

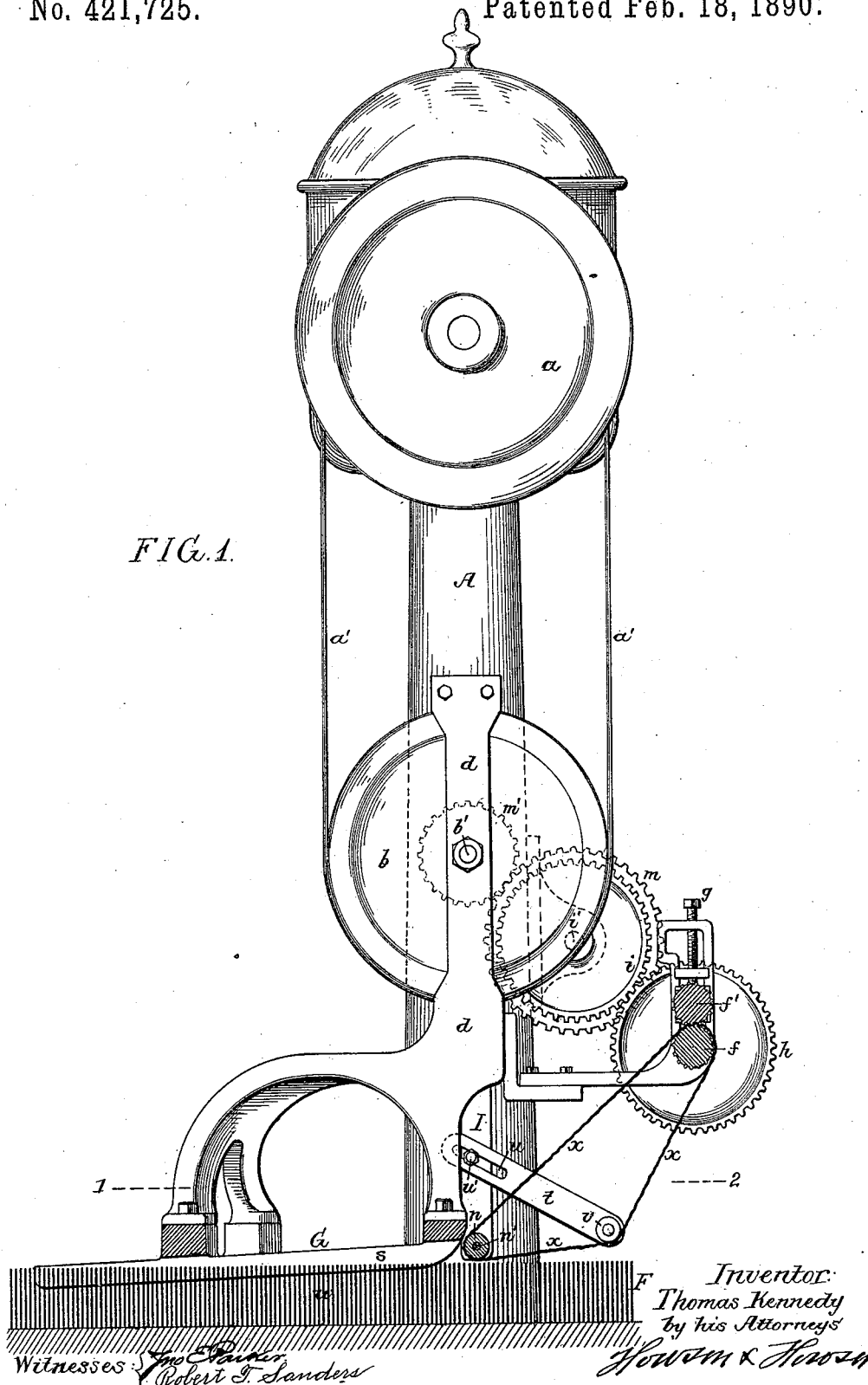
(No Model.)

2 Sheets—Sheet 1.

T. KENNEDY.
WOOL COMBING MACHINE.

No. 421,725.

Patented Feb. 18, 1890.



