No Printed Specification Available

S. Whitman.

Making Plaster.

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Patented Mar. 11, 1835.

Fig. 1.

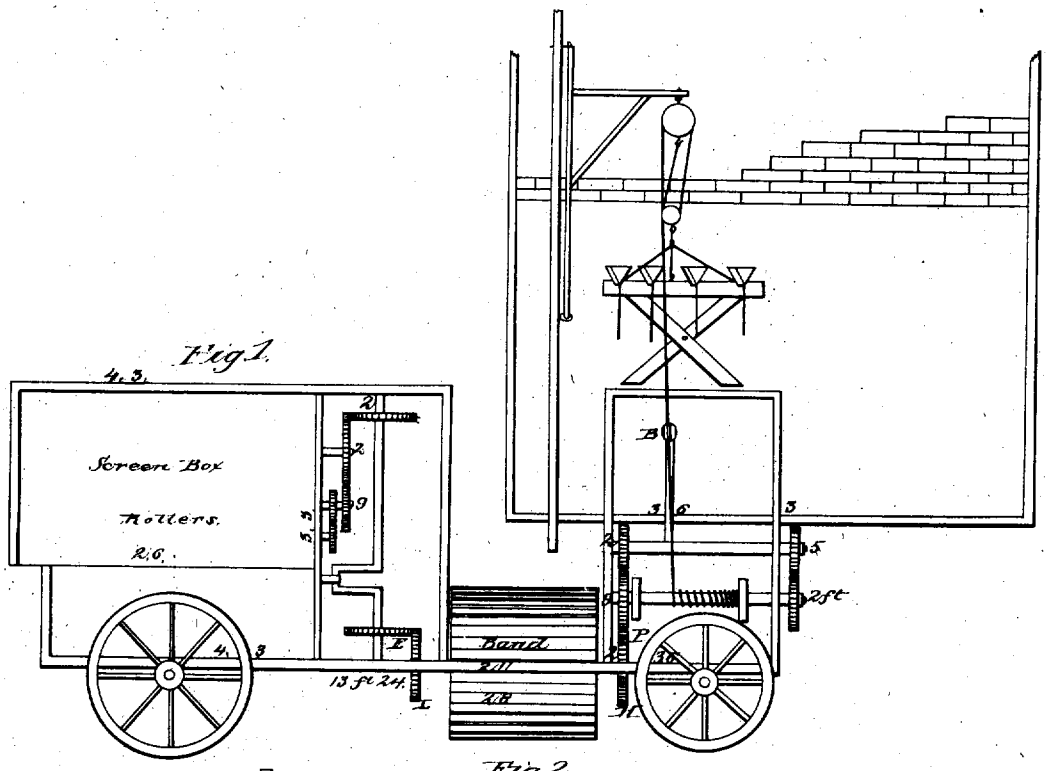


Fig. 2.

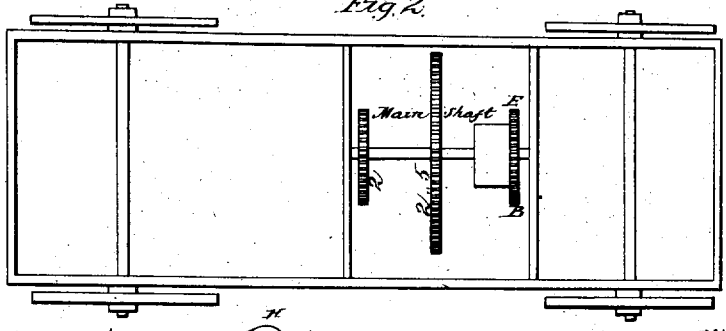


Fig. 3.

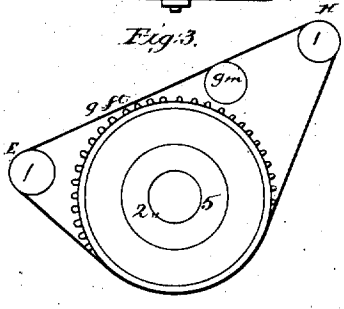


Fig. 4.

