

W. W. WOLARY & W. B. DUPUIS.

TROWEL.

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952,971.

Patented Mar. 22, 1910.

Fig. 1.

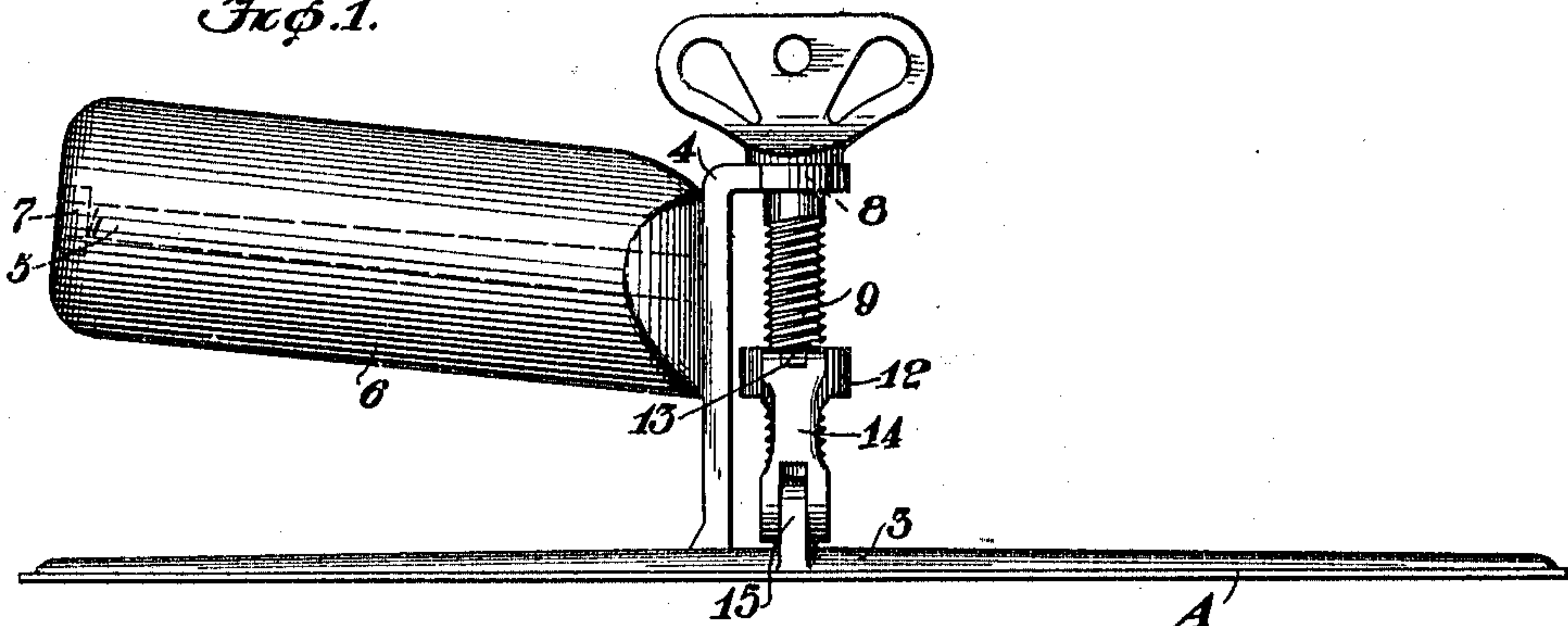


Fig. 2.

