(No Model.)

J. A. RUMRILL.

GRAIN HEADER.

No. 289,144. Patented Nov. 27, 1883.

fig 1.

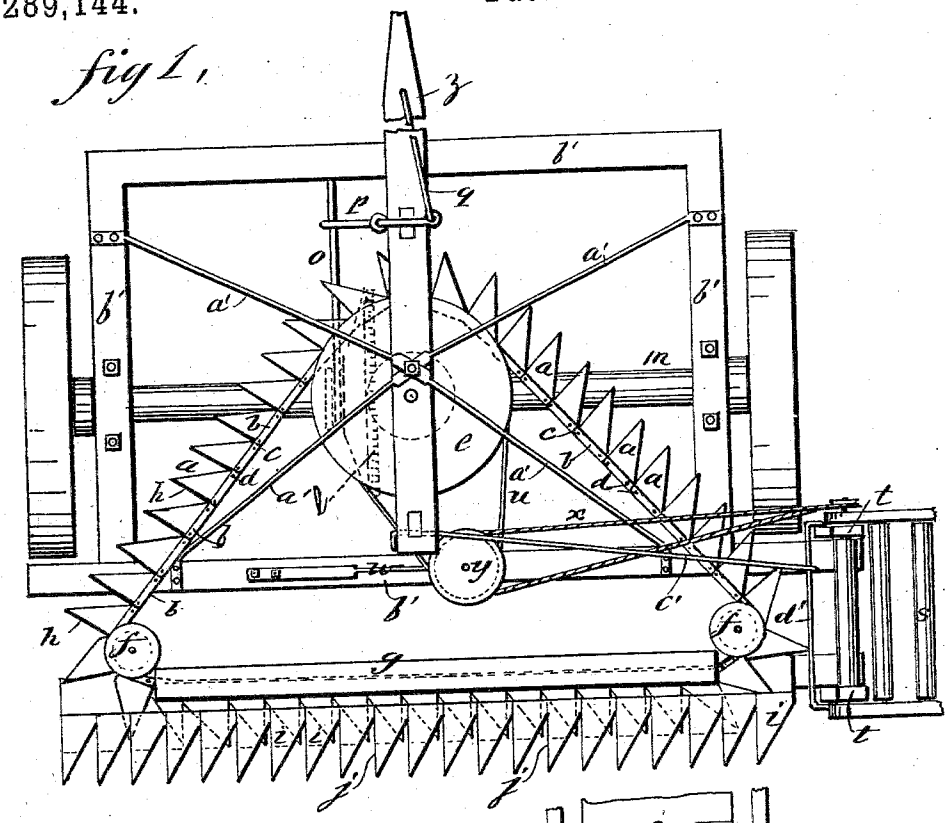


fig 2.

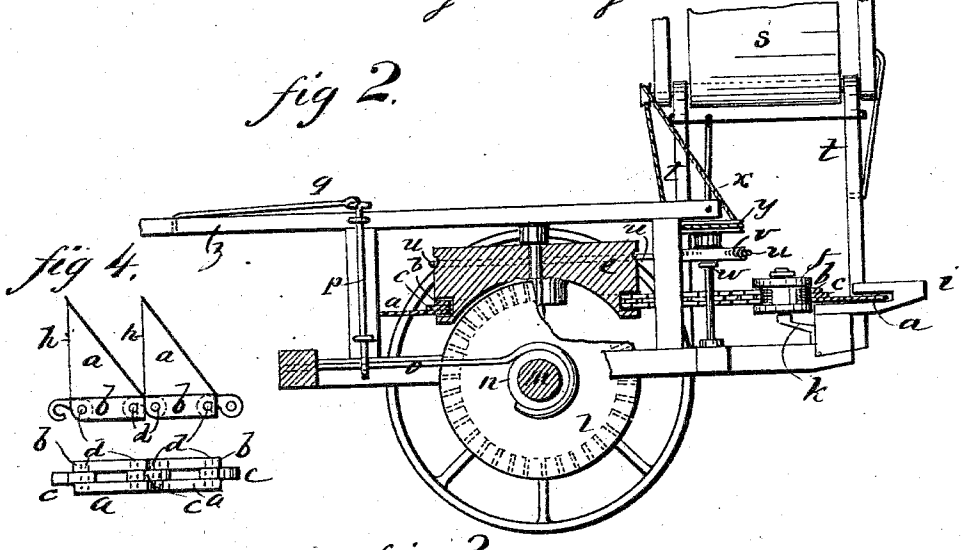
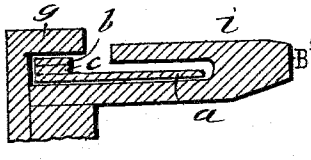


fig 4.

fig 3.



