

No. 609,265.

Patented Aug. 16, 1898.

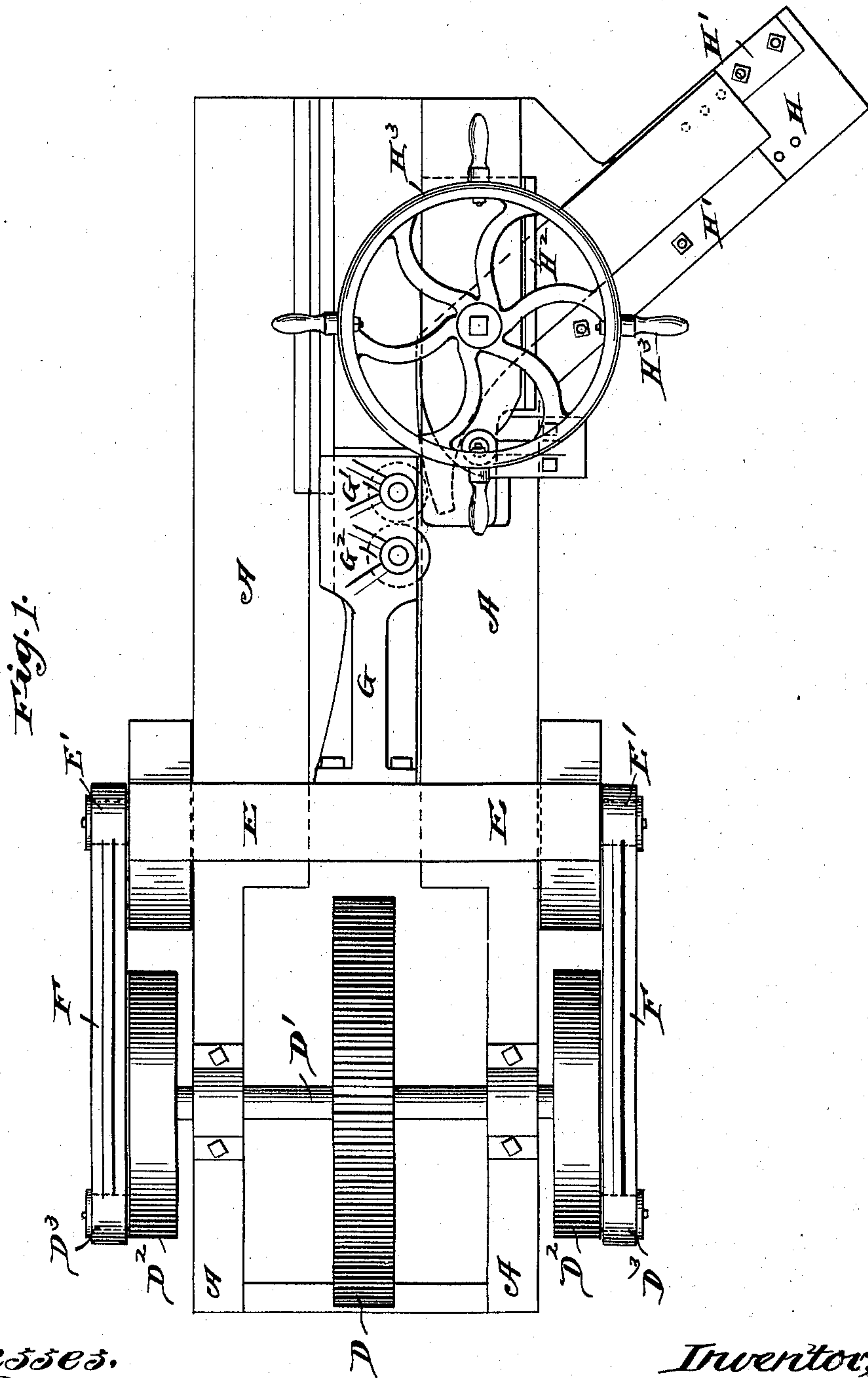
W. A. CLARK.

UPSETTING MACHINE FOR PLOWSHARES.

(Application filed Feb. 24, 1898.)

(No Model.)

2 Sheets—Sheet 1.



Witnesses.

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Inventor,

William A. Clark

By Morrison & Miller

Attys.

