

Ironing Hats.

Patented Apr. 10, 1841.



UNITED STATES PATENT OFFICE.

HENRY H. ROBBINS, OF MIDDLEBORO, MASSACHUSETTS.

MACHINERY FOR PRESSING BRAID AFTER IT HAS BEEN TRIMMED.

Specification of Letters Patent No. 2,044, dated April 10, 1841.

To all whom it may concern:

Be it known that I, HENRY H. ROBBINS, of Middleboro, in the county of Plymouth and State of Massachusetts, have invented new and useful Improvements in Machinery for Pressing Straw Braid After It Has Been Trimmed.

These improvements, the principles thereof, the application of said principles by which the same may be distinguished from other inventions of a similar nature, together with such parts or combinations as I claim to be my invention and for which I solicit Letters Patent, I have herein set forth in the following description and accompanying drawings herein referred to, which taken in connection form my specification.

Figures 1 and 2 of the accompanying plate of drawings represent my improved machinery, Fig. 1, being a side elevation and Fig. 2, a plan of the same.

My machinery is intended to be used after the braid has been trimmed, or the long and short ends have been separated from the straw braid in order to flatten it and give it the requisite gloss or polish.

A A A A is the frame work which supports the operative parts of the machine, which may be constructed as represented in the drawing or in any other suitable manner.

After the braid has been properly trimmed, a skein or any proper quantity is placed on the reel *l* attached to the end of the shaft *m*. The braid is then passed through the loop *p* (attached to the framework A A) to and around a wheel, *a*, connected to a measuring apparatus which will be hereinafter mentioned. The braid is next passed through the pressing apparatus which is constructed as follows: I is a cast iron or steel roller or wheel, the surface or periphery of which should be properly polished. This wheel is firmly fixed on one end of the shaft G, the journals of which shaft rest and revolve in suitable bearings at H H. Immediately beneath the wheel I is a hollow box K formed of iron or steel or any other proper metal. The upper side of this box is curved or made concave as shown by dotted lines in Fig. 1, the curvature being concentric with that of the wheel and the exterior surface of the concave side being polished similarly to the periphery of the wheel. This box I rests on the top of one end of a bent lever L M N shown in Fig. 1. One end of the lever is notched and in these

notches the loop or hook Q of the weight R is arranged at pleasure, for the purpose of pressing the box K against the periphery of the wheel I, the amount of the force with which it is pressed upward being varied by changing the position of the weight R in the notches of the lever L, M, N. The box K has a conducting pipe S S entering into it on one side, through which pipe steam from any proper generator may be introduced into said box for the purpose of heating the concave face of the same, an exhaust pipe T being arranged on the opposite side for the escape of the redundant or condensed steam.

The shaft G and machinery connected thereto is caused to revolve by means of a cogged wheel U on its end, connecting or engaging with another cogged wheel V on the shaft W, to which shaft any of the various kinds of power may be applied.

The braid is drawn through or between the pressing roller I and box K by means of a draw roller B on the shaft C, the journals of which shaft rest and revolve in suitable bearings in the standard or framework D. The shaft C and draw roller B are revolved with a proper velocity by means of a cross belt E E passing from a grooved pulley F on the shaft C, to and around the shaft G which is driven as above described.

The draw roller B keeps the braid properly extended as it passes between the pressing roller I and box K, the pressing between which serves to flatten any remaining ends which may project from the braid and the friction, occasioned by the revolving polished roller I on one side and that of the other side of the braid on the concave heated surface of the box K producing the requisite polish or gloss on the two sides of the braid.

As above suggested, there may be used in conjunction with the above described machinery, an apparatus for measuring the braid, which arrangement as I do not intend to claim it I shall merely describe generally.

As before mentioned the braid is passed or drawn over a wheel *a*, the circumference of which may be equal to thirty six inches or it may be of any other desirable dimensions. This wheel is placed on one end of a shaft *b*, Fig. 2, in which is inserted a pin or tooth *c*, which as it revolves engages with the teeth of the cogged wheel *d* on the shaft *e* which teeth may be ten in number. At

some other convenient part of the shaft *e* a pin or tooth *f* similar to that at *c* is inserted, which in revolving engages with the teeth of the wheel *g* on the shaft *h*, which
 5 teeth may be ten in number. It will be immediately perceived from the above description, that at every revolution of the wheel *a* and shaft *b* one yard of the braid has passed; and in like manner, it will be seen,
 10 from the above arrangement that every two revolutions of the shaft *b* will produce one revolution of the wheel *d* on the shaft *e*. The index *i* on the end of the shaft *e* shows on the dial *n* (the circumference of which is
 15 divided into ten equal parts), any number of yards less than ten, which may have passed the wheel *a*. Again as from the above specified arrangement, ten revolutions of the wheel *d* and shaft *e* are required to
 20 produce one revolution of the wheel *g* and shaft *h*, it is evident that at one revolution of the shaft *h* one hundred yards have passed the wheel *a*, every ten yards being shown by the divisions on the dial *o* by the
 25 index *k* on the end of the shaft *h*.

Instead of the hollow box *K* above described a cylinder may be used, said cylinder being heated by steam in a similar manner

to that by which the box is heated, but as the box is preferable and as the principle
 30 of the operation in the two methods, is the same, the only variation being in the use of a convex instead of a concave surface, I shall only suggest the use of the cylinder.

Having thus described my improved machinery I shall claim as my invention,
 35

Pressing straw braid by means of a polished revolving metallic wheel or roller in combination with a hollow metallic box, the upper side or face of which is concave and
 40 polished and which is heated by the introduction of steam as above described, the concave face being pressed against the periphery of the wheel by means of a bent lever and weight, the whole being arranged and
 45 operating substantially as herein above specified.

In testimony that the above is a true description of my said invention and improvement I have hereto set my signature this
 50 thirtieth day of December in the year eighteen hundred and forty.

HENRY H. ROBBINS.

Witnesses:

ELIAB WARD,
 EARL MOLEN.