

No. 704,063.

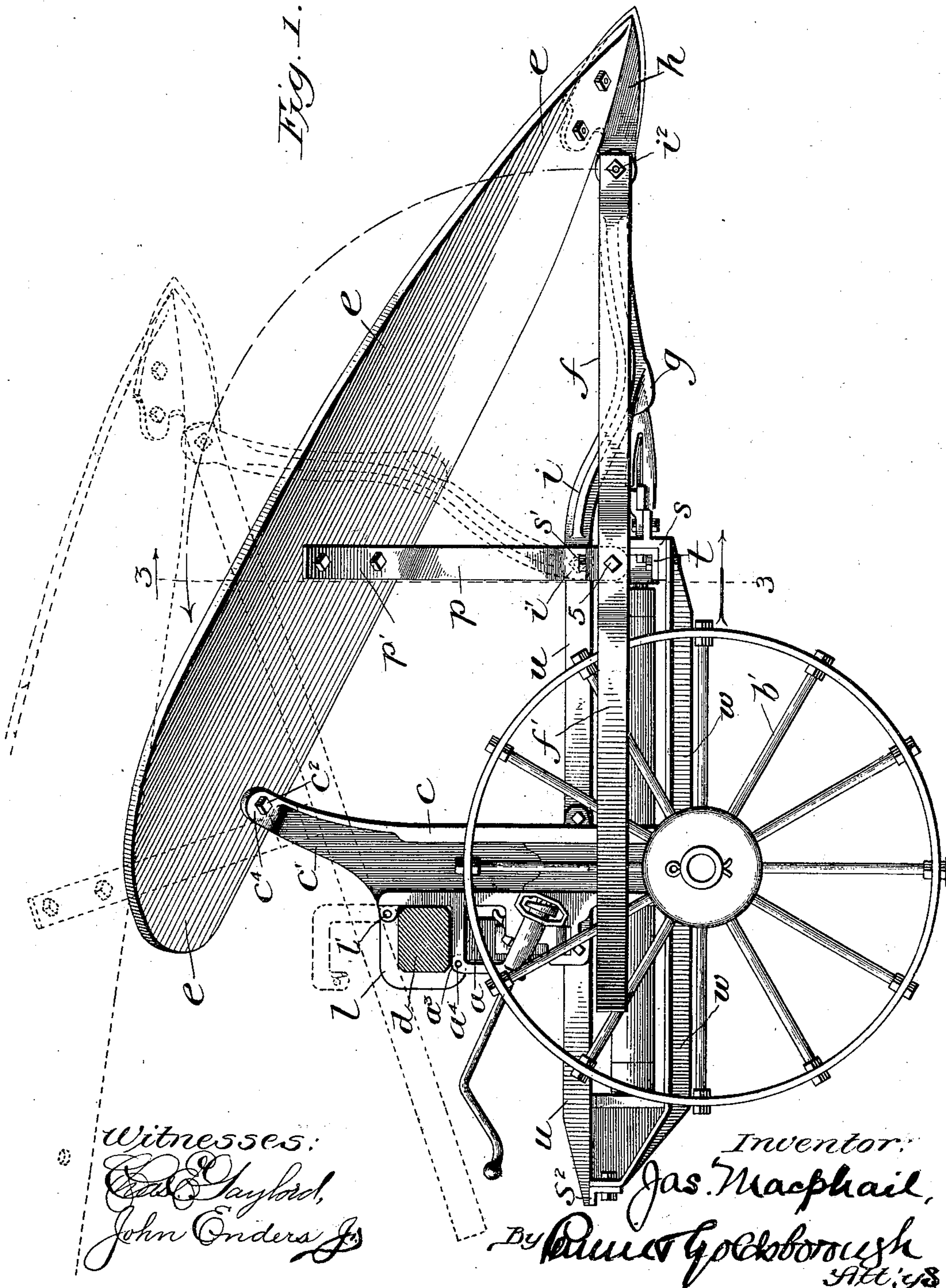
Patented July 8, 1902.

J. MACPHAIL.
DIVIDER FOR HARVESTERS.

(Application filed Dec. 17, 1900. Renewed Apr. 29, 1902.)

(No Model.)

