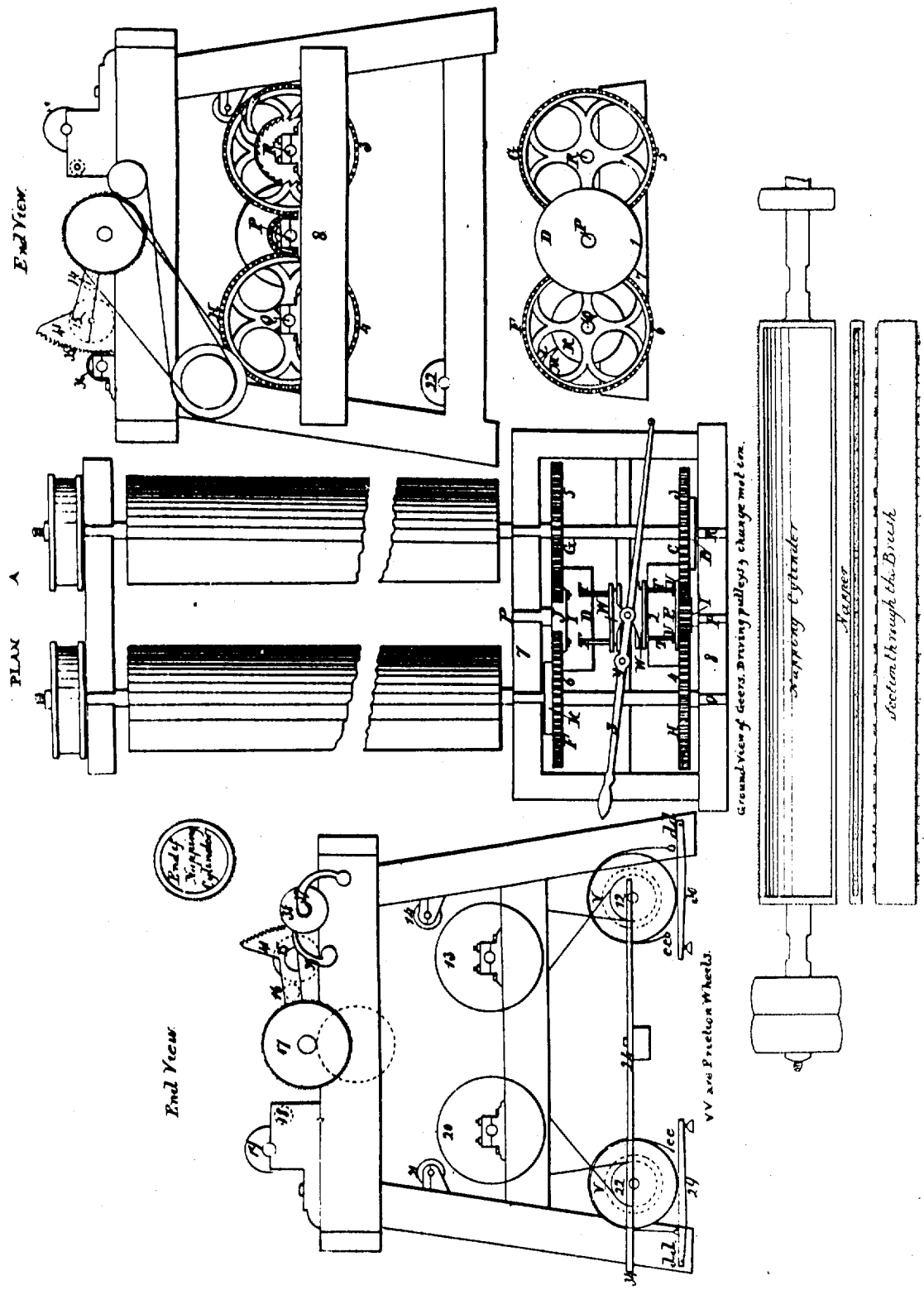
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Sheet 1 - 3 Sheets.

J. Jewett.

Cloth Stretching and Napping Mach.

Patented Dec. 30, 1830.



