J. Tillou.

Cloth Stretching Mach.

No. 1,902. Patented Dec. 14, 1840.

Fig: 1.

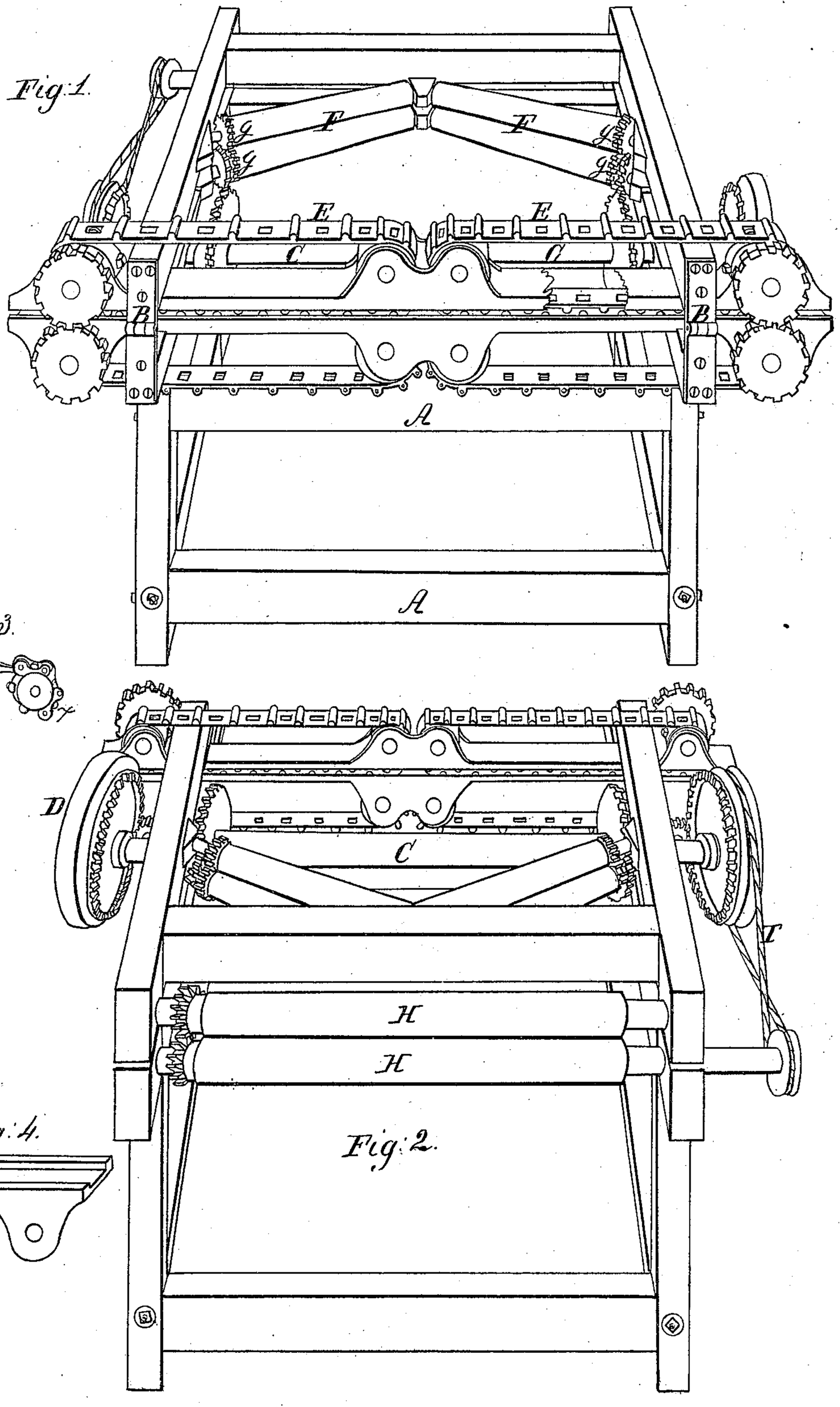

Fig: 3.

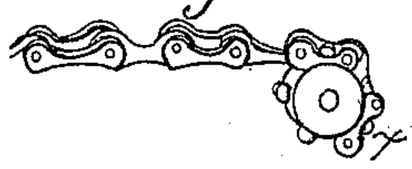

Fig: 4.

Fig: 2.

UNITED STATES PATENT OFFICE.

JOHN TILLOU, OF NEW HAVEN, CONNECTICUT.

MACHINE FOR OVERHAULING OR TAKING WRINKLES OUT OF CLOTH WHILE FULLING, &c.