2 Sheets—Sheet 1.



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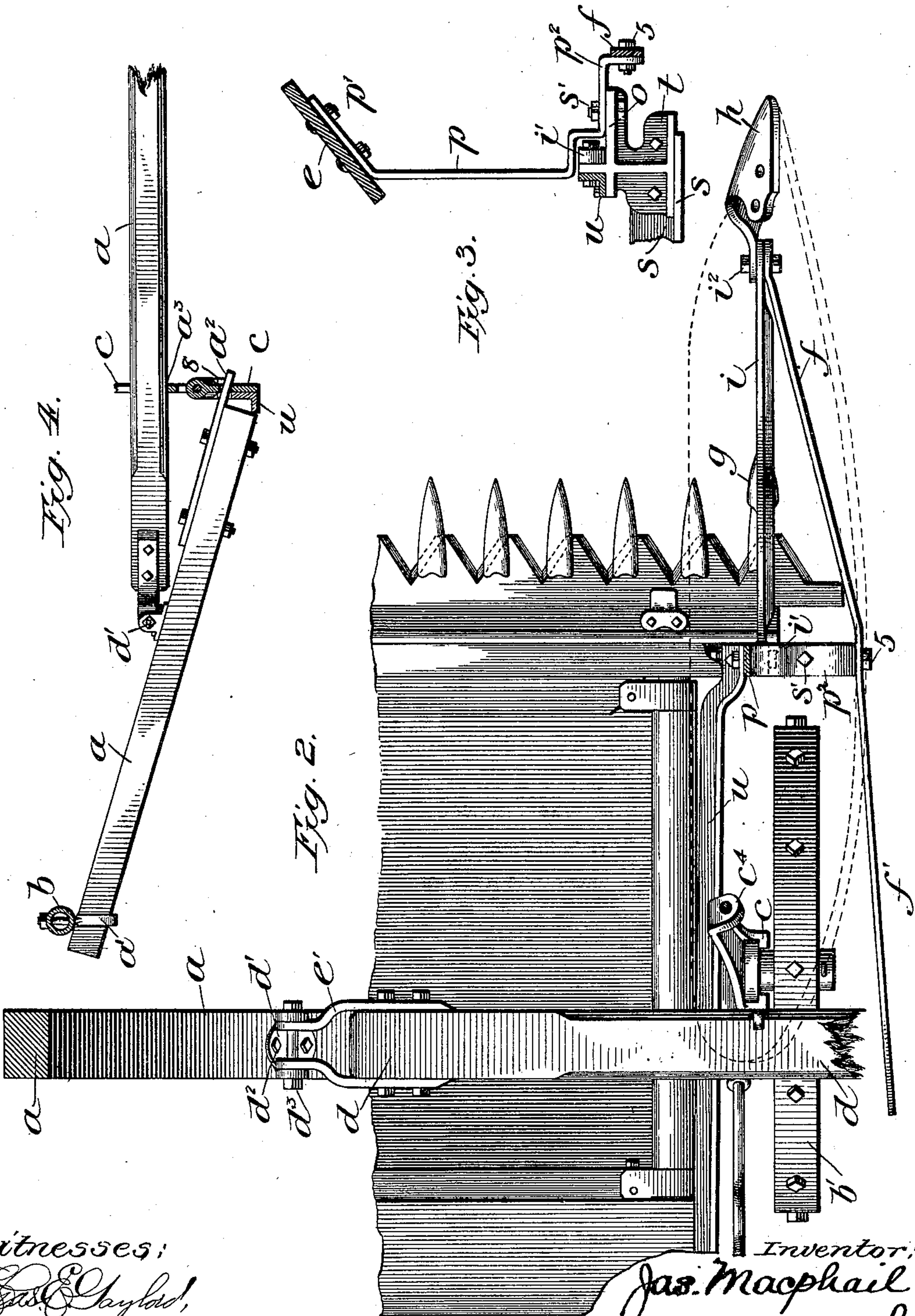
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2 Sheets—Sheet 2.



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Att'ys

UNITED STATES PATENT OFFICE.

JAMES MACPHAIL, OF BLUE ISLAND, ILLINOIS, ASSIGNOR TO THE McCORMICK HARVESTING MACHINE COMPANY, OF CHICAGO, ILLINOIS.

DIVIDER FOR HARVESTERS.

SPECIFICATION forming part of Letters Patent No. 704,063, dated July 8, 1902.

Application filed December 17, 1900. Renewed April 29, 1902. Serial No. 105,225. (No model.)