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FIG. 2

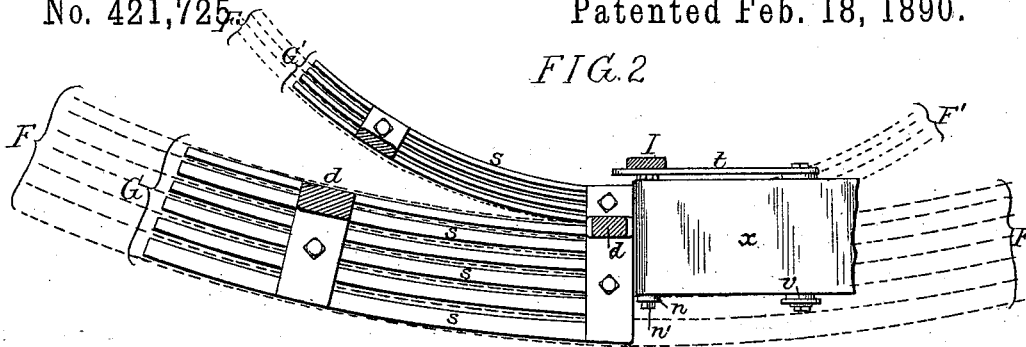


FIG. 4

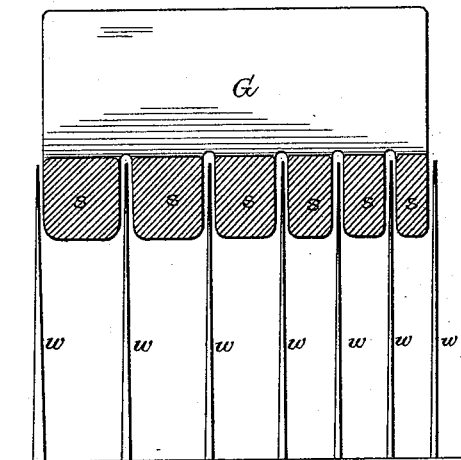
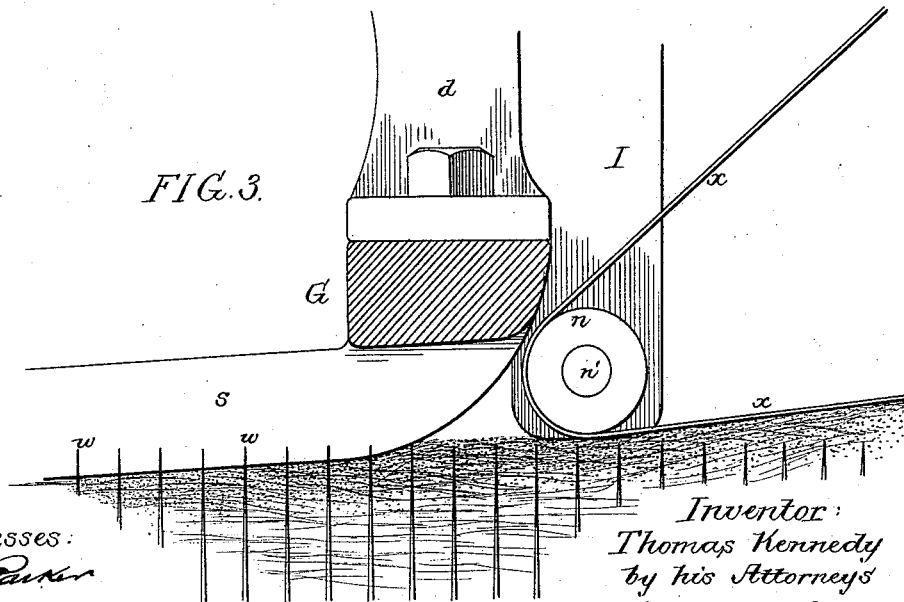


FIG. 3.



Witnesses:

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Inventor:

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UNITED STATES PATENT OFFICE.

THOMAS KENNEDY, OF PHILADELPHIA, PENNSYLVANIA.

WOOL-COMBING MACHINE.

SPECIFICATION forming part of Letters Patent No. 421,725, dated February 18, 1890.

Application filed September 6, 1889. Serial No. 323,133. (No model.)

To all whom it may concern:

Be it known that I, THOMAS KENNEDY, a citizen of the United States, and a resident of Philadelphia, Pennsylvania, have invented certain Improvements in Wool-Combing Machines, of which the following is a specification.

The object of my invention is to provide an acceptable substitute for the usual dabbing-brush for causing engagement of the wool with the teeth of the rotating comb rings or circles of a wool-combing machine; and this object I attain in the manner hereinafter set forth, reference being had to the accompanying drawings, in which—

Figure 1 is a side elevation, partly in section, of sufficient of a wool-combing machine to illustrate my invention. Fig. 2 is a sectional plan view of part of the machine on the line 1 2, Fig. 1. Fig. 3 is an enlarged sectional diagram illustrating the operation of that part of the machine to which my invention particularly relates, and Fig. 4 is a transverse section of part of the machine.