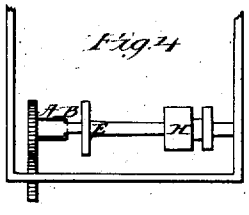
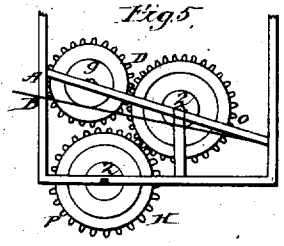


Fig. 5.



8688X Mar 11. 1895 427.

Samuel Whitman

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 Whitman himself of his improvement in a Machine for the purpose of Making Mortar and tending Masons.

To all persons to whom these presents shall come. Samuel Whitman of Danville in the County of Vermillion and State of Illinois sends greeting. Be it known that the said Samuel Whitman have invented, and made a new and useful Machine for the purpose of making Mortar and tending Masons called the Mortar Maker and Mason tender not known or used before. There can be as much labor performed by 3 men with this Machine as 12 men can do without it in the same length of time in the ordinary way. The Machine lifts the lime & washes it if necessary, mixes and prepares the mortar and carries the brick and Mortar to the summit of the building to any height required. The foundation of the Machine is somewhat similar to that of the frame of a wagon with wheels to carry it about at pleasure. It is about 14 feet in length and 6 feet in breadth. The boxes wherein the lime and sand are sifted and mortar prepared are placed upon that part of the foundation which rests upon the hind wheels which Scale the hind part of the machine. The machine goes by horse or by power. The horse walkes upon an inclined band which is lightened and supported by rollers in number which roll with the band nevertheless keeping their position and turning upon their own axis. The band also goes round the main cog wheel on the main shaft and turns it which puts the whole in motion. Plate 1st fig 1st represents a brick building and the machine standing by it. The plans of the mortar box, screen box, rollers, upright shaft, horse path or band, winding shaft, Crane &c are severally designated in writing. B. D. & E. H. represent the cog wheels on the ends of

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the main shaft described in plate 1 fig 1st (2d). the middle cog wheel being hid by the band. Plate 1 fig 2d represents the foundation of the machine and the main shaft. The middle wheel is what I call the main cog wheel around which the band goes. This wheel is about 4 feet in diameter. The right hand cog wheel E.B. is that which turns the winding shaft represented in plate 1. fig 4. also in plate 1. fig 1. which winds the rope that carries up the brick and mortar. The cog wheel on the other end of the main shaft is that which moves the upright shaft represented in plate 1. fig 1. This main cog wheel is under the rollers which the band rolls over and the band is kept in a triangular form the hypothenuse or longest side of which the horse walks upon. The band is composed of iron links fitted to mash into the cogs on the main cog wheel and upon these links are fastened slates of wood from 4 to 7 inches wide one upon each link. This forms the path upon which the horse walks and occupies the middle part of the machine as you can see in Plate 1 fig. 1st. The band is from 2 ft to 3 feet wide. The manner in which the band goes over the rollers and around the main cog wheel is represented in plate 1 fig 3d the ends of the rollers only being seen B. H. is the top part for the horse to go upon. This is a side view of the band. The band is also composed of 2 leather bands the one fastened to one end of the slates and the other to the other end of the slates one on each side of the iron chain and parallel with it and passing over the rollers in the same manner. This is done the better to steady support and strengthen the band. Plate 1 fig 4. represents the winding shaft which may in other words be called a spool which being slid off from a square axle from A to B. will remain still whilst the other parts of the machinery are in motion. B. H. represents the spool. A lever may be used in moving this spool. Plate 1 fig 5. represents the manner in which the winding shaft is ungeared from the cog wheel P. H. which causes it to carry up the hods and geared into another cog wheel a little above it which turns it the contrary way

