

# GEORGE S. ROGERS. Machines for Tentoring Cloth.

No. 122,283

Patented Dec. 26, 1871.

Fig. 1.

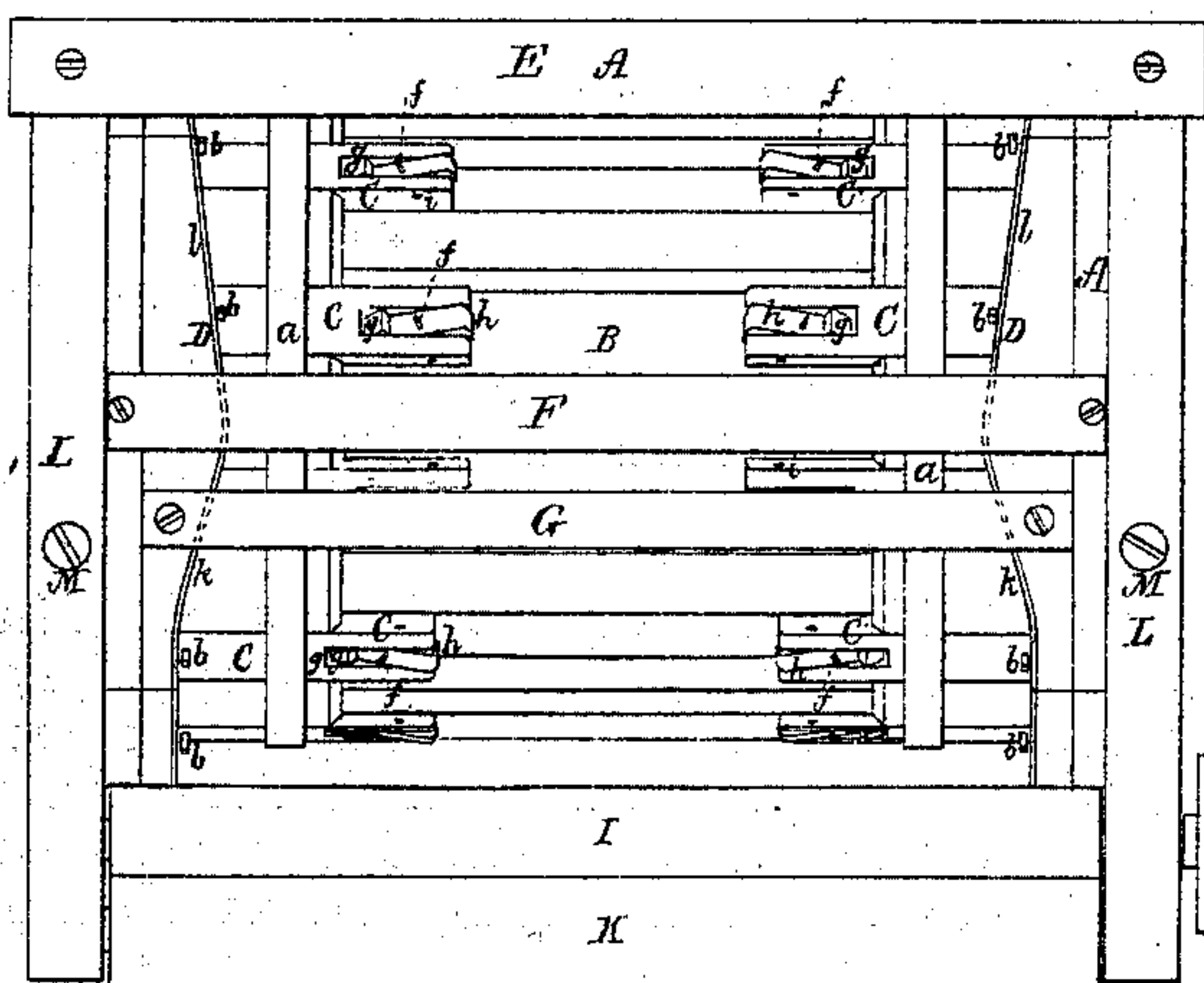


Fig. 3.

