(No Model.)

J. H. GROUT & S. OAKLEY.

HARVESTER BINDER.

No. 343,661. Patented June 15, 1886.

Fig. 1.

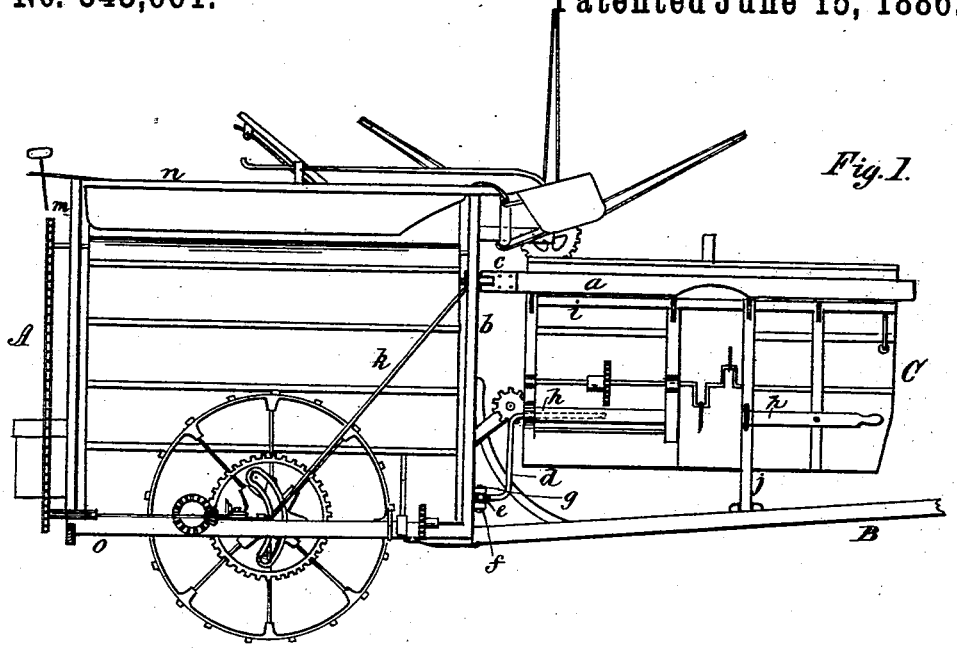


Fig. 2.

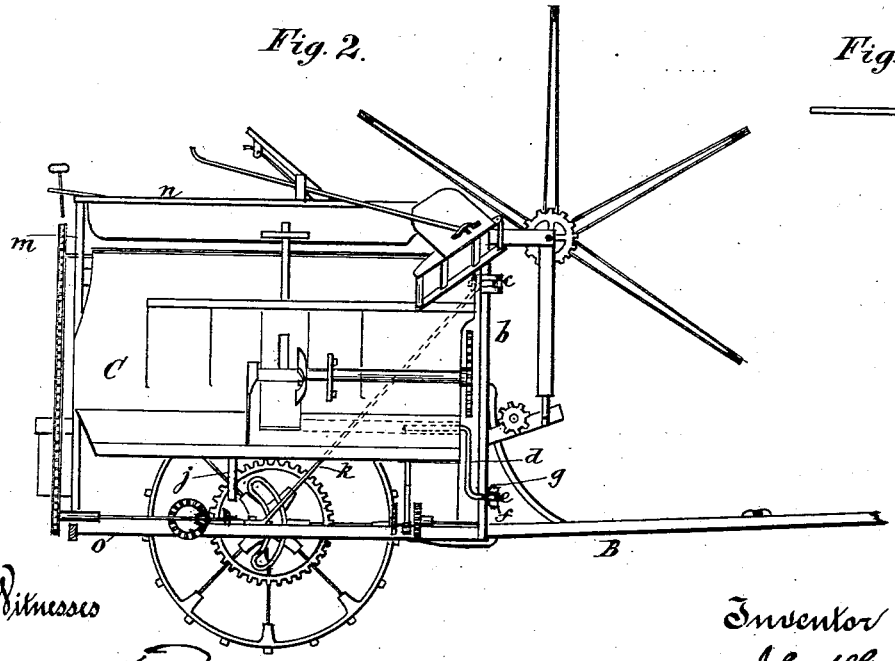
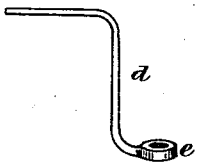


Fig. 3



Witnesses

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UNITED STATES PATENT OFFICE.

JOHN H. GROUT AND SYLVESTER OAKLEY, OF GRIMSBY, ONTARIO, CANADA.

HARVESTER-BINDER.

SPECIFICATION forming part of Letters Patent No. 343,661, dated June 15, 1886.

Application filed June 22, 1885. Serial No. 169,426. (No model.) Patented in Canada June 16, 1885, No. 21,900.