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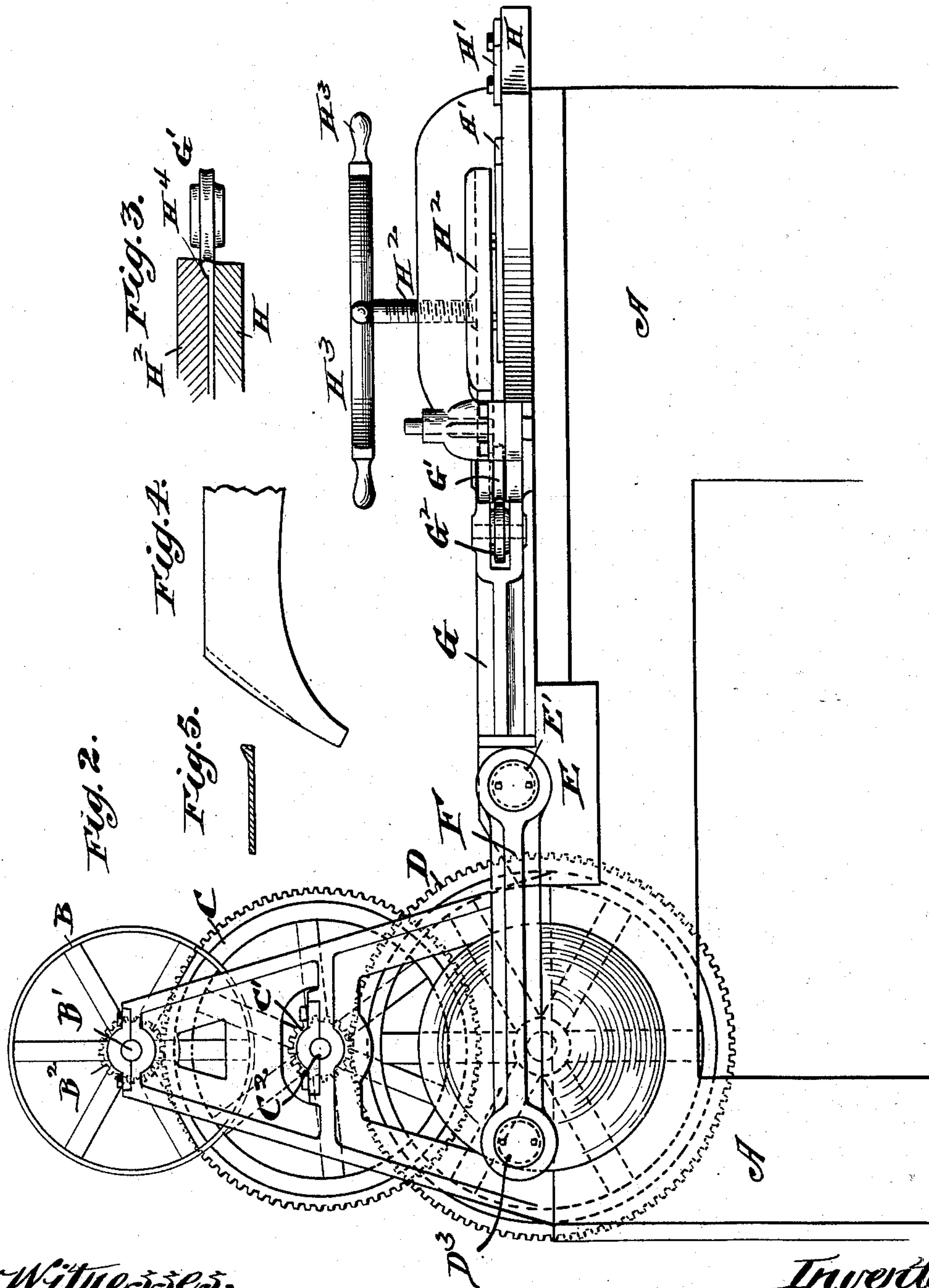
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UNITED STATES PATENT OFFICE.

WILLIAM A. CLARK, OF ROCKFORD, ILLINOIS, ASSIGNOR TO THE WEYBURN & BRIGGS COMPANY, OF SAME PLACE.

UPSETTING-MACHINE FOR PLOWSHARES.

SPECIFICATION forming part of Letters Patent No. 609,265, dated August 16, 1898.

