

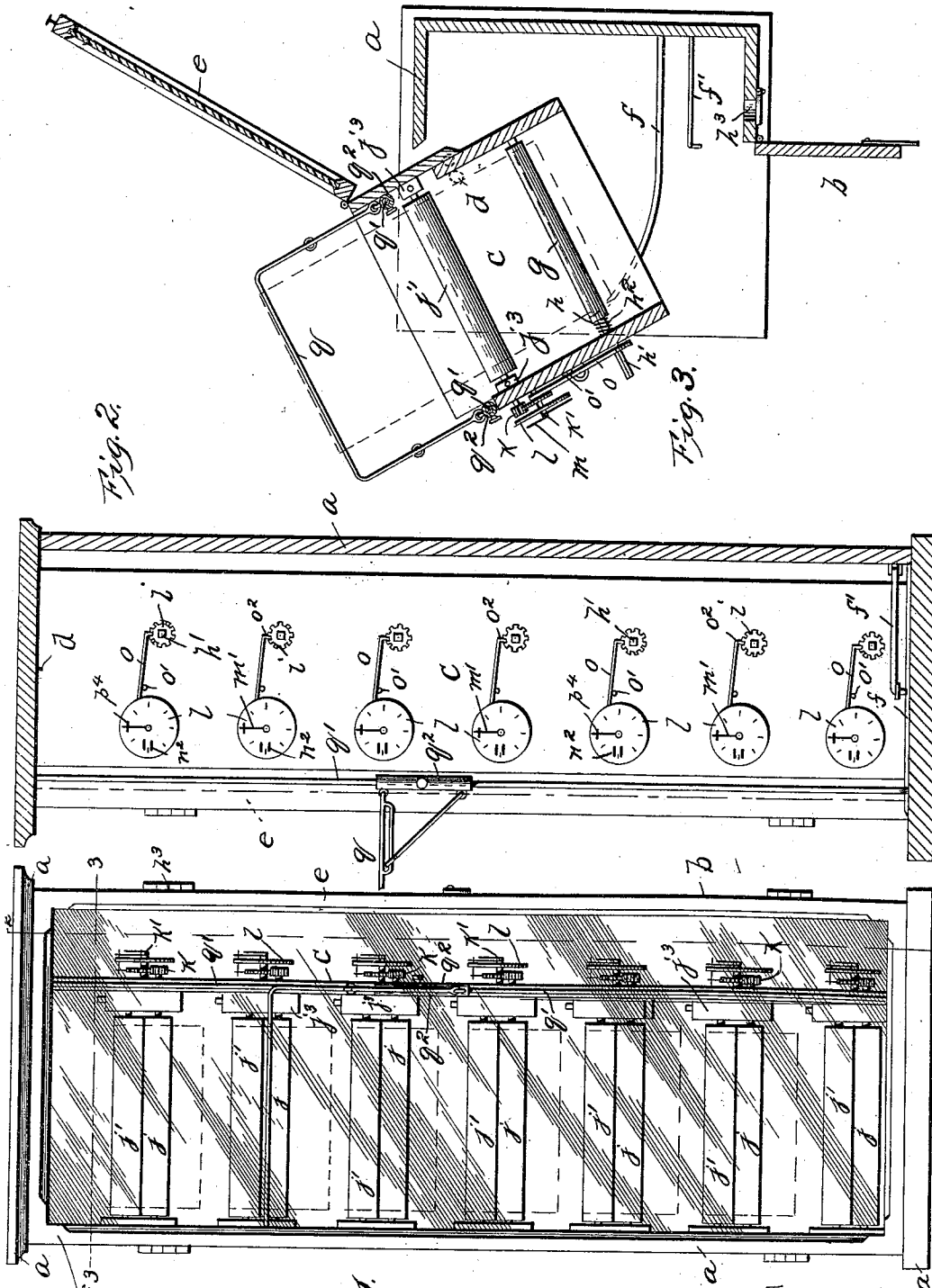
(No Model.)

2 Sheets—Sheet 1.

W. H. W. JENKINS.
CLOTH MEASURING MACHINE.

No. 550,509.

Patented Nov. 26, 1895.



Witnesses:
E. C. Duff
Hubert Peck

Fig. 1.

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Attorney

(No Model.)

2 Sheets—Sheet 2.

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Fig. 4.