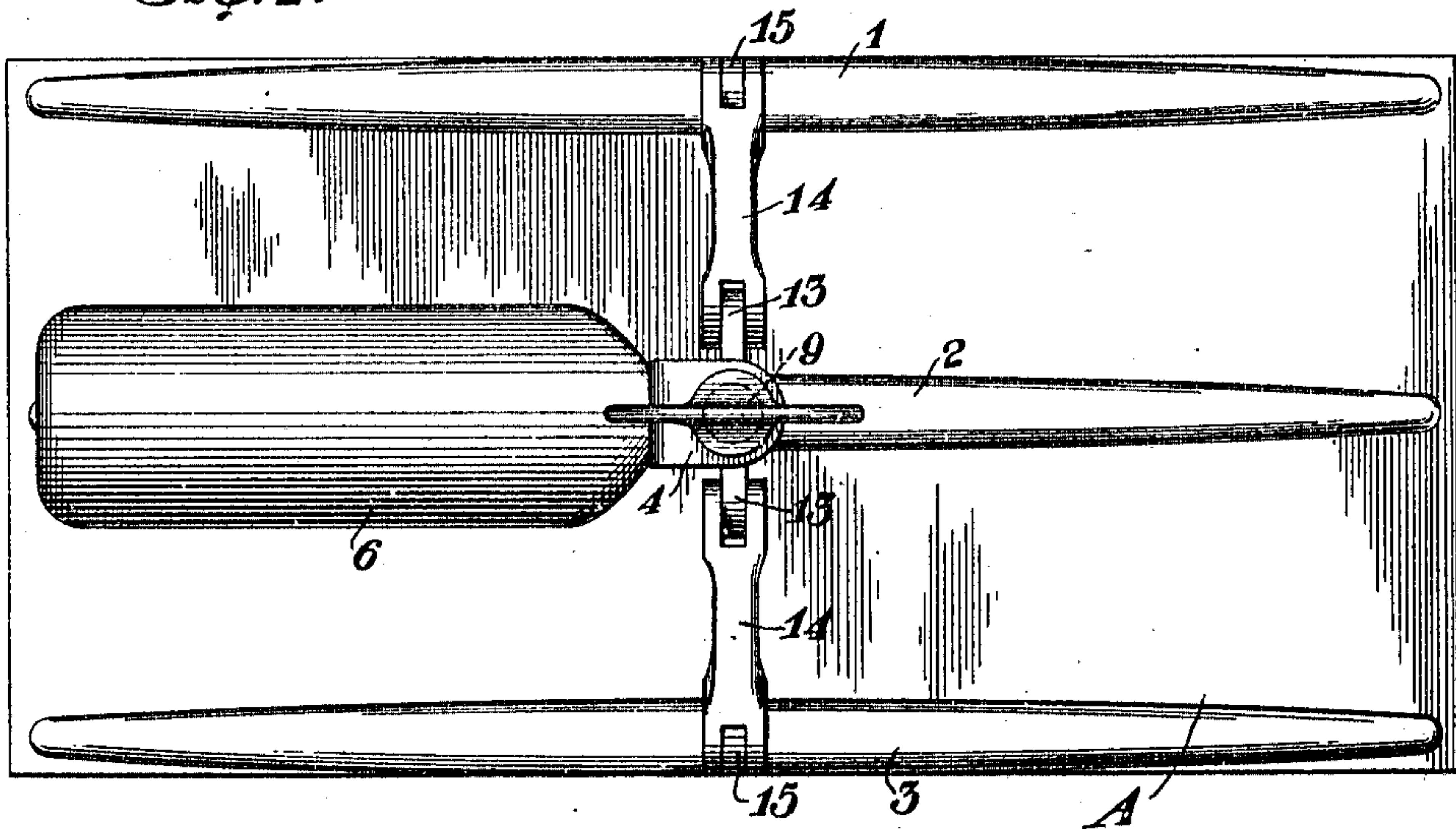
