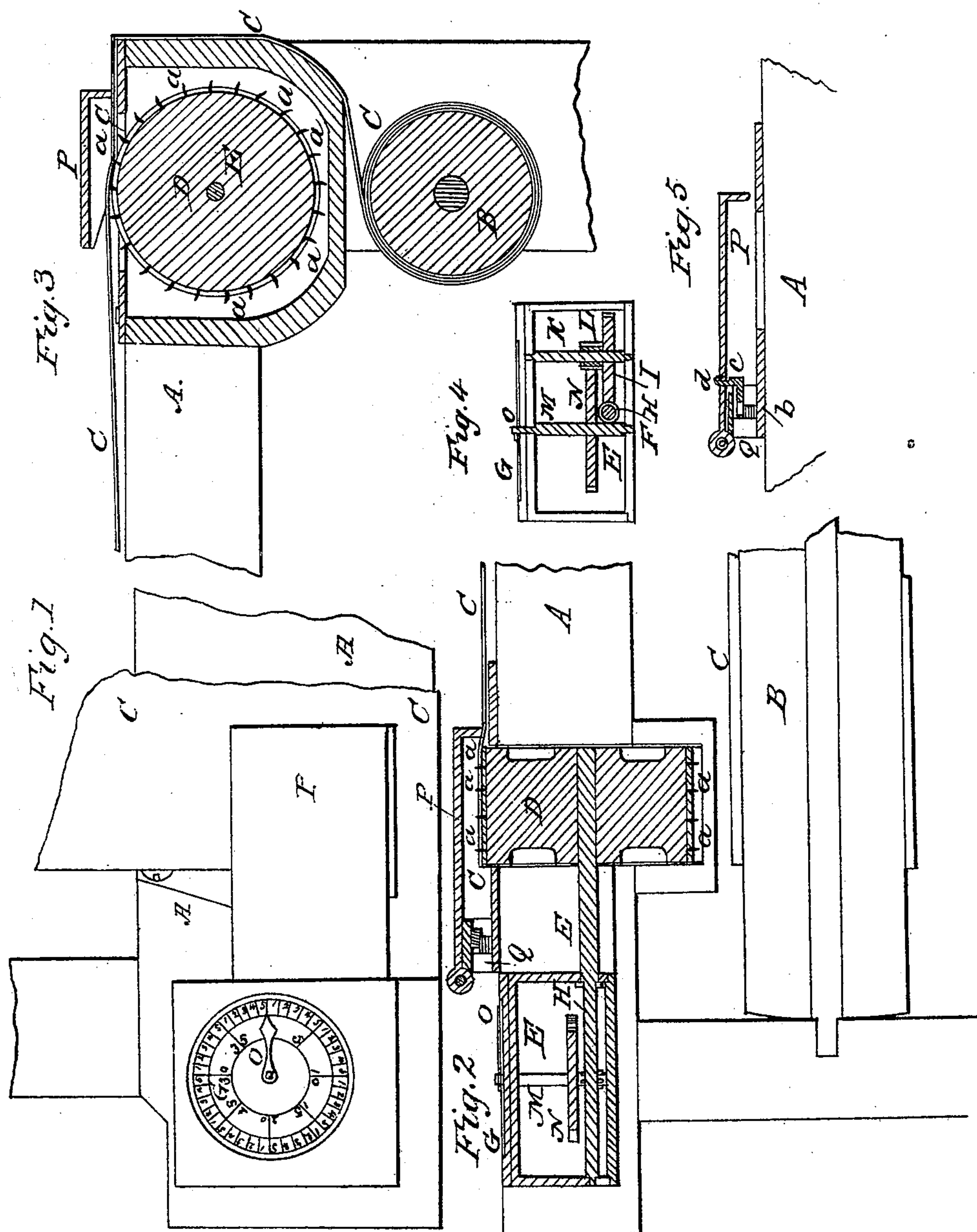


J. G. WEBSTER.

Machine for Measuring Cloth in the Loom.

No. 7,112.

Patented Feb. 19, 1850.



UNITED STATES PATENT OFFICE.

JOHN G. WEBSTER, OF LOWELL, MASSACHUSETTS, ASSIGNOR TO HIMSELF AND JOHN W. ROBERTSON, OF SAME PLACE.

