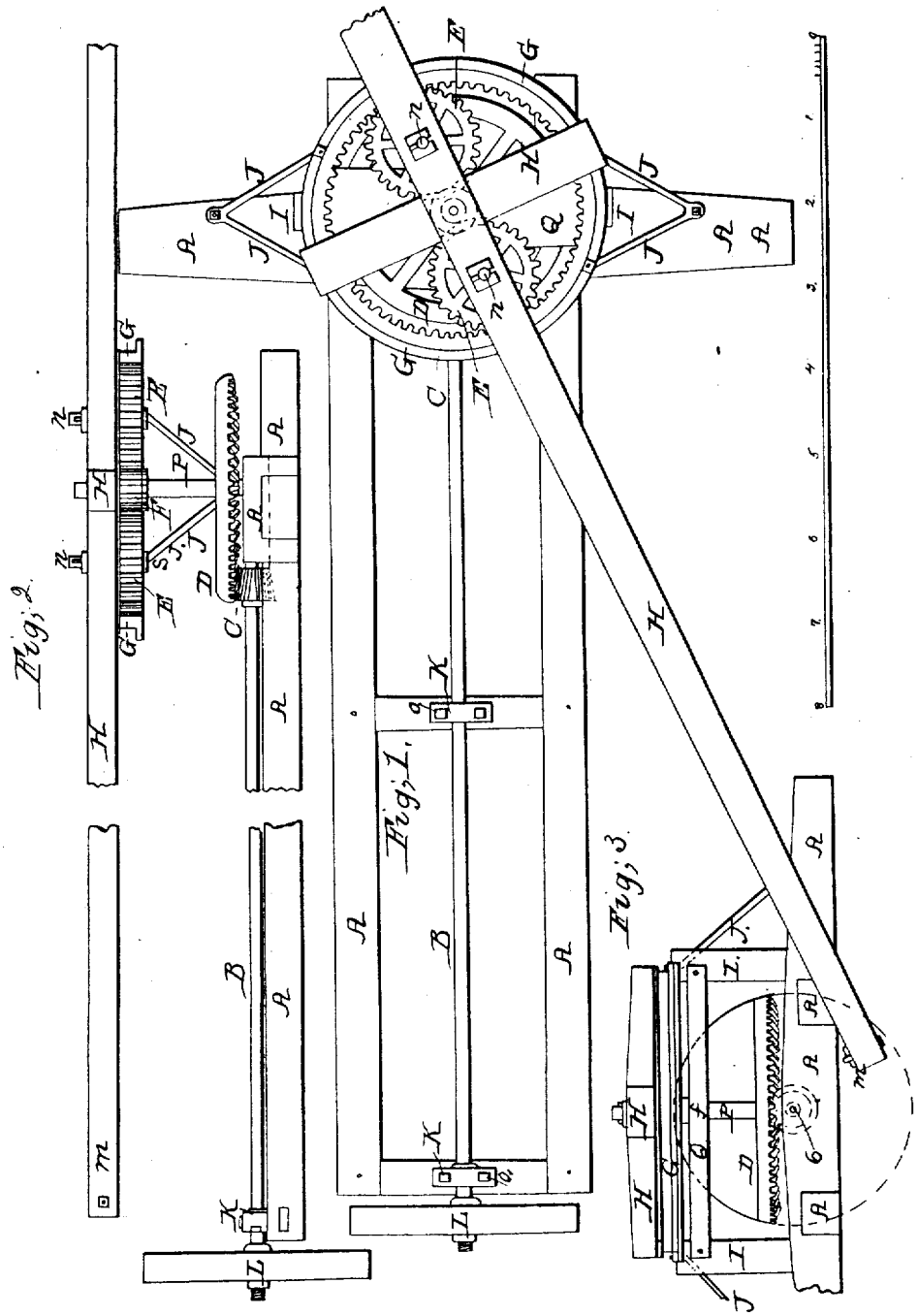
8228X

J. Eastman,

Horse Power.

Patented May 31, 1834.



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

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May 31. 1834

103.

John Martineau &
Joel Eastman. New Hampshire

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 John Martineau Administrator of the late Joel Eastman of the said Eastmans improvement in the arrangement and combination of wheels and other parts of a Machine for the application of the power of Horses and other Animals

To whom soever these presents shall come

Be it known that I John Martineau of the Town of Aldridge County of Onandoga and State of New York Administrator of the late Joel Eastman of New Hampshire & acting in trust for his heirs & legal Representatives in all matters relating to the inventions and improvements of the said Joel Eastman hereby declare and make known the facts that the late Joel Eastman of New Hampshire did shortly before his decease invent an improvement in the arrangement and combination of wheels and other parts of a machine for the application of the power of Horses or other Animals for the accomplishment of any objects for which such power is conveniently applicable. commonly called a Horse power a model of which made by his (Joel Eastmans) own hands is herewith presented showing the combination with accompanying drawings description and references wherein his improvement consists. Some of the objects or purposes to which this improved Horse Power is applicable are to drive Threshing Machines, Cotton gins and Horse mills. It may be applied to many other purposes.

The following is a full description of the arrangement and combination of wheels, and other parts embraced in the combination of the aforesaid Horse Power Machine which I will describe, enabling myself by reference to the accompanying drawings of said machine as well as may be to make myself understood.

