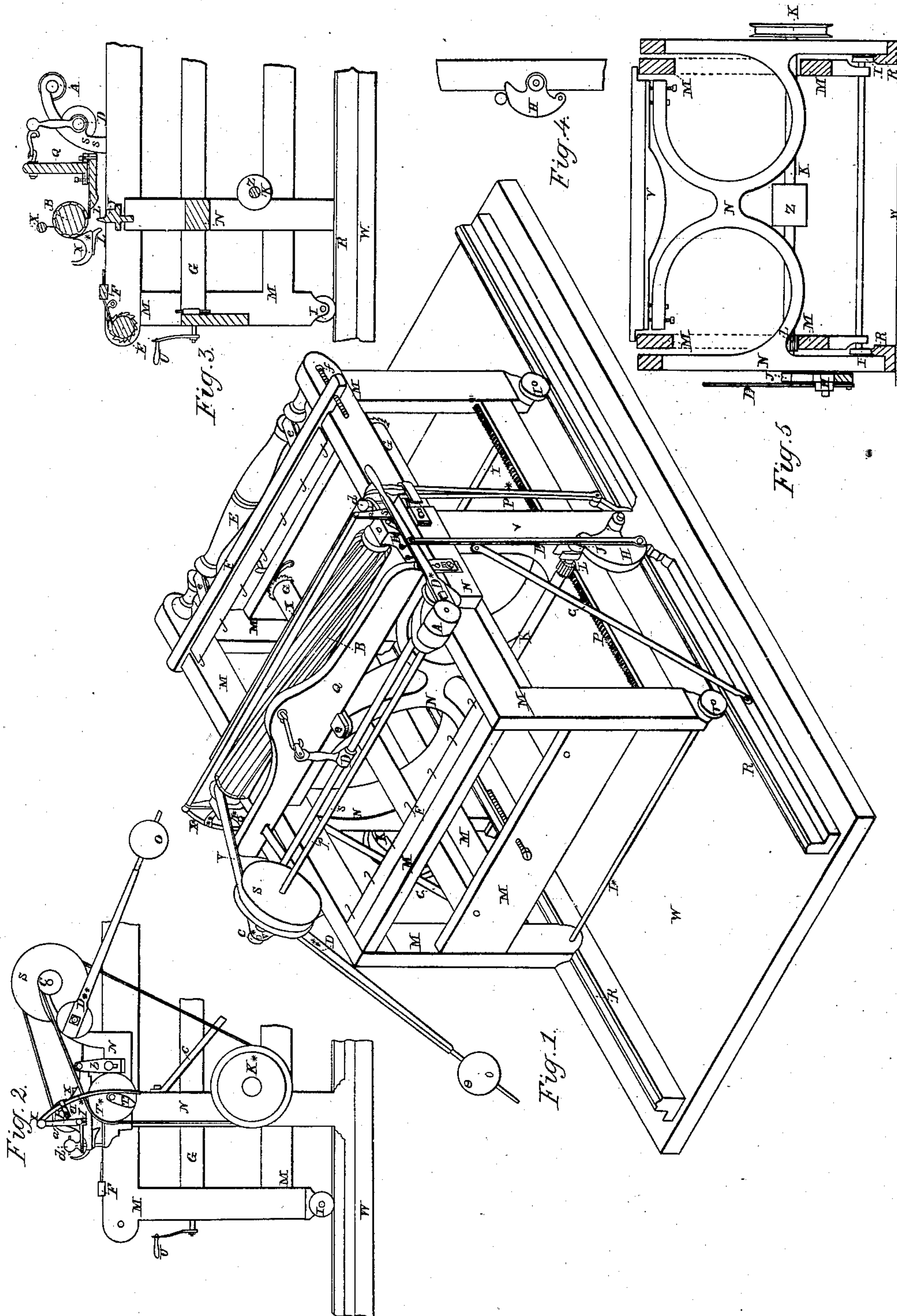


R. Daniels.
Cloth Shearing Mach.

N^o 681.

Patented Apr. 7, 1838.



UNITED STATES PATENT OFFICE.

REUBEN DANIELS, OF WOODSTOCK, VERMONT.

CROSSCUT ECLIPSE SHEARING-MACHINE FOR SHEARING WOOLEN CLOTHS.

Specification of Letters Patent No. 681, dated April 7, 1838; Antedated October 7, 1837.

To all whom it may concern:

Be it known that I, REUBEN DANIELS, of Woodstock, in the county of Windsor and State of Vermont, have invented a new and useful Improvement in the Construction of Crosscut Eclipse Shearing-Machines for Shearing Woolen and other Cloths from List to List, and that the following is a full and exact description of the construction and operation of said machine as improved by me, viz:

