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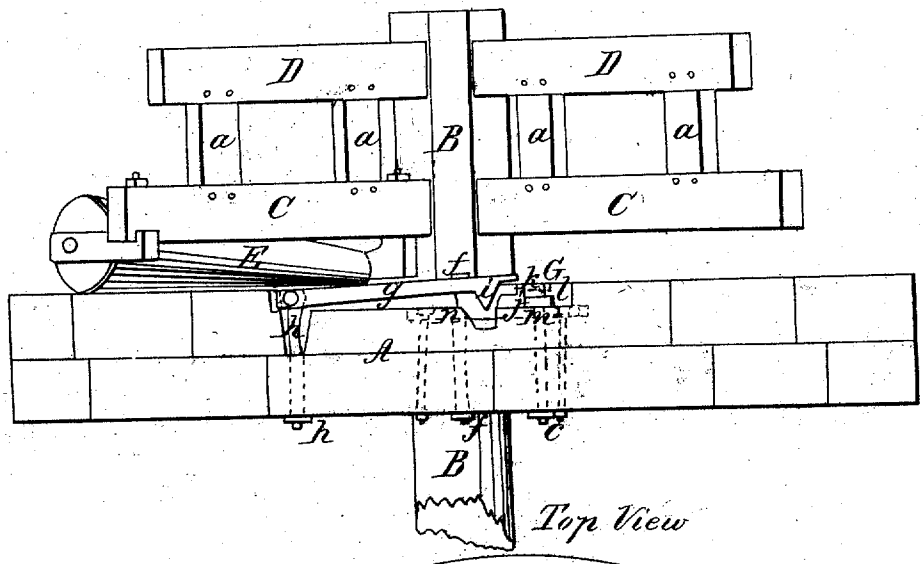
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L. Dudley.

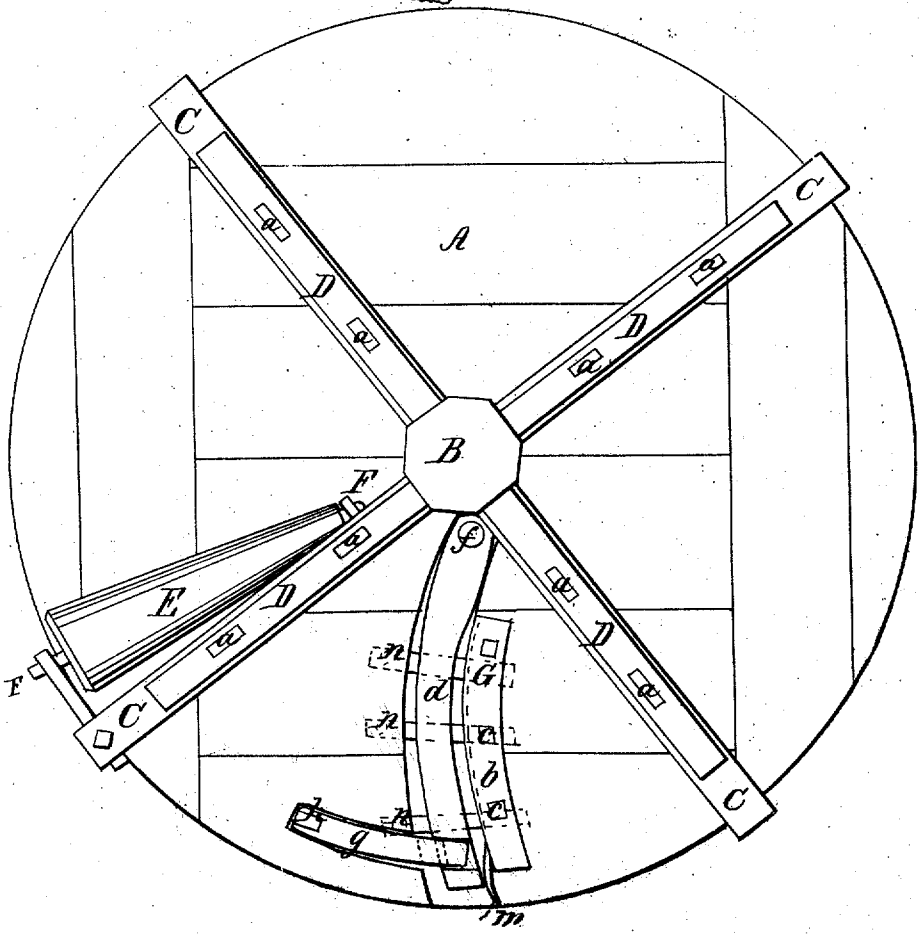
Making Farm Implements.

Patented May 27, 1814.

