(No Model.)

C. E. THORNE.

HARVESTER.

No. 284,686. Patented Sept. 11, 1883.

Fig. 1.

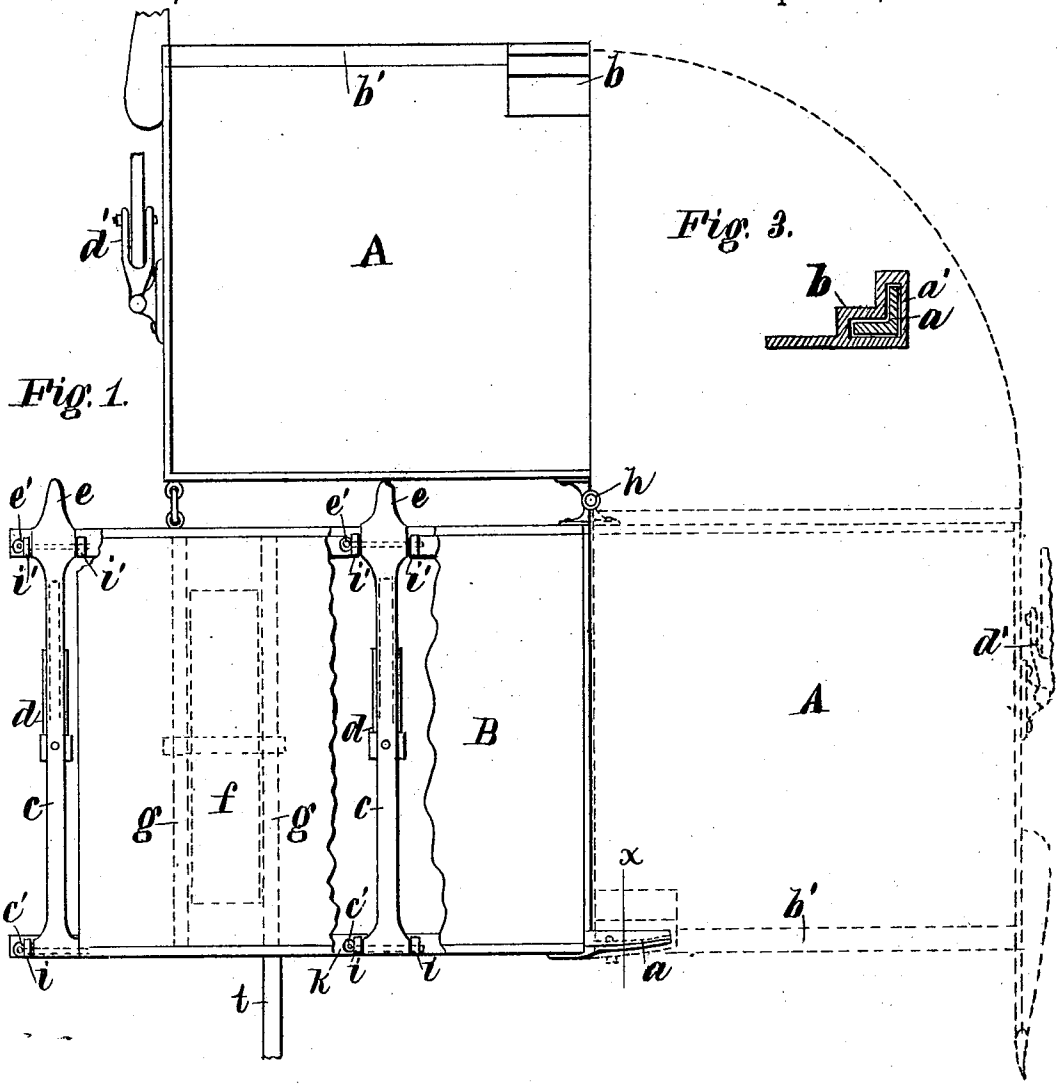
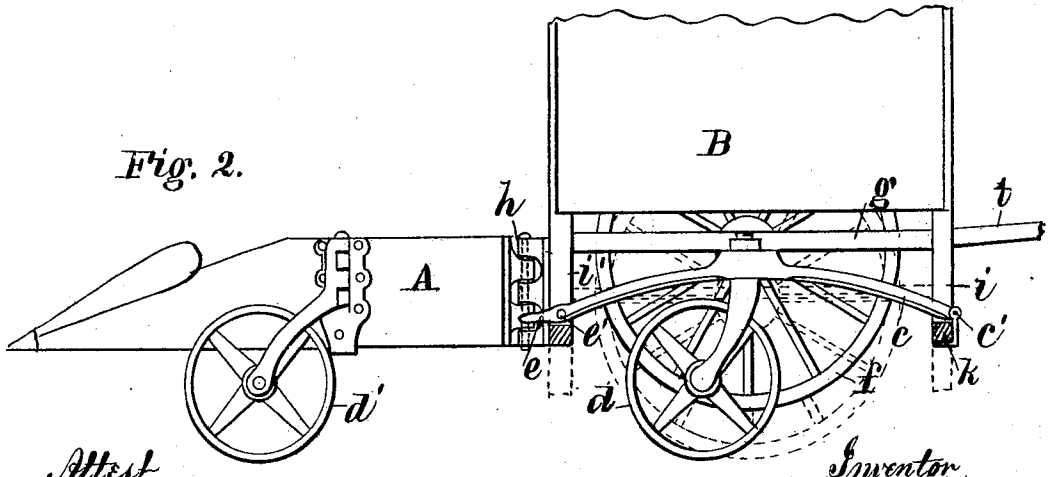