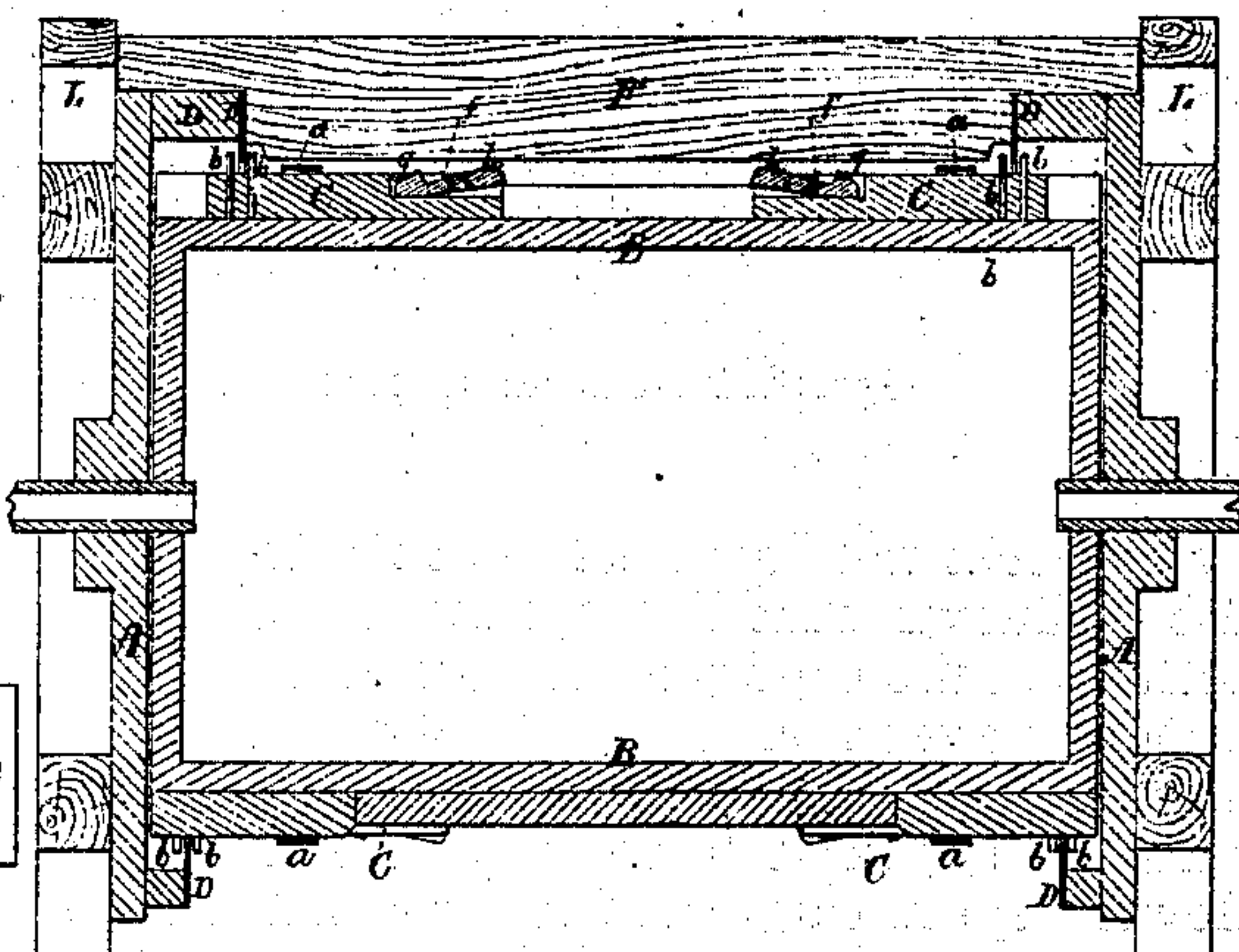


Fig. 2.