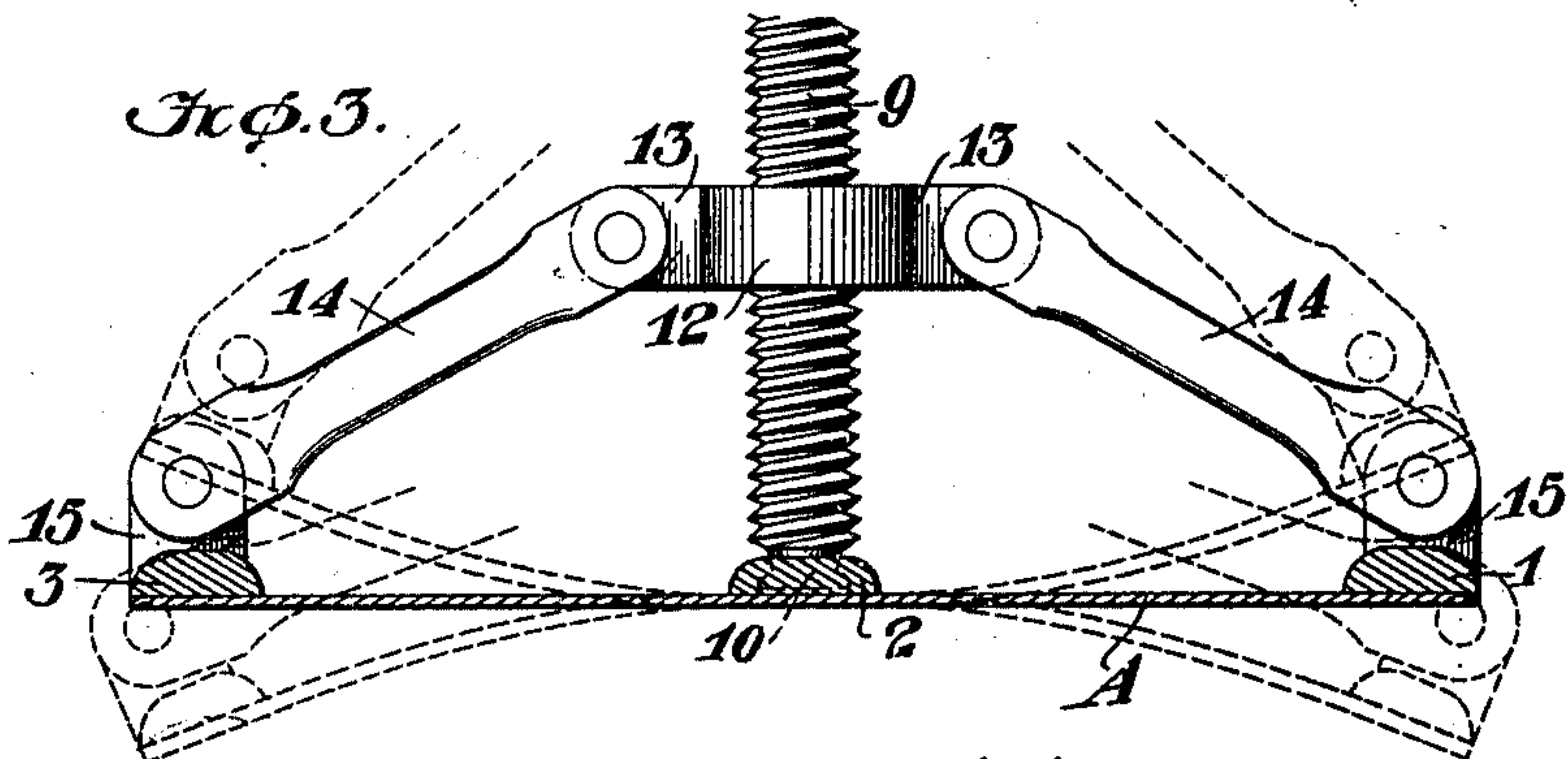


