

(No Model.)

J. SINNAMON.

Machine for Stretching and Drying Cloth.

No. 232,854.

Patented Oct. 5, 1880.

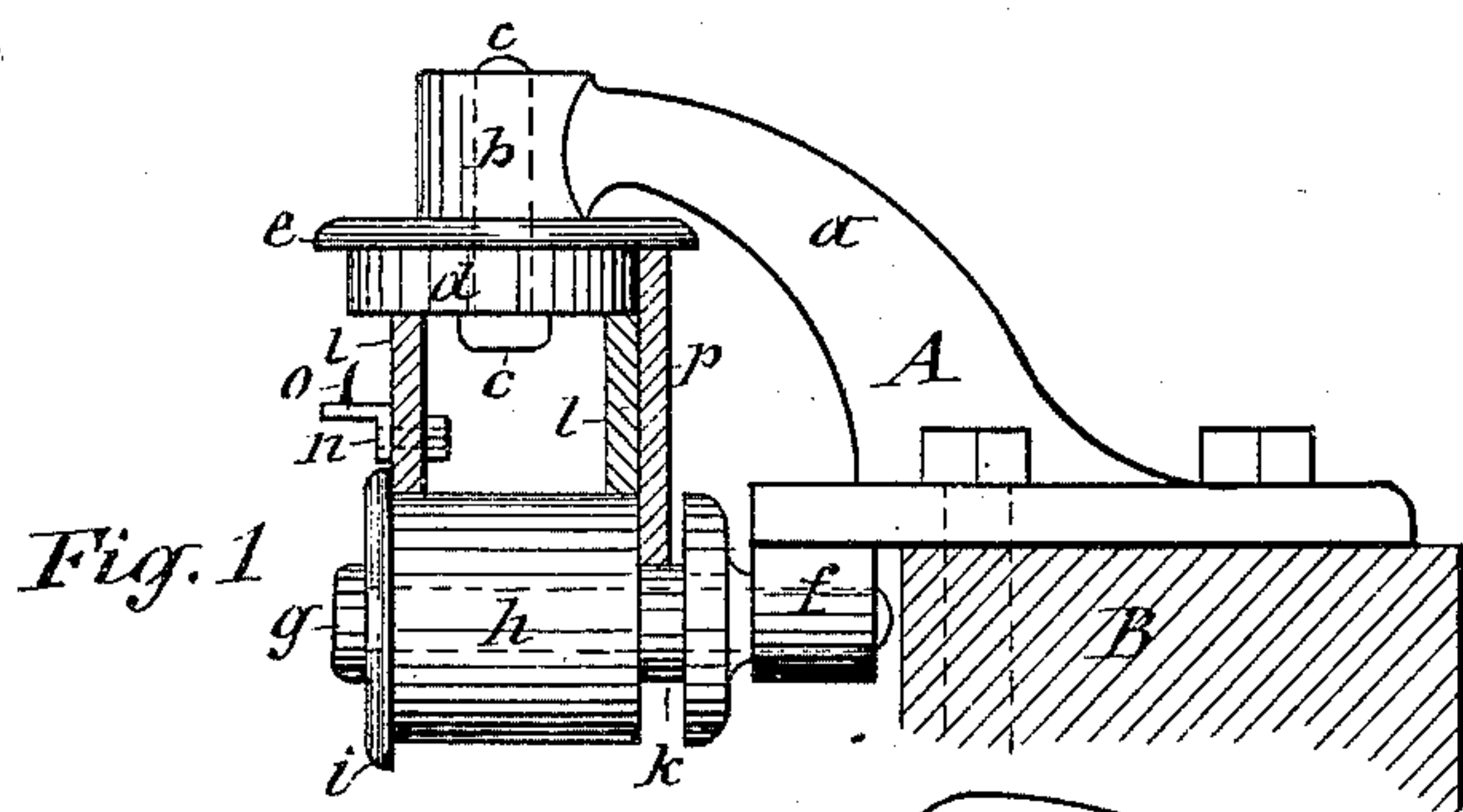


Fig. 1

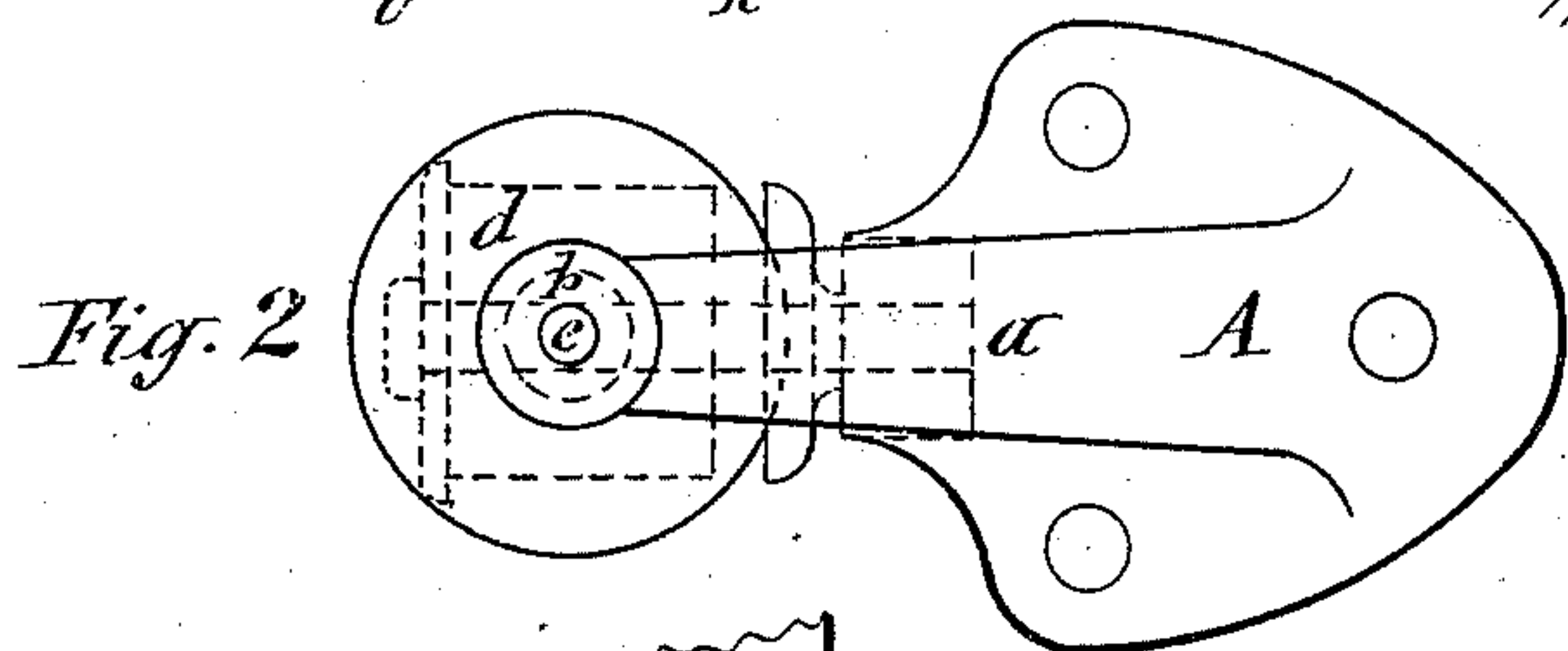


Fig. 2

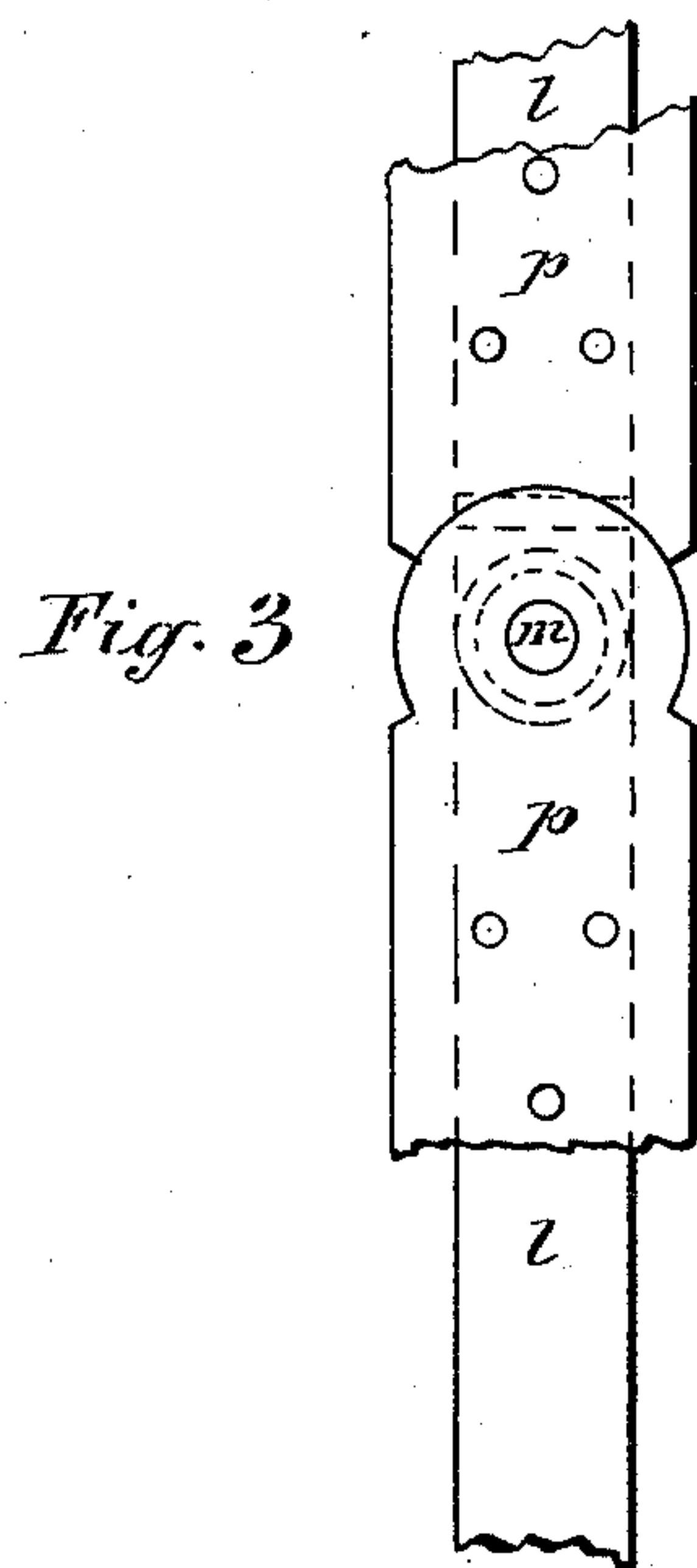


Fig. 3

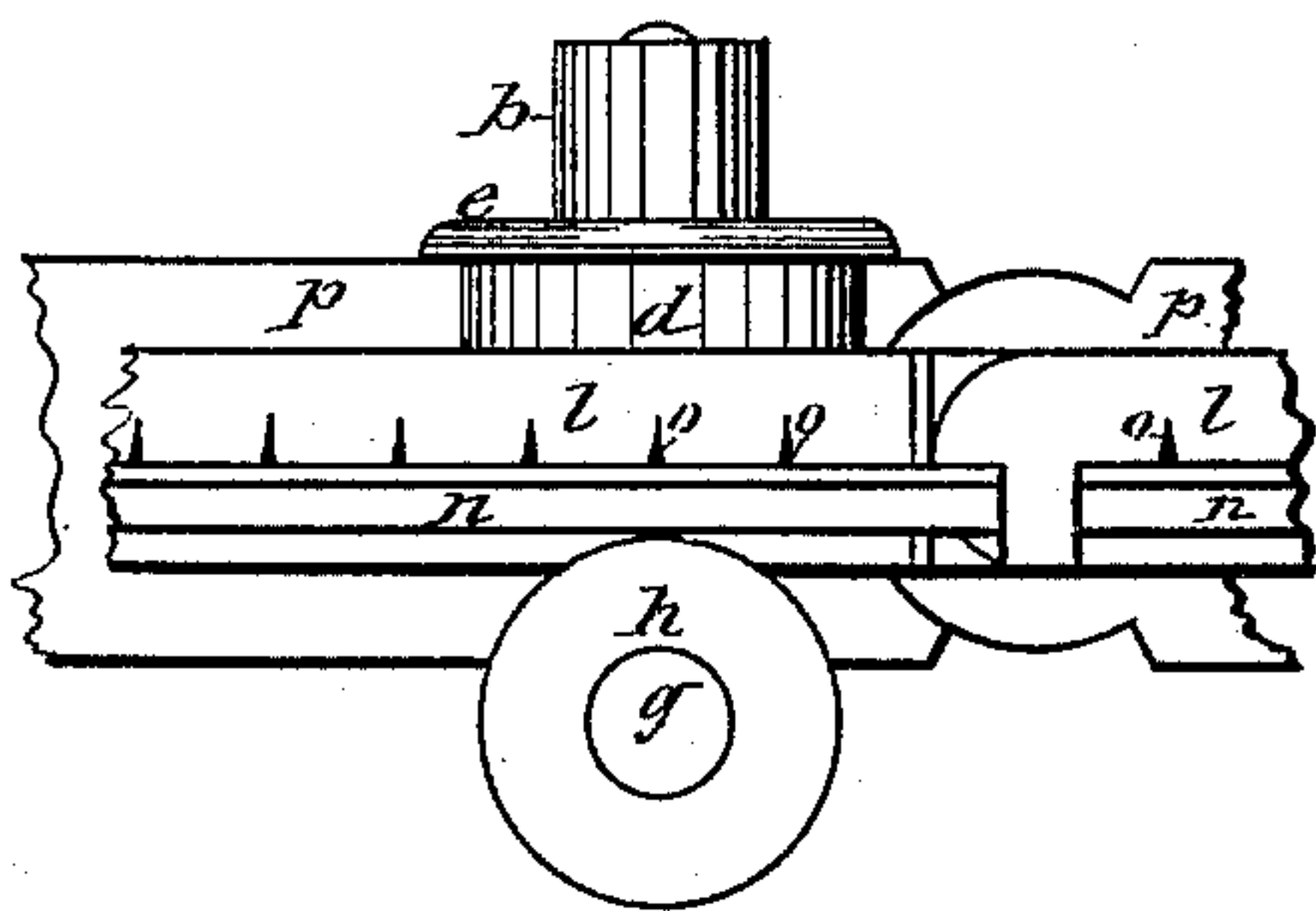


Fig. 5

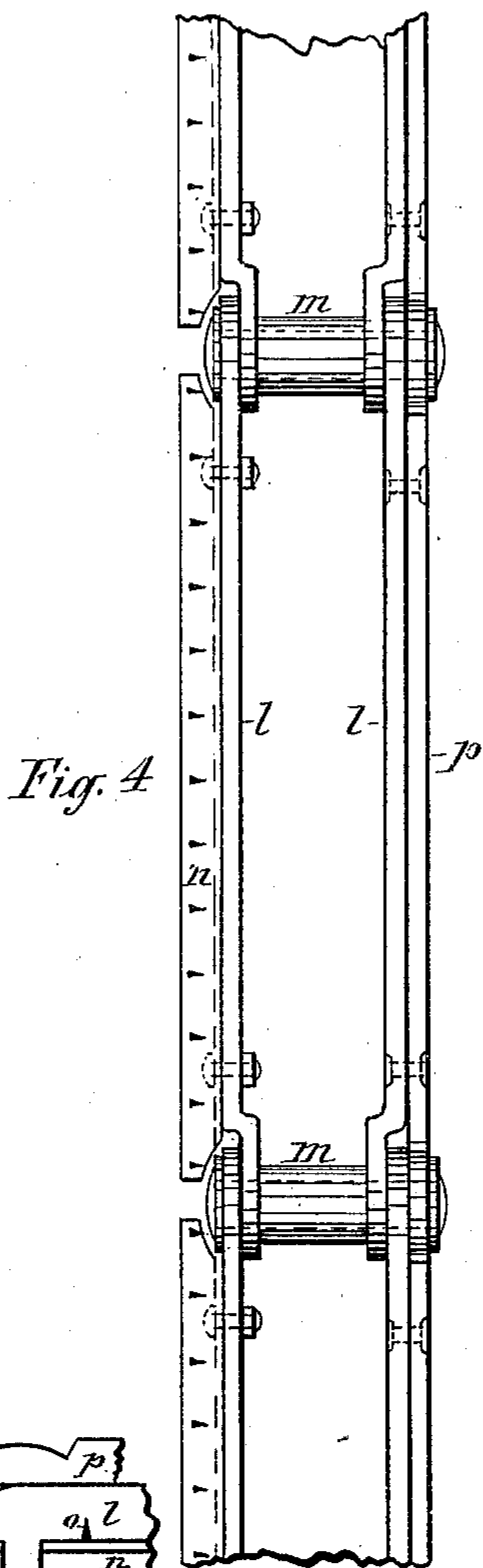


Fig. 4

WITNESSES:

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UNITED STATES PATENT OFFICE.

JOHN SINNAMON, OF OSWEGO, NEW YORK.

MACHINE FOR STRETCHING AND DRYING CLOTH.

