2 Sheets—Sheet 1.

A. C. CAREY & D. C. BAGLEY.

MACHINE FOR MEASURING AND FOLDING CLOTH.

No. 7,079. Patented Feb. 12, 1850.

Fig. 1.

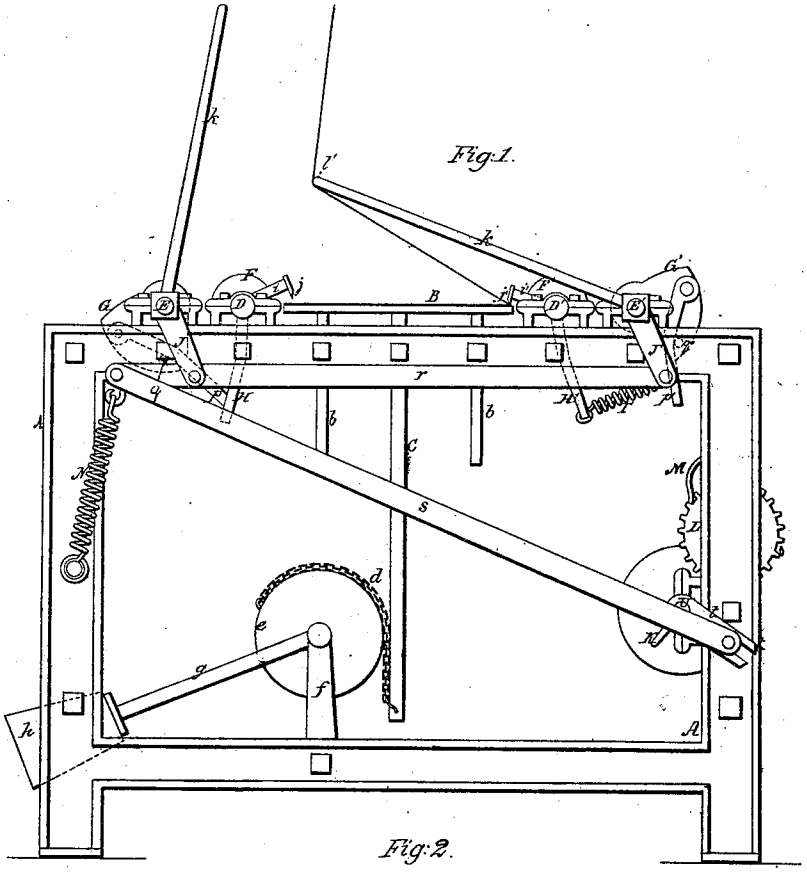
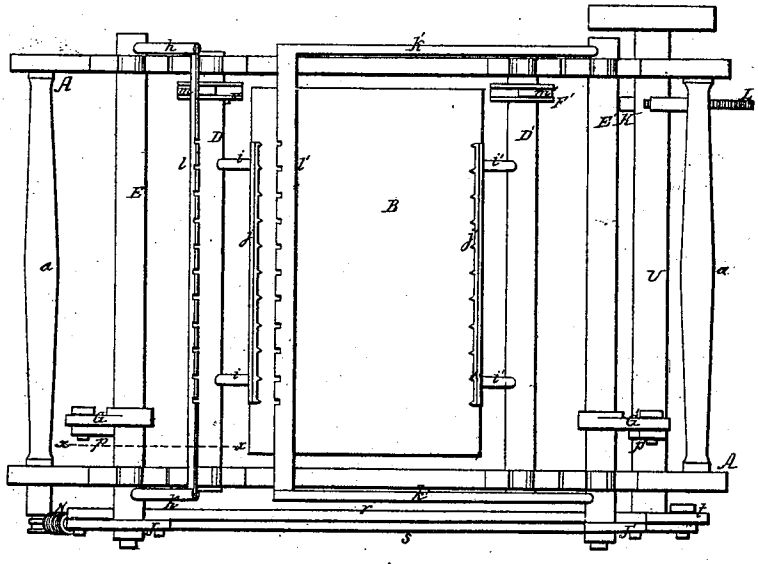


Fig. 2.



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Fig. 3.