way and lowers down the hods. D. O. represents the cog wheel which is fixed stationary and is continually turned by the cog wheel P. H. that is on the fore end of the main shaft into which the winding shaft is geared to wind up the hods. 2 levers are used for this one at each end of the winding shaft. B A D represents the cog wheel on the winding shaft which being lifted up from B to A by the lever A. O. and geared into the cog wheel D. O. will be turned the other way and the hods will be lowered. and the lever A. O. lowered from A. to B. gears it again into the cog wheel P. H. The motion of the machine is regulated by means of a drum on the main shaft. Plate 1. fig. 2.[a] which by its rubbing against a hoop will impede its progress providing it shall go too fast. There is a large pole set in the ground upon which is hanged a crane to which the pullies are fastened by which means the mortar and brick are carried to any height required. One man will be stationed upon the building to receive the hods and place the contents where they are needed. The rope will also pass through a match block or pulley near the ground which is fastened to a short post. Plate 1 fig 1 represents the pullies hods and hod frame and match block. Letter B. represents the match block. The upright shaft represented in plate 1 fig. 1. stands immediately between the band and the mortar and schreen boxes. On the lower end of this upright shaft is a cog wheel about 1 foot and ½ in diameter which is carried by the cog wheel on the hind end of the main shaft, mashing into it & turning this upright shaft. The crank on this shaft moves the rake in the mortar box more particularly represented in plate 2 fig 6 where the mortar box rake and crank and the manner in which the rake is pulled in and out as the crank revolves are to be seen. The cog wheels on the top of this upright shaft are those which turn the schreen and likewise the shafts on each side of the upright shaft which revolve in the lime washers. The mortar box is the under one and the rake rolls in it moves by rolling friction. The mortar

mortar boy is about 1 foot and ½ in depth 5 feet long and about 4½ feet wide. The schreen boy is about 3 feet deep and directly over the mortar boy. Plate 2 fig 7 represents the schreen boy and schreen and rollers under the schreen &c. The schreen or sieve is in form a cylinder revolves on its own axis. the lime and sand are put inside of it and as it sifts and fall into the mortar boy. The breast cog wheel near the top of the upright shaft turns D.B. the cog wheel on the schreen and this cog wheel turns B.H. one of the rollers and this roller has another cog wheel upon it that turns the other roller by the side of it. The two rollers are placed directly under the schreen they mash together and the lime falls in between them. These mash and make fine all the lumps that may have escaped the schreen. 2 inclined planes one on each side of the rollers nearly meet exactly between the rollers and draw the lime and sand into a very small compass.

They are nailed to 2 concaves one on each side of the rollers. The schreen boy is slid off leaving the mortar boy open by means of an iron crank and 2 small cog wheels one on each side of the machine. The mortar boy can then be tilted up and the contents emptied into another boy upon the ground. This boy has wheels to it to move it about as is most convenient. The wheels and axles may be taken off from this boy and this boy placed inside of the mortar boy for the convenience of carrying. When it is necessary to wash the lime there are 2 troughs that are square one on one side of the upright shaft and the other on the other side cross ways of the machine. The troughs are 1 foot and ½ in depth. In each boy is a shaft with rakes up on it 3 in number to stir up the lime water and a tunnel also to lead it into the mortar boy. These shafts are turned by the cog wheel on the top of the upright shaft. Plate 2 fig. 8 represents the lime washers and the manner in which the cog wheel on the upright shaft mashes into the cog wheels on the shafts that revolve in the lime washers. It is expected that the weight of the horse

horse or op upon the band will be of sufficient force to move all the machinery and raise the required quantity of bricks and mortar. But if the horse or op should be too light or it be required to raise a more than ordinary weight the power may be increased by drawing. The horse or op can be made to draw by being geared to the posts of the machine immediately behind him. The cutter work upon the lower rake upon the shafts that revolves in the lime washers is longer than the others and revolves in a channel through which the lime water passes. The foundation of the lower gudgeon inside of this channel is supported by cross bars underneath it. The cross bar that connects the two levers together that are on each end of the winding shaft may be raised either by a windlass or lever and the winding shaft geared into the cog wheel that will turn it the contrary way. What I claim as my own invention and not previously known in the above described machine is The manner of putting together the several parts as above described on the principle therein laid down or in other words the combination and arrangement of the parts to that intent. In testimony that the above is a full and exact description of the mode of construction and operation of my machine as invented or discovered by me I have hereunto set my hand this twenty seventh day of February eighteen hundred and thirty five

Witnesses
C. H. W. Thurston
Henry Stone

Samuel Whitman

(Drawing)

6 d.
H. C.

[illegible]