Application filed February 24, 1898. Serial No. 671,534. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM A. CLARK, a citizen of the United States, residing at Rockford, in the county of Winnebago and State of Illinois, have invented certain new and useful Improvements in Upsetting-Machines for Plowshares, of which the following is a specification.

The object of this invention is the production of a machine for upsetting the unfinished plowshare along the edge thereof which is to be welded with the landside in order to permit a perfect union of the two parts and to reduce the difficulty in welding.

In the drawings, Figure 1 is a plan view of this upsetting-machine. Fig. 2 is a side elevation of the same. Fig. 3 shows the relative positions of one of the upsetting-rollers and the share-holder. Fig. 4 represents by a plan view the portion of the share operated on after the operation. Fig. 5 shows the same in section.

Like letters of reference indicate corresponding parts throughout the several views.

A is the supporting-frame of the machine.

B is the driving-pulley, rigidly mounted on the rotatable shaft B'. B² is a pinion, also fixed on the shaft B'.

C is a gear-wheel engaging with the pinion B², which gear-wheel and the pinion C' are rigidly secured to the rotatable shaft C².

D is a gear-wheel fixed on the shaft D'. D² are two face-plates, both fixed on the shaft D' at opposite ends thereof and having wrist-pins D³.

E is a sliding carriage capable of a reciprocating movement lengthwise of the bed of the supporting-frame A. E' are bearing-studs projecting from the sides of the carriage.

F are two connecting-rods extending between the wrist-pins D³ and the studs E'.

G is an arm firmly secured to the forward side of the reciprocating carriage. G' and G² are two upsetting-rollers journaled in the arm G, near the forward end thereof. The former roller is grooved in its face in order to give the edge of the share with which it is brought in contact an upward turn. It is followed by the smooth-faced roller G², of a diameter slightly larger than the former, which further upsets the edge of the share.

H is the share-holder, rigidly attached to the bed of the machine.

H' are adjustable stops or gages to provide for the reception of shares of different sizes.

H² is a screw-clamp for securing the share in the holder H during the operation of the rollers G' and G² upon it.

H³ is a hand-wheel for operating the clamp H². The movable member of this clamp is recessed at H⁴ to provide for the reception of the plastic metal, the form of the recess governing the shape of the upset. To this upset the landside is welded, permitting a smooth and perfect union between the share and the landside.

On account of the thinness of the usual share and the difficulty of maintaining it at a welding heat for a sufficient length of time on the one hand and the danger of burning the metal by overheating on the other the welding of the share to the landside is quite a difficult operation, and when the welding is accomplished the thickness of the share about the weld is considerably reduced. By upsetting the edge of the share a greater body of metal is brought together, reducing the difficulty of the operation and leaving its thickness unimpaired after the welding.

The operation of my machine is as follows: The share, formed to the proper size and heated to the proper temperature at the point to be operated on, is placed in the holder H and secured in position by the clamp H². The machinery is started and the carriage E thereby caused to move toward the share. The roller G' first engages the edge of the share, giving that edge an upward turn. The roller G² follows close behind and finishes the operation by pressing the edge farther back, completely filling the recess H⁴ and forming on what is properly the under face of the share an upset portion of the form indicated by the dotted line in the view of the share shown in Fig. 4.

I claim as my invention—

1. In an upsetting-machine, in combination, a holding device, a carriage capable of a reciprocating movement and a grooved upsetting-roller and a plain upsetting-roller journaled on said carriage, substantially as and for the purpose specified.

2. In an upsetting-machine, in combination, a holding device having a recess of substantially the form of the upset desired, a carriage capable of a reciprocating movement,
- 5 a grooved upsetting-roller and a plain-faced upsetting-roller journaled on said carriage and means for imparting motion to the carriage substantially as and for the purpose specified.
- 10 3. In an upsetting-machine, in combination, a holding-clamp, having a recess in its upper member of substantially the form of

the upset desired, a carriage capable of a reciprocating movement, a grooved upsetting-roller and a plain-faced upsetting-roller 15 journaled on the carriage, which latter upsetting-roller is of a greater diameter than the grooved upsetting-roller, substantially as and for the purpose specified.

WILLIAM A. CLARK.

Witnesses:

LEWIS A. WEYBURN,
L. L. MILLER.