To all whom it may concern:

Be it known that I, JAMES MACPHAIL, a citizen of the United States, residing at Blue Island, county of Cook, State of Illinois, have
5 invented certain new and useful Improvements in Dividers for Harvesters; and I do hereby 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
10 it appertains to make and use the same.

In transporting harvesters along country roads or from one field to another through narrow lanes and gateways it is customary to support the binder end of the machine upon
15 a wheeled truck and to detach the tongue from its normal position and secure it detachably to the machine lengthwise the platform, with its end projecting beyond the grain end of the same, so that the machine may be
20 drawn endwise with the outer divider foremost. In all harvesters this outer divider projects much farther in front of the cutting apparatus than the divider employed in mowing-machines, and it is customary to extend
25 them so far forward as to considerably increase the width of the machine, thereby preventing its passage along most lanes and through narrow gateways and also seriously interfering with the storage of the machine
30 when not in use, as well as its transportation in railway-cars.

The object of the present invention is to connect the divider with the outer end of the platform-frame in such a manner that it may
35 be lifted up vertically and folded backward over the platform without at the same time interfering with the rigidity of the divider when in position for operation.

The invention will be clearly understood
40 from the following description, taken in connection with the accompanying drawings, forming part of this specification, wherein—

Figure 1 is an elevation of the outside or grain end of the harvester, showing the divider in operative position in full lines and
45 folded up out of operation in dotted lines. Fig. 2 is a plan view of the grain end of a harvester-platform, the divider-board being shown in dotted lines only, so as to expose the
50 parts beneath and the better to illustrate the

connection of the divider to the machine. Fig. 3 is a vertical section of Fig. 1 on the line 3 3 looking in the direction of the arrows, and Fig. 4 is a detail view showing the manner of
55 detachably connecting the tongue to the machine when it is desired to draw the same endwise.

Referring to the views, *a* denotes a bar that is detachably connected to the seat-supporting bar *b* of the machine by means of a clip
60 *a'*, depending from the seat-bar and through which the end of the bar *a* is passed. The opposite end of the bar *a* has bolted to it a metallic plate or other projection *a''*. The tongue of the machine is denoted by *d*. It
65 is adapted to be connected to the upper side of the bar *a* by a detachable connection *d'* of any suitable description. As herein shown, a bracket *d''* is bolted to the upper end of the bar *a*, and a removable bolt *d'''* is passed
70 through perforations in lugs upstanding from this bracket through the usual clips *e'*, by means of which the tongue is secured to the harvester-frame in its normal position.

The grain-wheel is denoted by *b'*. It is supported and made adjustable up and down by
75 any suitable means in a standard *c*.

The upper and lower fore-and-aft sills of the outer end of the platform are denoted by *u* and *w*, respectively. They are suitably
80 connected to the front sill *s* and the rear sill *s''* in any suitable manner, the connection of the upper sill *u* with the front sill of the platform being preferably made by means of a bracket *t*. (Best shown in Fig. 3.)
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The divider-board *e* is of the usual shape and construction. It is connected at its front end to the metallic point *h*, and the wheel-standard *c* has an upward projection *c'* with an offset end *c''*, upon which the rear end of
90 the divider-board rests and is supported when in operative position. Midway between its ends the divider is braced and supported by a standard *p*, having an inclined upper end *p'*, secured to the underside of the board, and
95 a horizontal extension *p''*, which rests upon a step *o*, projecting horizontally from the outer side of the bracket *t*. The divider is also provided with the usual guard *f*, which is connected to the point *h* at its front end and to
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the horizontal projection p^2 of the standard p about midway of its length, the guard also having a rear continuation or extension f' , passing outside the grain-wheel, to prevent the standing grain becoming entangled therewith.

The standard c is provided with a shoulder or step a^3 , upon which the tongue d rests when it is secured by means already described to the bar a , and the tongue is securely attached to the standard c by means of the shackle l , that is pivoted to the standard at the point l' and is adapted to embrace the tongue, as illustrated in Fig. 1, and be releasably locked to the standard at the point a^4 on the outer side of and beneath the tongue. With the tongue secured in this position the machine is adapted to be conveniently and easily drawn endwise, the bar a lying above the platform in a diagonal position, as indicated in Fig. 4, with the projection a^2 extending through a hole provided therefor in the fore-and-aft sill u and the tongue projecting outward beyond the grain end of the platform above the grain-wheel into suitable position for the attachment of the team.