Side View



Top View



May 29. 1814 2193X

Luther Dudley
Letters Patent

The Schedule referred to in these Letters Patent and making part of the same containing a description in the words of the said Luther Dudley himself of his improvement in the manufacture of Scythes

The invention of this improvement in the manufacturing of Scythes being a machine to turn the back of the Scythe and to crook it in a curvilineal form at one operation of the machine and at one heat consists in constructing and combining the following parts and principles of machinery herein described. viz a platform of hard timber is made of suitable height. its top surface is horizontal & its shape is circular forming a part of a circle or a whole circle as may be wanted. Through the center of this horizontal circular platform is fixed a large perpendicular shaft or spindle which turns round from left to right. A little above the surface of the platform two strong arms of hard timber are put through the shaft at right angles with each other and extend horizontally from the shaft about four feet. being well bound with each other and with timbers from other arms several feet above put through the perpendicular shaft similar to the lower arms and for the purpose of securing and supporting said lower arms. To the underside of one of said lower arms and in the same direction with it is fixed upon its gudgeon a large conical cast iron roller weighing about eight hundred. turned perfectly true being about four feet long. and its diameter at its large end is twelve inches and its small end about four inches. This conical roller must be hung by its gudgeon under said horizontal arms of said perpendicular shaft pointing with its small end to the centre of the shaft. so that the under surface of said roller may fit the horizontal surface of said platform on which it rolls round as said shaft turns. The conical shape of this roller must be such that it may roll equally alike at both of its ends. And the large end describing a circle as much larger than the small end. as twice the length of the said conical roller. The proportion between the diameters of the two ends of this conical roller may be easily found by knowing the diameters of the circles those two ends describe on said horizontal platform. Upon said horizontal platform (which may be a complete circle or any convenient portion of it round said perpendicular shaft) and even with the surface of said platform are fixed one or more curvilineal gripping irons. crooking a little to the right and pointing to the centre of said perpendicular shaft or nearly so. The jaws of this curvilineal gripping iron are made of large bars of iron faced with steel & tempered. The curvature of the jaws is the same as the scythe and their thickness is equal to the width of the back of the scythe to be turned up. The right hand jaw is permanently bolted to the said platform by a strong bolt. & its other end is pressed up to the other jaw horizontally so as to

grasp the back of the scythe plate firmly by a strong iron catch. This catch is about eighteen inches long & has a strong and easy powerful spring for its end at a gudgeon so that it will allow about to be a little thicker than common. This spring will yield and allow the catch to be drawn down to its place. The end of this catch extending to the right has on its under part a convex angle which acts against the outer end of the said moveing jaw. so that when said catch is drawn down by the approach of said roller said moveing jaw is closed or forced up to the upper jaw and grasps the back of the scythe firmly. said roller then moveing onward to the right runs against the scythe plate which is now perpendicular viz edge upward as grasped in said convex jaw, and gradually bends down all along the scythe plate, and rolls on until compressing it firmly upon the surface of the permanent jaw of said vice. the length of which jaw must be such as to leave the point of the scythe almost turning up a hook. As soon as the roller passes over the scythe plate, a spring fixed to the outer end of said moveing jaw opens it and the workman then takes the scythe plate out. which is then to be finished with the hammer in the usual manner. It is best to have a proper furnace in which to heat a large number of scythe plates at a time to accomodate each heat and to preserve this degree of heat while the machine is in operation. It is also contemplated to make the roller a perfect cylinder. Viz. the diameters of its ends the same. and to have it fixed in the recess or extended arms of a wheel whose shaft or axis lies horizontally over the said platform. so that said roller will be moved over the platform to the right and produce the same effect by the revolving of said wheel. This mode of giving motion to a roller to produce the effect required of this machine will answer very well for a small factory. Another mode of putting in motion said roller last mentioned is by having it hung by its gudgeon in a perpendicular frame formed by two timbers about fifteen feet long, or so. framed at their upper ends &c. to allow the roller to be rolled back & forth on the platform and when it comes to the end of the plate in said curved gripping vice. said frame will then give a proper degree of pressure to the roller. The vibratory motion of the frame to roll the roller forward and back again may be obtained by an horizontal arm connected to this roller frame and extending to the shaft of the common water wheel by which the proper motion may be given to said horizontal arm. by two cams or excentricities on said water wheel shaft. one of which cams will roll the roller forward over the gripping vice and the other will roll it back in a similar way. where it will stop a short time and admit the scythe plate to be put into said gripping vice which is the same in all three different ways contemplated to be put in operation. The platform in these two last modes of giving motion to the said roller will be very simple and admit of but one gripping vice. This cylindrical cast iron roller for this

the last mentd of shifting it for the fore part afterwards may be about as he makes in changing the Position of the machine does much time in making a stroke. It is to be noted that the moving jaw of the gripping tree has two mortices for pins or screw bolts on the under side and let into the platform as well under the permanent jaw as back side of said moving jaw. so as to present said moving jaw forwarding upon screw being bent as above the horizontal surface of the platform. and when the saw plate is put into said gripping tree edges upwards its backwards upon said oval pieces as the usual manner of the height of the back of the saw which must be straight when put into said tree so as to back turned. The permanent jaw of the gripping tree must be no longer than the back of the saw that is to be turned. and for saws of different lengths it is best to have permanent jaws also of different lengths accordingly to be put in and taken out. & all to fit the said moving jaw especially in machines that have but one gripping tree

Witnesses
John Fairbanks
Hosea L Morse.

Luther Dudley

Drawing made
Ad. Yes

(1368 words)