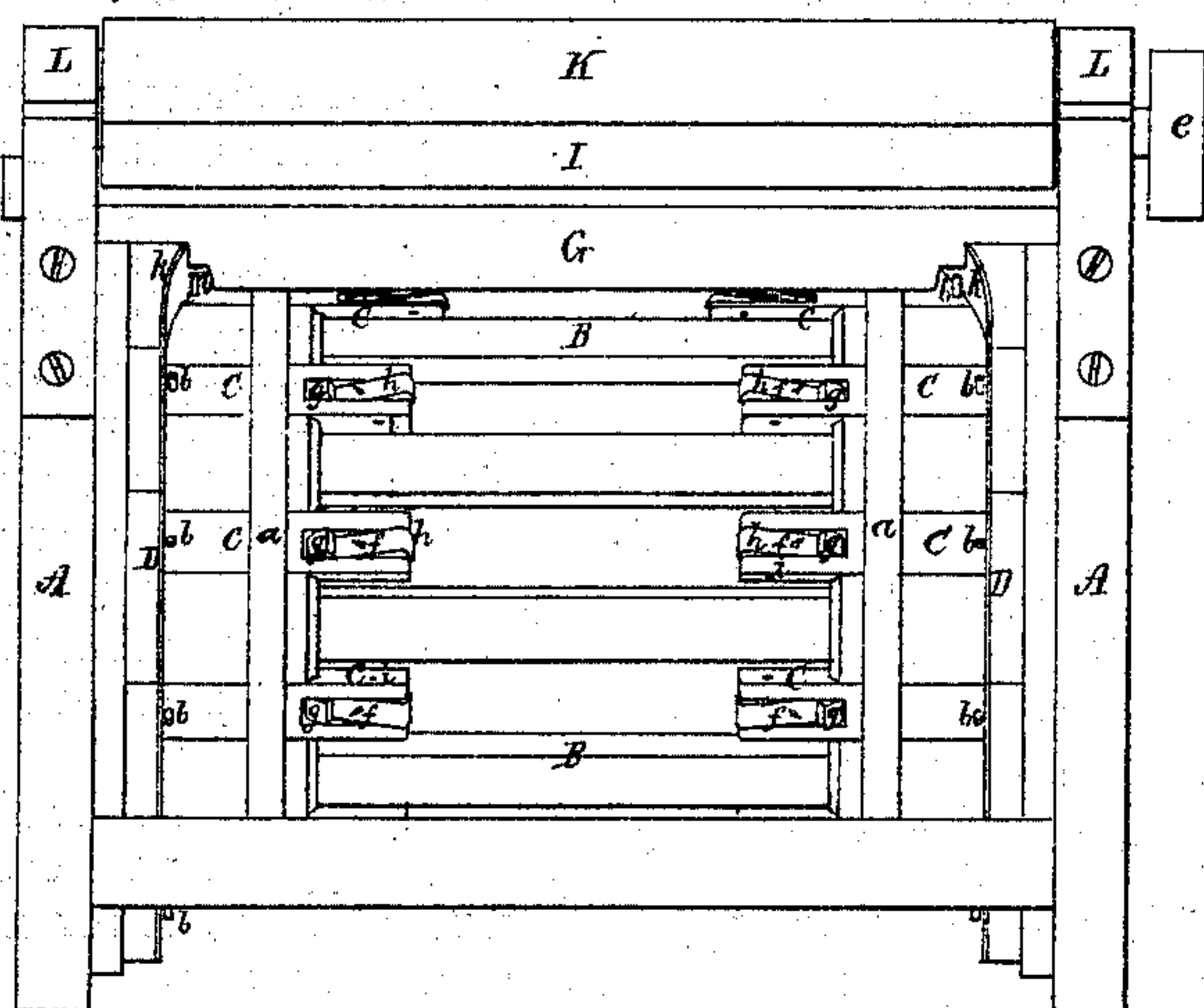


Fig. 4.