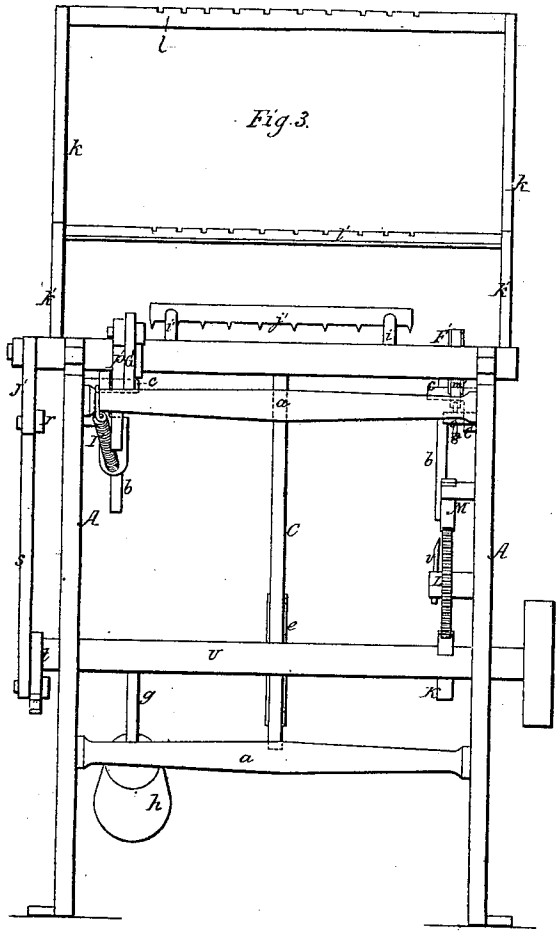


Fig. 4.

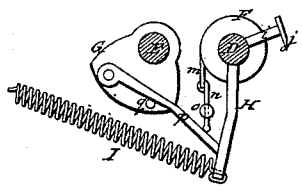


Fig. 5.

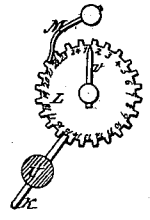
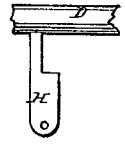


Fig. 6.



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UNITED STATES PATENT OFFICE.

AUGUSTUS C. CAREY AND DANIEL C. BAGLEY, OF AMESBURY, MASSACHUSETTS.

MACHINERY FOR FOLDING CLOTH.

Specification of Letters Patent No. 7,079, dated February 12, 1850.

To all whom it may concern:

Be it known that we, AUGUSTUS C. CAREY and DANIEL C. BAGLEY, of Amesbury, in the county of Essex and State of Massachusetts, have invented a new and useful Machine for Holding and Measuring Cotton and Woolen Cloths, which is described as follows, reference being had to the annexed drawings of the same, making part of this specification.

Figure 1, is a side elevation of the machine. Fig. 2, is a top or birds-eye view of ditto. Fig. 3, is an end elevation of ditto. Fig. 4, is a section of two of the horizontal shafts at the top of the frame at the line X X of Fig. 2, showing the bent bars, segmental plate and spring, for attaching and detaching the teeth of the combs to and from the folds of the cloth, as it is laid on the table. Fig. 5, is a view of the graduated notched wheel, radial arms, and pointer, for indicating the length of the cloth folded. Fig. 6, is a section of one of the bent bars or arms, attached to the horizontal shaft nearest the table.

Similar letters in the several figures refer to corresponding parts.

The nature of this invention and improvement consists in placing at the upper part of a suitable frame a horizontal table, having an up and down movement, and arranging on the sides of the same horizontal shafts, having sharped toothed combs or prickers, notched bars, and bent bars or arms attached, and connected by radial arms and connecting rods or bars to a horizontal revolving shaft, which operates a graduated notched wheel, in such a manner as to fold the cloth and measure the same as it is laid evenly on said table.

To enable others skilled in the art to make and use our invention, we will proceed to describe its construction and operation.

A is the frame made of a rectangular form, having two square upright sides, connected together by horizontal cross ties (*a*), and constructed of suitable size, strength, and material, to contain and support the several parts of the machine.

B is a horizontal rectangular platform or table, arranged at the top of the frame and midway between the ends and side of the same, having four rods (*b*) secured to its lower surface near the corners, which extend downward in a vertical line and pass through corresponding sized openings formed in the projecting portions of the right angled plates (*c*), secured to the inner surfaces of the sides of the frame.

