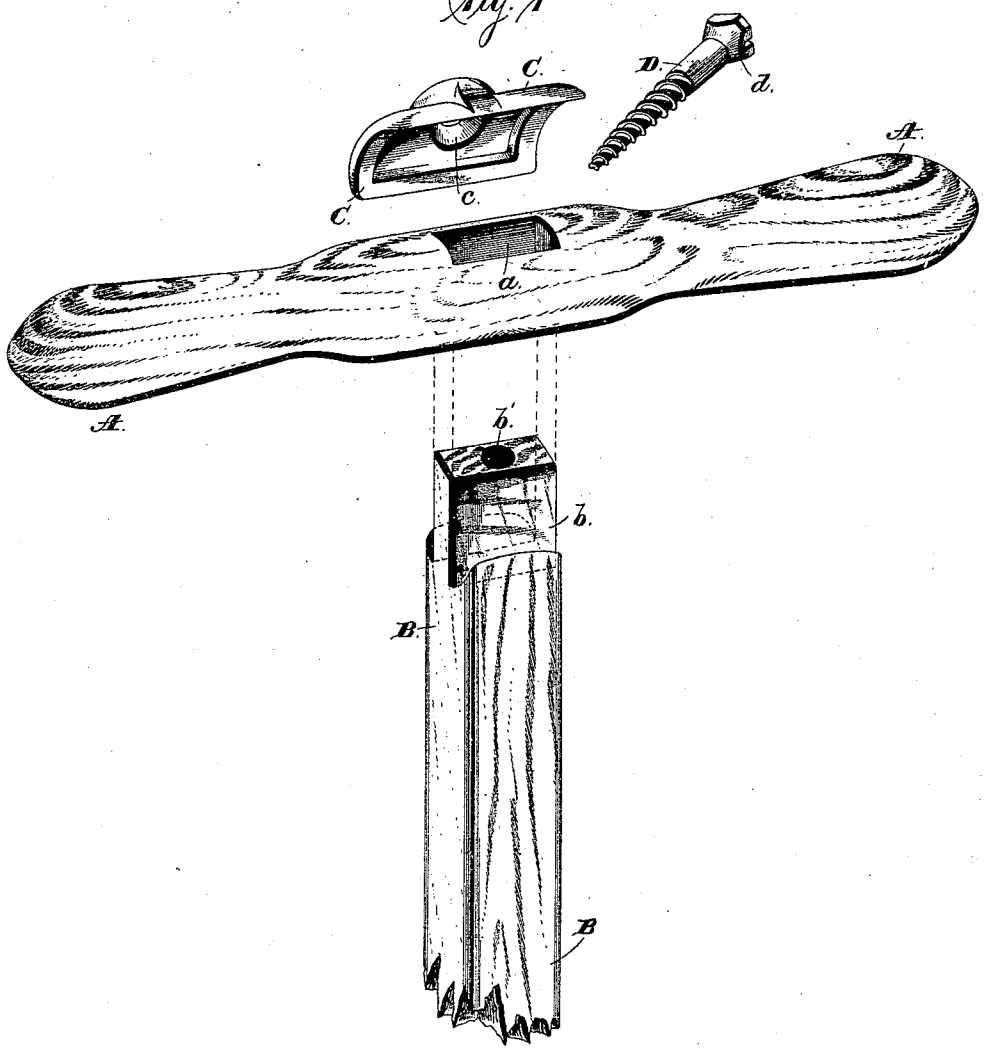
(No Model.) 2 Sheets—Sheet 1.

T. JOHNSTON.

HANDLE FOR LAWN MOWERS.

No. 443,855. Patented Dec. 30, 1890.

Fig. 1



Witnesses:
Jas. E. Hutchinson.
Chas. J. Williamson.

Inventor.
Thomas Johnston, by
Brindle & Russell, his Attys.

THE NORRIS PETERS CO., PHOTO-LITHO., WASHINGTON, D. C.

(No Model.) 2 Sheets—Sheet 2.

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Fig. 2.

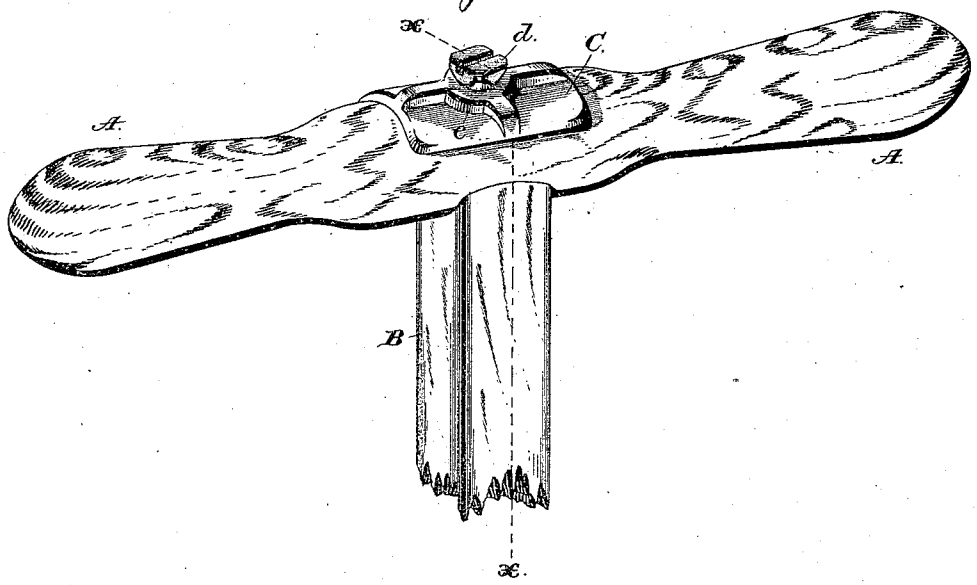
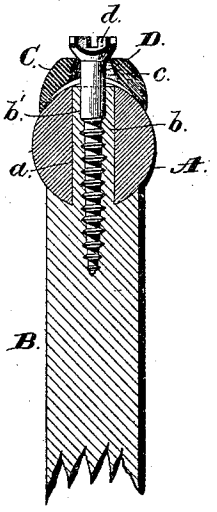


