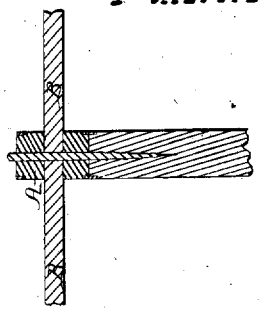
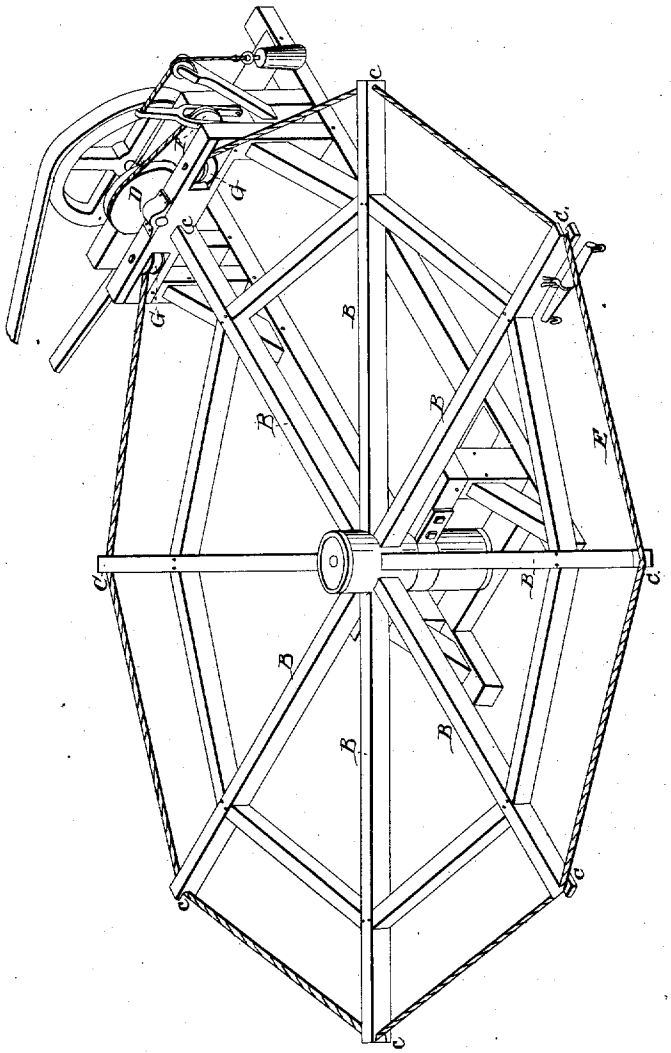
6682X

C. Emmons,

Horse Power.

Patented Aug. 2, 1831.





AM. PHOTO-LITHO. CO. N.Y. (OSBORNE'S PROCESS)

Aug 2. 1831 Cd82X 367

Caleb Emmons of the City of Petersburg Va

Dale of Petersburg 2 Aug 1831

To all to whom these presents shall come: Be it known that I Caleb Emmons of the City & County of Petersburg Va, have invented a new and useful improvement in the mode of propelling steam boats for propelling Machinery and that the following is a full clear & exact description of the Construction and operation of said improvement in the same reference being had to the accompanying plate or high paper and to the figures & letters marked thereon. The frame is made of plank or some solid piece of wood cut from off a log, & should be iron bound for it may be made of Cast iron, it is supported & kept in its position by a centre axle or spindle on which it turns, which communicates with a solid fly wheel below the hull. Mortises are made in this centre part or hub to receive the ends of the arms No 1 & 2 & 3 & 4 & 5 & 6 which are usually from six to eighteen inches from 10 to 15 feet in length, on the edge of the ends of which enters the hub is cut a dove tail that it may be fastened with a key which may be driven in and taken out at pleasure, as they may be fastened any other convenient manner. To each of which is fixed by the Bolts or Screws at each of the arms nearly after a angle of about 45 degrees & parallel to the axis of the arms with joint &c &c &c

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wooden Mats or Bones between each of the arms to keep them at equal distances apart / a Chain or rope may be substituted in their stead / Bones should be placed from the lower part of the limb to the under side of the arms when the arms are to carry heavy articles requiring support / a Metal or Wooden Cylinder placed fitted with-out the circle in which the outer ends of the arms describe / made fast and dated by and placed with its axis horizontal and suspended in its position by journals resting in a proper support or frame / this Metal or Cylinder may be made separately of Plank or boards / placed on the same Shaft at such distance apart / made such size as may suit / the purpose intended / E. C. Rope / the ends of which are fastened to each other by an iron hook / eye / that at one end is short / and at the other, as at C, is long / to give the Rope the requisite tightness / by hooking / the long eye on the short hook / This Rope is placed around in the circles in the outer ends of the arms / passing round the Metal Cylinder / this rope a Chain may be substituted / F. A moveable Metal or pulley / is placed that it may press sufficiently against the rope by means of a weight / with which it communicates by a rope passing over a pul-ley / the weight may be made fast to a large Pulley or Cylinder / a sufficient number of Metal or other Spring may be substituted / under each of the ropes / equally tight / that all the Strands / may have / C a position or grip behind / that is to give / their proportion to grasp / the article / that is to be

into the Barrel D Assembly. When the above described Apparatus or horse power is to be put in motion one or more horses are placed between & near the ends of the arms just above the rope & fastened to the arms immediately behind them by means of which they are made to push in circular track and causing the arms to revolve — the rope being drawn tight by means of the movable wheel H, & weight which is prevented from slipping in the notches in the ends of the arms (in the grooves of the wheel D. Consequently, A rotary motion will be communicated to the said wheel & drum). The number of revolutions of the wheel D. will be in proportion with diameter is with that of the circle described by the ends of the revolving arms/ deduction being made for the straight spaces of the rope between each of the arms (in Mangerisdamics the above mentioned wheel and drum) D. May be dispensed with by passing the rope around a wheel on the machine which is to be put in motion & arranging the movable wheel H, & weight in any convenient place above the wheel D. May be placed on a shaft whose axis is perpendicular as in driving a Horse Corn Mill in which case the wheel D may be placed on the Mill Stone Spindle. What I claim as new and as my own invention or discovery in the above described horse power or machine for the purpose of which I ask an exclusive privilege is the construction & arrangement of the several

8/2/1831 [illegible]

[illegible] Steam Engine & the application to the purposes of Machinery by Circular Motion

Witnesses

David Chambers 3

Timothy P. Bunyer 3

Calvin Simmons

(Sealed 2d August 1831. (864 words)