C is a vertical shaft, secured at its upper end to the under part of the platform or table and at the center of the same, and extending downward to the lower part of the frame and having a chain (*d*) attached at its lower end which passes over, and is connected at its end to the periphery of a skeleton wheel (*e*) grooved on its periphery, and secured on a horizontal transverse shaft, turning in suitable boxes at its extremities, formed in uprights (*f*), secured to the sides of the frame, which shaft has a radial rod (*g*) secured to its side, extending toward the end of the frame in an inclined direction, and having a weight (*h*) at its lower end sufficiently heavy to counterbalance the weight of the platform or table and its attachments, and keep it in a state of equilibrium.

D, D′, are horizontal transverse shafts, arranged on top of the frame, one on each side of the platform or table and turning in suitable boxes at their ends on top of the sides of the frame, and having radial arms (*i*, *i*′,) secured to them at equal distances from their ends, which incline upward over the table, and have sharped toothed combs (*j j*′) secured to their ends, extending from one to the other, and parallel to the upper surface of the platform or table, the points of the teeth of said combs being downward and situated immediately over the edges of the platform or table.

E, E′, are two other horizontal transverse shafts, arranged between the last mentioned ones and the ends of the machine, and turning in boxes on top of the sides of the same beyond which they project a short distance, having secured to near their ends outside the frame radial rods (*k*, *k*′,) equal in length to the distance between said shafts E E′, and the combs on the opposite sides of the platform or table, and connected together at their outer extremities by bars (*l*, *l*′,) notched on their outer edges, in such a manner as to allow one of them on one side the table to move past the comb on the opposite side, and as near the same as possible, without touching the teeth of the combs, passing through the notches, to allow this result.

F F′ are grooved, pulleys secured to the shafts D, D′, near their ends, to the peripheries of which are attached the ends of straps (*m*, *m*′,) of gum elastic or other suit-

able material pasing over the tops of the same, and extending downward and attached at their opposite ends to wire rods (n, n',) passing through openings formed in projecting pins or studs (o) secured to plates secured to the inner side of the sides of the frame, and having knobs at their lower ends to prevent them becoming disengaged from the projecting pins or studs (o), on said plates, the band m is intended as a counter spring, to prevent the combs j j' being brought to press too heavily on the cloth by the means hereafter described.

G, G, are segmental plates cast with hubs secured to the horizontal shafts E, E′, inside the frame, and having bent bars (p, p',), attached to their sides near their upper parts, and peripheries, by means of pins or bolts projecting from said segmental plates, and passing through openings in the ends of the bent bars. These bars rest against pins (q, q',) at their bent parts, projecting from the lower part of the segmental plates.

H, H′, are other bars or arms secured to the horizontal shafts D, D′, extending downward and slightly bent at their centers, toward the ends of the frame, and having projections, or enlarged at their lower ends, to form sufficiently wide surfaces on their faces for the lower ends of the bent bars (p, p',) to operate against.

I, I′, are spiral springs connected at one end to the lower ends of the bars or arms H, H′, and at their opposite ends to the upper corners of the frame, for bringing said bars or arms back to their original positions, after being acted on by the bent bars (p, p').

J, J′, are arms secured to the extremities of the shafts E, E′, extending downward and attached by means of pins projecting from the same, to a horizontal connecting rod or bar (r), extending from one to the other and to near one end of the frame, where it is attached to the upper end of an inclined rod or bar (s), extending to the opposite ends of the frame, being connected at its lower end to a slotted arm (t) secured to the end of a horizontal shaft (U), turning in suitable boxes in the frame, by means of screw bolts attached to the inclined bar or rod (s), passing through the slot in the arm (t), and fixed at the desired point in the same by a nut.

K is a metallic bar inserted half way through an opening in the horizontal shaft, so as to cause its ends to project from its sides equally.

L is a graduated wheel turning on a stationary shaft or stud projecting from the inner side of the side of the frame, and having a series of notches formed in its periphery, at equal distance apart, and graduated on its face with a corresponding number of marks numbered in numerical progression. A pointer (v) being secured to the shaft, or stud, and pointing upward to indicate the numbers as they are forced past the same, by the ends of the bar K engaging with the notches of the wheel.