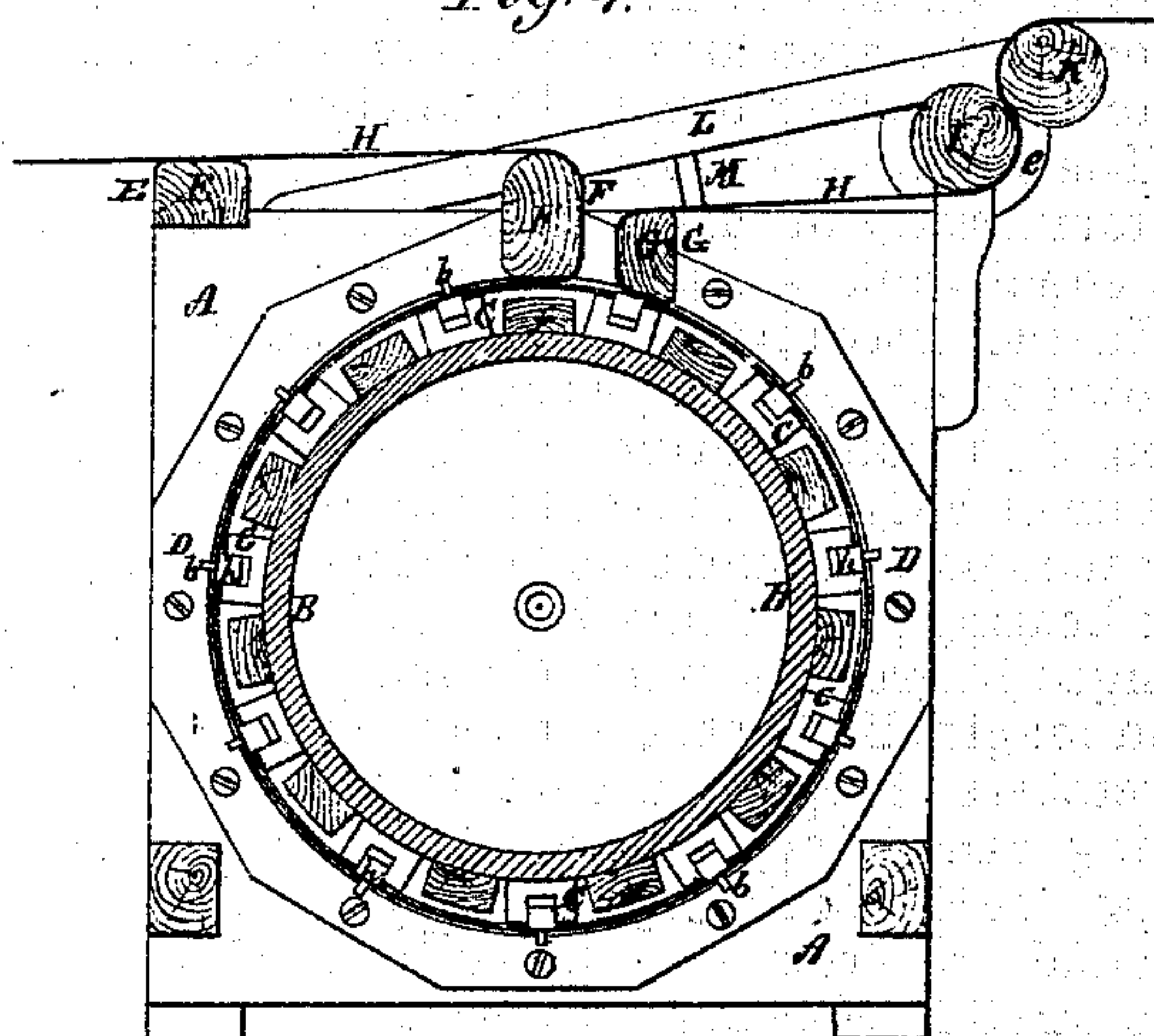


Fig. 5.