Fig. 3.

Fig. 2.



Attest
G. M. Gridley
Austin C. Evans

Inventor
Charles E. Thorne
By B. C. Converse, Atty.

N. PETERS, Photo-Lithographer, Washington, D. C.

UNITED STATES PATENT OFFICE.

CHARLES E. THORNE, OF SPRINGFIELD, OHIO.

HARVESTER.

SPECIFICATION forming part of Letters Patent No. 284,686, dated September 11, 1883.

Application filed December 27, 1882. (No model.)

To all whom it may concern:

Be it known that I, CHARLES E. THORNE, a citizen of the United States, residing at Springfield, in the county of Clarke and State of Ohio, have invented certain new and useful Improvements in Harvesters; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the letters and figures of reference marked thereon, which form a part of this specification.

My invention relates to that class of harvesters having a grain-binding attachment thereon, or adapted to be used with a binding attachment thereto; and it consists of constructions and combinations, all as will hereinafter be described and claimed.

In harvesters as at present constructed with their binding attachments great difficulty is experienced in transporting them from place to place with a team attached thereto, on account of their extreme length from the outer part of the binding attachment or table to the grain end of the platform, the usual length being about twelve feet. This prevents the machine from being taken through ordinary-sized gates, and also through a panel of post and rail or board fence without being obliged to remove a portion thereof, or of removing some portion of the machine, both of which require labor and expense and subject the farmer to much trouble and loss of time.

The object of my invention is to obviate the difficulty now encountered in the transportation of harvesters with a team, and to accomplish this I construct the machine with the platform hinged by its rear inside corner to the main driving-frame, in order that the entire platform may be swung around in rear of the binding attachment and main frame. To provide means for this purpose, I construct the cutter-bar of the machine in two parts or sections, which are joined together, as hereinafter described.

Figure 1 represents a harvester with the grain-platform A folded back in rear of the main frame B, the latter supporting the binder attachments. Fig. 2 is a side elevation of the same. In both views the apex of the incline leading from the platform to the binder is shown broken out to exhibit the supports and their attachments. Fig. 3 is a cross-section of the cutter-bar through line *x*, and includes both the elements of the joint of the same.