N. PETERS, PHOTO-LITHOGRAPHER, WASHINGTON, D. C.

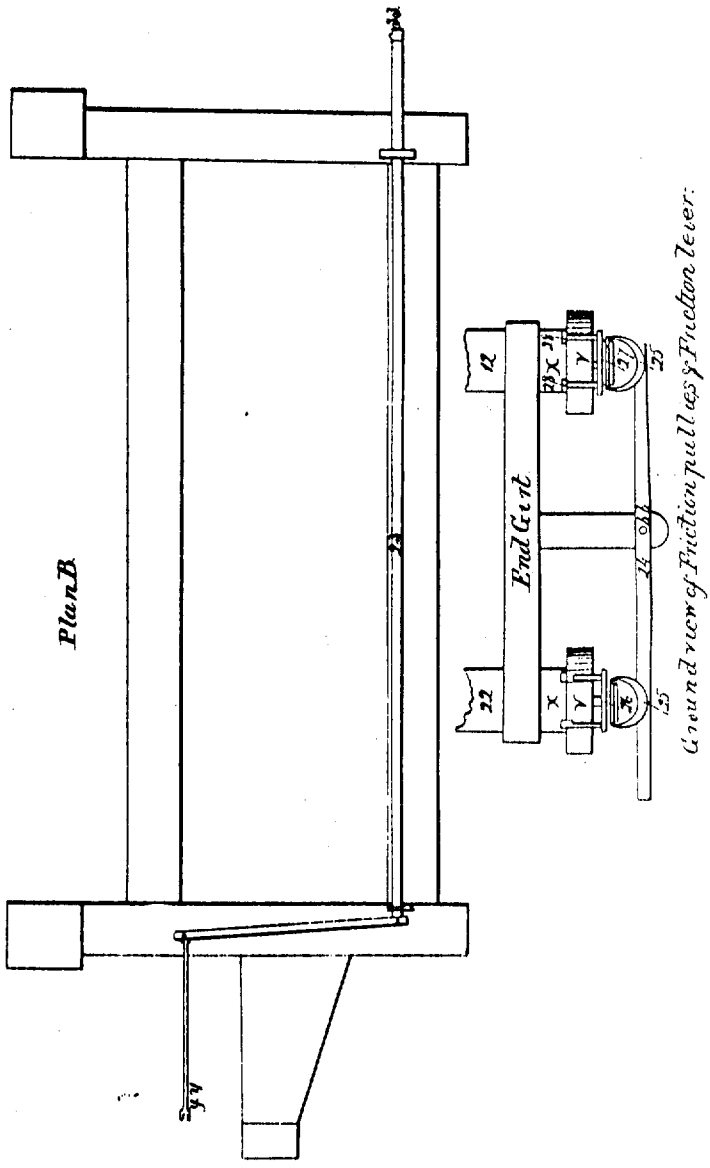
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Sheet 2-3 Sheets.

J. Jewett.

Cloth Stretching and Napping Mach.

Patented Dec. 30, 1830.