Specification of Letters Patent No. 1,902, dated December 14, 1840.

To all whom it may concern:

Be it known that I, JOHN TILLOU, late of Waterbury, now of New Haven, in the county of New Haven and State of Connecticut, have invented a new and useful Machine for Overhauling Cloth While Fulling and for other Purposes.

The design, principle and object of my machine is to remove mill-wrinkles, and to make a smooth surface on cloth, by means of an eccentric force so applied as to stretch the cloth widthwise, while the rolling cylinders passing the cloth draw, and stretch it lengthwise. This principle is applicable to machinery for overhauling cloth while fulling, and for extending cloth while napping, or shearing, or in lieu of revolving temples for weaving, and thereby declare that the following is a full and exact description of the construction and operation of my machine on this principle for overhauling cloth while fulling, reference being had to the annexed drawings making a part of this specification.

Figure 1, is a perspective view from the front, of my machine for overhauling the most stubborn cloth while fulling. Fig. 2, a perspective view of the same from the rear. Fig. 3, a section of the band or chain for the rubber. Fig. 4, a section of the groove, in the frame of the rubber to guide and support the band or chain of the rubber.

This machine consists of several independent parts, which may be used separately or combined as occasion may require viz: The transverse rubbers, the oblique, and the direct stretchers, all connected by gearing with the main shaft and moving power.

A, A, represents the frame about 5 by 4 feet square supported on posts or legs 3 or 4 feet high more or less. The top or table of this frame is in two leaves folding together and connected by the hinges B, B, in front. Each leaf contains a similar and corresponding part, and when shut together the parts are connected and moved by corresponding gearing, from the main shaft, C, firmly fixed on the lower leaf and connected with the moving power by a crank or band as seen at D, in Fig. 2.

The transverse rubber consists of 2 pairs of endless belts or chains running over pulleys from near the center to the end of the frame each way, as seen Fig. 1, E, E. These belts or chains are about 3 inches wide and are armed with ribs crossing the belt at right angles about 3 inches apart, one belt from each pair running from the center to the right, and one from the center to the left in a groove in the lower leaf as seen in Fig. 4. The corresponding belt or chain of each pair working in the same way and manner in the upper leaf directly above it. When chains are used cogs may be necessary on pulleys and holes to match in the chains, Fig. 3.

The oblique stretchers consist of two or more sets of small eccentric rollers placed diagonally across the frame as seen Fig. 1, F, F, extending from the outer edges nearly to the center of the frame. Each set may consist of 2 or 3 rollers; if of 2 only, one is placed in the lower leaf, the other in the upper leaf directly over it with matching cogs as seen at G, G. If 3 rollers are used 2 should be placed below and one above.

The direct stretchers seen in the rear of the machine Fig. 2, H, H, are rolling cylinders in common form and use of equal size, one in each leaf of the frame, placed directly one above the other and working by matched cogs, driven by a band from the main shaft as seen Fig. 2 T.

The operation of this machine is as follows: The upper leaf being raised, the cloth is introduced between the rubbers and extended over the machinery of the lower leaf; the upper leaf is then let down and the machine put in motion, by which, while the cloth is drawn through from the front and discharged by the rolling cylinders in the rear, the transverse rubbers will remove the wrinkles and unroll the selvage, and the oblique stretchers will extend and smooth the cloth widthwise, while the rolling cylinders in the rear will stretch it lengthwise as it carries it off, thereby removing all wrinkles or lappings occasioned by milling, and restoring the cloth to a smooth and even surface, and saving the tedious process of overhauling, usually performed by hand labor and less perfectly.

The upper leaf may be pressed down and held in place by springs or weights more or less as the stubbornness of the cloth may require. The gearing is calculated for equal

motion in all parts except the discharging cylinders which should a little exceed the others, to keep the cloth always stretched.

The rollers or cylinders for ordinary use may be plain as in the model, but when made for work requiring more force they may be fluted or creased as occasion may require.

All parts of this machine may be used together on heavy stubborn or felted cloth, but for light cassimere, &c., the rubbers alone or the eccentric rollers alone will be sufficient and the cloth may be carried through either of them, either way, forward or backward.

The size of the machine will vary according to the use intended, whether for cassimere, satinet or broadcloth.

The model deposited is one fourth of the size intended for narrow cloth.

What I claim as my invention and desire to secure by Letters Patent, is,

The transverse rubber, and the oblique stretchers, separately and in combination, for the purposes and in the manner herein described.

JOHN TILLOU.

Witnesses:
SIMEON BALDWIN,
ROGER S. BALDWIN.