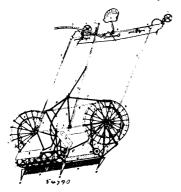
and a lower shoulder, in combination with the gasket surrounding the neck and arranged on the upper shoulder, the cover adapted to



embrace the mouth and having the depending flange f to bear on the gasket on said upper shoulder, and also having the two oppositely directed curvilinear inclined elevations on the upper side, and the metallic fastener comprising the horizontal portion i, and the two depending branches k, terminating in the lateral and curvilinear branches turned in opposite directions to engage the lower shoulder of said flange, substantially as specified.

No. 54,790. Machine for Harvesting and Threshing.
(Machine à moissonner et battre)



William Maloney and T. Hatchard Stedman, Calgary, North-west Territories, Canada, 28th January, 1897; 6 years. (Filed 19th December, 1896.)

Claim.—1st. In a header, harvester and thresher, a header provided with revolving reels A, B, which act as both reels and cutters, substantially as and for the purposes hereinbefore set forth. 2nd. In a header, harvester and thresher, a header provided with a com-In a header, narvester and thresher, a header provided with a combined carrying and dumping box for the purpose of receiving the heads of the grain from the knives, carrying the heads and depositing them in piles, substantially as and for the purposes hereinbefore set forth. 3rd. In a header, harvester and thresher, a harvester provided with a fork Z¹, to lift the grain from the ground and carry it to the thresher or stack, substantially as, and for the purposes hereinbefore set forth. 4th. In a header, harvester and thresher, a series of lugs G, on the outer circumference of the wheels A of the revolving reals A. The lugs G are so shaped that their outer surface is on a reels A, B. The lugs G are so shaped that their outer surface is on a line, tangent to the outer circumferences of the wheels A of the revolving reels A, B; the lugs G are thus formed to give the required set to the knives F, F, to allow of their use for the purposes of reels, as well as for cutters, substantially as and for the purpose hereinbefore set forth. 5th. In a header, h. rvester and thresher, a series of knives F, F, attached to the lugs G on the reel wheels A. The knives F, F, owing to the set given to them by the form of the lugs G on the reel wheels A, are made to cut only when their cutting edges are directly over the cutting edges of the knives F, F, on the cutter-bar H, substantially as and for the purposes hereinbefore set forth. 6th. In a header, harvester and thresher, a direct double power of drive on the cutter reels A, B. This direct double power is attained by the direct connection of each small sprocket C on the reel shaft B, by means of an endless chain E¹, with each of the large sprockets D on the main driving wheels E. Owing to the comparative diameters of the sprockets D, on the main driving wheels E, with the sprockets C on the reel shaft B, a sufficient speed of rotation is given to the reel shaft B, and to the reels A, B, which revolve with the reel shaft without using any intermediate gearing. By this special method of gearing, and the forms used in constructing the cutting portions of the machine, the power required to run the concaves L⁴, the straw and threshed heads return to their former