In Fig. 1 A represents one of the fixed posts or columns of a wool-combing machine, having at the upper end a bearing for a driving-shaft B, provided with a belt-pulley *a*, the belt *a'* from which drives a pulley *b*, which is free to turn on a spindle *b'*, carried by the post A and by an arm or hanger *d*, secured to the post. This pulley usually operates a vertically-reciprocating dabbing-brush for pressing the wool into the teeth of the inner and outer rotating toothed circles or rings of the machine, which are shown, respectively, at F and F' in Fig. 2. The use of a reciprocating dabbing-brush is objectionable, however, partly on account of its action upon the wool, but mainly because of the jarring of the machine, due to the reciprocating motion—a result of the use of the reciprocating dabbing-brush being that the speed of the machine is necessarily limited, in order to prevent undue vibration. In carrying out my invention, therefore, I substitute for the reciprocating dabbing-brush a feed-belt for pressing the wool downward into the teeth of the comb-rings, and a pressing-shoe having inclined or beveled bars or plates for supplementing the action of the feed-belt and completing the

pressure of the wool into engagement with the comb-teeth.

The pressing-shoe shown in the drawings is composed of two parts G G', the former operating in conjunction with the teeth of the outer ring or circle F of the machine, and the shoe G' acting in conjunction with the teeth of the inner ring or circle F' of the machine, both parts of the shoe being carried by the forked lower end of the arm *d*, depending from the column or post A. The feed-belt *x* is driven by a roughened or corrugated roller *f*, into contact with which it is pressed by an upper roughened or corrugated roller *f'*, the bearings for the shaft of which are acted upon by a set-screw *g*, the shaft of the driving-roller *f* having a spur-wheel *h*, which meshes into a pinion *i* on a shaft *i'*, having a spur-wheel *m* meshing into a pinion *m'* on the hub of the pulley *b*.

The lower portion of the feed-belt *x* passes around a roller *n*, carried by a stud-bolt *n'*, secured to an arm I, which is connected to the post or column A, the belt-roller being located immediately in advance of the pressing-shoe and the belt being of such a width and so located as to overlap both the outer ring or circle F and the inner ring or circle F' of the machine to the desired extent, as shown in Fig. 2.

Each pressing-shoe has a series of ribs *s* extending down between the circumferential rows of teeth *w* on the ring or circle, in conjunction with which the pressing-shoe operates, these ribs having a circumferential contour similar to that of the toothed ring. As the rings rotate, therefore, the laps of wool extending radially inward over the rings are first acted upon by the feed-belt *x*, which extends down into close proximity to the tops of the teeth, as shown in Fig. 3, the consequence being that the laps of wool are pressed down onto the teeth and are carried forward by the latter, so as to come under the influence of the inclined or beveled ribs *s* of the pressing-shoe, by which the wool is still further pressed down onto the teeth, so that the latter will have a proper hold upon the same when the combing action is effected where the inner and outer rings or circles diverge.

In order that the gearing for driving the

belt x may be compactly arranged and yet provide for a comparatively acute angle of the downward run of the belt, so as to cause it to act upon the wool gradually, I hang to the depending arm I a bar t , the outer end of which carries a roller v , serving as a guide for the belt, the bar being adjustable longitudinally on the arm I by means of a slot u and securing-bolt u' , so that the angle of the downward run of the belt x may be varied, as desired.

I am aware that rotating rollers have been suggested as a means of pressing the wool down onto the teeth of the rings, and hence I make no claim for such a device. By the use of the belt and its guide-rollers, however, I am enabled to render the approach of the belt toward the tops of the teeth so gradual that it will perform the desired downward pressing duty without having any tendency to obstruct the forward movement of the wool, thus overcoming an objection to the use of rollers for the purpose.

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

1. The combination of the toothed rings of a wool-combing machine with a feed-belt for pressing the wool down onto the teeth of said rings, a ribbed shoe acting upon the wool after it leaves the feed-belt and effecting the further pressing of the wool down into the teeth, and guide or carrier rolls for the belt,

the forward roll being located close to the teeth of the rings, and the rear roll being some distance above the tops of the teeth, whereby a gradual approach of the downward run of the belt toward the teeth is effected, substantially as specified.

2. The combination of the toothed rings of a wool-combing machine with a ribbed pressing-shoe, a belt for pressing the wool into the teeth of the combs before it reaches the pressing-shoe, a driving-roll for said belt, and lower and intermediate carrier-rolls for the belt, the forward roll being located close to the teeth of the rings, and the rear roll being some distance above the tops of the teeth, whereby a gradual approach of the downward run of the belt toward the teeth is effected, substantially as specified.

3. The combination of the toothed rings of a wool-combing machine, the bevel-ribbed pressing-shoe, the feed-belt, driving and carrier rolls therefor, and an adjustable arm carrying an intermediate guide-roll for the downward run of the belt, substantially as specified.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

THOMAS KENNEDY.

Witnesses:

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HARRY SMITH.