MEASURING CLOTH ON LOOMS.

Specification of Letters Patent No. 7,112, dated February 19, 1850.

To all whom it may concern:

Be it known that I, JOHN G. WEBSTER, of Lowell, Middlesex county, in the State of Massachusetts, have invented a new or Improved Apparatus to be Applied to a Loom and for Measuring or Indicating the Amount of Cloth Woven; and I do hereby declare that my said improvement is fully described and represented in the following specification and accompanying drawings, letters, figures, and references thereof.

Of the said drawings, Figure 1, denotes a top view of my said apparatus as affixed to the top surface of the breast beam of a loom and as applied to the cloth while the same is being woven. Fig. 2, is a longitudinal section of the breast beam and the said apparatus. Fig. 3, is a transverse section of the breast beam, cloth, cloth beam, and toothed roller of the measuring apparatus. Fig. 4, is a transverse and vertical section of the clock work and dial box.

My improved apparatus is affixed directly to or let into the breast beam of a loom for weaving.

In the drawings above mentioned or in such of them as the same is seen, A, represents the breast beam and B, the cloth beam of a loom.

Within a proper recess made down in the breast beam and directly under the selvage of the cloth C, a short cylindrical roller D, is placed, the said roller being affixed upon a horizontal shaft E, and having its periphery studded with points as seen at *a, a, &c.* The surface or selvage of the cloth, rests on the perimeter of the roller and so that the said points may pass into or through the cloth. The said shaft projects from and has a bearing in a circular or other proper shaped box F, on whose upper surface or top plate is a graduated circle, as seen at G, Fig. 1. On the middle of that part of the shaft which is within the box there is an endless screw H, which is made to engage with a worm gear I, fixed upon a vertical shaft K, which carries a small gear or pinion L. On another shaft M, there is a toothed gear N, which engages with the pinion L. Besides the said gear N, an index pointer O, is fixed on the shaft M, the said index pointer being so arranged above the graduated plate or circle G, as to operate in

connection therewith and indicate the measure of the cloth woven, suitable divisions or marks being made in the index plate, and the whole of the machinery being properly proportioned in order to produce the desired effect, or measurement of the cloth as in the proportion of its production in the loom.

Above the cloth when it covers the toothed wheel or cylinder, I apply a plate or guard P, which is made to rest so nearly in contact with the points of the wheel, as to prevent the cloth from slipping off therefrom. The said guard or plate is so hinged to the breast beam or a plate Q, screwed thereto, (as seen at *b*) as to be capable of being turned up into a vertical position. It is held down upon the cloth by means of a spring catch *c* (see Fig. 5, which represents a vertical section of the guard and its catch) which is fastened to the breast beam or the plate Q, and extends through an orifice *d*, made through the guard.

The purpose of the guard is not only to protect the teeth of the wheel or cylinder from injury, but to prevent the cloth from slipping off the wheel whenever it becomes necessary to draw it forward, as it often is in order to remove extraneous matters or bunches of cotton or woolen fiber which may have accidentally become introduced and woven between the threads. Should the cloth be pulled forward or in a direction toward the heddles, the guard prevents it from rising off the teeth so as to prevent the correct measurement of it. The forward movement of the toothed wheel occasioned thereby will be compensated by a return movement of it which takes place as soon as the cloth is relieved from the force by which it was moved forward.

I am aware that a roller or cylinder and clockwork have been combined and used for indicating the length of any surface against which the periphery of the said roller might be placed and rolled such a contrivance being generally known by the name of "way meter," "carriage meter," or "pedemeter."

I am also aware that a roller or cylinder and a pencil marking apparatus have been applied to the cloth beam of a loom in order to mark into equal lengths or parts the cloth woven upon the said cloth loom. I there-

fore neither claim such contrivances nor the methods by which they have been applied and used. But

What I do claim as my invention is—

- 5 The arrangement of the roller and clock work directly upon the breast beam of the loom and with respect to the cloth or sel-vage thereof as specified.

In testimony whereof I have hereto set my signature the fifth day of September A. D. 1849.

JOHN G. WEBSTER.

Witnesses:

JAMES KEYES,

JOSHUA CONVERSE.