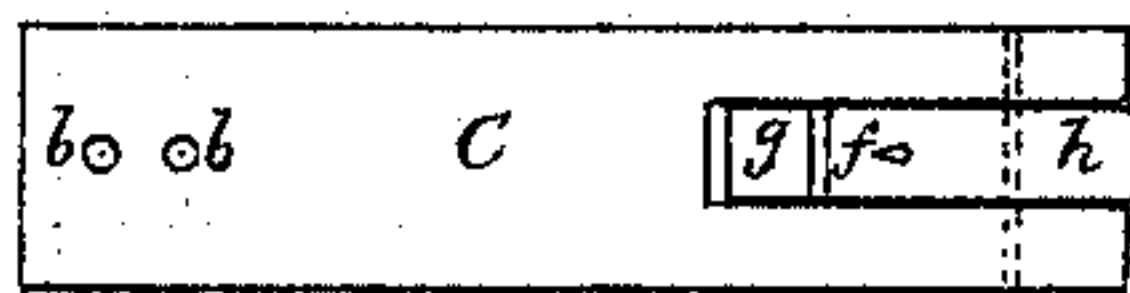


Fig. 6.

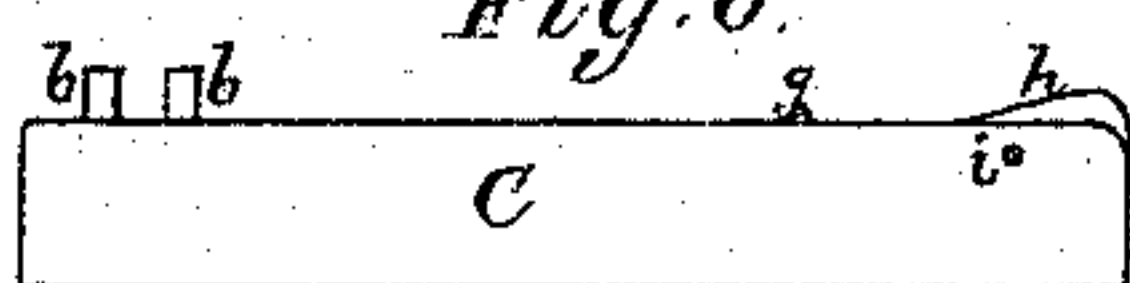


Fig. 7.



Fig. 8.



Fig. 9.



Fig. 10.

