E. BREED.

Improvement in Machines for Making Wheelbarrow Trays.

No. 130,273. Patented Aug. 6, 1872.

Fig. 1.

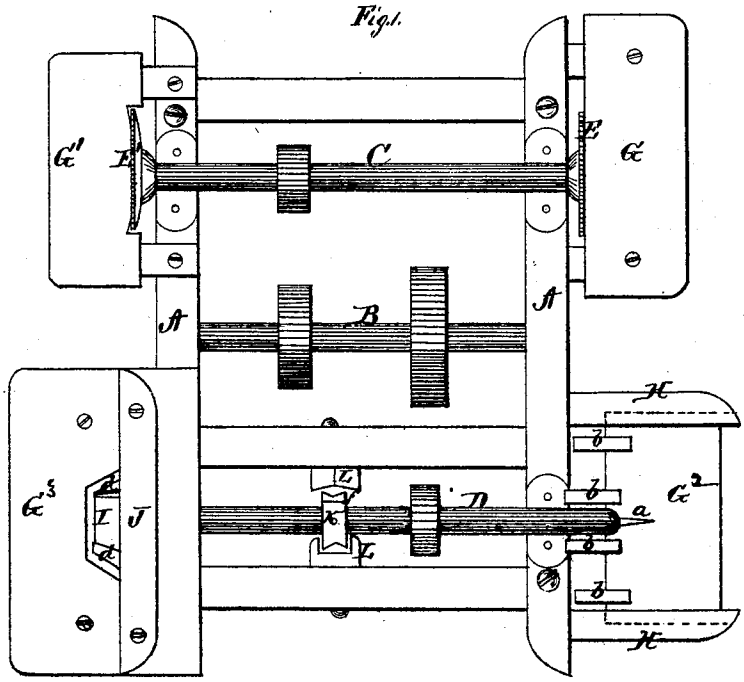


Fig. 2.

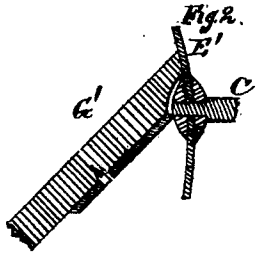


Fig. 3.

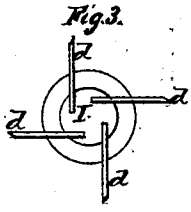


Fig. 4.

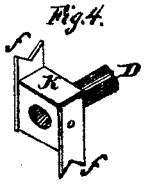


Fig. 6.

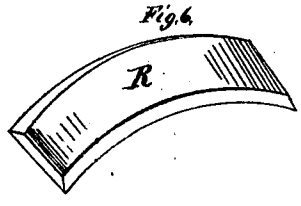


Fig. 5.

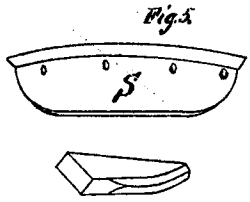
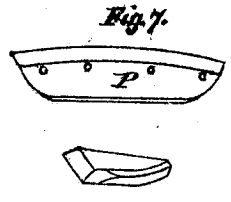


Fig. 7.



Witnesses:

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C. L. Ewert.

Inventor.

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per Alexander Mason

Attorneys

A.M. PHOTO-LITHOGRAPHIC CO. N.Y. (OSBORNE'S PROCESS.)

UNITED STATES PATENT OFFICE.

EZRA BREED, OF JAMESTOWN, NEW YORK.

IMPROVEMENT IN MACHINES FOR MAKING WHEELBARROW-TRAYS.

Specification forming part of Letters Patent No. **130,273**, dated August 6, 1872.

To all whom it may concern:

Be it known that I, EZRA BREED, of Jamestown, in the county of Chautauqua and State of New York, have invented certain new and useful Improvements in Machines for Making Wheelbarrow-Trays; and do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawing and to the letters of reference marked thereon making a part of this specification.

The nature of my invention consists in the construction and arrangement of a "machine for fitting and putting together boxes or trays for wheelbarrows," as will be hereinafter more fully set forth.

