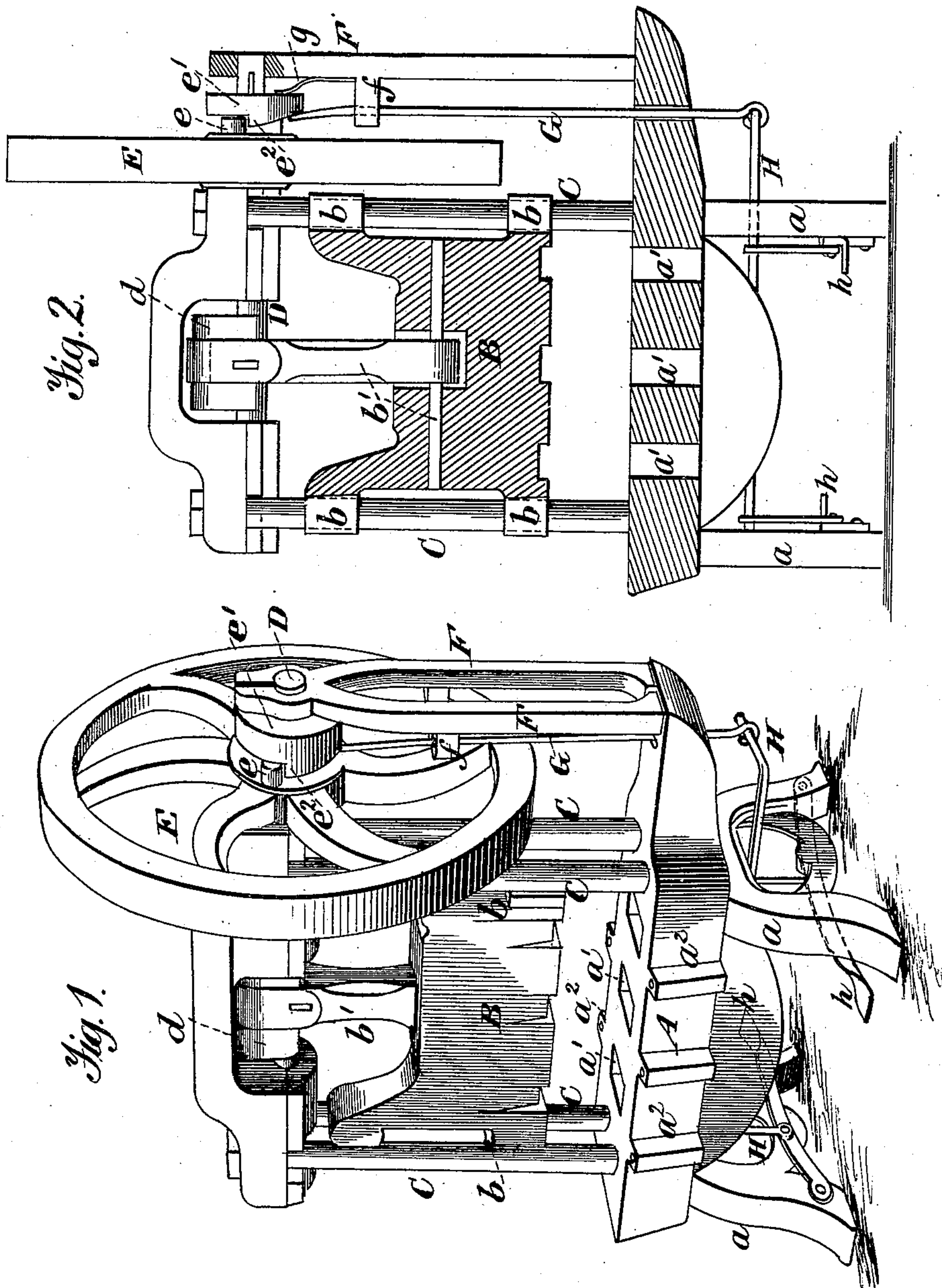


(No Model.)

H. ST. LAWRENCE.
FORGING MACHINE.

No. 333,486.

Patented Dec. 29, 1885.



Witnesses.
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UNITED STATES PATENT OFFICE.

HENRY ST. LAWRENCE, OF NORTHAMPTON, MASSACHUSETTS.

FORGING-MACHINE.

SPECIFICATION forming part of Letters Patent No. 333,486, dated December 29, 1885.

Application filed June 12, 1885. Serial No. 168,519. (No model.)

To all whom it may concern:

Be it known that I, HENRY ST. LAWRENCE, of Northampton, in the county of Hampshire, and State of Massachusetts, have invented
5 an Improved Forging-Machine, of which the following is a specification.

The invention relates, generally, to presses for forging pitchforks, hay-forks, hoes, shovels, and analogous articles; and its special ob-
10 ject is to form a structure which shall be strong, simple in its parts, conveniently operated by water or steam power, and little liable to get out of order.

Figure 1 of the drawings is an elevation in
15 perspective that discloses the general relation of the parts. Fig. 2 is a longitudinal sectional elevation.

In the drawings, A represents the stationary die-block, supported upon legs *a*, and B the
20 plunger or movable die. The latter has a grooved tenon, *b*, on each side, which fits between two pillars, C C, that serve as guides therefor, and is connected by an eye-rod, *b'*, with the crank *d* of rotary shaft D. This is
25 hung in bearings supported on the pillars C C, which are thus made to serve two purposes—namely, as guides to the plunger and supports to the shaft which carries it. On
one end of this shaft, and outside of the pillars,
30 I make fast a band or drive wheel, E, which is also journaled in an auxiliary bearing formed by the uprights F F, which rise vertically from the stationary die-block A.

On the band or drive wheel E is a lug, *e*,
35 and on the sliding sleeve E' is a cam, *e'*. The sleeve is keyed to shaft D, while the wheel revolves loosely on said shaft, being actuated by water or steam power. During each revo-

lution the sleeve turns with its cam-face against the rigidly-held end of rod G, so that the
40 shoulder *e*² of cam is forced away from lug *e*, the sleeve and wheel unclutched from one another, and the wheel allowed to revolve loosely on shaft. When the operator is ready for another forging, he presses the treadle and draws
45 rod G below the sleeve, when the spring *g* brings the shoulder *e*² of the cam within the circular line of travel of the lug *e*. Thus I give the desired intermittent action to the plunger. At the bottom the rod G is pivoted
50 to a treadle, H, extending horizontally through the legs *a* *a*, and adapted to be actuated on both sides by stepping on a foot-piece, *h*, so as to start the press by letting the sleeve and wheel clutch together. The stationary die
55 has three holes, *a'*, through which the work drops, and three ribs, *a*², by which the dies may be bolted. The pillars are rabbeted at each end to form shoulders, and are threaded at the upper end to receive fastening-nuts. 60

Having thus described all that is necessary to a full understanding of my invention, what I claim as new, and desire to protect by Letters Patent, is—

The combination, with a stationary die-
65 block, A, and rod G, passing up through it, of an upright, F, having a projection through which passes the upper end of said rod, and is rigidly held to overcome the resistance of the sleeve spring at each revolution of shaft,
70 as and for the purpose specified.

HENRY ST. LAWRENCE.

Witnesses:

H. P. BILLINGS,
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