers of the said endless aprons R.

To the delivery end of the platform K is hinged the extension-platform V, which serves as an elevator to deliver the cut grain into a wagon drawn at the side of the machine.

To the upper part of the frame of the extension-platform V is hinged the ends of a bail, W, to the center of which is attached the end of a rope, X. The rope X passes around a guide-pulley, Y, pivoted in the slotted end of the bar Z, secured to the hinged tongue, and passes thence to and around a guide-pulley, *a*, pivoted to a support, *b*, attached to the tongue C, a little in front of the rear cross-bar of the frame A. From the pulley *a* the rope X passes up to the rear cross-bar of the frame A, where it is adjustably secured by a belaying-cleat or other suitable means. With this construction, by drawing up and letting out the rope X, the outer end of the elevator V can be raised and lowered and secured at any height, as may be required. It is then maintained at that height, notwithstanding the varying heights at which the main frame A may be adjusted, the pulley acting to take up the cord X and raise said outer end of the elevator frame V when the cutter-bar is depressed, and give out slack and lower the same when the cutter-bar is raised.

The bar Z rests upon the slotted upper end of a standard, *c*, the lower end of which is pivoted in a socket or bearing in the cross-

head E of the tongue C. The rear end of the bar Z is inserted in a socket or keeper, *d*, attached to the tongue C.

To the forward end of the bar Z is attached the end of a guy-rope, *e*, the other end of which is secured to the frame A, to hold the said bar Z against the side pull of the elevator V.

To the journal of the small gear-wheel P is attached a pulley, *f*, around which passes an endless belt, *g*, which is crossed and passes around a pulley, *h*, attached to the end of the shaft *i*. The shaft *i* revolves in bearings *j*, attached to the upper sides of the rear ends of the bars *k*, and to the said shaft, at the inner sides of the said bars *k*, are attached pulleys *l*, around which pass endless belts *m*, and which are flanged to keep the said belts in place upon the said pulleys. The belts *m* also pass around pulleys *n*, pivoted to supports attached to the frame of the platform K, a little in the rear of the sickle-bar L, and in such positions that the cross-bars *o*, attached to the endless belts *m*, will pass close to the sickle-bar L, and will thus force the grain-stalks against the sickles in proper position to be cut.

The bearings *j* are slotted to receive the fastening-bolts, so that the said bearings can be readily adjusted to tighten and slacken the belts *m* as may be required.

The bars *k*, at their middle parts, are pivoted, by bolts *q* or other suitable means, to the upper part of the standards *p*, which are attached to the forward parts of the side bars of the frame A.

The rear ends of the bars *k* are secured, by bolts *r* or other suitable means, to the standards *s*, attached to the forward parts of the side bars of the frame A. The rear ends of the bars *k* are slotted to receive the bolts *r*, and the standards *s* have a number of holes formed in them to receive the said bolts, so that the said bars *k* can be readily adjusted to cause the bars *o* of the endless belts *m* to work closer to or farther from the sickle-bar L, the tension of the belts *m* being regulated by adjusting the position of the bearings *j*. By this construction the grain will be forced against the sickles without being shelled and wasted, as it must necessarily be when struck by the arms of a revolving reel.

With this improvement the center of gravity is brought nearer the center of the machine than in ordinary headers, so that the tendency of the lighter sides of said machine to rise will be removed.

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

1. In a grain-header, the combination, with the frame A, hinged tongue C, and hinged elevator-frame V, of the bail W, the bar Z, secured to the tongue and provided with guide-pulley Y, the guide-pulley *a*, located on said tongue, and rope X, secured at one end to the bail W, thence passing around the guide-pulleys Y *a*, and adjustably secured at its opposite end to a belaying-cleat secured to the frame, whereby the hinged extension-platform can be adjusted as desired, and securely supported at an unvarying height regardless of the different heights at which the cutter-bar may be adjusted, substantially as set forth.

2. In a grain-header, the combination, with the frame A, platform K, sickle-bar L, endless belt R, and endless-chain reel *i l n m o*, of the drive-wheel B, gear-wheels P Q T U, pulleys *f h*, belt *g*, rollers S, the journal of one of which is extended and provided with the gear-wheel U, crank O, pitman N, and bent lever M, substantially as shown and described.

ELIJAH HICKMAN.

Witnesses:
C. R. BARRY,
A. LOCKWOOD,
JOHN CLEMENTS.