A. KRUEGER & B. KRAMLICH.

RIDING ATTACHMENT FOR HARROWS.

APPLICATION FILED JULY 5, 1911.

1,011,819.

Patented Dec. 12, 1911.

2 SHEETS—SHEET 1.

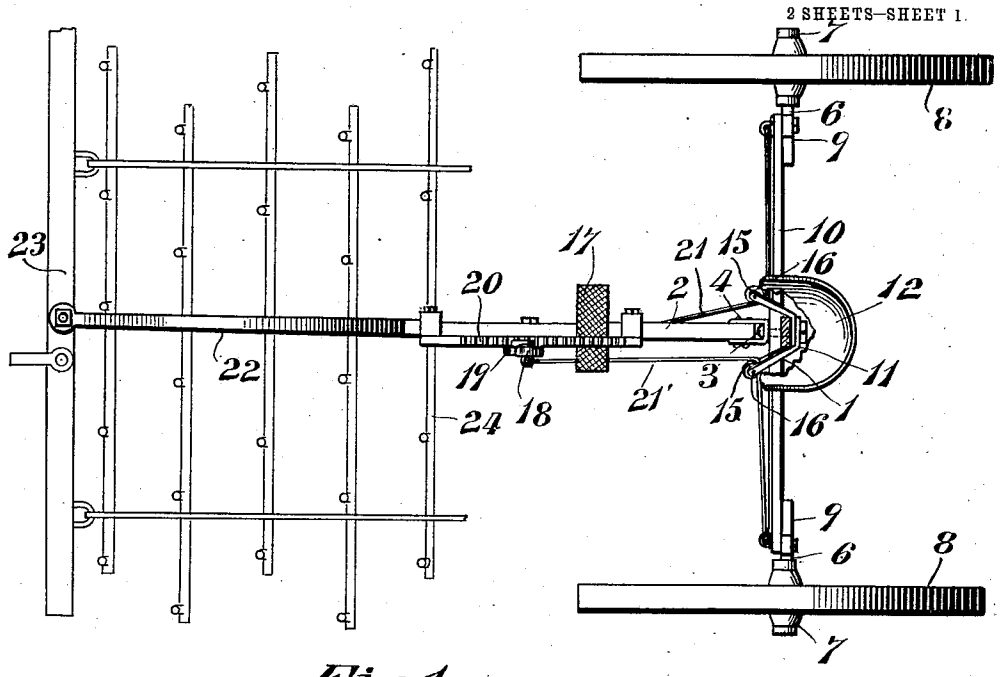


Fig. 1.

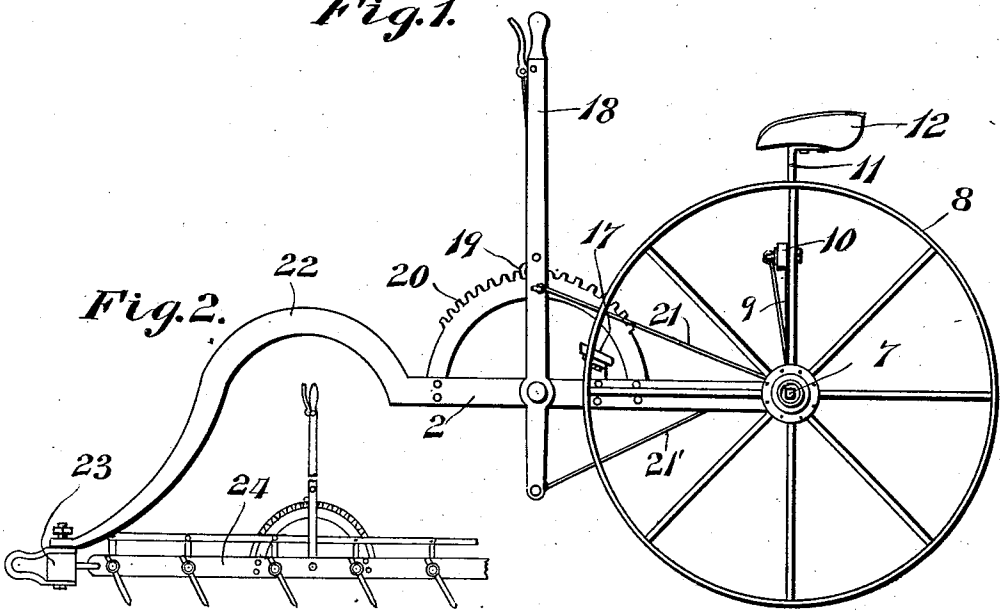


Fig. 2.

Witnesses

Thos. F. Knox

Wm. Bagger

Inventors

Asaph Krueger,

Benjamin Kramlich

By Victor J. Evans

Attorney

COLUMBIA PLANOGRAPH CO., WASHINGTON, D. C.

A. KRUEGER & B. KRAMLICH.

RIDING ATTACHMENT FOR HARROWS.

APPLICATION FILED JULY 5, 1911.

1,011,819.

Patented Dec. 12, 1911.

