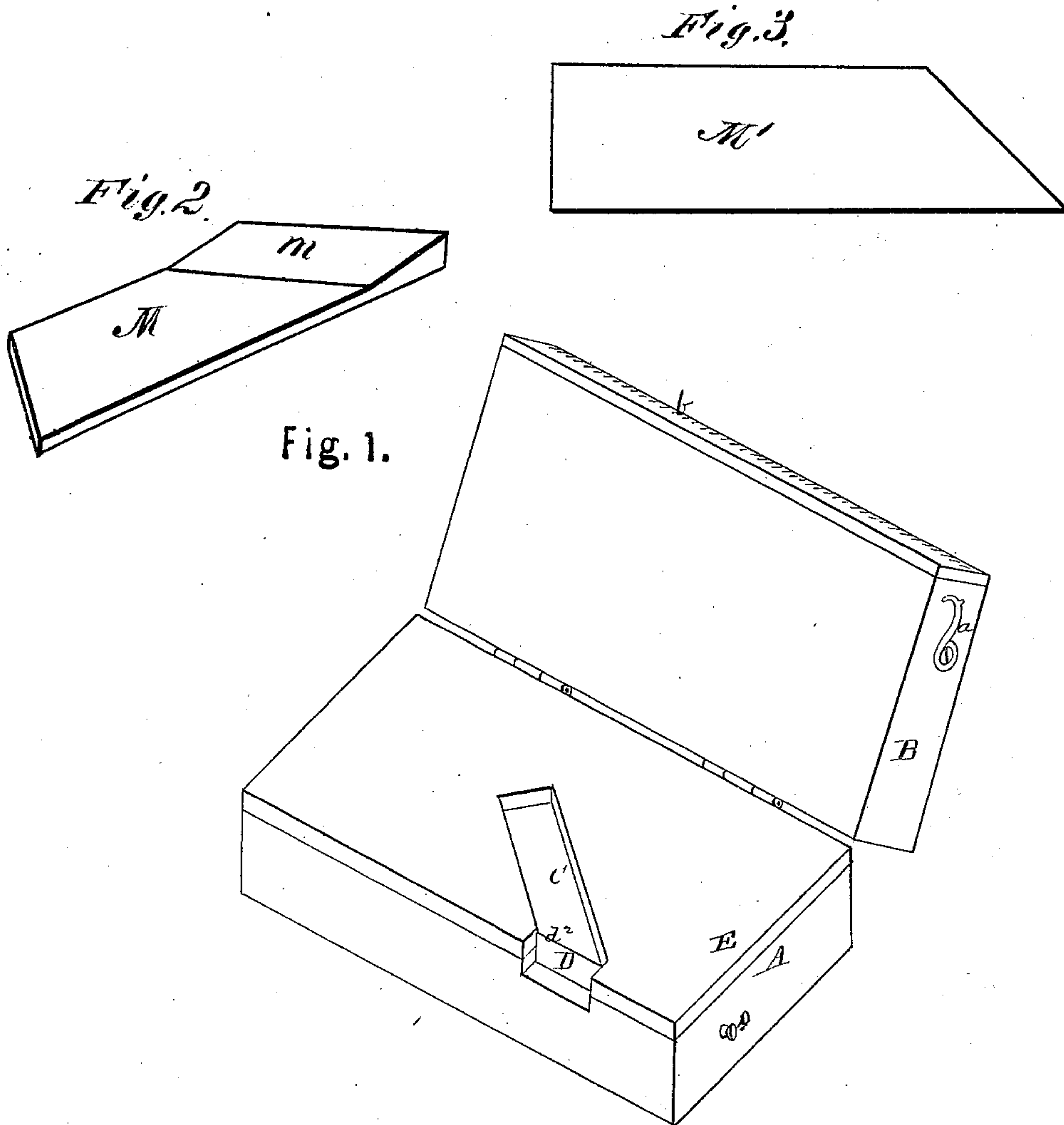


W. M. WATSON.

Dies for Upsetting the end of Plow-Shares and
Blanks therefor.

No. 169,213.

Patented Oct. 26, 1875



WITNESSES.

