J. LOFF.

CLOTH-MEASURING MACHINES.

No. 193,767. Patented July 31, 1877.

Fig. 1.

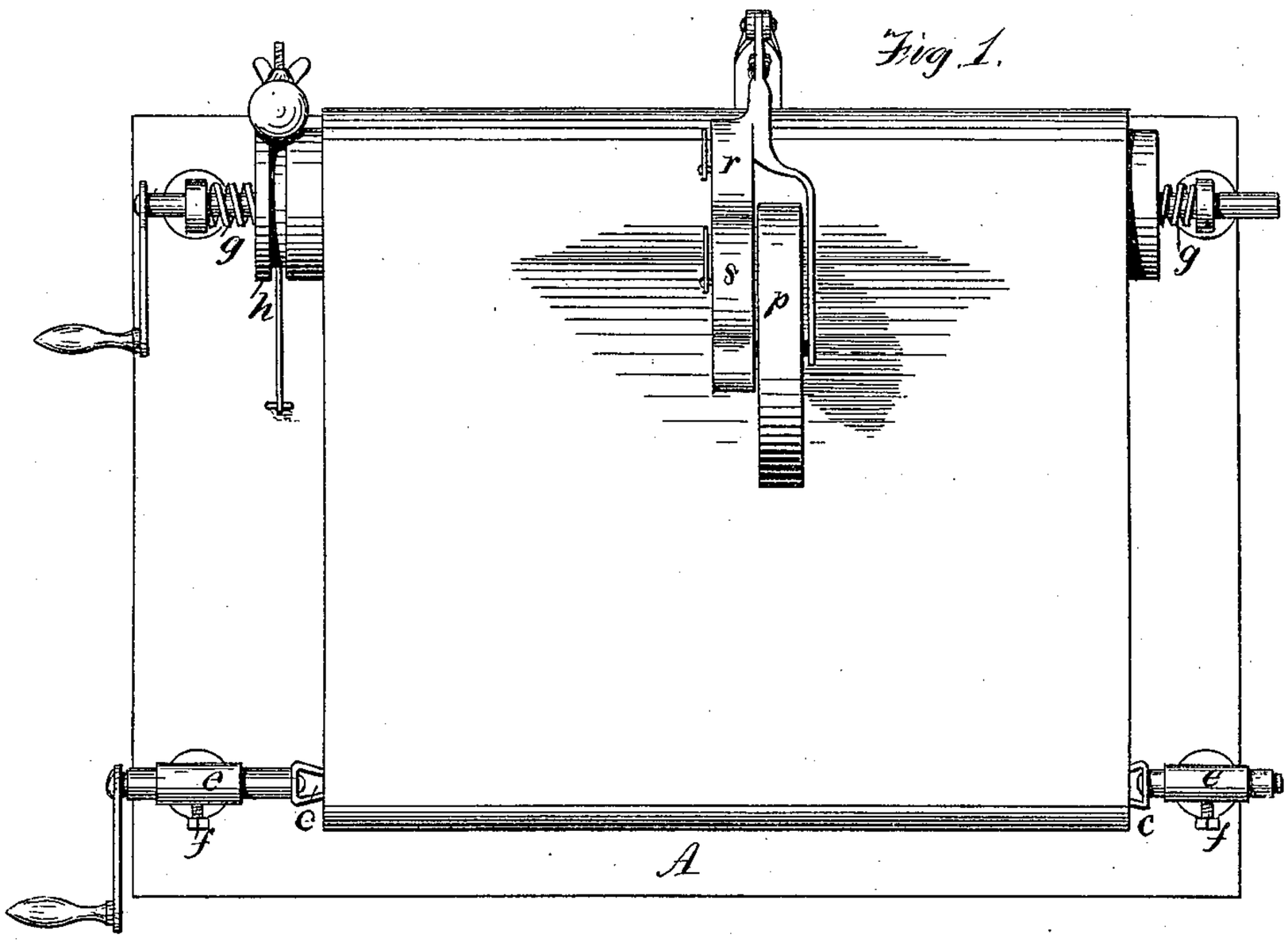
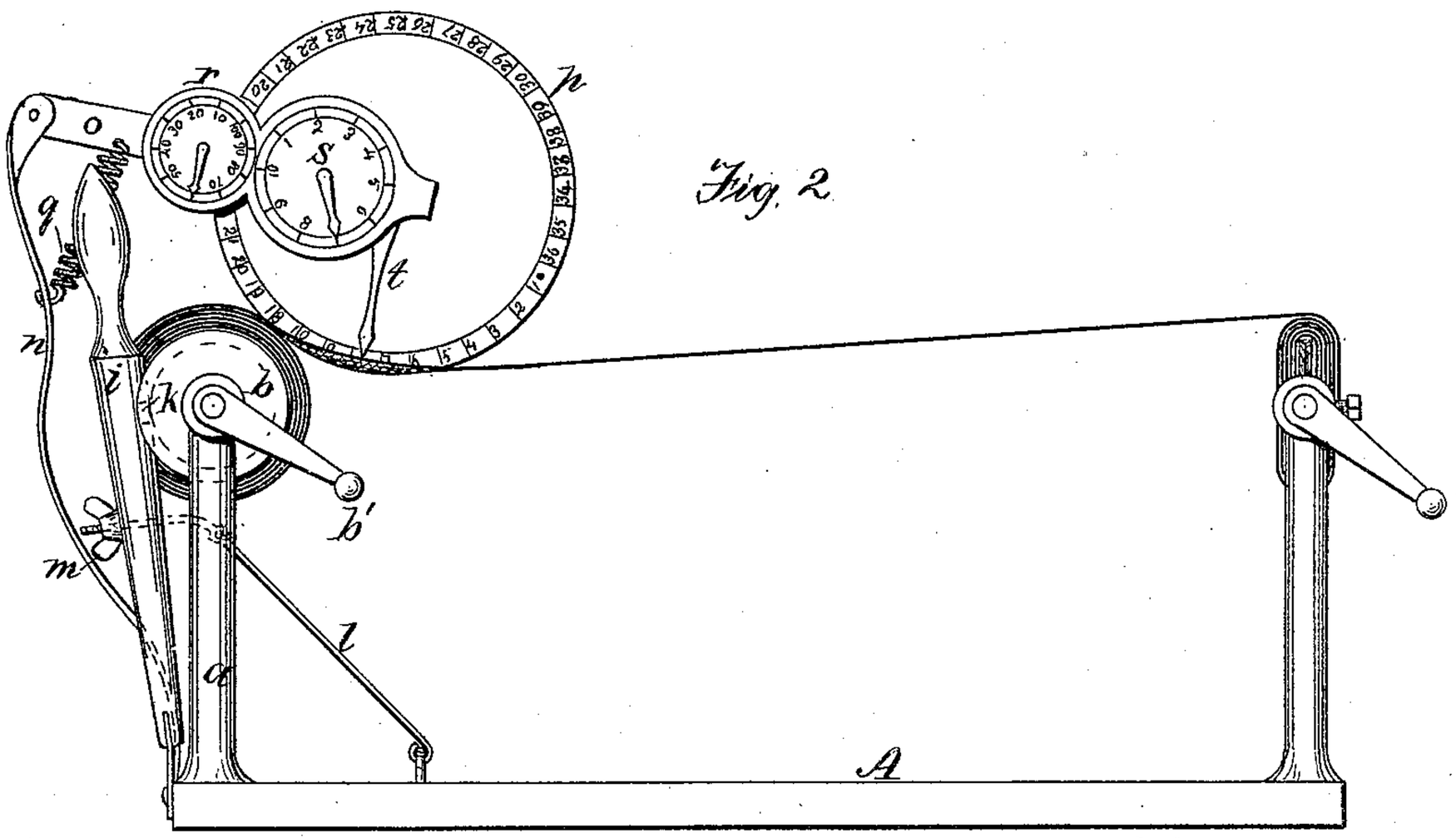