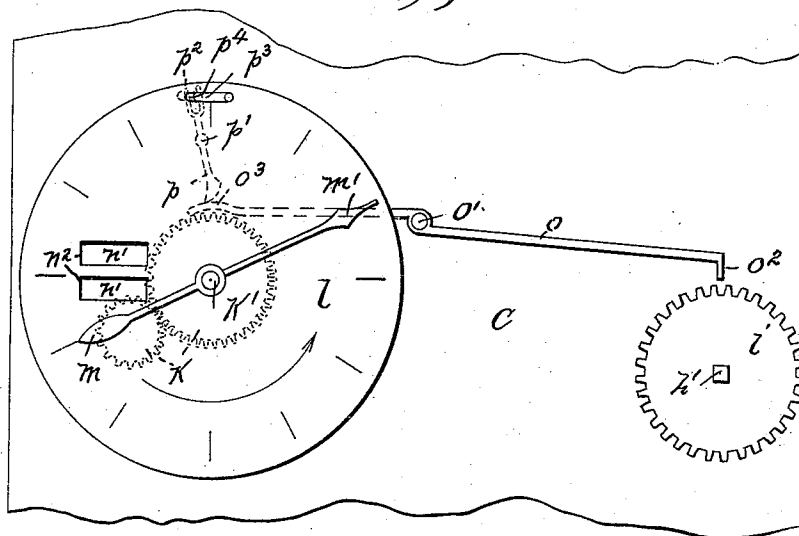


Fig. 5.

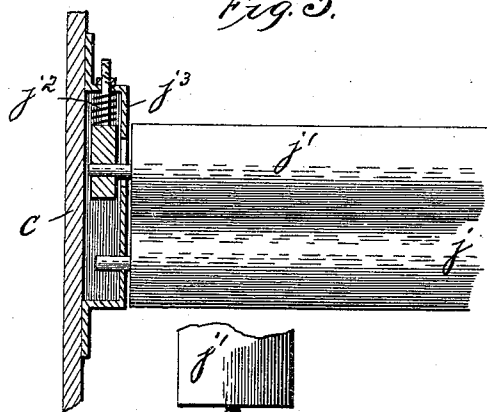
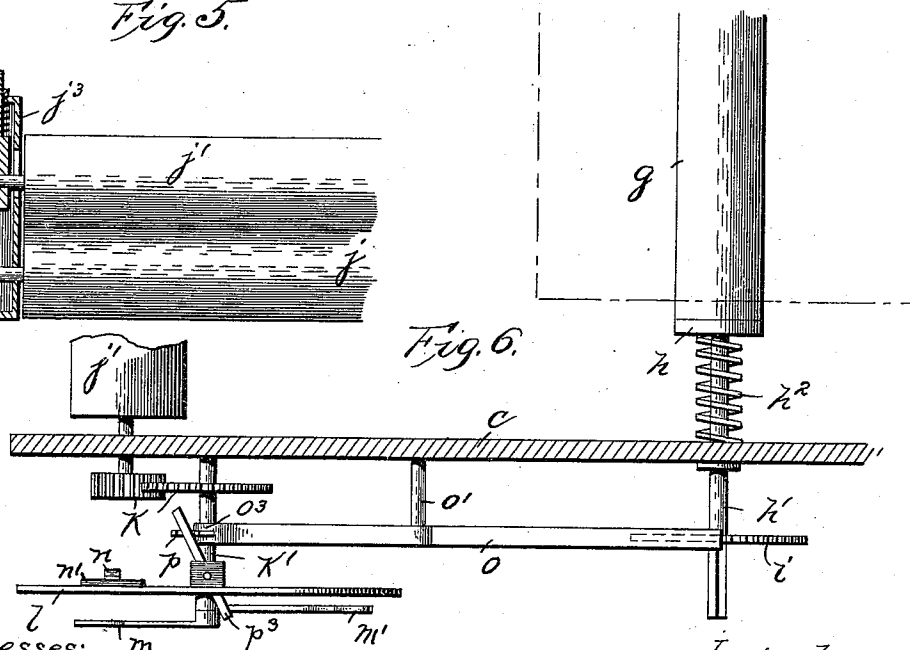


Fig. 6.



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UNITED STATES PATENT OFFICE.

WILLIAM H. W. JENKINS, OF PORTSMOUTH, OHIO.

CLOTH-MEASURING MACHINE.

SPECIFICATION forming part of Letters Patent No. 550,509, dated November 26, 1895.

