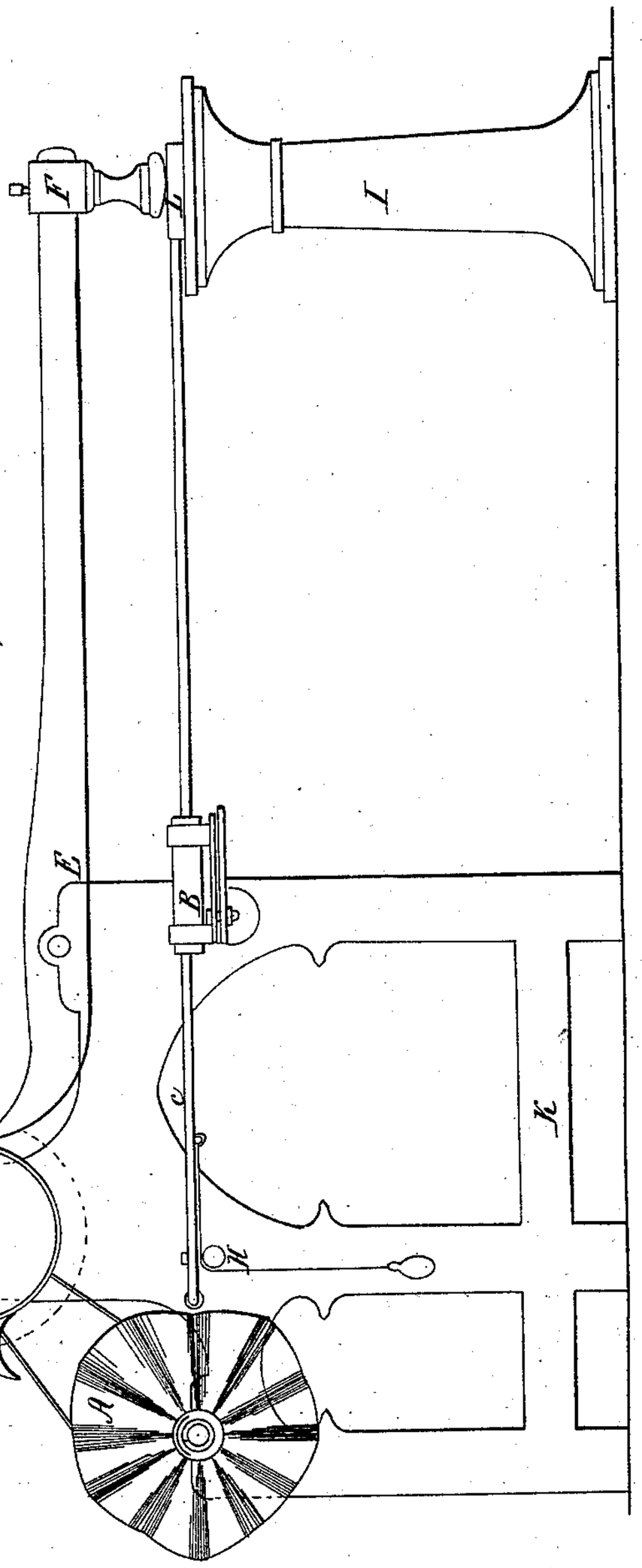
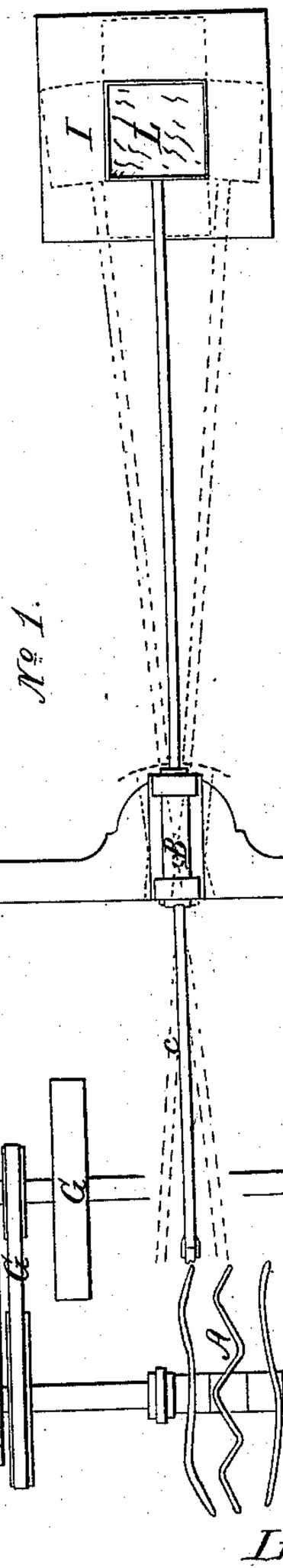
W. Vine.