The outer end of the divider is pivotally connected at the point i^2 with a forwardly-extending radius-bar i , which is pivotally connected at its rear end at i' to the bracket t and is preferably provided midway of its length with a saddle g , which straddles the outermost guard-finger of the cutting apparatus, thereby steadying and supporting the bar. The front end of the divider-board is supported by this bar, and it will be readily understood that by pivoting the bar at its rear end to the machine-frame and pivotally connecting the divider with the front end of the bar the entire divider, including the board e , the point h , the guard f , and the bar i , are adapted to be raised and folded over backward into the vertical position, (shown in dotted lines in Fig. 1,) thereby reducing the width of the machine practically to the limits of the fore-and-aft width of the platform. In order to fold the divider in the manner thus described, the connection of the supporting-standard p to the step o is made by means of a detachable bolt s' , and the means for connecting the rear end of the divider-board to the extension c' of the wheel-standard is also made by means of a removable bolt c^2 , so that when it is desired to fold the divider into the position shown in dotted lines its connection with the bracket t and the standard or bridle extension c' is loosened, when the radius-bar i will be free to be lifted into the vertical position. (Shown in Fig. 1.)

The divider being pivotally connected at its front end to the radius-bar i , it is advisable that it should have some support for its rear end when raised and folded back. In the present arrangement this support is provided by the tongue d , which whenever the divider is so folded will be in the position

indicated in the drawings, where it will receive and hold the weight of the divider-board and all the pivoted parts. So far, however, as the pivoting and folding of the divider is concerned the invention is not limited to supporting it upon the tongue, as any other support might be provided for this purpose. For example, the board might be allowed to rest at a point more nearly its front end upon the upper end of the standard c , or it might be supported by the grain-wheel or the end of the platform itself.

In folding the divider, as above explained, the intermediate standard p and the wheel-guard f of course move with it and by engaging with the tongue, the standard, or other projection serve to support the weight of the divider-board and hold it against lateral displacement. On returning the divider to the operative position the horizontal bend p^2 of the standard p rests upon the step o and the rear end of the board rests naturally upon the inclined end c^4 of the bridle extension c' . The parts are then securely fastened together at the points c^2 and s' , and the divider is thus held rigidly in its operative position despite the fact that it is freely movable into the inoperative position heretofore described.

Although I have herein shown and described a particular manner of fastening the tongue in the position to draw the machine endwise, the present invention is not limited to this arrangement, as the tongue might be connected in any other manner suitable for the purpose. Neither is the invention limited to the connection of the divider to the harvester by means of the particular radius-bar described, as it may be connected by other suitable means permitting the same to be lifted into the vertical position described and folded backward upon any part of the machine that will provide a suitable support for it.

Having thus described my invention, what I claim is—

1. In a harvester, the combination with the cutting apparatus and the platform, of an outside divider, projecting normally in advance of the cutters, and a radius-bar that is pivoted to the frame and has the divider pivoted to it so as to permit the divider to be folded over backward.

2. In a harvester, the combination with the cutting apparatus and the platform, of an outside divider, projecting normally in advance of the cutters, a radius-bar that is pivotally connected to the frame at its rear end and has the divider pivoted to it at its outer end, so as to permit the divider to be folded over backward.

3. In a harvester, the combination with the cutting apparatus and the platform, of an outside divider, projecting normally in advance of the cutters, and a radius-bar that is pivotally connected to the frame at its rear end, and has the divider pivoted to it at its outer

end said divider being also detachably connected at its rear to a supporting-standard rising from the machine-frame, whereby it may be detached from its rear supporting-
5 standard and folded over backward.

4. In a harvester, the combination with the cutting apparatus and the platform, of an outside divider, projecting normally in advance of the cutters, a radius-bar that is pivoted
10 to the frame at its rear end and having the divider pivoted to it at its outer end, a supporting-standard rising from the machine-frame in rear of the pivot of the radius-bar, and means for securing the rear end of the
15 divider to the standard, whereby its rear end is supported and its front end held rigidly in

working position, said means being such as to permit the detachment of the divider from the standard and folding it over backward.

5. In a harvester, the combination with the
20 platform, of an outside divider projecting normally in advance of the platform, and a radius-bar that is pivoted to the frame, and has the divider pivoted to it so as to permit the divider to be folded over backward. 25

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

JAMES MACPHAIL.

Witnesses:

VICTOR JOHNSON,
R. B. SWIFT.