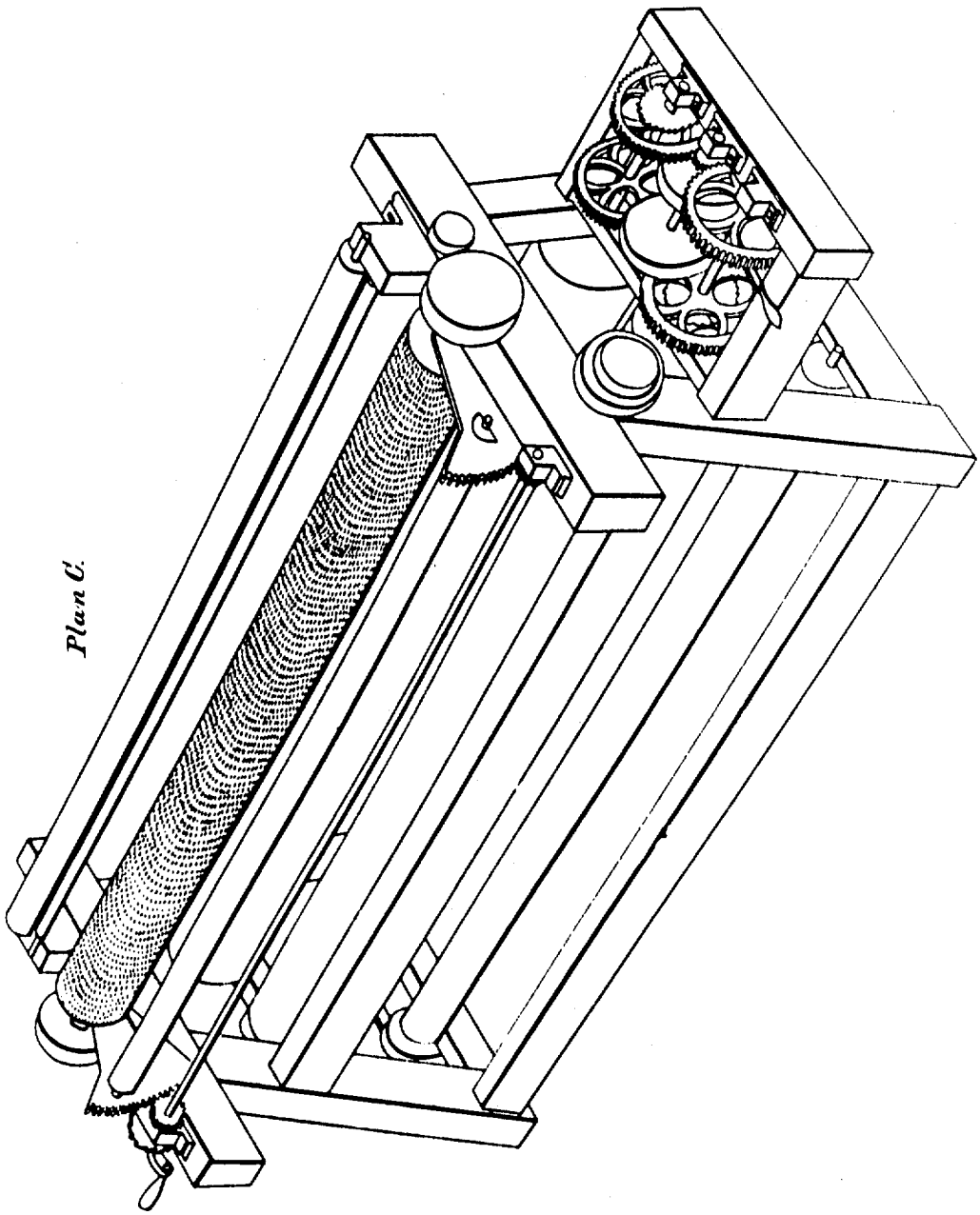
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Sheet 3 - 3 Sheets.

J. Jewett.

Cloth Stretching and Napping Mach.

Patented Dec. 30, 1830.



Plan C.

Dec. 30 1830

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John Jewett. Dudley Mass.

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Letters Patent

To all to whom these presents shall come. I John Jewett of Dudley in the County of Worcester and State of Massachusetts and Yeoman — Be it known that I the said Jewett have invented certain new and useful improvements in the mode of causing cloth to pass and be stretched whilst passing over a receiving cylinder provided with pointed teeth for taking in raising the pile or nap upon cloth.

To all to whom these presents shall come. I John Jewett of Dudley in the County of Worcester and State of Massachusetts and Yeoman — Be it known that I the said Jewett have invented certain new and useful improvements in the mode of causing cloth to pass and be stretched whilst passing over a receiving cylinder provided with points or teeth for taking in raising the pile or nap upon cloth. which invention and the improvements thereof and the manner in which I have combined the specification thereof and the mode of using the same are explained and described as follows that is to say. The cloth is to be wound upon a roller from the beam and from thence round to pass over and under rollers and over the receiving cylinder provided for raising it and over and under rollers to another receiving cloth beam on which it is to be wound up as it comes off from the first beam after having passed round and under the rollers and cylinders aforesaid and then by a change of direction after it has been wound from the first beam it may be made to pass back over and under the rollers and cylinder aforesaid and again wound upon the first beam as it comes off from the beam on which it was last wound up. The direction of the cloth beams and rollers being given regulated and changed in the manner herein after described and explained which description and explanation may be better understood by reference to the plan hereto annexed.

The cloth being wound on the cloth beam numbered 1 as be in plan A.