Let there be constructed on a suitable platform or floor a railway of wood or other material having on the top a metallic wire smoothly finished two or more inches above the platform or floor; the length of the rails and their distance asunder being adjusted to the width of the cloth to be sheared, and to the length of the shear. The design and use of this railway is to receive and guide the cloth carriage under the shear in the process of shearing, and also the form and attachment for the cast iron spectacle frame, so called, from its resemblance to spectacle bows. This attachment must be on the outer side of the rails, so as to permit the cloth carriage to pass on the rails within the cast iron spectacle frame. The cast iron spectacle frame is a massy casting consisting of one entire piece, the object of which is not only to form an unyielding stationary support to the rest underneath the shear frame but also to give attachment to the iron shear frame in which the revolver runs, and to which the ledger blade is attached. This rest is attached to the spectacle frame by means of set screws in such manner that either end of the rest may be raised or depressed or moved backward or forward so as to be exactly adjusted to the revolving and ledger blades while shearing. The upright spectacle frame gives attachment to all the stationary parts of the machine above the rails. It is constructed with two upright posts of the height of the cloth carriage. These posts are connected by two circular parts adapted to receive the cloth rolls, having the cloth wound around them. These cloth rolls or beams are a portion of the cloth carriage and as long as the width of the cloth to be sheared. The form of the spectacle frame is shown in drawings Figure 5 and marked N, N. Immediately above the two circular parts is placed the cloth rest, which is fastened to them by means of

set screws already described. The top of this rest is to be brought to a degree of sharpness resembling No. 18 wire so as to present but a very small portion of the cloth to the action of the shear in each successive portion of time; and yet not so sharp as to endanger the rending of the cloth. The ends of the rest are to be smoothly rounded to permit the cloth to pass without damage. The shear frame is placed over the rest in such position that the edge of the ledger blade falls immediately in contact of the rear of the upper edge of the rest, while the center of the revolving blade lies immediately over the wire edge of the rest. Within a small distance of this edge two ledges project down upon the cloth, the one before and the other behind the shear, the object of which is to depress the cloth on each side of the wire edge of the rest, and permit the nap to rise above the thread to meet the action of the shear. These ledges or projections are shown, Fig. 3 and marked L, L. The shear frame is of one solid casting and gives attachment to the revolving and ledger blades, the oiler stand and oiler, the gage screws, and dial, and dial dog with the ledges above described, and marked L, L. The ledger blade is a separate piece, and is attached to the shear frame at each end, and in the center by set screws, so that it can be raised or depressed at pleasure. The object of the set screws in the center of the ledger blade is to attach the ledger blade to a strong and unyielding portion of the shear frame to support it in position without trembling. This strong unyielding portion of the shear frame is marked in the drawings by Q and the set screws are shown by lip D. A stand is attached to the spectacle frame to support the bearings of the shear frame which is so constructed as either to lie down close to the cloth while shearing or to be raised up when the shear has reached the list and the cloth frame requires to be drawn back preparatory to shearing another portion of the cloth. This stand is marked B, in drawing Fig. 2. The strong unyielding portion of the shear frame is shown in drawing Fig. 1, and marked Q as above described. Two scroll stands are attached to the spectacle frame and are shown in the drawing Fig. 3 and marked S, S. Into these scroll stands are introduced the bearings of the balance shaft

small friction roller, end of shaft in contact
 with cam. K dog shaft shown in Fig. 3.
 L pinion wheel playing into gear. M, M.,
 &c., frame of cloth carriage. N, N., &c.,
 5 spectacle frame. D# the hand lever.
 D## the balance lever. I, I,## shaft
 connecting trucks. K# large pulley on dog
 shaft. L# strap of iron connecting lever
 handle D with cam H. e, e, cords or fas-
 10 tenings to connect the hand roll to the
 stretcher. L, L, two ledges to depress the
 cloth over the cloth rest. O, balance weights.
 P rack into which pinion wheel plays. Q
 unyielding part of shear frame. R, R, rail
 15 ways. S large pulley on main shaft carry-
 ing revolving blades. T small cam to move
 oiler Fig. 2. U crank or cloth roll Figs. 2
 and 3. V rest Figs. 3 and 5. W floor on
 which machine stands. X# lever to move
 20 oiler. Y belt driving revolving blades. X
 oiler. Z weight on dog shaft. a, oiler stand.
 b, stands for gudgeons for shear frame.
 c, c, braces from rail ways to spectacle
 frame. d, set screws to regulate shear frame.
 25 P# latch holding down lever handle D
 while shearing. T# pulley moving the cam
 to turn the oiler. I#I# box holding bear-
 ings of revolving blades. f thumb screws

to move the latch. S, S, scroll stands. p, s,
 main pulley shaft. 30

In the specification thus presented, it is
 not designed to specify every minute por-
 tion of the machine: and those portions not
 specified are common to this and other ma-
 chines of a similar kind in use. 35

All I claim as my invention is—

The above combination and arrangement
 of any two or more of the following par-
 ticulars of the above described cross cut
 eclipse shearing machine, when combined 40
 with the cloth carriage; first, I claim the
 cast iron receptacle frame; secondly, the
 cloth rest with wire edge; thirdly, the dial
 plate set screws to regulate the length of
 nap; fourthly, the cam to lift pinion wheel 45
 out of rack, and fifthly, the ledge to depress
 the cloth in front of the shear. But I do
 not claim as my invention any one of the
 above described parts, or a combination of
 them, independently of their combination 50
 with the cloth carriage, nor do I claim the
 cloth carriage as my invention.

REUBEN DANIELS.

Witnesses:

DAVID PIERCE,
 ISAAC B. HARTWELL.