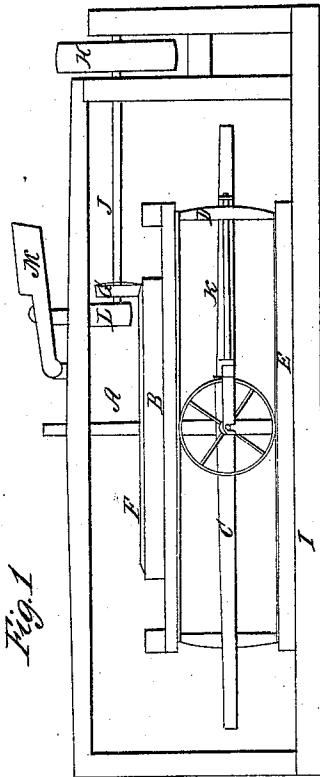
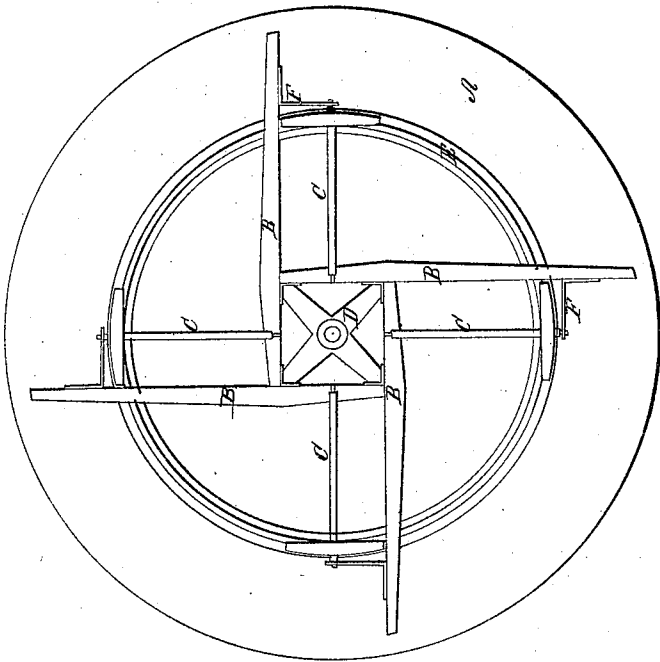
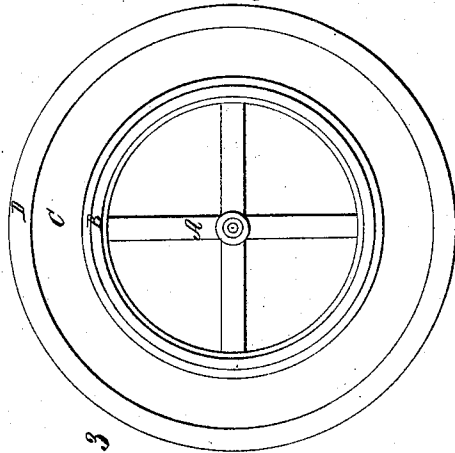
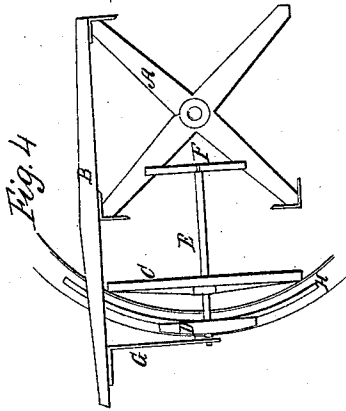


B. Langdon, Horse Power.

N^o 286.

Patented July 19, 1837.



Witnesses;
J. W. Coffin
John C. Langdon

Fig. 2

Fig. 1

Inventor;
B. Langdon

UNITED STATES PATENT OFFICE.

BARNABAS LANGDON, OF TROY, NEW YORK.

MODE OF APPLYING HORSE OR OTHER ANIMAL POWER TO PROPELLING MACHINERY.

Specification of Letters Patent No. 286, dated July 19, 1837.

To all whom it may concern:

Be it known that I, BARNABAS LANGDON, of the city of Troy, in the county of Rensselaer and State of New York, have invented a new and Improved Mode of Propelling Machinery by the Application of Horse or other Animal Power; and I do hereby declare that the following is a full and exact description.

