D. P. MARSTON.

Improvement in Machines for Dressing Wheel-Fellys.

No. 114,169. Patented April 25, 1871.

Fig. 1.

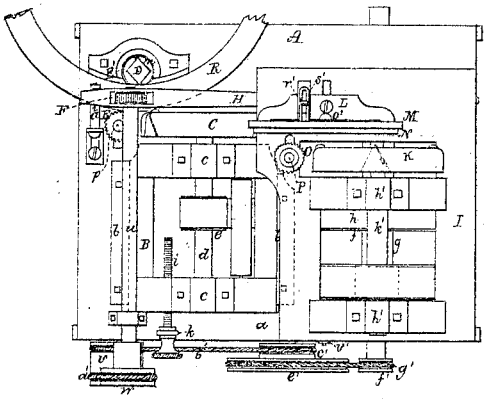


Fig. 4.

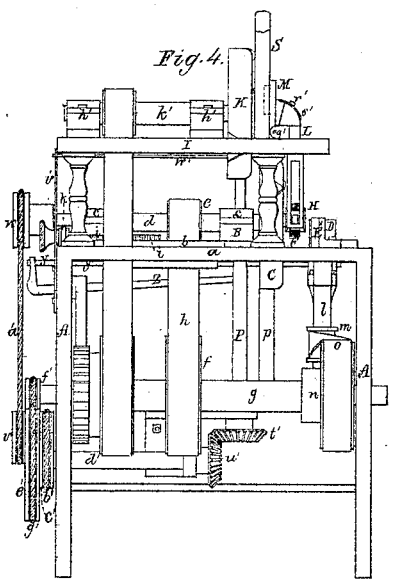


Fig. 2.

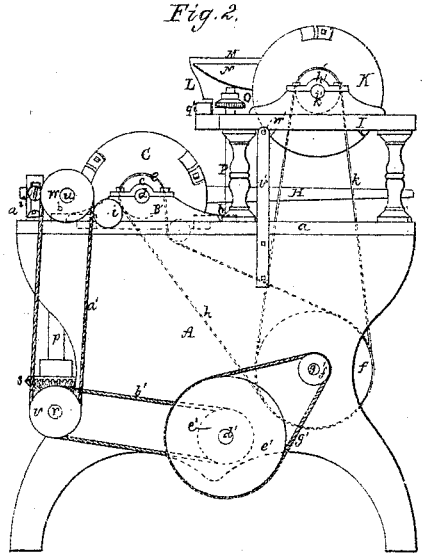


Fig. 3.

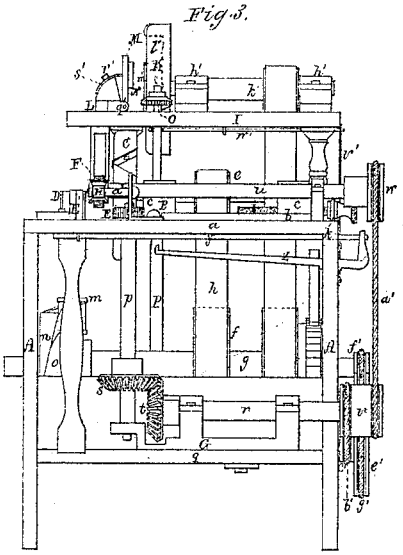


Fig. 5.

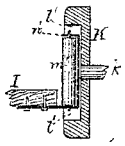
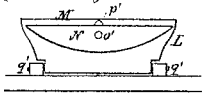


Fig. 6



Witnesses

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DUDLEY JEFFERSON MARSTON, OF AMESBURY, MASSACHUSETTS.

Letters Patent No. 114,169, dated April 25, 1871.

IMPROVEMENT IN MACHINERY FOR DRESSING WHEEL-FELLIES.

The Schedule referred to in these Letters Patent and making part of the same.

To all persons to whom these presents may come:

Be it known that I, DUDLEY JEFFERSON MARSTON, of Amesbury, of the county of Essex and State of Massachusetts, have invented a new and useful Improvement in Machine for Dressing Wheel-Fellies; 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;

Figure 2, a side elevation;

Figure 3, a front-end view; and

Figure 4, a rear-end view of it.

The machine is to dress or reduce a felly not only on its inner and outer curved periphery at one operation, but also on either of its two opposite sides, giving the said side its requisite bevel.

In the drawing—

A denotes the frame of the machine.

On the top *a* of the said frame is an adjustable carriage, B, arranged between two parallel guides, *b b*.

The said carriage supports in bearings *c c* a transverse shaft, *d*, carrying on one end a cutter-wheel, C.

On the said shaft is a pulley, *e*, around which and another pulley or wheel, *f*, fixed on a driving-shaft, *g*, an endless belt, *h*, is arranged.