Fig 1 is a ground or horizontal view of the machine. Fig 2. is

Drawing

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a side view elevation and Fig 3. an end view elevation. It may here be remarked, that in all the figures the same letters applyed to correspond in parts of the Machine. AAAA Fig 1. shows the foundation timbers longitudinally and the cross pieces under the wheels. The longitudinal pieces are connected in the centre and at the other end by cross pieces T.T.-T3. represents a horizontal shaft with a bevil pinion on one end C. and on the other end is the drum or pulley L to receive the band that is to communicate motion to the threshing machine Cotton Gin or other apparatus. K.K. are Boxes in which the shaft runs and by which it is kept in its proper place. These Boxes are secured by screw bolts. O, O— D represents the bevil wheel geared into pinion C the bevil wheel is hung on upright shaft or Journal P which also receives pinion F shown in elevation fig 2. which gears into two spur wheels E E. which last gear into a stationary wheel g.g. which is supported by two upright timbers I I. and iron braces J.J.J.J. The spur wheels E E are supported by journals. n.n. which are provided with a projecting flange or collar on the lower end to keep the wheels from dropping off. The journals pass up through the level H crossed by a Mortising piece H. they are provided with a shoulder that comes in contact with the lower side of the level H and are firmly secured in their places by Keys driven thro' their upper ends countersected by a metallic plate let into the wooden lever or drawing bar. which also is provided with a ring bolt and clevis to attach the Horse to. a, a is a horizontal piece of timber connected with H and provided with a hole in the centre through which the upright shaft or Journal P passes and by which it is steadied and kept in its position perfectly. being assisted in an equal degree by the wheels E E pinions F. and the whole of them being within the stationary wheel G G are kept in their relative positions. S.S. shows the collars or flanges on the journals N. N. that keep the wheels E E from dropping off — It is not deemed necessary to go into working the dimensions of the several pieces above described as a mat-

is appended to the drawing which will readily explain. nor is it proper to limit the several parts to the dimensions here laid down they may be varied and should be adapted to the amount of power in any particular case intended to be applied

The plan of the wood work may be varied perhaps with advantage by substituting for the longitudinal pieces A A and cross pieces F F a single piece forming with large cross pieces A A a simple cross. The wheels E E may also be supported in their proper place by a cast iron bar. with pins or journals cast on solids or with a hole and the journals made of wrought iron or steel and inserted and properly secured in their places by keys or screws and nuts. nor is it necessary to limit the spur wheels E E to two. Any additional one may be added perhaps with advantage. making three spur wheels geared into the pinion F and stationary wheel D D. These three spur wheels may be hung on three arms connected at the centre and by a circular rim corresponding with the solid part of the stationary wheel D D. To each of the arms a journal may be cast on solid. or be provided with a hole and have a wrought iron or steel journal inserted and secured as before observed or the whole may be made of wrought iron. Other details may also be varied to suit the taste of different persons.

If the iron rim as last described be used it may be provided with cheeks or brackets projecting upwards forming a birth for the reception of the drawing lever which would thus have room to spring across the whole diameter of the stationary wheel. constituting it a spring lever When instead of an entire wooden drawing lever. with a cross stiffening piece supplied with iron journals as before described. A cast iron bar is used with solid journals cast on. or wrought or steel journals inserted.

The drawing lever may be attached thereto by screw bolts and when three spur wheels are geared into the stationary wheel and pinion supported by a bridge arm connected with the centre and periphery. a hole may be formed in the centre for the reception

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the journal of the upright shaft P the journals of all the wheels & pinion in that case being relatively presented. they cannot easily

In regard to the dimensions of the wheels and the motion of the drum or pulley it may be observed that a very suitable size for the stationary Wheel G G. for all ordinary purposes is from 34 to 40 inches diameter of pitch circle and the pinions from one sixth to one eighth of the same. The bevil wheel shaft be a little smaller say about six inches and its pinion bearing about the same proportion to it. that pinion E bears to stationary wheel G G. The drum or pulley D may be about 3 feet in diameter and revolve from fifty to sixty times for one revolution of the lever. There is a trifling variation in the drawing of the frame work from the model in the latter the pulley or drum is placed within the frame and the pinion represented by I I in the model are solid being joined solid with the longitudinal pinion A A. These differences are merely noticed but are not deemed of any special importance

What I claim as the invention of Joel Eastman, or intend for his Heirs and Legal representatives is the combination of wheels consisting of stationary wheel G G and the wheels E E including a third wheel if necessary. and pinion F all geared together. The improvement effected by which arrangement is the advantage of bringing cogs into gear and action on opposite sides of the journal of the pinions by means of which the stress is taken off the journals. and the same cogs being brought into action at the same instant the shaft is steadied and distortion thereby diminishing the liability of breaking the cogs in fact the strength by this arrangement when the cogs are of the same size is doubled or trebled if three wheels be used another advantage resulting from this arrangement is compactness and portability

There are all other advantages that are derived from this application of the foregoing described combination however the same may be modified and pinions & drum or pulley substituted for those of the stationary wheel and legal representatives of this aforesaid Joel Eastman

Witness Francis Phelps
Wm B. Hutchinson

Joel Eastman
by Hutchinson & Co Attorneys

6 Dec 1866.

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