Application filed March 8, 1895. Serial No. 540,964. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM H. W. JENKINS, of Portsmouth, in the county of Scioto and State of Ohio, have invented certain new and useful Improvements in Cloth-Measuring Machines; and I do hereby declare that the following is a full, clear, and exact description of the invention, which will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form part of this specification.

This invention relates to certain improvements in cabinets and measurers for cloth.

The object of the invention is to provide an improved cabinet for carrying and inclosing bolts of cloth and indicating the amount of cloth on each bolt.

A further object of the invention is to provide a carrier for a bolt of cloth, provided with a registering device to show the quantity of cloth in the bolt, and which is so constructed as to permit any desired length of cloth to be unwound from the bolt and automatically stop the bolt and lock the same when the desired quantity of cloth has been removed therefrom.

A further object of the invention is to provide certain improvements in details of construction and arrangements of parts whereby a simple and exceedingly effective and durable cabinet and cloth-measuring mechanism is provided for use in dry-goods stores and the like to contain and inclose the bolts of cloth.

The invention consists in certain novel features of construction and in combinations of parts, more fully and particularly described hereinafter, and pointed out in the claims.

Referring to the accompanying drawings, Figure 1 is a front elevation of the cabinet closed, the measuring-rolls and registers being seen through the glass-front door. Fig. 2 is a vertical section through the closed case on the line 2 2, Fig. 1. Fig. 3 is a cross-sectional view on the line 3 3, Fig. 1, showing the bolt-carrying frame swung out and the two doors open. Fig. 4 is an enlarged detail side elevation of a portion of the bolt-carrying frame, showing the registering mechanism for one measuring-roll and the locking mechanism for the bolt of cloth thereof, the registering

mechanism showing the bolt to contain forty yards of cloth and in position to permit ten yards of cloth to be removed therefrom, the lock-controlling hand having been pushed back from zero and thereby releasing the lock, dotted lines showing the levers controlled by said hand. Fig. 5 is a detail view, partially in section, of a pressure and a measuring roll. Fig. 6 is a detail enlarged cross-section through the right-hand side of the swinging bolt-frame, looking down on a registering mechanism shown in adjustment, (seen in Fig. 4,) and the lock showing part of bolt-holder and pressure-roll.

In the drawings, *a* is the casing, of suitable height and dimension to receive a bolt-frame of the desired capacity provided with a suitable base and with a closed top and a closed back. The two sides of the case extend from the back of the case forwardly a suitable distance, usually about one-half of the depth of the case, so that the front of the case and forward part of the sides are open, except as hereinafter provided. The right-hand side of the case is completed forwardly by the door *b*, having glass panels and arranged to swing outwardly. The opposite side of the case is completed to the front by a portion of the side of the swinging frame *c*, carrying the bolts of cloth and measuring and registering mechanism for each. This frame is composed of the vertical sides and the top and bottom arranged within the case and pivoted or hinged at *d*, at or near one edge of the frame top and bottom and in the top and bottom of the case, (or otherwise,) so as to be capable of swinging outwardly partially from the case, (see Fig. 3,) or swinging backwardly into the case to a position with its sides parallel with the sides of the case and its left-hand side fitted against the left-hand side of the case and extending outwardly in continuation thereof. (See Fig. 1.) This frame is provided at its front edge with the door *e*, hinged thereto and arranged to close the front of the case, and at its free edge to lock to the free edge of the before-mentioned door to entirely close the case and inclose the frame carrying the bolts and measuring and registering mechanism.

A suitable curved track *f* can be provided on the bottom of the case for the frame car-

rying the cloth bolts; also, fastening means, such as f' , can be employed to lock the frame in position, if desired, although I do not limit myself to the employment of any such devices.

5 The swinging frame mentioned and which can be entirely inclosed within the case is formed to carry a desirable number of removable bolts of cloth, the bolts being preferably arranged in suitable vertical series in the rear
10 portion of the frame. The frame can be formed to carry any number of bolts from one up. Each bolt is provided with separate measuring and registering mechanisms so formed as to always indicate at the side of said
15 frame the quantity of cloth remaining on the bolt, and also so formed as to lock the bolt against rotation when the amount of cloth desired has been removed therefrom and to
20 set to permit being unwound.