SPECIFICATION forming part of Letters Patent No. 232,854, dated October 5, 1880.

Application filed July 19, 1880. (No model.)

To all whom it may concern:

Be it known that I, JOHN SINNAMON, of Oswego, in the county of Oswego, in the State of New York, have invented new and useful Improvements in Machines for Stretching and Drying Cloth, of which the following, taken in connection with the accompanying drawings, is a full, clear, and exact description.

This invention relates to the tentering-chains employed for conveying cloth coated with sizing through a prolonged drying-frame and stretching said cloth during the process of drying, and has more particularly reference to that class of tentering-chains which are guided by stationary pulleys or friction-rollers.

The invention consists in an improved construction of said tentering-chain and means for guiding the same in its movement through the cloth drying and stretching apparatus, whereby increased strength is imparted to the said chain and a more accurate movement with less friction of same is obtained.

The invention is fully illustrated in the accompanying drawings, wherein Figure 1 is a transverse section of my improved tentering-chain, with an end view of the means for guiding the same. Fig. 2 is a plan view of the aforesaid devices for guiding the chain. Figs. 3 and 4 are side and plan views, respectively, of sections of my improved tentering-chain, and Fig. 5 is a side view of said chain and the means for guiding it.

Similar letters of reference indicate corresponding parts.

A represents a bracket or hanger bolted to the top of the string-timber B, which is extended the length of the cloth stretching and drying apparatus in the usual manner.

The hanger A is formed with a goose-neck, *a*, which overhangs the inner edge of the stringer B, and is provided at its extremity with a vertically-socketed head, *b*.

In the socket of the head *b*, from the under side thereof, is secured a pin, *c*, having on its lower end a head, between which and the under side of the head *b* is a pulley or roller, *d*, pivoted to said pin, said roller having at its upper end a horizontally-projecting peripheral flange, *e*.