A screw, *i*, arranged to turn in a standard, *k*, screws into the carriage B, and serves to effect its adjustment or that of the cutter-wheel relatively to another rotary cutter-wheel or head, D, fixed on the upper end of a vertical shaft, *l*.

On the shaft *l* is a pulley, *m*, about which and a pulley, *n*, on the driving-shaft *g*, an endless belt, *o*, is arranged.

The cutter-head D is disposed within a curved guide, E', formed and arranged on the top *a* of the frame A in manner as represented.

Aside of the cutter-head D, and arranged with it and the cutter-wheel C, are two feed-wheels, E F.

The feed-wheel E is fixed on the upper end of an upright shaft, *p*, whose foot is stepped into an adjustable carrier, G, arranged on a girt, *q*, of the frame A, in manner as shown.

The carriage G supports a shaft, *r*, connected with the shaft *p* by two bevel-gears, *s t*, and to a shaft, *u*, of the feeder F by pulleys *v w* and an endless band, a^1, going around such pulleys, all being as shown.

The shaft *p* is free to vibrate toward or away from the cutter-head shaft *l*, and is pressed toward such by a slide-bar, *y*, actuated by a lever, *z*, arranged as shown.

When the machine is in operation a weight is hung on the longer arm of the said lever *z*.

Furthermore, the feeder-shaft *u* is supported at its ends nearest to the cutter-head D in a bearing on a lever, H, whose fulcrum is shown at a^2, such lever being arranged as represented.

When the machine is in operation a weight is placed or hung on the longer arm of the lever H.

An endless belt, *b'*, goes around the wheel or pulley *v* and another wheel or pulley, *c'*, fixed on a shaft, *d'*, which derives rotary motion from the driving-shaft *g* by means of two pulleys, *e' f'*, and an endless belt, *g'*, all being disposed as shown.

Erected on the frame A and arranged on it as represented is an auxiliary frame or table, I, which supports in suitable bearings *h' h'* a shaft, *k'*, provided with a cutter-wheel, K.

The said wheel K has a circular recess, *l'*, in its front side, such being to receive a guide-roller, *m'*, arranged in such recess in manner as shown in Figure 5, which is a vertical section of the cutter-wheel and the roller, and the supporter *n'* of the latter, such supporter being a standard projecting from the top of the auxiliary frame or table I in manner as shown.

An adjustable carriage, L, provided with a vibratory plate, M, is arranged with respect to the cutter-wheel K in manner as shown, and so applied to the auxiliary table as to be capable of being adjusted nearer or further from the cutter-wheel, and fixed in position as circumstances may require.

Figure 6 represents an inner side elevation of the carriage L and its plate M, and an adjustable-curved guide or segment, N, fixed to the plate M by a set-screw, *o'*, going through a vertical slot, *p'*, made in the plate M.

The said plate M is pivoted to the carriage L at *q' q'*, and held in a suitable inclined position by means of a set-screw, *r'*, and a slotted arm, *s'*, arranged as represented.

Aside of the carriage L and in rear of the cutter-wheel K is a feed-wheel, O, fixed on a vertical shaft, P, which derives motion from the shaft *d'* by means of bevel-gears *t' u'* fixed on the shafts *d'* P.

A spring, *v'*, arranged as shown, and to press against a slide, *w'*, to embrace the feed-wheel shaft, serves to press the feed-wheel O toward the carriage L.

On the driving-shaft of the machine being put in revolution rotary motion will be imparted to the several cutter and feed-wheels, and in such case if a felly be introduced to the action of the cutter-wheels C and D in manner as shown at R, it will be pressed downward by the feed-wheel F, and laterally by the feed-wheel E, and at the same time will be driven forward by such feed-wheels, and will be simultaneously dressed or reduced on its inner and outer peripheries.

After having been so dressed it is to be turned up in manner as shown at S and run underneath the segment N and between the plate M and the next adja-

cent feed-wheel and the guide-roller in the cutter-wheel K. The said feed-wheel will advance it and the cutter-wheel will reduce it on one side to the bevel required.

I claim as my invention—

1. The combination of the cutter-wheels C D, the curved guide E', and the presser feed-wheels E F, all arranged, and the cutter and feed-wheels being provided with mechanism for supporting and operating them, substantially as explained.

2. The combination of the recessed cutter-wheel K, the guide-roller *m'*, the feed-wheel O, the adjustable carriage L, the vibratory adjustable plate M, and segment N, all being arranged and to operate, and provided with operative mechanism, substantially as explained and represented.

DUDLEY JEFFERSON MARSTON.

Witnesses:

R. H. EDDY,

J. R. SNOW.