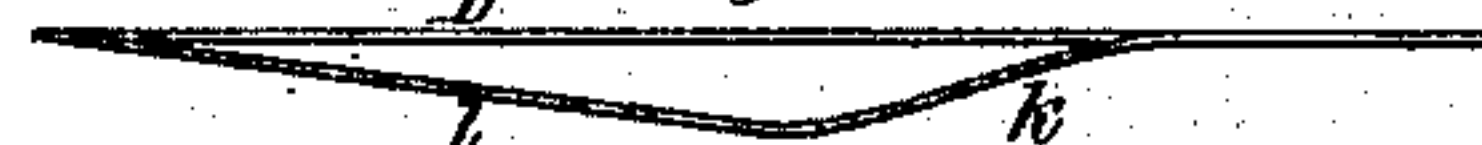
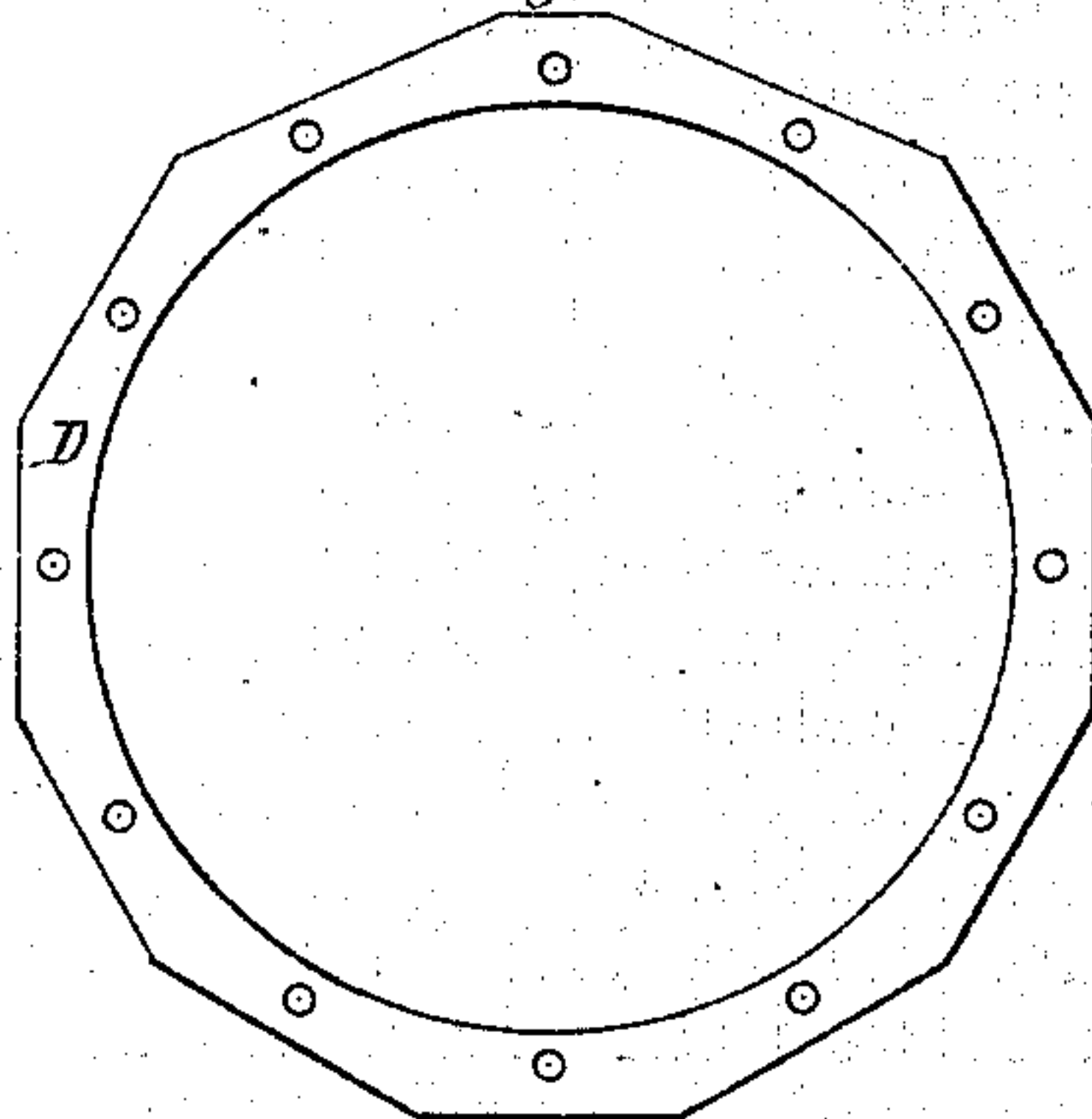


Fig. 11.



Witnesses

S. W. Piper

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# UNITED STATES PATENT OFFICE.

GEORGE S. ROGERS, OF THETFORD, VERMONT.

## IMPROVEMENT IN MACHINES FOR TENTERING CLOTH.

Specification forming part of Letters Patent No. 122,283, dated December 26, 1871.

*To all persons to whom these presents may come:*

Be it known that I, GEORGE S. ROGERS, of Thetford, of the county of Orange of the State of Vermont, have invented a new and useful Automatic Machine for Tentering Cloth; and do hereby declare the same to be fully described in the following specification and represented in the accompanying drawing, of which—

Figure 1 is a top view, Fig. 2 a rear elevation, Fig. 3 a longitudinal section, and Fig. 4 a transverse section of it. Fig. 5 is a top view, Fig. 6 a side elevation, and Fig. 7 a longitudinal section of one of the stretchers on an enlarged scale. Figs. 8 and 9 are other forms of stretcher.