In the drawings, g is the removable core on which the bolt of cloth is wound. This core is at one end provided with a journal turning and removably fitted in a suitable bearing in the left-hand side of the frame. The
25 opposite end of the roller is formed to intermesh with and removably fit a head h , rigid on the end of the shaft h' , passing outwardly through the right-hand side of the swinging frame. This short shaft h' is mounted to
30 permit longitudinal movement thereof, and a coil-spring h^2 is arranged between said head h and the side of the frame to yieldingly press said shaft inwardly and the head into tight
35 engagement with the core of the bolt of cloth, so as to lock the bolt to turn with said shaft. The notched wheel i is rigid on the outer portion of the shaft h' . The outer end of
40 this shaft h' is formed so that a key can be inserted through opening h^3 in the side of the casing to fit and turn said shaft to wind the cloth on the core previously mentioned.

j and j' are rollers arranged in the front portion of said swinging frame in front of the
45 bolt of cloth. Suitable bearings are provided for these rollers, and one of the rollers j' is a pressure-roll and has a sliding bearing constantly forced downwardly by spring j^2 in the casing j^3 . Adjustable nuts are provided,
50 whereby these springs can be varied in tension, and hence the tension of the pressure-roller on the measuring-roller can be controlled.

It is obvious that the springs force the
55 pressure-roll tightly against the measuring-roll, so that the rollers engage with the desired pressure.

The shaft of the measuring-roller is extended outwardly through the right-hand side
60 of the frame and forms the driving-shaft of the train of gears k from the shaft of roller j to the center arbor k' , passing through the dial-plate l and provided with two hands m and m' on its outer end, the hand m being
65 rigid with the center arbor and indicating the yards on the bolt, the hand m' turning with

the arbor, but being movable independent thereof and constituting the controller for the number of yards to be removed from the bolt. The face of the dial is usually divided
70 into sixty divisions, with the zero-mark at the top of the dial, each division usually indicating one yard. However, of course, I am not limited to any peculiar arrangement of divisions of the dial-face.

Each dial is provided with suitable means
75 to indicate the cost-price and a selling-price of the particular goods in the bolt. This means is here shown as comprising the spring-holder n , secured at the rear side of the dial-plate
80 to removably hold the card n' , having the price-mark thereon, behind the openings n^2 in the dial-plate.

o is a vertically-swinging latch or lock fulcrumed at o' between its ends and having the
85 shouldered end o^2 above and adapted to drop into and lock the notch-wheel on the bolt-holder shaft. The opposite end of this latch extends into the frame carrying said train of
90 gears, with its upper side usually curved at o^3 and arranged beneath the lower curved end of the upright lever p , fulcrumed at p' between its ends and having the upper forked end p^2 , between which the end of the horizontally-arranged lever p^3 is loosely confined.
95 This lever p^3 is fulcrumed between its ends and its outer end extends through a slot p^4 in the dial-plate immediately opposite the zero-mark at the upper end of the dial-plate. The lower end of the lever p engages the
100 curved end of the latch and controls the position of the latch, so that the latch can be allowed to drop into said notched wheel and lock the bolt against unwinding, and can be
105 held therefrom (see Fig. 4) to permit unwinding of the bolt until the desired length of cloth has been removed therefrom. This is controlled by the movable hand on the dial, which is formed to engage the end of said
110 horizontal lever p^3 , projecting through the dial-plate, so that when said lever is swung by said hand, when the hand is being pushed backwardly away from the zero, the latch will be lifted by the lever sliding up on curved
115 end o^3 , and the bolt will be free to rotate, and when said hand engages said lever end in the opposite direction the lever p will be swung from curved end o^3 and allow the latch to drop and lock the bolt. When originally
120 winding the cloth on the core, the hands are both set at zero, and the cloth is wound on the bolt by means of a key engaging the bolt-shaft. If a complete bolt is placed in the bolt-holder, the register is set to indicate the number of yards in the bolt. The cloth passing
125 between the pressure-roll and the measuring-roll rotates the same, and the movement thereof is imparted to the hands of the dial, the gearing and size of the rollers being so proportioned that each division on the dial
130 represents a certain predetermined length, as a yard. Thus when the bolts have been

formed the finger on the dial will indicate the exact number of yards on the bolt. Such movement of the hands, when the cloth is being wound on the bolt in the machine, will not lock the latch of the bolt-shaft, as the hands move forwardly around the dial and in the direction to unlock said shaft and hold the latch in the arranged position. Now if it is desired to unwind, say, ten yards from the bolt, and, say, the bolt contains forty yards, the long hand is moved forwardly on the dial to the figure "10" (see Fig. 4) from zero-point, and in so doing rocks the connecting-levers p^3 , so as to lift the latch from the bolt-shaft. The cloth is then drawn between the roll, and both hands are moved backwardly by the rolls and gearing until the ten yards are drawn off. The long hand then reaches zero-point and engages the projecting end of the horizontal lever p^3 , and thereby swings said lever p so as to free lever p from the latch and thereby drop the latch and lock the bolt against further rotation, and the other hand m is moved back to the "30" point, which indicates that there are thirty yards still on the bolt.