2 SHEETS—SHEET 2.

Fig. 3.

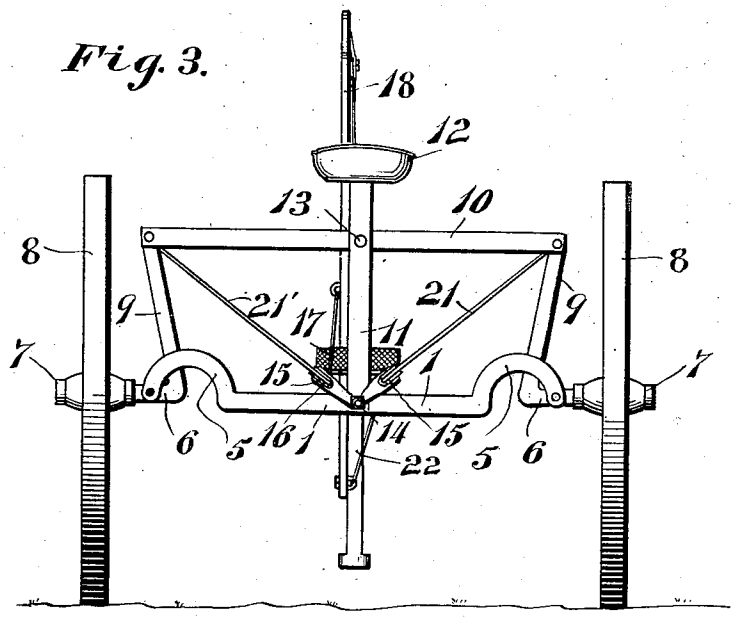
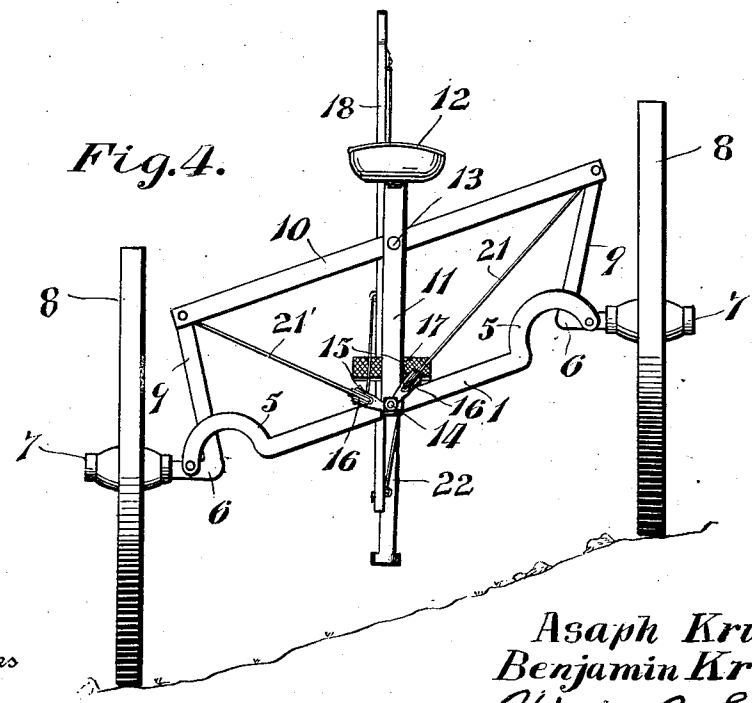


Fig. 4.



Witnesses

Thos. F. Knox,

Wm. Bagger

Inventors

Asaph Krueger,

Benjamin Kramlich

By Victor J. Evans

Attorney

COLUMBIA PLANOGRAPH CO., WASHINGTON, D. C.

UNITED STATES PATENT OFFICE.

ASAPH KRUEGER AND BENJAMIN KRAMLICH, OF COLFAX, WASHINGTON.

RIDING ATTACHMENT FOR HARROWS.

1,011,819. Specification of Letters Patent. Patented Dec. 12, 1911.

Application filed July 5, 1911. Serial No. 636,845.

To all whom it may concern:

Be it known that we, ASAPH KRUEGER and BENJAMIN KRAMLICH, citizens of the United States, residing at Colfax, in the county of Whitman and State of Washington, have invented new and useful Improvements in Riding Attachments for Harrows, of which the following is a specification.

This invention relates to riding attachments for agricultural implements, such as harrows and the like, and it has for its principal object to produce a simple and efficient riding attachment which may be conveniently used upon hillsides, the said riding attachment being provided with means whereby the wheels may be tilted with reference to the body so that the wheels may be maintained in an upright position when operating upon a hillside, thereby preventing slipping and side motion.

A further object of the invention is to so construct the device that the seat associated with the riding attachment shall be maintained in a level position when the body of the attachment is tilted for hillside work.

Further objects of the invention are to simplify and improve the general construction and operation of a device of the character described.

With these and other ends in view which will readily appear as the nature of the invention is better understood, the same consists in the improved construction and novel arrangement and combination of parts which will be hereinafter fully described and particularly pointed out in the claims.

