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Sheet 1. 2 Sheets.

S. Marsh.
Cloth Napping Mach.

Patented Jan. 11, 1836.

Fig. 2

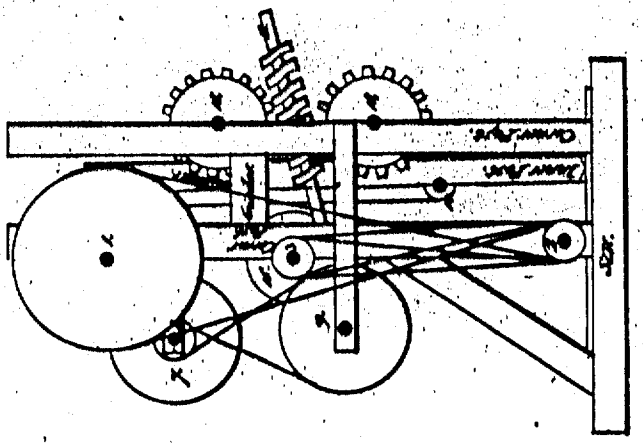
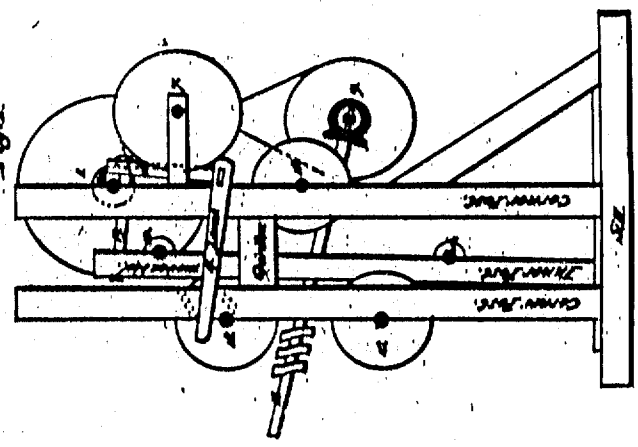


Fig. 1

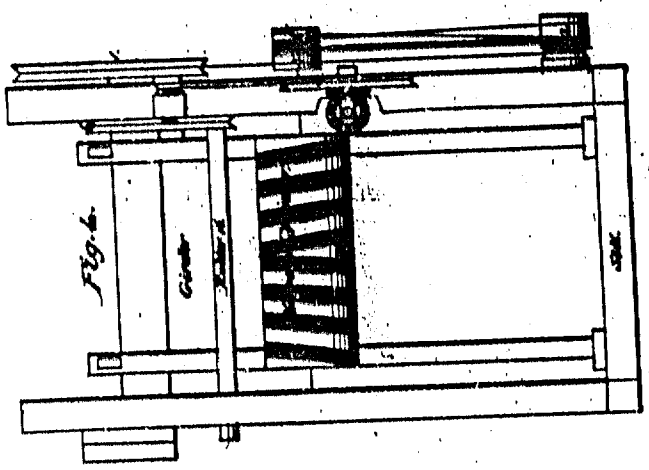


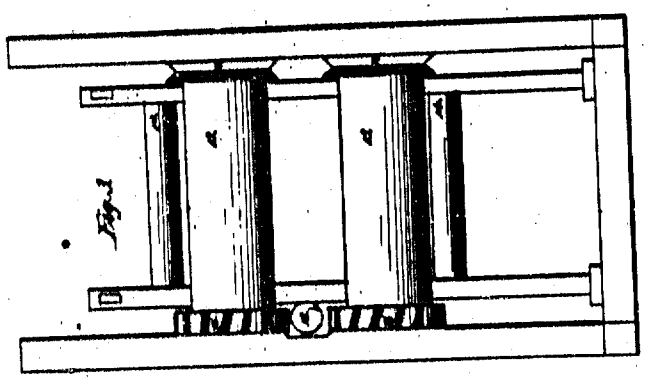
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Sheet 2 - 2 Sheets

S. Marsh.
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E. PETERS, PHOTO-LITHOGRAPHER, WASHINGTON, D. C.

9314X Jan 11. 1836 1.

Stephen Marsh of Jerico Vermont

Letters Patent (Patented January 11. 1836.)

The Schedule referred to in these Letters Patent and making part of the same containing a description in the words of the said Stephen Marsh himself of his improvement in the complete Mashine for Mashing cloth.