WITNESSES:

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UNITED STATES PATENT OFFICE.

JOHN A. RUMRILL, OF SALINA, KANSAS.

GRAIN-HEADER.

SPECIFICATION forming part of Letters Patent No. 289,144, dated November 27, 1883.

Application filed March 30, 1883. (No model.)

To all whom it may concern.

Be it known that I, JOHN A. RUMRILL, of Salina, in the county of Saline and State of Kansas, have invented a new and Improved Grain-Header, of which the following is a full, clear, and exact description.

My invention consists, essentially, of an endless-sickle contrivance in which the sections are linked together suitably for running on a driving pulley or drum, and guides with suitable tightening devices for taking up the slack of the chain, together with a contrivance of the guards for keeping the chain in its proper course, and means for operating the endless sickle, also an extension-carrier for delivering the grain from the elevator to a wagon alongside of the header, all as hereinafter fully described.

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

Figure 1 is plan view of the principal parts of a header with a sickle contrived according to my invention. Fig. 2 is partly a side elevation and partly a sectional elevation. Fig. 3 is a transverse section of the sickle, the guide-bar, and one of the guards. Fig. 4 is a detail of the sickle, showing the manner of connecting the sections.

I propose to connect the sections *a* of the sickle together in an endless chain by means of top plates, *b*, and links *c*, pivoted at *d* between the sections *a* and top plates, *b*, making an endless-chain sickle adapted to run on the driving-drum *e*, guide-pulleys *f*, and the grooved stationary guide-bar *g*, the sickles being made with the cutting-edges *h* square or perpendicular to the course along which they run in the guards *i*, and the guards being also perpendicular to said course on the side *j*, against which the sickle cuts, by which the sections cut in an advantageous manner. The continuous movement of the sickle in one direction is also calculated to make it cut better and easier than the reciprocating sickles. The guards *i* are wholly beveled on the back for gathering in the grain, and they are made broad enough at the base to touch each other and prevent the grain from passing back so far as to choke the sickle, besides making a continuous cover to the race in which the sickle runs, for keeping it in proper place. The guide-pulleys *f*, at the ends of the guide-bar along the guards, and over which the sickle-chain runs to and from the drum, are designed to be mounted on spring-supports *k*, to serve for tighteners to keep the chain taut; but other tighteners may be used, if desired.

The drum *e* is to be turned by a gear-wheel, *l*, on the axle *m*, which is designed to be connected with the axle by a clutch, *n*, with which suitable shifting devices, consisting of the rods *o*, *p*, and *q*, will be provided in practice for connecting and disconnecting the sickle-driving mechanism when desired.

The carrier and elevator for receiving the grain from the sickle and delivering it are not shown, as they will be of the ordinary or any approved form; but I propose to provide an extension-elevator, *s*, at the top of the frame *t* of the elevator commonly used, for carrying the grain up into a wagon that is to run alongside of the header, which elevator will be driven by the belt *u* from drum *e* passing over the pulley *v*, having the spring *w*, and a belt, *x*, from a pulley, *y*, on the shaft of the pulley *v*, the said spring being designed for a tightener to both of said belts.

The lever *z* is designed to extend back along over the tongue a suitable distance to enable the machine to be tilted by it on the wheels for gaging the sickle to the grain as desired.

The endless sickle may be employed in other forms of harvesters as well as in headers, and I propose so to use it when required.

Stays *a'* brace the frame *b'*, and a brace-rod, *c'*, from the lever *z* to a bail, *d'*, of the elevator-frame *t* aids in supporting the elevator in proper working position.

In the construction of the endless sickle I do not mean to limit myself to the particular contrivance of the links herein shown, and while I may use the square-edged sections of the sickle that I have represented I may also employ endless sickles of bevel-edged sections with my improved operating and guiding gear.

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

1. An endless-chain sickle consisting of sections *a*, having cutting-edges perpendicular to

the line of travel along the guards, and pivoted together by plates *b* and links *c*, substantially as described.

2. The guards *i*, having cutting-edges perpendicular to the line of the sickle movement, and beveled edges on their other sides, in combination with an endless-chain sickle having cutting-edges perpendicular to said line of movement, substantially as described.

3. The combination of the carrier *s*, geared with the sickle-driving drum *e* by belt *u*, pulleys *v* and *y*, belt *x*, and the spring-support *w* for said pulleys, substantially as described.

JOHN A. RUMRILL.

Witnesses:
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