In the accompanying drawings has been illustrated a simple and preferred form of the invention, it being, however, understood that no limitation is necessarily made to the precise structural details therein exhibited, but that changes, alterations and modifications within the scope of the claims may be resorted to when desired.

In the drawings,—Figure 1 is a top plan view of a riding attachment constructed in accordance with the invention, showing the same applied to be used in connection with an ordinary drag harrow. Fig. 2 is a side elevation of the same. Fig. 3 is a rear elevation of the improved riding attachment. Fig. 4 is a similar view showing the device adjusted for hillside work.

Corresponding parts in the several figures are denoted by like characters of reference.

The improved riding attachment consists of an axle member 1 with which a forwardly extending reach member 2 is pivotally associated by suitable connecting means which may consist of a headed bolt 3 connected with the axle and engaging an apertured clip or keeper 4 upon the rear end of the reach member, although any other convenient pivotal connecting means may be adopted. The axle member is provided at the ends thereof with arcuate brackets 5, 5 upon each of which a lever 6 is fulcrumed. Each of said levers carries at its outer end a spindle 7 upon which the transporting wheel 8 is journaled. The inner ends of the levers 6 are provided with upstanding arms 9, the upper extremities of which are connected by a link bar 10. An upright 11, which is pivoted centrally upon the axle, supports at its upper end the seat 12, said upright being pivotally connected intermediate its ends with the central portion of the link bar 10, as indicated at 13. Associated with the pivotal pin 14 which connects the lower end of the upright 11 with the axle 1 are clips or keepers 15, each carrying a guide member, such as a pulley 16.

The reach bar 3 supports a suitably arranged foot board 17 directly in front of which is fulcrumed a lever 18, one arm of which extends below the reach member, as clearly seen in Fig. 2. The upwardly extending arm of the lever 18 carries a stop member 19 adapted to engage a segment rack 20 which is supported upon the reach member. Flexible elements, such as cords or cables 21, 21′ are provided, each of said flexible elements being connected at one end to the upper end of one of the upwardly extending arms 9 of the wheel carrying levers 6. The opposite end of the element 21 is connected with the lever 18 at a suitable distance above the fulcrum of said lever, while the element 21′ is connected with the downwardly extending arm of the lever 18 at an equal distance below the fulcrum of said lever.

It will be readily seen that by tilting the lever 18 in one direction, strain will be exerted upon the flexible element 21, while the

element 21′ will be correspondingly slacked, thus tilting the arms 9 and the wheel carrying levers 6 in one direction with reference to the axle, the seat carrying upright being correspondingly tilted so as to be maintained in parallel relation to the wheels. By tilting the lever 18 in the opposite direction, the parts will be reversely moved, as will be readily understood. The extent of the tilting movement is obviously to be governed with reference to the slant of the hillside upon which the device is to be employed, and the parts will be firmly secured in adjusted position by the stop member 19 engaging the segment rack 20. The operator, while occupying the seat 12, is thus enabled to quickly and accurately tilt the riding attachment properly with reference to the inclination of the hill on which work is being performed, and by keeping his feet upon the foot board 17, the operator is likewise enabled to prevent the reach member from rocking when the axle is tilted.

The forward end of the reach member is provided in the customary manner with an arch 22 which is terminally connected with the draft bar 23 of an ordinary drag harrow 24 or with any other implement in connection with which it may be desired to use the improved device.

From the foregoing description, taken in connection with the drawings hereto annexed, the operation and advantages of this invention will be readily understood.

The construction is extremely simple and inexpensive, and the improved device has proven itself to be thoroughly efficient for operation under circumstances where riding attachments or "harrow carts", as they are sometimes known would be entirely inefficient and incapable of operation.

Having thus described the invention, what is claimed as new, is:—

1. In a device of the character described, an axle, wheel carrying levers pivotally connected therewith, said levers having arms at their inner ends, a seat carrying upright pivotally connected with the axle, a connecting bar pivotally connected with the seat carrying upright and with the arms of the wheel carrying levers, a reach associated with the axle, a lever fulcrumed upon the reach, and suitably guided flexible elements extending from the arms of the wheel carrying levers to the lever fulcrumed upon the reach and connected with said lever, respectively, above and below the fulcrum of the latter.

2. In a device of the character described, an axle, wheel carrying members pivoted thereon, a reach member pivotally connected with and extending forwardly from the axle, a seat carrying upright pivoted upon the axle, connecting means pivotally associated with the seat carrying upright and with the wheel carrying members, a foot board upon the reach, an operating lever fulcrumed upon the reach, and suitably guided flexible elements connected with the operating lever equidistantly above and below the fulcrum of the latter, said flexible elements being connected with the tiltable wheel carrying elements at opposite ends of the axle.

In testimony whereof we affix our signatures in presence of two witnesses.

ASAPH KRUEGER.
BENJAMIN KRAMLICH.

Witnesses:
U. L. ETTINGER,
CHAS. F. VOORHEES.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."