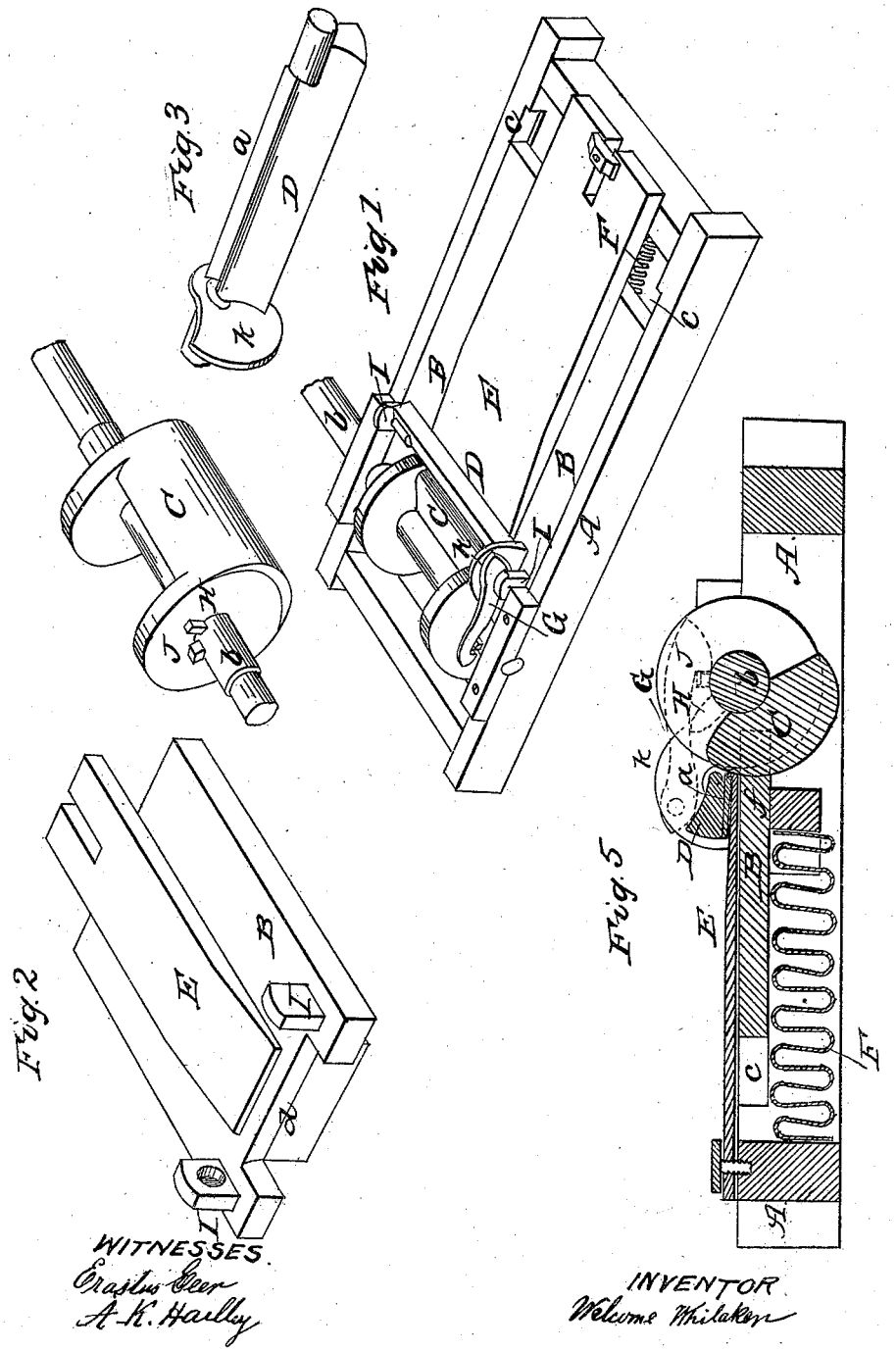
W. WHITAKER.

Butt Machine.