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UNITED STATES PATENT OFFICE.

WILLIAM MEDD WATSON, OF TONICA, ILLINOIS.

IMPROVEMENT IN DIES FOR UPSETTING THE ENDS OF PLOWSHARES AND BLANKS THEREFOR.

Specification forming part of Letters Patent No. **169,213**, dated October 26, 1875; application filed October 13, 1875.

To all whom it may concern:

Be it known that I, WILLIAM MEDD WATSON, of Tonica, in the county of Sa Salle and State of Illinois, have invented a new and valuable Improvement in Plow-Manufacturing; and I do hereby declare that the following is a full, clear, and exact description of the construction and operation of the same, reference being had to the annexed drawings making a part of this specification, and to the letters and figures of reference marked thereon.

Figure 1 of the drawings is a representation of a perspective view. Fig. 2 is a perspective view of my improved plowshare-blank when re-enforced. Fig. 3 is a plan view of the share-blank.

My invention has relation to an improvement in the manufacture of plowshares, and is designed as an improvement on a device for which Letters Patent were granted to me March 15, 1870; and it consists in the employment of a detachable die-plate inserted in a hinged box or case, said die-plate being provided with a recess for the reception of the blank, the outer end of the recess in the block being beveled for the formation of the re-enforcement, when the die is placed endwise or in the same vertical plane with the follower of a press, or other suitable means, situated directly over the projecting end of the blank, when the press is operated, the descent of the follower causing the upsetting and re-enforcing of the metal blank.

My invention further consists in cutting out a plowshare-blank from the sheet metal of greater length than the share when upset and completed, so as to afford a sufficient quantity of metal for the upsetting process, as will be hereinafter more fully set forth.

In the accompanying drawings, A is a block or case, provided with a beveled recess, D, for receiving the re-enforcement of the blank, and a removable die-plate, E, having an inclined recess, C, for the reception of the blank. B represents the top or upper section of the die-case hinged to the lower section A, and provided with a catch, *a*, which engages with a pin, *o*, in the end of the die-case A, thus se-

curely fastening the sections together. *b* is a plate attached to the front of the section B, which is made to extend beyond the hinged portion of the die, either by being cast solid with or secured to it by screws or pins, the object of this projecting plate *b* being to guide the steel while being upset, and prevent it from doubling over. The die-plate E, having the recess C, is separable from the section A, so that die-plates having different-sized recesses may be employed for the kind of share intended to be produced. The form of the depression D corresponds to the form of the re-enforcement on ordinary plowshares. M (see Fig. 2) is a plowshare-blank when upset, having the re-enforcement *m* at its outer end. M' (see Fig. 3) is the elongated blank, cut out in any of the ordinary ways from a sheet of metal of uniform thickness.

The difference I make is in cutting the blank longer, to allow enough metal to upset it to the required thickness at its outer end. The usual method of making a plowshare thicker at the shin or land side is to weld to it a strip of metal by means of a hammer or drop. The objections to this method are that blisters are extremely liable to be formed along the line of welding, thus preventing the complete union of the parts, and when either the share or its re-enforcement is worn down to the welding-line the soil will stick to the share at the blisters, and prevent it from scouring.

These defects are entirely obviated by my method of upsetting the blank at its end.

According to my method the sheet is first rolled into sheets of the required width, and of the thickness necessary, and then cut into blanks. The blank is then heated and laid in the recess C of the die-plate E, and the hinged upper section B closed and fastened. The die is then placed endwise under the follower of a press, in the same vertical plane with the blank and directly over its projecting end, when the press is operated, causing the descent of the follower and the upsetting of the projecting end of the blank.

What I claim as new, and desire to secure by Letters Patent, is—

1. The separable plate E, having the die C D, in combination with the section A and hinged section B, substantially as described, and for the purpose set forth.

2. A plowshare-blank, M', when constructed substantially as and for the purpose set forth.

In testimony that I claim the above I have hereunto subscribed my name in the presence of two witnesses.

WILLIAM MEDD WATSON.

Witnesses:

J. S. UNDERHILL,
ISAAC RAYMOND.