7609X

S. S. Allen,

Horse Power.

Patented June 29, 1833.



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

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(Assignment)

June 29, 1833

125.

Samuel S. Allen's Horse Power

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 Samuel S. Allen himself of the improvement or the machine called a Horse Power

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To all whom it may concern

Be it known that Samuel S. Allen of Saratoga Springs in the County of Saratoga and State of New York have invented an improvement in the mode of constructing the machine usually called a horse power and that the following is a full and exact description thereof. The Horse power which I employ is intended to be portable. It is constructed that it may be readily transported from one place to another, and which receives its motion from a lever or sweep, moved round by the walking of the horse in a circle although I do not intend to confine myself to any precise size in any of the various parts. Still for the sake of description, give the proportions which I have found to answer well in practice. Make a frame or box about six feet long and eighteen inches in height. The end pieces of sawed plank three feet long at their lower edges, and two feet 8 inches at their upper. The sides three feet slope in about two inches. The sides may be of two inch plank and must be securely fastened to the ends. This box is to contain the drawing wheels and pinions, in their vertical shafts, running in suitable boxes, to receive their boxes and sustain the whole, pieces of timber eighteen along the upper and lower sides of the box. The upper pieces may be 3 by 8 inches flush with the top and mortised and keyed through the ends. The side edges must reach just to the centre of the box, as the upper bearings or braces of the shafts are to be fastened thereto. The lower timbers are three by nine inches and twelve feet long, and is to extend six feet without the box being secured to one end of it like the upper timbers and notched in, and secured to the other end. The shafts of the first drawing wheel may be about 4 inches square and extend above the top timber about 6 inches, where it is a little tapered to receive the bevel or sweep, to which the horse is to be geared. The shaft is made of cast iron and has a flat rack or flush mortise, to which the arms of the wheel, to be presently described, are secured, &c.

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The wheel is about thirty in diameter (and stands near to the lower end of the shaft. The second drawing wheel is about 26 inches in diameter, it stands above the first drawing wheel, and has on its shaft a pinion of about one fourth of the size of the first wheel, which meshes into it. The third shaft has a pinion of about one fifth of the size of the second wheel, which meshes into it. On the lower end of this third shaft there is a bevil or crown wheel, which may be about eighteen inches in diameter, its teeth perfect downward, and meshs into a pinion about one fifth of its size. The pinion is fixed upon an iron shaft, which runs horizontally, near to the ground, and extends along the lower timber, six feet without the box, or frame, (and carries on its extreme end a wheel of eighteen inches in diameter, from which a band extends to a threshing machine, snuff grist mill, or any other Machinery to which such a horse power is adapted. To receive this horizontal shaft, the cage of the sill, a projecting piece of timber is rebated, or hollowed out on its under side, by which means it is protected from injury by the feet of the horse, or from any other cause. Instead of making the lower or sill timber, in one piece, it may be made to unship near to the box, (and be removed along with the horizontal shaft), when required. The wheels before named, consist of cast iron rims with arms made of wood. These arms are formed of two pieces of hard stuff, crossed, halved together in the middle, the timber should be about 3 by 2 inches. The shaft passes through a mortise in the centre of the arms; (and they are secured by bolts to the flanches, or dish, when the shafts, the ends of the arms may then be turned off to fit the inner part of the rim of the wheel. The rims are strengthened by a flanch which projects inwards serving as a bearing for the arms (and also to bolt them to, a projection is cast on each side of the arms, within the rims to confine them in width, and secure them from splitting; when the horse power is to be used, it is placed upon the ground, in which it will be necessary to make a small excavation to receive the lower part of the wheel, four stakes are to be driven into the ground at the four corners of the box, (and two chains tightened on these by means of levers, passing over the box, near each end, will render it perfectly secure. What I claim as new and my invention, is the manner of making the wheel, as before mentioned, and

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with wooden arms 6m cast iron rims, by which means they are afforded
elasticity, are lighter and may be more easily repaired in the case of the
breaking of a cog, than when the whole is made of cast iron, I also claim
the manner of securing the horizontal shaft from injury, (and) so that the
horse may pass over it with little or no obstruction.

Samuel S. Allen

Witnesses
Thos. P. Jones
Jas Andrews

Patented June 29th 1833.

1020 acres

(Drawing Red folio)