the machine is greatly decreased, substantially as and for the purposes hereinbefore set forth. 7th. In a header, harvester and thresher, the increasing or decreasing of the speed of the revolutions of the reel shaft A, B, by removing the sprockets C and replacing them by other sprockets, of a greater or less diameter as may be required; the sprocket wheels C being connected onto the reel shaft B by means of slip keys and set screws so that they can be easily and quickly changed, substantially as and for the purposes hereimbefore set forth. Sth. In a header, harvester and thresher, the separate and direct power given by the revolution of the main driving wheels E to each large sprocket D on these wheels, and communicated o the sprockets C on the reel shaft B, by means of the endless chains E⁴, each section of the reel shaft and reels is given an independent power of revolution, so that while turning the machine one half of the reel A, B, will work forward, while the other half will work backward, substantially as and for the purposes hereinbefore set forth. 9th. The construction and arrangement of the frame X, X, and lever K¹, which by being solidly framed together, revolve with each other from and around the main axle V, thus giving an oscillating motion to the entire body of the machine, and to the reels A, B. By this oscillating motion of the reels A, B, the knives are raised or lowered to such a distance from the ground as may be required to head grain of any height, substantially, and for the purposes hereinbefore set forth. 10th. In a header, harvester and thresher, the entire body of the machine, so centred on and fixed solidly to the axle V, that each portion, including reels A, B, and the driving power, always retaining the same relative position to the axle, the driving power is not interfered with by any oscillating motion of the body of the machine or the reels A. B., substantially, and for the purposes hereinbefore set forth. 11th. In a header, harvester and thresher, the entire control of the raising or lowering of the reels A, B, or the oscillating motion of the body of the machine, and all other working of the machine directly from the driver's seat, by means of the one lever K¹, substantially, and for the purposes hereinbefore set forth. 12th. In a header, harvester and thresher, the method of constructing the main frame X, X, and the solid connection between the main frame X, X, the main tilting lever K¹, and the cutter-bar H, by means of the cross braces M, M, connected to the back corners of the main frame X, X, and the lever braces N, N; the braces M, M, and N, N, joined to the brace D which is carried down to the cutter bar H, and the side braces L¹, L² and L³ from the main axle and the bottom of the frame to the cutter-bar. By means of these braces the whole of the machine is attached and braced solidly together so as to ensure its working without any jar or solidly together so as to ensure its working without any jar or uneven pressure on any of its parts or the possibility of any portion getting out of line, substantially and for the purposes hereinbefore set forth. 13th. In a header, harvester and thresher, a tongue P¹, P¹ on each side, outside the line of the main driving-wheel E, E, connected to the main axle V by means of the drop irons Q¹, to which they are secured by pin and collar attachment so as to allow of the tongues P¹, P¹, being readily removed, while putting in or taking out the horses. The tongues P¹, P¹, are connected at back by a cross-frame R¹ to which the driver's seat L¹, guiding attachment R⁴, and tilting bar Q¹ are attached. The tongues P¹, P¹, after passing the cross-bar R¹ are bent downward and inward and braced to the cross-bars by the braces O², the tongues P¹ P¹ and braced to the cross-bars by the braces Q^2 , the tongues P^1 P^1 , after passing the cross-bars by the braces Q^2 , the tongues P^1 P^1 , after passing the cross-bar R^1 , R^1 , are bent downward to receive the guiding-wheels T^1 , T^1 , to which are attached the rudders U^1 , U^1 . The rudders U^1 , U^1 , are connected by side rods V^1 , V^1 , to the foot lever R^4 below the driver's seat. By the motion of the foot lever R^4 transferred to the guiding-wheels T^1 , by the side rods V^1 , and the rudders U1, the machine is afforded a double guiding power, controlled directly from the driver's feet, substantially, and for the purposes hereinbefore set forth. 14th. In a header, harvester and thresher, a thresher driven from behind by means of horses working between the double tongues P¹, P¹, connected to the outside of the main driving-wheels by the drop irons Q¹ joined at the back by the cross-brace R¹, and supported on the guiding-wheels T¹, substantially and for the purposes hereinbefore set forth. 15th. In a header, harvester and thresher a thresher attached to the same main fractions. harvester and thresher, a thresher attached to the same main frame X, X, which is used for the header, and so centred on the main axle V between the main driving-wheels E, as to give an oscillating motion, controlled from the driver's seat L¹ by means of the lever K¹, substantially and for the purposes hereinbefore set forth. K¹, substantially and for the purposes hereinbefore set forth. 16th. cylinders A, B, and the concaves I¹ provided with teeth, the cylinders A, B, being driven by direct power from the main driving-wheels E by the connection of the endless chains E¹, from the large sprockets D, on the main driving-wheels E, to the small sprockets C, on the cylinder shaft B, substantially and for the purposes hereinbefore set forth. 17th. In a header, harvester and thresher, the cylinders A, B, of the thresher being in two sections and centred from the main axle V, and controlled by the revolutions of the main driving-wheels E, E, each section of the cylinders A, B, can revolve driving-wheels E, E, each section of the cylinders A, B, can revolve in a direction different from the other, as the revolutions of the main driving wheels E, E, are varied or reversed, so that, turning the machine in any direction does not cause any stoppage or interference with the working of the machine, substantially and for the purposes hereinbefore set forth. 18th. In a header, harvester and thresher, by the forward motion of the machine when working, the grain is brought in by the cylinder bars K⁴ and threshed, by the combined action of the teeth of the cylinder bars, and the teeth on