Fig. 3.



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UNITED STATES PATENT OFFICE.

THOMAS JOHNSTON, OF NEWBURG, NEW YORK.

HANDLE FOR LAWN-MOWERS.

SPECIFICATION forming part of Letters Patent No. 443,855, dated December 30, 1890.

Application filed March 9, 1887. Serial No. 230,274. (No model.)

To all whom it may concern:

Be it known that I, THOMAS JOHNSTON, of Newburg, in the county of Orange, and in the State of New York, have invented certain new and useful Improvements in Handles for Lawn-Mowers; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, in which—

Figure 1 is a perspective view of the parts of my device separated from each other. Fig. 2 is a like view of the same when combined, and Fig. 3 is a section upon line *x x* of Fig. 2.

Letters of like name and kind refer to like parts in each of the figures.

In the construction of lawn-mowers in which the handle is composed of a straight bar provided upon its rear end with a cross-bar much difficulty has been found in so combining such parts as to make a strong and durable joint. To obviate this difficulty is the design of my invention, which invention consists in the means employed for securing the cross-bar to the push-bar, substantially as and for the purpose hereinafter specified.

In the carrying of my invention into practice I employ a cross-bar A, having any desired form or length, and within its center form a mortise *a*, which is preferably oblong and is arranged with its longest diameter in a line with the longitudinal axis of said bar.

Upon the rear end of a push-bar B is formed a tenon *b*, which corresponds to and is adapted to fit into the mortise *a* of the cross-bar A, and has its outer end flush with or preferably a little below the periphery of said cross-bar at such point. As shown in the drawings, the shoulders formed on the push-bar B by reducing it to make the tenon constitute a seat for the cross-bar and have a shape corresponding to the latter where it comes into contact therewith. In the present instance the cross-bar being round in cross-section, such shoulders are made concave and extend up around the sides of the former. A metal plate C, that has a curved inner face and is provided with central opening *c*, is now fitted upon the outer side of said cross-bar over the outer ends of the said mortise and tenon, and the whole then fastened together by means of a screw D, which passes through the opening *c* in said plate into an axial opening *b'* in said push-bar, its threaded body being contained within the latter and its head *d* having a bearing upon the outer side of said plate. The inward pressure of the screw upon the metal plate operates to hold the cross-bar firmly against the shoulders which form the inner end of the tenon and renders impracticable any independent movement of said cross-bar, while the separation of said parts for storage or transportation is easily and quickly effected by the removal of said screw. The screw, it is to be observed, being tapering in form, necessarily expands the tenon so as to cause its sides to press closely against the walls of the mortise, thereby materially aiding in holding the parts tightly together, and furthermore, as it extends for a portion of its length down into the body of the push-bar B to a point beyond the junction of the same with the tenon, it considerably strengthens the latter and reduces to a large degree the probability of its breakage.

Having thus described my invention, what I claim is—

1. The combination of a bar provided at its end with a tenon and concave shoulders, the mortised cross-bar fitted over said tenon and seated upon said shoulders, the curved plate engaging said cross-bar on its upper side, so as to confine it in place on said shoulders, and a screw for holding said parts together, substantially as and for the purpose specified.

2. The combination of a bar provided at its end with a tenon and concave shoulders, the mortised cross-bar fitting over said tenon and seated upon said shoulders, the curved plate engaging said cross-bar on its upper side, and the tapering screw passing through said plate and into the tenoned bar, substantially as and for the purpose described.

3. The combination of a handle-bar provided at its upper end with a tenon and concave shoulders, the mortised cross-bar fitted over said tenon and seated upon said shoulders, the curved plate engaging said cross-bar upon its upper side, and the screw passing into said tenon to expand the same in the mortise and having its head engaging said plate, substantially as and for the purpose shown.

4. In a handle for lawn-mowers, the combination of the push-bar provided at its upper end with a tenon and concave shoulders, the mortised cross-bar fitted over said tenon and seated upon said shoulders, the curved plate engaging the cross-bar upon its upper side, and the tapering screw passing through said plate and extending down into the tenoned bar to a point below the junction of the latter with the tenon, substantially as and for the purpose set forth.

In testimony that I claim the foregoing I have hereunto set my hand this 24th day of February, 1887.

THOMAS JOHNSTON.

Witnesses:
JOSEPH GUY,
SAMUEL MCCOLLAM.