M is a spring pawl secured to a stud projecting from the inner side of the frame, immediately above the notched wheel, and entering at its movable end, the notches in said wheel.

N is a spiral spring attached to the frame and to one end of the inclined rod or bar (s) for drawing it down during its vibration.

The mode of operation is as follows: A revolving motion being communicated to the horizontal shaft U, it will cause a vibratory motion to be given to the inclined connecting bar or rod (S) and arms J, J, and a corresponding rocking to be given to the horizontal shafts E, E′, on their axis. The cloth to be folded and measured is placed on a rack or roller or table immediately over the center of the platform or table B and its end is brought down between the notched bars (l l') on the radial rods (k k') and is temporarily fastened to the side of the table. The machine is then put in motion as before stated, to give a rocking movement to the shafts E E′ so as to cause the notched bar (l l') to be alternately brought down past the respective combs (j j') on the opposite side of the table B and the segmental plates G G′ to move the bent bars (p p') and their lower ends over the surfaces of the bent bars or arms H H′ so as to rock the shaft D D′, and alternately raise the combs from the platform or table and the effect is as follows: Supposing the end of the cloth to be attached to the right hand side of the table B and the several parts of the machine to be in the position represented in Figs. 1, 2, 3, the horizontal connecting rod or bar r will be moved to the right, and with it the lower ends of the arms J J′ causing the notched bar (l') attached to the shaft E′ at the right hand side of the table or platform B, to be forced downward with one fold of the cloth, so as to lay the same on the table and the notched bar (l) attached to the shaft E on the opposite side of the table to be raised, and the end of the bent bar (p) attached to said shaft E to be moved over the surface of the enlarged part of the bent bar H so as to raise the comb (j) on the left hand side of the table B to make way for the passage of the cloth and notched bar (l'); and as soon as said notched bar is brought down to the table the end of the bent bar (p) will have passed over the enlarged part of the bent bar H and above the shoulder of the same formed by said enlarged part when said bent bar will be suddenly drawn back to the left to its first position by the spring

I, causing the teeth of the comb (*j*) to be forced down through the cloth and notches in the bar (*l'*) and to hold the cloth firmly on the left side of the table. The slotted arm or crank (*t*) continuing its rotary motion will pass its center point and force the horizontal connecting bar (*r*) and with it the arms J J' to the left causing the notched bar (*l'*) to be raised and the end of the bent bar (*p'*) to be forced over the surface of the enlarged part of the bent bar H' to raise the comb (*j'*) on the right hand side of the table B and the notched bar on the left to be lowered with another fold of the cloth of a similar size to the first, which will be held to the right hand side of the table by the teeth of the comb (*j'*) being forced into the same, after the end of the bar passes over the shoulder of the enlarged part of the bent bar H' and allows the spiral spring I' to draw said bar H' to the right. The slotted arm or crank (*t*) will then again pass the opposite center point, and cause the notched bar (*l*) to be again raised and the opposite one (*l'*) to be lowered and another fold to be laid, and so on in this manner the operation is continued each notched bar alternately laying a fold of a size commensurate with the distance between the points at which the notched edges of said bars touch the table B and the ends of the bar *k* entering the notches in the graduated wheel L and turning the same so as to bring the end of the spring pall M' in the next succeeding notch in its passage past the same so as to indicate the number of folds made, and consequently the length of the cloth as it is laid and folded on the table. Each end of the bar K will pass the notched wheel L at every fold of the cloth and therefore the graduated marks on said wheel must correspond with the size of the fold and indicate the number laid on the table.

The red lines denote the passage of the cloth.

What we claim as our invention and desire to secure by Letters Patent is—

The mode of folding and laying the cloth on the table or platform B, kept in a state of equilibrium by the weight (*h*) wheel (*e*) chain (*d*) and rod (*g*) by means means of the notched bars (*l l'*) attached to the radial rods (*k k'*) secured to the shafts E, E', combs (*j j'*) attached to the shafts D D', segmental plates G G' bent bars (*p p'*) and H H' arms J, J', horizontal and inclined connecting rods or bars (*r*, *s*,) slotted arm or crank (*t*) constructed combined arranged and operated as herein set forth.

AUGUSTUS C. CAREY.
DANIEL C. BAGLEY.

Witnesses:
J. E. SANBORN,
M. G. CAREY.