In a socket, *f*, on the base of the bracket A

is secured horizontally a pin, *g*, the axis of which is at right angles to and in a perpendicular line from the axis of the roller *d*.

Upon the pin *g* is mounted a roller, *h*, which is provided at its outer end with a peripheral flange, *i*, and at its rear end with a circumferential groove, *k*, the forward face or shoulder of which is in a perpendicular line with the rear face of the upper roller, *d*, as shown in Fig. 1 of the drawings.

l l represent two links of a chain, which links are formed of flat bars of metal of equal lengths and heights, and secured parallel to each other by bolts *m* passing through the ends of said links and shouldered against the inner sides thereof. The said links are formed at one end with an inward offset, so as to receive on their outside the straight end of the succeeding links and maintain the exterior surface of the chain straight. The successive links of the chain are coupled by the bolt *m* passing through their extremities. The links *l* are of proper height to allow them to pass horizontally between the under side of the roller *d* and top of the roller *h* without undue vertical play, and the bolts *m* are of such lengths from shoulder to shoulder as to bring one link close to the flange *i* and the other link close to the edge adjacent to the groove *k* of the roller *h*.

To the outside of the link, abutting against the flange *i*, is attached an L-shaped plate, *n*, usually made of brass, and having secured to its horizontal flange the tenter-hooks *o*, upon which is hooked the edge of the cloth undergoing the drying and stretching process.

To the outer side of the link, near the groove *k*, is firmly attached a wider link, *p*, which travels in the groove *k* of the roller *h*, and bears with its upper end against the rear face of the pulley *d* and the upper flange, *e*, thereof. The strain incident to the stretching of the cloth attached to the tenter-hooks *o* is transmitted to the wide link *p* by the links *l l* and their connecting-bolts *m*, and this strain is resisted chiefly by the before-described bearings of the wide link in the groove of the rollers *h* and on the rear face of the roller *d*, and thus to a great extent the strain on the outer end of the roller *h* and the friction on the flange thereof are reduced. The rear link, *l*, being

rigidly secured to the link *p*, serves to thoroughly brace the same, so as to prevent its yielding to the lateral strain.

It will be observed that by this peculiar construction and combination of the chain and its carrying-rollers the weight of the chain and cloth attached thereto moves over horizontally-pivoted rollers, which at the same time aid in resisting the lateral strain.

Furthermore, by my improvements each set of carrying and guide rollers *h* and *d* are pivoted to one hanger, A, and are thus secure in their relative position. Said hangers being all made after one pattern and the rollers *h* and *d* being fitted alike to all of them greatly facilitates their alignment in the stretching and drying machine.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. In combination with the tentering-chain composed of the links *l l*, of equal height, and the wider link *p*, attached to the outer link, *l*, and the vertically-pivoted roller *d*, provided with flange *e*, the horizontally-pivoted roller

h, arranged diametrically beneath the roller *d* and provided with the flange *i* at its outer end, and with the groove *k* in a perpendicular line with the rear face of the roller *d*, substantially as described and shown.

2. The combination of the bracket A, provided at its base with the socket *f*, and having the goose-neck *a*, with a socketed head, *b*, the pin *c*, extended vertically through the head *b*, the flanged roller *d*, pivoted on pin *c*, the roller *h*, provided with flange *i* and groove *k*, the horizontal pivotal pin *g*, secured in socket *f*, and the chain composed of the links *l l*, of equal height, and wider link *p*, attached to the outer link, *l*, substantially in the manner described and shown.

In testimony whereof I have signed my name and affixed my seal in the presence of two attesting witnesses, at Syracuse, in the county of Onondaga and State of New York, this 6th day of July, 1880.

JOHN SINNAMON. [L. S.]

Witnesses:

E. LAASS,

WM. C. RAYMOND.