No. 666,881. Patented Jan. 29, 1901.

G. L. CYR.

ROLLING COLTER.

(Application filed Sept. 13, 1900.)

(No Model.)

FIG. 1.

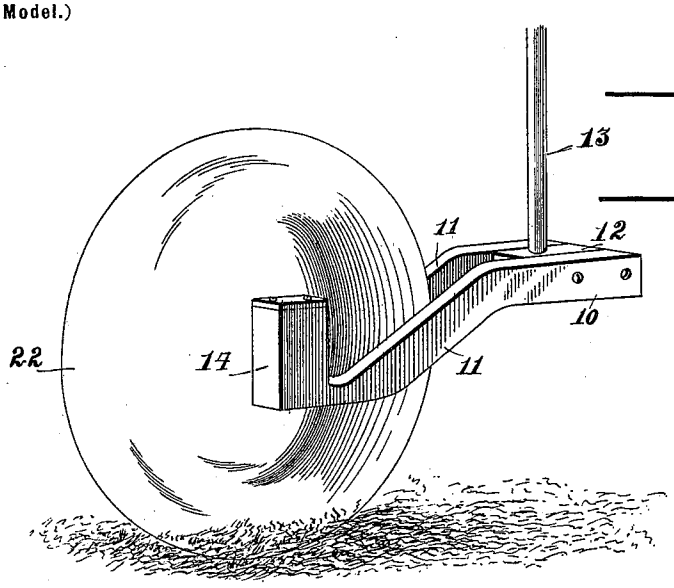


FIG. 2.

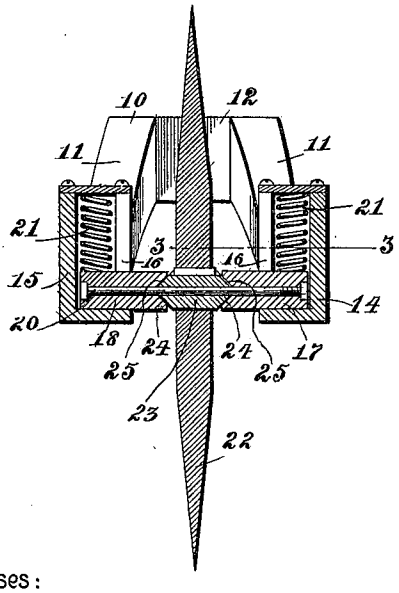
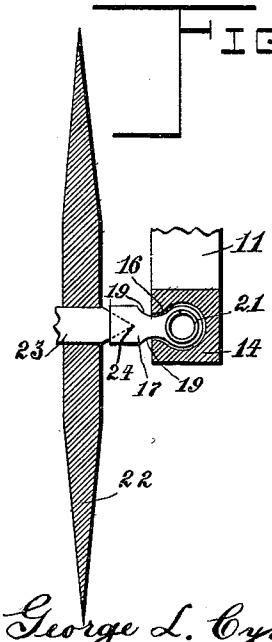


FIG. 3.



Witnesses:

J. F. Groat.

W. J. Benedict

George L. Cyr. Inventor

By Marion & Marion

Attorneys

UNITED STATES PATENT OFFICE.

GEORGE L. CYR, OF BROOKS, MINNESOTA.

ROLLING COLTER.

SPECIFICATION forming part of Letters Patent No. 666,881, dated January 29, 1901.

Application filed September 13, 1900. Serial No. 29,863. (No model.)

To all whom it may concern:

Be it known that I, GEORGE L. CYR, a citizen of the United States of America, residing at Brooks, in the county of Red Lake, State of Minnesota, have invented certain new and useful Improvements in Rolling Colters; and I do hereby declare that the following is 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.

My invention relates to improvements in rolling colters especially adapted for agricultural machinery, but more especially adapted for plows; and the primary object in view is to provide an improved means for supporting a rotary colter-disk in a manner which will permit said disk to lift or raise itself automatically for a limited distance when it encounters a stick, stone, or other obstruction in its path.

A further object of the invention is to provide means by which the rotary colter-disk is held automatically down to its working position; and a further object is to simplify the construction and at the same time promote the efficiency of the device and minimize the cost of manufacture thereof.

Further objects and advantages of the invention will appear in the course of the subjoined description, and the novelty in the construction and arrangement of parts will be defined by the claims.