Forging Metals.

No. 8,945. Patented May 11, 1852.



No. 2.



No. 1.

Inventor,
Wm Vine

UNITED STATES PATENT OFFICE.

WILLIAM VINE, OF HARTFORD, CONNECTICUT.

GOLD-BEATING MACHINERY.

Specification of Letters Patent No. 8,945, dated May 11, 1852.

To all whom it may concern:

Be it known that I, WILLIAM VINE, of the city of Hartford, county of Hartford, and State of Connecticut, have invented a new and useful Improvement in the Construction and Operation of Gold-Beating Machines for Beating Gold Leaf, Foil, &c.; and I do hereby declare that the following is a full and exact description of this my improved, automatical gold-beater, reference being had to the plan accompanying and forming part of this specification.

The nature of my invention consists in the combination of a cam or its equivalent so constructed as to be of a double form and action, with a rod sliding through a cylinder which is provided with a pivot so that it is free to move horizontally, said rod giving the appropriate movement to the packet, and the object of the invention being to give to said packet motions in two directions with only one cam.

Plan No. 1 shows the cams and the mode of operating with the rod sliding through the cylinder and connecting with the packet on the block. Plan No. 2 is a side sectional view, showing the cams trip hammer, cylinder, sliding rod, &c.

Letter A are the double action cams. B cylinder for the sliding rod to pass through. C the sliding rod, connected with and to move the frame containing the packet of gold to be beaten on the block I. D trip hammer cam. E helve of hammer. F hammer head. G driving pulleys, with * belt to pulley on the cam shaft, or it may be * gearing wheels. H weight and pulley, (or may be a spring) to cause the return or backward movement of the sliding rod, keeping it constantly to follow the irregularity or indentations of the cams. I block for beating on. K frame to contain the movement works. L frame containing the packet of gold to be beaten.

One of the cams A constantly acts on the end of the sliding rod, C, passing through the cylinder, B, giving any desired movement to the packet on the block, I, while being operated on by the hammer, and by shifting one cam for another all the motions are accomplished. This movement is caused backward and forward by and in conformity with the shape of the indentations on the periphery of the cams, assisted by the weight (or spring) to cause the backward movement of the rod to the same. The lateral or right and left movement is caused simultaneously by the cams being properly shaped on the side or disk to the required form. These two irregular shapes on the cams acting in concert I call the double action cams, both the shapes acting together on the end of the rod, C, passing through the cylinder, B, (which is also movable on a center pivot, allows all the movements to take place of the packet on the block, I, the figure and form of the same of course, being made and regulated by the proper and peculiar form of the indentations on the cams.

By this improvement in the construction and operation of a gold beating machine, all the inconveniences of the machinery around the block, (in other machines) is done away with, which is an important matter in consequence of the difficulty of saving the waste gold, which in many of the parts of beating flies off in fine particles by the concussion of the blow of the hammer, and mixes with the machinery, causing a serious loss and waste.

This improvement is also important as to the economy of expense of construction, also answering better and all the purposes of the different machines in use.

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

The double action adjustable differential cams, or their equivalent combined with the sliding rod and pivoted cylinder, in connection with other parts of gold beating machinery substantially, in the manner and for the purpose as herein set forth and described.

Hartford 20th March 1852.

WM. VINE.

Signed in presence of—
FRANCIS FELLOWES,
ISAAC F. SMYTH.