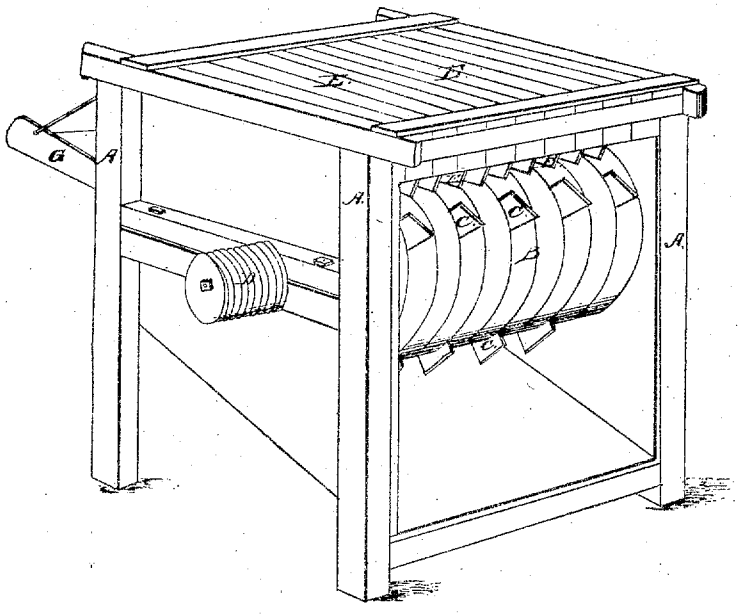
7768X

Hart & Holladay,

Thrashing Mach.

Patented Sept 17. 1833.

No specification available



7768X

Sept 17, 1838

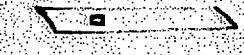
James Hart and Wallis S. Holladay, Spotsylvania Virginia

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 James Hart and Wallis S. Holladay of their improvement in the Construction of the Cylinder and Concave of Wheat Threshing Machines.

To all to whom these presents shall come Be it known that we James Hart and Wallis S. Holladay of the County of Spotsylvania and State of Virginia have invented a new and useful improvement in the Construction of the Cylinder and Concave of Wheat threshing Machines and that the following is an exact description of the Construction and location of the said Cylinder and Concave as improved by us.

The axis of the Cylinder is made of a bar of iron one inch and a quarter square and of sufficient length for a Cylinder of from two to three feet long the length of the Cylinder depending upon the horse power which is to be applied. To this axis the Cylinder is thus Constructed. Cut bars iron which is from two to three inches wide and from three sixteenths to half an inch thick into lengths of from sixteen inches to two feet according to the intended diameter of the Cylinder. In the centre of these bars cut a square hole corresponding in size with the size of the axis Cause a bar with the hole in it will appear thus



The bars then put on the axis at the place where the Cylinder commences This being done a circular piece of plank one inches less in diameter than the length of the bars of one end of such thickness as may be necessary to keep the bars at the required distance from each other with a hole in the centre of the same size with that in the bars put on the axis and pressed close to the bars then bend down evenly together a groove a Cut round the plank corresponding in depth to the thickness of the bar and into these grooves the bars is set. This done

Off

another bar similarly made is fixed in like manner with the difference only that it is fixed at right angles with the first bars and another piece of plank placed like the first. In this manner the whole Cylinder or Cage is made each successive bar being fixed at right angles with the preceding one until a many bars and Circular pieces of plank have been fixed as may be necessary to make the Cylinder of the intended length. To fix the whole Cylinder firmly together two rods of iron each half an inch in diameter are passed through the Cylinder one end of it to the other the rod through one range of the bars another through another range like about three and a half inches from the ends of the bars or an inch and a half from the outer edge of the Circular pieces of plank holes having been previously made through each for that purpose. The rods are cut at the ends of the rods and taps are made adapted to them. These taps screwed tightly on to the bars and pieces of plank firmly together that the Cylinder cannot be broken by any ordinary force applied but to prevent any motion of the Cylinder in the axis internally strong bars are fixed on the axis against the terminating bar at each end of the Cylinder. The Cylinder is fixed in a box formed as the boxes of threshing Machines generally are.

The Concave is formed in the following manner. Plank pieces six inches wide and of the same thickness with that used in Constructing the Cylinder is sawed into lengths of about two feet and a half. A segment of a Circle is then cut out of each piece as represented in the following figure which gives a lateral view of it the segment beginning at A and ending at B



Five iron teeth shown in the representation above given by the figures 1 2 3 each about six inches long and an inch and a half wide and about three Eighths of an inch thick are then let into the plank to a depth corresponding with their thickness between the points A and B the ends of the teeth reaching about two inches below the surface of the Concave. Another plank of exactly the same size and form is then added and three similar teeth are let into it at precisely corresponding points. Thus the whole Concave is Constructed by adding pieces of plank of like size and form each hav-

ing three iron teeth it as shown above until it has attained the dimensions required. Bind all together six iron rods each half an inch in diameter and passing through the plank as through each range of the iron teeth at the distance about three inches from the centre and another behind each range of the iron teeth and as near-ly as possible in contact with them so as to support them and at the distance of about an inch above the concave holes for this purpose having been previously made. These rods are represented in the above figure Screws are cut at both ends of each rod and taps made fitted to them These screwed tightly to make the concave as strong as the Cylinder. The Concave is the segment of a circle having the centre of the Cylinder for its centre Shoulders are cut at the ends of the planks which form the Concave These shoulders are seen at the letters C and D The Concave is then let down through the frame of the threshing box in such a depth that the teeth of the Concave are three sixteenth of an inch distant from the surface of the Cylinder the shoulders resting on the upper part of the frame of the box to keep it immovable two pieces of timber are laid across it and firmly fixed there by means of iron bolts which pass down through them and the planks of the Concave into the frame of the box The bolts hav-ing strong heads at the upper end and screws and taps at the other The Concave being thus fixed and the Cylinder put in motion the bars of the latter strike upward passing at the distance of three sixteenth of an inch from the surface of the Concave and at the same distance from the teeth on each side. The Cylinder is put in motion by means of a band passing on a block or wheel fixed on the end of its axis. Any horse power will do, a regulator is to give from six hundred and fifty to twelve hundred revolutions per minute to the Cylinder: the of small diameter requiring more revolutions in a given time than one of great diameter The bars of the Cylinder and the teeth of the Concave are so fixed in the above plan of Construction that they cannot fly off and clash in their rise and fall so that they cannot be broken by ordinary obstacles found in the wheat

Witnesses Richard Murphy
Charles Todd

Inventor
Walter S. Holladay

Patented May 16 1837

Drawn for Patent