To all persons to whome these presents shall come Greeting. Be it known that I Stephen Marsh of Jerico in the County of Chittenden and State of Vermont have invented constructed made and applied to use a new and useful improvement in the mode and manner of Mashing and dressing cloth by one continues operation with the mashing and dressing is completed which is known and denominated the complete Mashine: Which said improvement is described and specified in the words and figures following, to wit: Figure one and two represent the two ends with all the frame work and machinery seen in those directions. And figures three and four represent the two sides of the frame and machinery as seen on those directions. The drawing is about one twelfth part of the common size which is found to be suitable in practice, but may be varied in size to suit the operator. Figure 3. exhibits the cloth cylinders 13. The pullies 10. on one end are to drive friction bands to produce suitable tension on the cloth. The mashine at the other end of the cloth cylinders are to be governed by special cylinders or screws a section of which is seen at 12. & 11. are the adjusting cylinders and are connected by their pivots with the inner posts — Figure 4. Exhibits the mashing cylinder 15. the Roller 16. The Pulley called the driving Pulley No 1. on the other end of the same shaft this is connected by a band with and carries pulley No 2. This Pulley is a long one and carries the bands running from thence to pullies 3. & 4. 3.

The pulley 3. is fast on the shaft of the napping cylinder 15. and the pulleys 4 & 5 are loose. When the napping cylinder is required to go one way the open band is placed on pulley 3. and when it is required to go the other way the open band is slipped on to the loose pulley, and the cross band slipped on to pulley 3. On the same shaft of pulley of 1. is a small pulley 6. pulley next above pulley 7. to which it is connected by a band and on the same shaft with pulley 7. is a small pulley 8. which is connected by a band with pulley 9. and on the inside of pulley 9 and concentric therewith is a bevel wheel attached to the said pulley. and turning therewith on an axis of rotation. The other bevel wheel connected with the above is on the shaft of the screw or spiral cylinder 12 in the end of which is a small gudgeon or pivot which passes through the said axis of rotation and thereby keeps both wheels in due proximity

Figure 1 exhibits an end view of the frame to which the machinery is attached and a side view of pullies No 1. 7. 9 & 20. and an end view of the two cloth cylinders No 13. Also the adjusting cylinders 11. attached by their pivots to the inner posts, and the napping cylinder 15. also the lever 17 which is attached to the end of the Roller 16. There is inserted into the roller 2 uprights No 18 connected by swivels joints with the inner posts by long levers or curved pieces. The cloth being stretched over the adjusting cylinders into show the cloth line, as marked from 14 to 14.

Then by raising the lever 17 will bring the cloth in contact with the napping cylinder 15. and by lowering the said lever will make the cloth recede from the said cylinder. For the purpose of holding the lever in its proper place a number of holes are bored in the post, into which an adjusting pin may be put and moved as occasion may require. On an adjusting end or shaft answer the same purpose. On pulley 9 is seen the bevel gear above described attached to the screw or spiral cylinder as aforesaid. Figure 2 exhibits the opposite end of the frame from figure 1. and also a side view of pullies No 1. 2. 3. 7. 8. and 9. and also a view of the spur wheels 10. on ends of the cloth cylinders, and the screw or spiral cylinder 12 passing below them and to be geared into either as occasion may require. Also an e

rear of the napping cylinder 16. and one of the adjusting cylinders 14. The dark parts of the napping cylinder are those on which the cards, or other napping material is fixed. The edges of the cards should be let into the cylinder nearly one eighth of an inch, so as to leave the card convex in the middle. The teeth of the card should radiate nearly in right lines from the centre of the cylinder or have but a small inclination or slope. To put this machine in operation first wind the cloth on the lower cloth cylinder which may be done by a cord temporarily attached to the end of the gudgeons. Then bring the other end of the cloth around the adjusting cylinder and attach it to the upper cloth cylinder. Then gear the screw into the upper spur wheel, until the cloth has run on that cylinder, and so alternately until the napping is finished.

The back of the cards, or that way which will take the least hold of the cloth should be first used until the cloth is well begun, and then by changing from the open to the cross card, over the napping cylinder the other way. This will keep the teeth of the cards always in order, and the cloth will not be injured. The said Stephen Marsh is aware that pulley bands, spur wheels, bevel wheels, plain napping, and spiral cylinders have been in use in various combinations, and hereby fully disclaims all right or title to the inventions of any part of the complete napper except what he truly believes is of his own invention, either in construction combination or arrangement.

The said Stephen Marsh is not however aware that such a combination and arrangement of the different parts has ever before been produced nor is he aware that the teeth of the cards have been set at any other than the usual angle which from examinations appears to be about 45°. nor is he aware that the pivot of one bevel or other wheel, has in any case been made to pass through the axis of rotation of its accompanying or connecting wheel

He the said Stephen Marsh therefore claims as his invention the direction of the card teeth, radiating in direct lines from the centre or axis of the cylinder or having a less inclination than those which are now or heretofore have been in use. Also the passing of the pivot of one wheel through the axis of rotation of the other and the general arrangement and combination of the machinery as herein before set forth. In testimony that the foregoing is a

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hine Specification of my said improvement and Invention as herein before described. & hereunto set my hand this 12th day of November AD 1835

Witnesses
E. R. Johnson
John Johnson

Stephen Marsh

(1038 words)

(Patented January 11. 1836.)
(Rec'd & Recorded anew September 12. 1838)

(Drawing)