A is the platform, which is of the usual horizontal kind, and in the operative machine has an endless belt or apron the full width of the same, running from the divider end toward the incline B, to carry the cut grain up the latter to the binder on the opposite side. As the endless belt and its rollers are in another section, and do not extend upon the incline B, which has a distinct and individual endless belt, a division of these two parts of the harvester, as shown in the drawings, is entirely practicable, and can be easily made for the purpose herein specified. This point of division is made where the platform-belt ends and where the elevator-belt begins, and at the junction of the platform-frame with that of the main frame of the binder and its elevating devices. The platform, instead of being made rigid with the binder-frame, is made in a separate section, and is secured to the frame of the binder by a hinge, *h*, on the rear side. On the front side the cutter-bar is provided with a tongue, *a*, extending from that part on the binder-section, and with a hole in the uniting end of the platform-section of the same, a plate, *b*, being formed upon or secured to it as a re-enforce, for allowing a hole of sufficient size to be formed therein for the tongue *a*, as shown in the cross-section, Fig. 3. The tongue and its hole may be of any desired shape to make a complete and perfect joint, sufficiently strong, and without liability of being loosened by the operation of the machine. The form of tongue and the hole for its insertion herein shown is L shape, as giving sufficient strength while conforming to the united parts. The lower part of the plate may be extended, as required, under the platform and bolted thereto. The tongue *a* is somewhat segmental in shape, to allow it to conform to the radial movement of the platform in swinging in a circle of which the line of division from the hinge to the tongue *a* is the radius. In the view Fig. 1 the circular dotted line shows the movement of the platform in swinging around to its position. The normal position of the platform is also shown in dotted lines. In performing the movement the weight of the platform farthest

from the hinge is borne by the divider-wheel *d'*, which also serves to support it during transportation. As the platform A is directly in line of draft when folded, the machine will not be subjected to unusual strain from vibration in passing over rough or uneven ground, but will ride steadier, and the driver can pass with it through ordinary gates or fences without the help of an assistant, which is now required.

In addition to the improvement described, means for supporting the binder parts are also used. This consists in the two supporting-bars *d d*, the front ends of which are flexibly attached to the front rail of the bed-frame, they being formed with an eye or hole through them, and pivoted thereto by a bolt, *c'*, extending through the end of the curved supporting-bar *c* and lugs *i* on either side of it, which project from the front rail, *k*. The curved bars *c* extend across from the front to the rear rail of the binder-frame on either side of the drive or master wheel *f*, and parallel with each other. They are made thicker and stronger in the center, and have the pintle of a caster-wheel, *d*, pivoted in a vertical hole through them at this point. The rear ends of bars *c* have extensions or handles *e e* projecting therefrom through the space between the uprights *i' i'* on the rear bar of the binder-frame. They are secured therein by pins *e' e'*, extending through the uprights and the bars *c c*, in the same manner as at their front ends; but, instead of being permanently attached, the pin is withdrawn to allow the end of each bar to play freely up and down between its uprights when the machine is in operation, it being thereby relieved of the weight of the bars and their attached wheels, while the latter may be allowed to trail upon the ground. When the ends of the bars *c c* are secured at their rear ends by their pins *e' e'*, the wheels *d d* are intended to support the binder attachment, and for this purpose they are lowered to clear the master-wheel *f* from the ground and the ends of bars *c c*, secured as described. The handles *e e* are used for this purpose, or other means may be used in addition thereto. The hinge *h* may be of any desired form with sufficient strength; but preferably it should extend rearward from the frame B to clear the gearing that may project beyond it. The tongue *a* is prevented from being withdrawn by a set-screw or other equivalent fastening device, which is loosened when the two parts are required to be detached. When the section A is folded back behind the main frame in the position shown, it is secured to the frame of section B by a hook or other equivalent device.

I am aware that it is not new in harvesters to hinge the platform to the main frame, so that the former may be swung back of the latter when it is desired to pass the machine through a small opening, and that it is common to attach the caster-wheels on adjustable bars, and to these I make no claim.

I claim as my invention—

1. In combination with sections A and B, the hinge *h* and the divided finger-bar *b'*, provided with the tongue *a* and the plate *b*, or re-enforce, having the hole *a'* therein corresponding therewith, for the purpose set forth.

2. In combination with the tongue-and-groove or tongue-and-hole fastening in the re-enforce plate or re-enforce end of the finger-bar, a set-screw or other equivalent means for securing the united sections of the same together.

3. The combination of the frame B, having recesses, the curved supporting-bars C, hinged at their front ends to the frame B, and provided at their rear ends with handles, having a pin, *e*, passing through the handle and the walls of the recess, and caster-wheels pivoted to the arch of the curved bar, substantially as described.

4. The combination, with the main frame and its attachments, of the caster-wheels, one on each side of the main drive-wheel, whereby the weight of said main frame and attachments may be shifted at will from the main drive-wheel to said caster-frame.

In testimony whereof I affix my signature in presence of two witnesses.

CHARLES E. THORNE.

Witnesses:
B. C. CONVERSE,
G. M. GRIDLEY.