Recorded in the Patent Book

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is made to pass over the carrying roller numbered fourteen and thence under the feeding roller numbered fifteen and thence over the stretching roller numbered sixteen and thence under the metallic roller numbered seventeen and thence over the cylinder for leasing & numbered seventeen and thence under another metallic roller numbered eighteen and thence over stretching roller numbered nineteen and thence under feeding roller numbered twenty and thence over carrying roller numbered twenty one and thence on to the cloth beam numbered twenty two upon which it is wound up when the machine is in motion as already described from the cloth beam numbered twelve forward and from which cloth beam numbered twenty two it may by a change of motion hereinafter described be made to pass back and be wound up upon the cloth beam numbered twelve. The cloth beams numbered twelve and twenty two in plan A and have pulleys of the same diameter of the beams on which they are fastened & the same shafts by which the beams are moved, which pulleys are represented by XX. In the plan B these pulleys are connected with pulleys upon their respective feeding rollers numbered thirteen and twenty one in plan A. by means of cross belts running over the pulleys and also over pulleys at the ends of the respective feeding rollers and fixed to their shafts which pulleys are of the same diameter as the feeding rollers respectively by which means motion is communicated from the feeding Rollers to the cloth beams. Rollers numbered fourteen and twenty one in the plan A are called receiving rollers called carrying rollers and are moved by the friction of the cloth passing over them. Rollers numbered thirteen and twenty in plan A are rollers moved by gearing called feeding rollers which draw the cloth and shorten it as it passes over them. Roller numbered fifteen in the same plan is a stretching roller moved only by the cloth capable of being elevated or depressed to increase or diminish the cloth and graduated by pressure upon the pivots or bearings in the cylinder in which it is placed by springs &c. Roller numbered seventeen is an isolated roller and moves only by the friction

of the cloth passing over it called a stretching roller. Motion is communicated to the said eight leaved or radius catched rolling by means of pinions or any other metal sufficiently stiff and strong moved only by the friction of the cloth and intended to keep the cloth smooth and well clear of creases by the points or teazles on the cylinders of the said feeding in. Steam has been tried in the Cylinders of the said stretching teazles for winding the pieces up with. E F C & G in plain Arrangement wheels. H & G being each one tooth longer in circumference than F & C. The gear wheels H & G are fixed to their respective shafts immediately over each other and turn them. F & C are not always so fixed but move upon their respective shafts when working in one direction and brought so that the catches upon and connected with them are severally catch into the circular ratchets fixed to their respective shafts Q & R. K & B. are circular ratchets fixed to their respective shafts QR for the purpose of holding the gear wheels F & C. when working and brought so that their catches can catch into the teeth of the ratchets L & M on a spring and catch connected to the gear wheels F and the ratchet K into which the catch catches when the gear wheels turned in such direction and brought so that the catch comes into the teeth of the ratchet so as to hold the wheel. There is a similar spring and catch on the gear wheel C which catches into the ratchet B in like manner and for like purposes. S is a lever called a shifting lever used to put in and out of gear the gear wheels F & G alternately and also to put in and out of gear the friction wheels V & V on shafts of the cloth beams on the outside of the pulleys marked X & X on shafts of the cloth beams numbered seven and twenty two. T is the shaft or called pinion I & J. on the shaft is stationary and is bent in the middle so as to bring each end in the centre of the respective pinions I & J. I & J are pinion wheels with a plunge movement with catches U. U. U. U. and not confined but loose on the shaft and gear respectively into the respective

gear wheels E & G. H & C. D & E are pulleys between the shaft P. and moved contrary ways by belts. one being an open and the other a cross belt for the purpose of changing the motion of the cloth T.T.T.T are dogs which pass through the pulleys D & E respectively and are also with them and by means of the whole spring lever may be brought so as to be held fast by the catches O.O.O.O on the flanges of the pinions I & J. when it is required to change the motion of the cloth. allow a new motion being given to the pinions I & J respectively by being thus connected with the respective pulleys D & E which are always moving with the same velocity in a contrary direction to each other. Lever S. turns on a pivot Y and is connected with forks W & W. which are pivoted to the ends of the flanges in which are the dogs T.T.T.T so that the flanges may move while the forks remain stationary and so that the forks being adjusted to the ends of the flanges may by a motion of the lever move the dogs T.T.T.T so as to bring them in contact with or remove them from the catches O.O.O.O as may be required. Lever S. extends to the opposite side of the frame and the end marked O in plan A is connected with rod Y.Y. in plan B which is attached to a perpendicular lever Z which turns upon the pivot A.A. and is made to act by motion of the lever S and horizontal slide numbered twenty three running parallel with the opposite side of the frame and the slide numbered twenty three in the plan B is connected with a lever numbered twenty four which is opposite and parallel to lever S and turns on a pivot B.B in the centre between the clock beam numbered twenty two and twenty two. so that when lever S is moved it operates on lever numbered twenty four. twenty five and twenty six in plan B are fixed attached to lever numbered twenty four. and bayonet or slide numbered twenty six. and likewise moves in such manner as when lever 24 is moved in one direction it throws the bayonet or slide numbered twenty seven in contact with dogs 28 and carry the pinion pulley V to the right hand.