The swinging bolt-frame can be conveniently swung out where access thereto is desired to replace or remove bolts or to inspect cloth or for other reasons.

When it is desired to remove cloth from any bolt, the two doors can be opened to permit setting the locking mechanism and drawing off the cloth.

The swinging frame can be provided with a guide g , arranged in front of the rolls, with its front bar arranged a predetermined distance from the presser-roller—say one-quarter of a yard. The cloth is cut off at this front bar, so that a quarter of a yard length of cloth is left hanging from the rolls. This enables easy and ready inspection of the cloth and an end for grasping when drawing off the cloth. This guide is arranged to swing vertically when not in use against the front of the swinging frame.

When the swinging frame is formed with a plurality of bolts and pressure-rolls, &c., the front sides of the frame have a pair of slide-rods q' , on which the guide slides vertically to any pair of pressure-rolls, when it can be secured by clamping-screws or other means. The guide can consist of the top frame, carrying the front bar and pivoted to slide-tubes q^2 , and the swinging brace pivoted to said tubes and working in slots in said frame.

The rolls rotated by the cloth are usually covered by some material to form a friction-surface to take hold of and be positively rotated by the cloth.

Although the cabinet is here shown arranged for seven bolts, yet I do not limit myself to any specific number of bolts from one up. The cabinets are usually made to contain from twelve to twenty-five bolts.

The many advantages and great utility of

this invention are obvious. The room now usually taken up by counters, shelving, &c., can be otherwise occupied or utilized. The cloth will all be inclosed and covered, and it will not be necessary to take down and put up the bolts, as the hanging ends from the pressure-rolls will sufficiently display the goods.

The stock on hand can be determined in a short time by merely glancing at the various registers.

It is evident that various changes might be made in the forms, arrangements, and constructions of the parts described without departing from the spirit and scope of my invention. Hence I do not wish to limit myself to the exact construction herein set forth, but consider myself entitled to all such changes as fall within the spirit and scope of my invention.

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

1. The combination with an inclosing case, of a vertical frame longitudinally arranged therein and open at the front and pivotally mounted therein so as to swing laterally to permit ready access to the interior thereof, the vertical series of removable cloth bolt carriers transversely mounted in the sides of said frame, the vertical series of measuring and pressure rolls mounted in the frame in front of said carriers, substantially as described, and registering mechanism for each measuring roll arranged on the outer side of said frame, substantially as described.

2. The combination of a case having a front door, a vertical laterally swinging frame arranged within the case and open at the front and rear, the vertical series of bolt carriers in the frame, the corresponding vertical series of measuring and pressure rolls provided with the registering mechanisms, the two vertical rods q' , q' , longitudinally arranged on the opposite sides of the front of the frame and guiding the cloth, and the vertically adjustable slides on said rods provided with the vertically folding cloth guide and gage in front of the rolls, substantially as described.

3. The upright case, a door at the front portion of one side thereof, the other side extending a portion of the distance to the front, the upright frame in the case having the top and bottom pivoted at one side to the case top and bottom, and the sides, one side closing said open side of the case, the door hinged to the outer side of said frame and arranged to close against the free edge of the other door, and one or more bolt holders in said frame, substantially as described.

4. The merchant's cabinet comprising the case, in combination with an upright frame eccentrically pivoted in said case to swing horizontally into and out of the same, and carrying bolt holders and cloth measuring devices, and a door hinged to said frame to

close the front of the case when the frame is swung into its normal position therein, substantially as described.

5 The combination of a frame, a bolt holder having a notched wheel thereon, a swinging latch to engage and lock said wheel and the bolt holder, pressure and measuring rolls, a register having a dial and pointer to indicate the quantity of cloth in the bolt, a lever pro-
10 jecting through the dial and controlling said latch, and another pointer operated by the

register and movable over the dial to engage said lever and operate the same, substantially as described.

In testimony that I claim the foregoing as my own I affix my signature in presence of
15 two witnesses.

WILLIAM H. W. JENKINS.

Witnesses:

OWEN CROSS,

JAMES R. MILLER.