A. DILTS.

Spoke-Setting Machine.

No. 219,699. Patented Sept. 16, 1879.

Fig. 1.

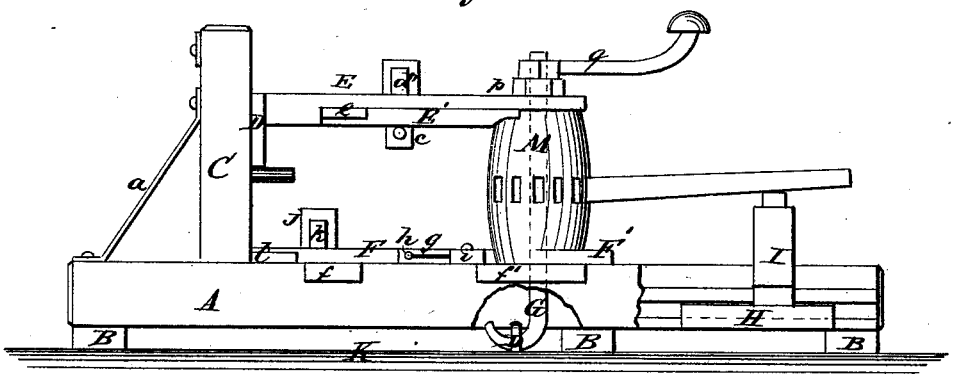


Fig. 2.

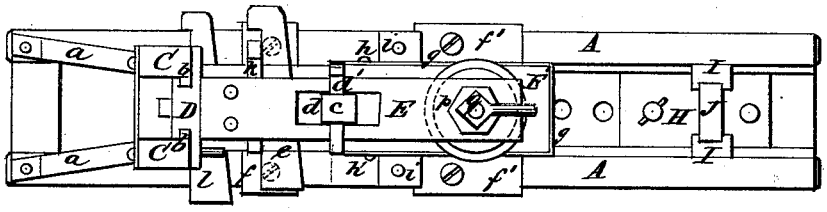
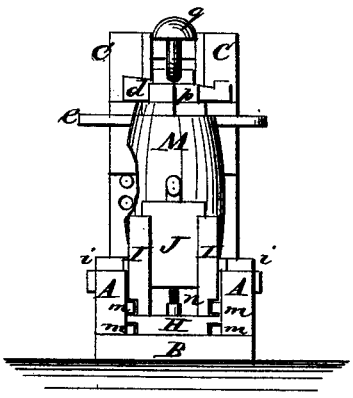


Fig. 3.



WITNESSES:

Achilles Schehl.

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UNITED STATES PATENT OFFICE.

ANDREW DILTS, OF DALLAS, IOWA, ASSIGNOR, BY MESNE ASSIGNMENTS, TO HIMSELF AND E. G. DILTS, ONE-FOURTH EACH, AND TO DANIEL WAGONER, ONE-HALF OF ALL HIS RIGHT, ALL OF SAME PLACE.

IMPROVEMENT IN SPOKE-SETTING MACHINES.

Specification forming part of Letters Patent No. **219,699**, dated September 16, 1879; application filed May 24, 1879.

To all whom it may concern:

Be it known that I, ANDREW DILTS, of Dallas, in the county of Marion and State of Iowa, have invented a new and Improved Spoke-Setting Machine, of which the following is a specification.

This invention relates specifically to improvement in the manner of setting spokes by hand.

Heretofore this has been done by placing the hub on a stool over a pit to give room for the spokes, which were driven in with a mallet, and guided by the hand alone. This, of course, led to great unevenness in the position of the spokes, and when out of line they could be restored only by knocking them one way or the other until they all aligned. This, of course, produced looseness in the spokes and injured the mortises.

The object of my invention is to set the spokes perfectly straight in the first instance.

It consists of a frame for holding the hub firmly on a pivot, so that it can be turned freely, and an adjustable gage for holding the spoke while being driven.

In the accompanying drawings, Figure 1 is a side elevation of my improvement. Fig. 2 is a top plan of the same, and Fig. 3 is a front-end view or elevation.

Similar letters of reference indicate corresponding parts.

Referring to the drawings, A A are the side plates of the machine, placed on cross-pieces B B B, and fastened thereto a short distance apart. Near the rear end posts C C rise from the plates A A, strengthened behind by braces *a a*.

On the inside edges of the posts C are guides *b b*, which engage the grooved edges of the head D, so that the latter slides freely up and down. In the head is tenoned, at one end, the horizontal top brace, E. The under side of this brace is rabbeted part of its length from the free end, and in this is placed an adjustable brace, E′, held by a stud, *c*, passed upward through the same and through a slot, *d*, in E, where it is held by a key, *d′*. A rabbet is made in the upper side of brace E′, at the rear end, and through this is passed a key, *e*, by means whereof the brace can be adjusted to and from the hub to accommodate it to those of different sizes. The end of this brace is concave, to enable it to bear evenly on the surface of the hub.

The upper edges of plates A A are connected by cross-pieces *f f′*, and on these is placed a bottom brace, F, which has a movable piece, F′, connected with its forward end by a metal strap, *g*, the ends whereof are slotted, and connected with the main part of the brace by pins *h*, passed through the slots into the main part of the brace. The opposite ends of these two parts are made concave, so they will clasp the hub firmly at the bottom.

The brace F is held by blocks *i i*, and also by a stud, *j*, passed up through the cross-piece *f* and the brace, and fastened by a transverse key, *k*. The rear end of brace F has a tongue, which projects between posts C C, and under this is a key, *l*, passed transversely through a recess made in its under side. By means of this key the brace can be adjusted forward and back to accommodate its position to the size of the hub.

In cross-piece *f′* and the end of top brace, E, are holes aligning with each other for the bolt G.

Near the forward end of the plates A A, and between them, is placed a plate, H, the rabbeted edges whereof are confined between the cleats *m m*. From these, on either side, rise the vertically-grooved guides I I, in which is confined the gage J, adjustable vertically by a set-screw, *n*, the head whereof bears against the plate H.

The machine is employed as follows: It is set upon the floor K, with the hooked head of the bolt G engaging the staple L, driven in the floor, the length of the bolt projecting up through the hole in cross-piece *f′*. The top brace, E, is lifted to one side, and the hub M placed over the bolt G. The projecting upper end of the bolt is then passed through a hole in the end of top brace, E, which is pressed down on top of the hub. A washer, *p*, is then passed over the bolt, and a lever-nut, *q*, screwed down upon it. The adjustable bottom and top braces, F, F′, and E, are then driven up against the surface of the hub, as shown in Fig. 1, and

the gage J lifted to give the proper dish to the spokes. A spoke is now taken, the tenon inserted in the mortise in the hub, while the end of the spoke is laid on the top of gage J. The workman places his foot on top of the spoke, over the gage, and with a mallet drives it in the hub. The spokes are adjusted in this way, and driven in one after the other.

This arrangement enables the spokes to be driven in perfectly even and at any desired angle to the axis of the hub.

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

As an improvement in spoke-setting machines, the hook-bolt G, passed up through the cross-piece f', and adapted to receive the hub M, in combination with the top brace, E, vertically adjustable by means of head D, held in posts C C, brace E′, connected with brace E and adjusted by key *e*, and bottom brace, F, with connected part F′, said bottom brace being adjustable to and from the hub by key *l*, whereby the hub is held and braced to withstand the driving in of the spokes, substantially as described.

ANDREW DILTS.

Witnesses:
J. W. FINARTY,
L. M. ESTES.