Fig. 2.



Witnesses;
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UNITED STATES PATENT OFFICE.

JOHN LOFF, OF WHITEWATER, WISCONSIN.

IMPROVEMENT IN CLOTH-MEASURING MACHINES.

Specification forming part of Letters Patent No. **193,767**, dated July 31, 1877; application filed December 14, 1876.

To all whom it may concern:

Be it known that I, JOHN LOFF, of Whitewater, in the county of Walworth and State of Winconsin, have invented a new and useful Improvement in Apparatus for Measuring Cloth; and I do hereby declare the following to be a full, clear, and exact description of the same, reference being had to the accompanying drawings, forming part of this specification.

My invention relates to an improved apparatus for measuring cloth; and consists in certain improved details, which will be hereinafter described.

In the drawings, Figure 1 is a top view of the machine, and Fig. 2 is a side view, showing the lever and the indexes.

In carrying out my invention, I mount on suitable standards *a*, that rest in a base, A, a roller, *b*, operated by a crank and handle, *b'*. On the other side, in like standards, are pivoted clamps *c c*, arranged to hold the ends of the board on which the cloth is wound. One of the clamps may be provided with a crank like the roller *b*. The shafts on which the clamps are fixed revolve in sleeves *e e*, in which they have free rotary, but no endwise, movement. These sleeves are held by set-screws *f f*, and may be adjusted to adapt the clamps to the length of the board and width of the cloth. The roller *b* is fixed on its shaft, so that it may be turned by the crank. This shaft has endwise movement in its bearings, but is held centrally by means of springs *g g*. One end of the roller is provided with a groove, *h*, against which a lever, *i*, is made to bear, and to which it is held by a pin, *k*, on the lever and fitting in the groove. This lever is pivoted below by means of a metal extension thereof, so that it may be moved laterally, and by such movements, and by means of the pin it carries the roller from side to side. The lever is held against the roller, with the pin in the groove, by means of the rod *l* and nut *m*. By this means it may be made to press with any force.

Mounted on a springing standard, *n*, is an arm, *o*, which carries on the opposite end the wheel *p*, exactly one yard in circumference, the face of which is divided near the periphery into inches by means of radial lines. This wheel is held down against the cloth by means of its own weight and a spring, *q*. On the arm are two cylindrical cases, *r* and *s*, the faces of which are marked, as shown in Fig. 2, into ten equal spaces. Within these cases are wheels, which are moved in succession from a pin on the shaft of the larger wheel. The construction in this respect is the same as that used in ordinary measuring instruments. A pin or stud on the arm of the main wheel strikes, in one revolution, a cog on the wheel in the case *s*, and moves the index-finger of that case one space, thus recording the passage of one yard. Ten revolutions of the primary wheel move the secondary one revolution, and that one revolution moves the third wheel in case *r* one space, indicating the passage of ten yards of the cloth under the large wheel.

In using the device, the main wheel should be brought down on the cloth with the zero mark at the point of the index-finger *t*, which is fastened to the frame, and does not move with the wheel. As the cloth moves along, being wound upon the roller, it turns the wheel by the friction of the surfaces, each revolution of this wheel, as before stated, noting the passage of one yard, and fractions of a yard being indicated by the figures at the point of the index-finger *t*, while the units and tens are regulated on the dials *r* and *s*.

The lever *i* serves to keep the roller so adjusted laterally that the cloth may wind evenly thereon. After the cloth is measured the wheel *p* is lifted therefrom, and the cloth may be cut or rewound upon the board.

The machine is specially intended for a retail store, and is especially convenient for invoicing.

I am aware that machines for measuring cloth, operated by means of the friction of the cloth upon a wheel, are not new, and I, therefore, limit my claims to the special construction.

I am aware that a measuring apparatus having a wheel resting on the cloth is not new, and that such a machine has also been provided with adjustable clamps for holding the roll of the cloth from which the measured

part is unwound, and I make no broad claims to these elements.

I claim as my invention—

1. The grooved roller *b*, in combination with the springs *g g* and lever *i*, by which the roller may be swayed from side to side, as set forth.

2. The combination of the grooved roller, the lever *i*, fitting in the groove, the rod *l*, and the nut *m*, as set forth.

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Witnesses:
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