In the drawings hereto annexed, forming a part of this specification, Figure 1 is a perspective view of the rolling colter embodying my invention. Fig. 2 is a vertical transverse section through the colter and illustrating the means by which the colter disk or axle is mounted for free rotation and slidable movement. Fig. 3 is a horizontal detail section on the line 3 3 of Fig. 2, illustrating the slot in one spring-housing of the hanger.

The same numerals of reference denote like parts in each figure of the drawings.

In carrying my invention into practice I employ a hanger 10, which is provided with the downwardly-curved arms 11, the latter being joined firmly together at the upper ends, as at 12. A spindle 13 is attached to the connected end 12 of the hanger-arms, and this spindle may be connected or clamped in any usual way to a proper part of the agricultural machine—such, for example, as the beam of an ordinary plow.

In view of the fact that the colter is designed to be used in a familiar way I have not considered it necessary to illustrate the application of the improvement to a plow nor to show and describe one embodiment of means by which the spindle may be attached to the agricultural machine.

The arms 11 of the hanger are formed with the boxings 14 15, each of which extends upwardly from one arm for a suitable distance. These boxings may be made integral with the hanger-arms or they may be made separately therefrom and attached firmly thereto. Furthermore, the boxings are disposed parallel to each other, and on their inner sides they are provided with the vertical slots 16, the latter being arranged in coincident positions.

17 18 designate the slidable spindles, which are fitted in the slots of the boxings 14 15, respectively, each spindle having an intermediate curved portion 19, with which engages the edges of the inner wall of one boxing, whereby the spindle is confined to slidable movement in the headed wall of its boxing. The spindles and the axle are provided with axial bores or passages, in which is arranged the clamping bolt or rod 20, the latter serving to couple the two spindles and the axle together, so as to maintain these parts in alined relation. The coupling bolt or rod has a head at one end, which may be countersunk in an end face of one spindle, while the other end of said bolt or rod receives a nut, which is adapted to be removed in case it is desired to disconnect the spindles and the axle one from the other.

21 designates the coiled repressing-springs, which are fitted in the boxings or housings, so as to bear against the top of the latter, the lower ends of said springs being seated upon the spindles. Said springs are of such size that they will fit snugly in the boxings, which serve to prevent displacement of the springs and confine them into proper relation at all times to the spindles. The springs tend to normally depress the two spindles and to hold the colter-disk 22 in its proper working posi-

tion, said disk being arranged between the spindles, the pair of boxings, and the arms of the hanger 10.

The colter-disk is made of metal with a sharpened edge, said disk being secured to a short axle 23, the ends of said axle being pointed, as at 24. The ends of the slidable supports 17 18 project beyond the slotted walls of the boxings, and said projecting ends of the spindles have the cavities 25, forming the seats for the pointed ends 23 of the disk-axle.

From the foregoing description, taken in connection with the drawings, it will be seen that the axle of the colter-disk is mounted in the seats of the spindles, so as to rotate freely therein, and at the same time these spindles are slidably supported in the slotted boxings of the hanger, so as to be free to move upwardly therein when the colter-disk encounters an obstruction in its path. The depressing-springs are of such strength as to normally keep the spindles and the colter-disk to their proper working position; but when the disk rides over a stone, stick, or other obstruction the parts are adapted to give or yield in an upward direction, thereby compressing the springs until the obstruction shall have been passed.

Changes within the scope of the appended claims may be made in the form and proportion of some of the parts while their essential features are retained and the spirit of the invention is embodied. Hence I do not desire to be limited to the precise form of all the parts as shown, reserving the right to vary therefrom.

I claim—

1. In a rolling colter, the combination of a colter-hanger having the vertical guideways, the alined spring-repressed spindles slidably mounted in said guideways of the hanger, and a colter-disk having an axle which is journaled for free rotation in said spindles, said colter-disk adapted to move with the spindles in a vertical path, substantially as described.

2. In a rolling colter, the combination of a colter-hanger having the slotted boxings, alined spindles slidably confined in said boxings, a colter-disk having an axle journaled in said spindles and arranged to travel vertically therewith, and springs housed within the boxings and seated upon the spindles, substantially as described.

3. In a rolling colter, the combination of a hanger having the slotted boxings, the recessed spindles slidably fitted in the boxings, and having the seats in their contiguous ends, a colter-disk provided with an axle having pointed ends adapted to be seated in the spindles, and springs confined within the boxings and seated upon the spindles, substantially as described.

In witness whereof I have hereunto set my hand in the presence of two witnesses.

GEORGE L. CYR.

Witnesses:

LILLIAN BELAIR,

JOSEPH PERRAULT.