To all whom it may concern:

Be it known that we, JOHN HENRY GROUT and SYLVESTER OAKLEY, of Grimsby, in the county of Lincoln, in the Province of Ontario, Dominion of Canada, have jointly invented certain new and useful Improvements in Harvester-Binders; and we do hereby declare that the following is a full, clear, and exact description of the construction and operation of the same.

The invention relates to certain improvements in that class of machines known as "harvester-binders" for cutting and binding grain, by which the said machines can be narrowed sufficiently to enable them to pass through ordinary gates or bars or into barns without taking the binder portion off. By our improvement the width of the machine is diminished two feet six inches, making one that with a six-foot cut will go through a gate eleven feet six inches wide, or proportionately narrower as the width of cut is made smaller. One great difficulty with harvesters and binders has been to get them into the field where they are required without arranging in some way with a good deal of trouble to take them through gates endwise or take down fences. Our improvements remove this difficulty, as when folded the machine can be easily drawn through all ordinary gates, bars, barn-doors, &c. The binder portion can also be very easily detached from the harvester part of the machine, which gives an excellent opportunity for the operator to get at the inside of the binder for any required purpose, it being impossible almost to do so when the binder portion is in its position for operation. When the machine is about to be drawn through a gate, our improvements enable the binder portion to be swung around in front over the tongue and partly supported by it and by the hinge and brace combined.

Our invention consists in hinging the binder attachment to the front of the main frame of the machine or harvester frame by a peculiarly-shaped combined hinge and brace running from the bottom of said harvester-frame to the lowest gas-pipe, that forms a supporting-bar for the frame of the binder, while the upper part of the binder attachment is hinged to the top of the post by an ordinary hinge.

By reference to the drawings forming part of this specification it will be seen that Figure 1 represents a side elevation of the machine with the binder attachment swung forward over the tongue, making the whole machine long and narrow, and in this position capable of being drawn through all ordinary gates, bars, or barn-doors. Fig. 2 represents a side elevation of the machine similar to the first, but with the binder attachment closed in position for operation, in this position the machine being short, but broader than the width of ordinary gates. Fig. 3 represents a detached view of the lower hinge-rod, showing its peculiar form.

A is the harvester-frame or main frame of the machine, to which is attached the main parts common to harvesters.

b and *m* are posts, and *n* and *o* are horizontal pieces forming part of a frame which carries the endless carrier to draw up the gavel to the binder.

B is the tongue, secured to the bottom of the harvester-frame.

C is the binder attachment.

Reference to Fig. 1 shows the inner portion of the details, which need not be minutely described.

a is a wooden bar passing along the upper part of the binder attachment, on the front end of which is secured one leaf of a strong common hinge, *c*, the other leaf of which is secured to the post *b* of the harvester. This will be known as the "upper hinge."

d is a round iron bar, bent as shown in Fig. 3, and terminating at its lower end in an eye, *e*, said eye being placed between the ears *f*, secured to the post *b*, and *g* is a bolt passing through both, thus hinging and securing the rod *d* to the said post. The upper end of said rod is bent at right angles and made to enter the open end of a gas-pipe, *h*, which, together with a similar pipe, *i*, above it, forms part of the frame of the binder attachment. It will be observed that the said rod *d*, being bent and arranged as shown, acts as a combined brace and hinge, and with the assistance of the hinge *c* allows the binder attachment C to be swung around to the front over the tongue. The cross-piece *j*, connecting both gas-pipes *h i*, rests on

the tongue B, and assists in supporting the binder attachment when thrown forward over it, as in Fig. 1.

k is a brace-rod secured to the top hinge, *c*, and made to pass to the frame *o*, outside of the wheel, to cause the post *b* to remain perfectly rigid and assist in carrying the binder attachment when swung around in front.

When the machine is narrowed in the above manner, it measures about eleven feet across the widest part, consequently can be driven through a gate eleven feet six inches wide, with room to spare. When the binder attachment C is not swung to the front, the machine measures over thirteen feet across, which prevents it being able to go through any ordinary gate.

What we claim is—

1. The combination, with the post *b* and pipe *h*, of the hinge-rod *d*, having its lower end terminating in an eye, *e*, connected by means of the ears *f* to the post *b*, and its upper end bent and made to enter the open end of a gas-pipe, *h*, which forms the lower supporting-bar of the binder-frame, substantially as and for the purpose specified.

2. In a harvester and binder, the combination of the hinge-rod *d*, having the eye *e* at its lower end and bent horizontally at its upper end, ears *f*, gas-pipe *h*, post *b*, binder attachment C, hinge *c*, brace *k*, cross-piece *j*, and tongue B, all arranged and constructed substantially as specified.

Dated at Hamilton, Ontario, this 22d day of May, A. D. 1885.

JOHN H. GROUT.
SYLVESTER OAKLEY.

In presence of—
JAMES DORAN,
J. H. OAKLEY.