10 A circular horizontal railway is to be provided of such dimensions as the nature and object of the machinery to be connected with it and other circumstances may render expedient; and three or more rollers or wheels
15 fitted thereto and connected to the center of its circle by means of an horizontal shaft through the center of each roller are to be drawn around upon the railway by a horse or horses or by such other animal power
20 as shall be employed. For this purpose there is to be an upright shaft in the center of the circle with its lower end placed in a box or step and its upper end so secured by the frame which is to support the machinery or its fixtures as to allow it to revolve vertically. To this shaft a hub or
25 cast iron flange should be attached having its outside vertical surface formed into as many planes and angles as there are rollers upon the railway in order that an arm may be attached to each plane and extended out to the horse path—passing a little forward of the periphery of the roller with which
30 it is to be connected. On the side of the arm next the roller a cast iron knee or other fixture is to be attached extending on the outside of the roller in the direction of its diameter so as to receive the outer end of its shaft, the same being made to come
35 through the rollers and to terminate as a gudgeon or central point for that purpose and the knee being supplied with a box or step accordingly for it to rest and turn in. The inner end of the same shaft in form of
40 a gudgeon is also to be placed in a box provided for it in the flange to which the arm is attached and at such point in the flange as to give the shaft a direction exactly central. The horse or animal power
45 for drawing the rollers is to be attached to one or more of the arms thus connected with the rollers and with the flange upon the vertical shaft at the center thin size and strength therefore as well as the thickness
50 and horizontal extent of the flange are con-

sidered as matters of judgment sufficiently and horizontal extent of the flange are connection with the purposes which they are to answer.

As an alternative provision—instead of having the upright shaft made movable so as to revolve vertically by means of being attached to the flange and arms it may be fixed in its station. And the flange being provided with a vertical perforation
60 through its center or attached to a box or hollow shaft for the purpose may be made to revolve upon it independently as upon a stud shaft. In this case there should be a collar upon the inner shaft or other provision to support the flange at its required elevation.
65

Upon the top of the rollers (they in their movement being screwed at equal distances apart and of equal size) is to be placed a circular plate or broad flat rim so as to revolve horizontally in its own circle by means of the friction or adhesion of its under surface to that of the rollers as they are drawn around upon the railway. From
75 the inner edge of this rim arms or a thinner plate attached to it may be extended to the center when a perforation is to be made or a box or hollow shaft provided and attached to the arms through which the upright shaft is to be admitted in such manner as to allow the rim to revolve around the shaft as its center. Or a vertical shaft may be attached to those appendages of the rim and extended down so as to rest and turn
80 upon the top of the stud shaft below or as a center in a step therein provided for it they being made and fitted to each other in either form accordingly. The under surface of this revolving rim should be fitted to the periphery of the rollers or a circular section of it extend down from the surface or a plate of iron in nature of a band attached thereto flatwise in nature of a circular railway with an even surface for that
85 purpose.
90

In order to increase the speed of this revolving rim beyond its ordinary movement in relation to that of the rollers upon the railway when occasion requires rollers or
95 wheels of larger dimension may be provided and one fixed by the side of each of the railway rollers upon the main shaft so as to revolve with it without coming in contact with the railway or interfering with
100
105
110

the flooring or other substance underneath a circular passage or recess if required being provided so as to allow it to revolve in nature of a pulley suspended by the shaft.
5 And by placing the horizontal rim upon the top of these instead of the railway rollers their enlarged circumference will accelerate its motion accordingly. Now to communicate the power and effect of the momentum
10 of this rim as thus acquired to other machinery for ordinary mechanical manufacturing or other practical purposes is the object and design of this improvement. To effect which cogs may be fixed in the rim at its
15 outer or inner edge or in any circular concentric section of its upper surface fitted to bevel or other wheel, placed in connection therewith or by raising or otherwise preparing a like section of its surface without
20 cogs as a rim in nature of a railway either bevel or beveled and placing a wheel or roller of corresponding surface in contact to be turned by the power of friction or cohesion of their surfaces, rotary movements
25 of various descriptions may be obtained, extended and applied to the purposes aforesaid, provision being made for adding weight as an overload for the purpose of increasing the momentum or friction of any
30 of the revolving bodies in connection as may be required. All necessary fixtures and appendages also being provided and applied upon the common principles of mechanism as is usual in other cases of like nature.
35 What I claim of the improvement thus

above specified and described and desire to secure by Letters Patent is—

1. The manner in which the circular flat rim or platform is made to revolve horizontally in its own circle by means of the progressive motion of three or more rollers or wheels rolling around a common center upon a circular track or railway under the propulsion of horse or other animal power—
40 with the rim or platform placed upon the top of the rollers and being supported and carried around by them, and the manner of accelerating its motion by means of larger wheels to be fixed by the side of such railway rollers upon the same shaft. 45

2. The manner of communicating the power and effect of the momentum of the rim or platform thus acquired to other wheels by the introduction of cogs, bands or other means in common use for the purpose of obtaining rotary movements for mechanical, manufacturing or other practical purposes as above described, together with the provision for adding weight as an overload for increasing the momentum or friction of
50 or between any of the revolving bodies in connection, as may be required, and also the principles embraced by the said improvements so far as the same are applicable to machines of the above description. 55

Subscribed this 21st day of June, 1837.

B. LANGDON.

Witnesses:

DANIEL WHITING,
JOHN C. LANGDON.