No. 3,156. Patented July 8, 1843.



UNITED STATES PATENT OFFICE.

WELCOME WHITAKER, OF ALBANY, NEW YORK, ASSIGNOR TO JNO. F. WINSLOW.

MACHINE FOR FORMING THE EYES OF BUTT-HINGES.

Specification of Letters Patent No. 3,156, dated July 8, 1843.

To all whom it may concern:

Be it known that I, WELCOME WHITAKER, of the city and county of Albany and State of New York, have invented a new and useful Machine for Forming the Eyes or Joints of Wrought-Metal Butts or Hinges; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, which form a part of this specification, in which—

Figure 1 is a perspective view; Fig. 2, the carriage detached, with the gage E, in its place upon it; Fig. 3, the tumbler detached; Fig. 4, the cam or eccentric detached; Fig. 5, a longitudinal vertical section through the whole machine.

The nature of my invention consists in folding or bending the metal plate or blank butt (previously cut and prepared of the proper dimensions) so as to form the eye or joint by a single operation of the machine.

To construct this machine an oblong frame of four sides is formed of cast iron, shown at A, Fig. 1. On the upper inside edges of the sides of the frame a rabbet (*c*) is formed, in which a carriage B, is made to slide; this is an oblong flat plate having a notch cut out of its forward end as shown at (*d.*) in Fig. 2, on each side of which two short studs I, stand that serve for bearings for the tumbler D, to turn in. The tumbler is the segment of a cylinder somewhat triangular in form in its cross section one face being concave the other straight the outer side assuming the curve of the cylinder; the axis of this tumbler is rounded its whole length, and forms journals at the ends where it projects, on which it turns; on the lower and straight side of the tumbler D, there is a plate of tempered cast steel (*a*), the front edge or lip of which projects, and can be set more or less beyond the tumbler axis; the lip of this plate is rounded and conforms in thickness to the size of the eye or joint of the butt intended to be made. The carriage is kept forced forward by a strong spring F, underneath it, and above it there is a gage or stopper E, which is a flat bar of steel lying longitudinally over the carriage and affixed to the frame.

In front of the carriage, and on a level with it a stout axle (*b*,) is placed having its bearings in the frame; this axle has two wheels or disks upon it, at a suitable distance apart between which there is a cam C, as wide or wider than the butts to be made and projecting beyond the disks (this is most plainly shown at Figs. 4, and 5,) outside of which there is a cam H, on the shaft (*b*) and forward of it another small catch or cam J, the first of these is made to act on a cam K, attached to one end of the tumbler; the curve against which cam H acts being concentric with the disks on axle (*b*), so that the tumbler is held down on the blank while the cam is turning the end over the steel lip (*a*), when it is sufficiently turned for the purpose the cam K, is released, and a pawl G, which is connected with the tumbler catches on the catch J which causes the tumbler to rise brings the lip (*a*,) out of the bight of the hinge and the turn is completed, after the cam passes, the hinge drops out, and the machine is supplied with another blank, on which the above operation is repeated.

In operating this machine a blank for a hinge is laid on the carriage in front of the gage E, one end resting against the gage the other projecting beyond the carriage as the cam C, comes around in the direction of the arrow Fig. 5, the tumbler D, is held down by cam H, as above described and the end of the blank (*f*,) which projects beyond the carriage is curved up over the lip (*a*), the cam C, gradually forcing back the carriage as the blank is turned; the blank being prevented from receding by the gage E; to close the joint of the hinge the cam (K) is released from cam H and allows tumbler D, to be turned up, which is effected by the pawl G, catching on the catch J, and withdraws the lip (*a*) from the turn of the hinge and the rounded part of the tumbler then serves to hold the curved part of the butt down, until the bend is completed as before described.

What I claim as my invention and desire to secure by Letters Patent is—

The combination of the tumbler D, cam C, carriage B, and gage E, constructed arranged and operated in the manner and for the purpose substantially as herein described.

WELCOME WHITAKER.

Witnesses:

ARCHIBALD BULL,

WINANT G. VANDENBERGH.