The machine has for its object the tentering automatically of fulled cloth, so as to bring it to an equal width throughout the piece.

In the drawing, the frame of the machine is shown at A as having within it, and suitably arranged, a hollow drum, B, for the reception of steam or hot air. It is to be suitably constructed for such purpose and to have the usual appliances for heating it by steam or hot air. There are arranged in grooves in the periphery of such drum, and longitudinally thereof, two series of slides or stretchers, C C, &c., each stretcher of one series being exactly opposite one of the other series. They are held in the grooves by hoops *a a* going around the drum or cylinder, and admitting of the stretchers being moved longitudinally; or they may be otherwise properly supported in the grooves. There is near each end of the drum, and extending around it, a cam-plate, D, which is supported by the frame A, is stationary and extends between two pins, *b b*, projected from each of the stretchers. This plate is to be formed so as to impart to the stretchers while the drums may be in revolution their necessary longitudinal movements during which they seize upon the cloth, stretch it widthwise, and finally let go of it and move inward for again seizing it. Over the drum are a series of stationary bars or guides, E F G, which are arranged in the frame A in manner as shown, the cloth while passing to and from the drum being led over or about the said guide-bars, in manner as shown at H in Fig. 4. From the inner guide-bar the cloth passes under a draft-roller, I, and between such and a pressure or other roller K, supported by arms L L, provided with

screws M M for forcing them downward. There is on the shaft of the roller I a driving-pulley, *e*, it being for the purpose of putting such roller in revolution by means of a driving-belt from a proper motor. Each of the slides C is provided with a small sprue or tenter-hook, *f*, and a rider or projection, *g*, arranged with respect to it, as shown. In one case—viz., that exhibited in Fig. 9—both hook and rider are extended from the slide, but in Figs. 5, 6, and 7 the rider and hook are represented as projecting from a short lever, *h*, formed and arranged in the bar and on a pivot, *i*, as represented.

In Fig. 8 the rider and hook are shown as constructed as a metallic tongue pivoted in the slider. The rider serves to hold the cloth off the tenter-hook until time for the latter to enter the cloth. On each slider being moved longitudinally sufficiently to draw the rider out from under the cloth, the latter will immediately be drawn down upon the tenter-hook. In the case where the rider and hook are applied to the lever, the pressure of the cloth on the tail of the lever will force it down so as to press the hook into the cloth immediately after the rider may be drawn out from underneath the cloth.

From the above it will be seen that the tenter-hook cannot catch the cloth except when close to its edge or selvage, and not until the rider may have been drawn away from the cloth.

A piece of cloth after having been fulled, and before being tented, is irregular in width, the fulling process serving to produce such irregularity. The purpose of my machine is to bring the cloth to an equal width throughout the piece. This the machine does in consequence of all the sliders or stretchers being moved outwardly like distances, and every tenter-hook being caused to seize the cloth at the selvage thereof only, however, the width of the cloth may vary. Just before the cloth leaves the drying-cylinder the tenter-hook sliders are moved inward, so as to draw the hooks out of the cloth, such being effected by the parts *k k* of the cam-plate D, the parts *l l* of such plate serving to remove the stretchers outward.

Fig. 10 is a top view, and Fig. 11 an inner side elevation of one of the cam-plates D. The cloth being wet or moist when run into the machine



will be discharged from it dry, or substantially so, and of a regular width.

This machine is intended to do the work of ordinary tenter-bars, and with much more expedition, thereby saving the necessity of exposing the cloth to the atmosphere for being dried, or to being rained or snowed upon, or frozen, or more or less covered with dust under such exposure.

I claim—

The combination of the drying-drum B, the two

series of slides G C, tenter-hooks *f*, and riders *g*, arranged to operate together, as set forth, and with guides E F G and draft-rollers I K, and provided with mechanism for moving such slides lengthwise, all being constructed and to operate substantially as specified.

GEORGE S. ROGERS.

Witnesses:

R. H. EDDY,  
J. R. SNOW.

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