gear wheels E & G. H & C. D & E are pulleys loose on the shaft P. and moved contrary ways by belts. one being an open and the other a cross belt for the purpose of changing the motion of the cloth T.T.T.T are dogs which pass through the pulleys D & E respectively and are made with them and by means of the sliding lever may be brought so as to be held fast by the catches U.U.U.U on the flanges of the pinions I & J. when it is required to change the motion of the cloth rollers a new motion being given to the pinions I & J respectively by being thus connected with the respective pulleys D & E which have always moving with the same velocity in a contrary direction to each other. Lever S. turning on a pivot Y and is connected with forks W & W. which are adjusted to the necks of the flanges in which are the dogs T.T.T.T so that the flanges may or may not be while the forks remain stationary and so that the forks being adjusted to the necks of the flanges may by a motion of the lever move the dogs T.T.T.T so as to bring them in contact with or remove them from the catches U.U.U.U as may be required. Lever S. extends to the opposite side of the frame and the end marked O in plan A is connected with rod X.X. in plan B which is attached to a perpendicular lever Z which turns upon the pivot A.A and is made to act by motion of the lever S and horizontal slide numbered twenty three running parallel with the opposite side of the frame and the slide numbered twenty three in the plan B is connected with a lever numbered twenty four which is opposite and parallel to lever S and turns on a pivot B.B in the centre between the cloth beam numbered twenty two. so that when lever S is moved it operates on lever numbered twenty four. Twenty five and twenty six in plan B are forks attached to lever numbered twenty four. and bayonet or slide numbered twenty six. and twenty seven in such manner as when lever S is moved in one direction it throws the bayonet or slide numbered twenty seven in contact with dogs 28 and causes the friction pulley V to retain cloth.

line of communication of motion to lower numbered twenty four. The friction
pulley V is made to act on the cloth beam numbered twenty two. Motion is so
as to bring the edges T T in contact with the catches on pinion wheel J on the
opposite side and the opposite motion will take place both with respect to the
gear wheels ... rollers and cloth beams. When the machine is in motion and
the cloth is passing from the cloth beam numbered twelve under the feeding roller
numbered thirteen and so on in the manner before described to the cloth beam
numbered twenty two the friction pulley V is acting on the cloth beam numbered
twelve for the purpose of preventing the cloth from going off too fast and the
feeding roller numbered twenty moves with a velocity one twentieth greater
as than the feeding roller numbered thirteen by reason of the inequality in size
of the gear wheels F & G in order to draw the cloth tight and smooth over the
cylinder prepared for tearing it and the cloth beam numbered twenty two
is moved so as to wind up the cloth by motion communicated from a pulley
on the shaft of the feeding roller numbered twenty by means of a bell wheel
with slip so as to accommodate the velocity of the cloth beam to its varying
circumference by means of the winding of the cloth upon it. When the cloth
is passing from the cloth beam numbered twenty two under the feeding roll
er numbered twenty and so in the manner described to the cloth beam num
bered twelve the pulley V is acting on the cloth beam numbered twenty
two for the purpose of preventing the cloth from going off too fast and the
feeding roller numbered thirteen moves with a velocity one twentieth
greater than the feeding roller numbered twenty by reason of the inequality
in size of the gear wheels H & C in order to draw the cloth tight and smooth
as aforesaid and the cloth beam numbered twelve is moved so as to wind
up the cloth by motion communicated from a pulley on the shaft of the
feeding roller numbered thirteen by means of a bell wheel with slip
so as to accommodate the velocity of the cloth beam as aforesaid. It
is to be understood nevertheless that although I have in my plans and
the explanation hereof mentioned a cylinder prepared with pointed
teazles for teasing cloth yet I do not claim as a part of my inven
tion such cylinder either separately or in combination nor the carding
of cloth by means thereof and although I have mentioned the cloth

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rollers numbered fifteen and seventeen on my plan B which ought to be the stretching rollers used for stretching the cloth said thereon yet I do not claim the same either separately or in combination as a part of my invention nor the stretching of cloth said thereon and as to the rest of the machinery described more fully and claimed separately and only so much of it in combination as is adapted to give motion to and regulate and change the motion of the feeding rollers numbered thirteen and twenty in my plan A nor as to regulate and change alternately the motion of the cloth and draw it tight and smooth over the cylinder shaft and for raising the nap of the cloth — In Witness whereof I the said John Ewell Junr. have hereunto set my hand and seal this seventh day of December in the year of our Lord Eighteen Hundred and thirty

Witnesses
C. P. Wellman
Jno. Laird

John Ewell [seal]

Ex'd
C.S.H.

2888 n.s.

(Patented December 30. 1830)