In order to enable others skilled in the art to which my invention appertains to make and use the same, I will now proceed to describe its construction and operation, referring to the annexed drawing, in which—

Figure 1 is a plan view of my entire machine; Figs. 2, 3, and 4 are detached views of certain parts thereof; and Figs. 5, 6, and 7, the three pieces of which a wheelbarrow-tray is composed.

A represents the frame of my machine, across the center of which, in the lower part, is located a shaft, B. This shaft obtains its motion from any suitable power, and from the said shaft motion is, by means of belts, communicated to the shafts C and D, which are located across the top of the frame A, one at each end. On one end of the shaft C is a common circular saw, E, with a table, G, outside of said saw, and connected with the frame. On the other end of the same shaft is secured a circular saw, E′, which is concave on its outer side, as shown in Fig. 2. On the outer side of this saw is an inclined table, G^1, attached to the frame A. The upper edge of the table G^1 is curved to correspond with and fit in the concavity of the saw E′. Upon one end of the shaft D is attached an auger-bit, *a*, and on this side of this frame A project horizontal bars H H, which are grooved longitudinally on their inner sides, and form guides, in which a table, G^2, slides back and forth. At the inner edge of this sliding table is a series of inclined bars, *b b*, arranged in curved form. Upon the other end of the same shaft is secured a conical head, I, in which are placed radiating triangular knives *d d*. This head and knives work in a slotted table, G^3, upon which and over the knives is a guide-bar, J. At a suitable point on the shaft D, within the frame, is secured a head, K, having two knives, *f f*, fastened to it. These knives have at their outer ends each a V-shaped notch, which forms the cutting-edge. On each side of the shaft D, opposite to the knife-head K, is attached a guide, L, one of said guides being square and the other V-shaped, as shown. R represents the bottom piece; P, the front piece; and S, the back piece, to form the bent box or tray for railroad-wheelbarrows. My machine is designed to fit these several pieces, P, R, and S, after they have been bent in the desired shape. The table G^3 on the machine is for fitting the bottom R, and it will readily be seen that when said bottom is held against the guide J, and passed along the same, the corner will be cut to the desired bevel by the beveling-knives *d d*. Changing ends with the bottom R brings the other edge to the knives *d d*, and finishes it in a like manner, leaving it all prepared to nail to the parts P and S. The inclined table G^1 with the concave saw E′ are for beveling and shaping the lower edges of the parts P and S, they having been bent as the bottom part R, and also marked by hand, being held for marking against the bottom R after its edges have been beveled. The saw E′ is concaved or dished to the desired circle, and against it is held the marked edge of the part P or S, which is guided by the hand to the desired shape upon the pitch of the table and dish of the saw, leaving the edges in the proper shape. The table G is for shaping the other edge of the parts P and S, the saw E being a common circular saw, and the shape is guided by the skilled eye of the operator to any desired shape. The pieces P and S are then taken to the head K with the knives *f f*, where the same edge that has been shaped on the table G is rounded by inserting that edge in the guides L and passing it over said knives, changing ends with the pieces P and S in order to always work with the grain of the wood. From the knives *f f* the pieces P and S go to the movable table G^2, where they are set edge-

wise against the pins *b b*, the beveled edge down, and nail-holes bored by the bit *a* at the desired places and angle.

I am aware that the various parts of my machine, taken separately, are not new, and I lay no claim to them as such; it is simply their combination in one machine, whereby a great saving in time, labor, and expense is effected, that I desire to cover.

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

The arrangement on the frame A of the circular saw E, concave or dished saw E′, bit *a*, triangular knives *d d*, and notched knives *f f*, having respectively the horizontal table G, inclined table G^1, movable table G^2, with inclined pins *b b*, slotted table G^3, with guide J and the guides L L, all constructed and operating as and for the purposes herein set forth.

In testimony that I claim the foregoing I have hereunto set my hand and seal this 13th day of June, 1872.

EZRA BREED. [L. S.]

Witnesses:
JAMES I. FOWLER,
JOHN BOOTEY.