Fig. 3.



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UNITED STATES PATENT OFFICE.

WILBUR W. WOLARY AND WILL B. DUPUIS, OF WASHINGTON, IOWA.

TROWEL.

952,971.

Specification of Letters Patent.

Patented Mar. 22, 1910.

Application filed April 14, 1909. Serial No. 489,851.

To all whom it may concern:

Be it known that we, WILBUR W. WOLARY and WILL B. DUPUIS, citizens of the United States, residing at Washington, in the county of Washington and State of Iowa, have invented certain new and useful Improvements in Trowels, of which the following is a specification.

Our invention relates to an improvement in trowels, and the object is to provide a mason's trowel which may be transformed into a flat, convex or concave trowel, so that the work of three different trowels may be accomplished with a single trowel, thus making it possible to operate on a flat or curved surface with equal facility.

With these objects in view, our invention consists in a flexible trowel blade with a handle connected thereto through its longitudinal center, and means for flexing the blade into convex or concave form, and holding it in such position, or allowing it to remain in a flat adjustment as the case may require.

Our invention further consists in certain novel features of construction and combinations of parts which will be hereinafter described and pointed out in the claims.

In the accompanying drawings:—Figure 1 is a view in side elevation, Fig. 2 is a top plan view, and Fig. 3 is a transverse section with dotted lines indicating different adjustments.

A, represents the trowel blade, which is of the usual rectangular form, and made of sheet metal; 1, 2, and 3, are strips securely riveted lengthwise of the blade, the strips 1 and 3 at the edges, and 2, at the center. A bracket 4 is erected from the center bar 2, and preferably integral therewith, and on the tang 5, a handle 6 is secured by a nut or other means 7, which tang may be upset on the end to hold the nut on. The bracket extends laterally at its outer end, parallel with the center bar 2, and has an orifice 8 therethrough to receive a screw 9 which is swiveled in the orifice with its nut swiveled in a bearing 10 in the center bar 2. The screw passes through a nut 12, and the wings 13, 13, of this nut are pivotally connected with the toggle links 14, 14, and these in turn are pivotally connected with lugs 15, 15, upstanding from the bars 1 and 3. Normally the blade is perfectly flat like an ordinary mason's trowel, but to adjust it to make it convex for instance, a screw is

turned to the right, thus drawing the nut 12 outwardly, and through the toggle links, drawing the edges of the trowel in the same direction, thus presenting a curvature to the blade of greater or less degree according to the requirements, as it may tend from perfectly straight to a more or less sharp curve. The blade is made to present a concave surface by reversing the screw until the curvature desired is attained. In this simple manner, we have in effect, three tools in one, thus giving it a wide range of usefulness, so that it may not only be used to apply plaster and cement to flat surfaces, but also for finishing all sizes of cement curbing, for instance, and other cement walls, or products that call for a finished surface on a curve or circle. Also it is useful in the construction of cement gutters, drains, floors, wash-ways, water tanks, cisterns, sewers, and the like; in fact, the range of its utility is only measured by the limitations of a straight, a convex, and a concave trowel, it combining all three in one, as previously stated.

More or less slight changes might be resorted to in the form and arrangement of the several parts described, and the mechanical means for accomplishing the results cited, without departure from the spirit and scope of our invention, and hence we do not wish to limit ourselves to the exact construction herein set forth, but:—

Having fully described our invention, what we claim as new and desire to secure by Letters Patent, is:—

1. A trowel comprising a flexible one-piece blade, and means connected with the blade at at least two points more or less remote from each other and means connected with said first-mentioned means for flexing the blade from a straight plane to present either a convex or concave surface.

2. A trowel comprising a flexible one-piece blade, and means connected with the blade at three points for flexing the blade from a straight plane to present either a convex or concave surface.

3. A trowel comprising a blade, a bracket, a screw, a nut, a toggle, links extending from the end of the toggle to the edges of the blade whereby the latter is adjusted from a straight to a convex or concave form.

4. A trowel comprising a flexible blade, arms extending from opposite edges of the blade toward the center, and means con-

5 nected with the inner ends of said arms for moving said inner ends toward or away from the center of the blade, whereby to flex it, and impart to it a convex or concave surface.

10 5. A trowel comprising a blade, bars along the opposite edges and center, a bracket extending from the center bar, a handle connected with the bracket, a screw swiveled to the bracket and center bar, a nut in which the screw turns, and links extending from the nut to the outer bars whereby the turning of the screw in one direction curves the blade one way, and the reverse turn of the screw curves it in an opposite direction.

15 6. A trowel comprising a flexible blade, and means attached to the blade at or near

its center and means connected with the opposite edges for applying forward or backward tension to said edges.

20 7. A trowel comprising a flexible blade having reinforcing strips at or near the opposite edges, and means attached to the blade at or near its center and means connected with the strips for applying forward or backward tension to said edges. 25

In testimony whereof we affix our signatures, in the presence of two witnesses.

WILBUR W. WOLARY.
WILL B. DUPUIS.

Witnesses:

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