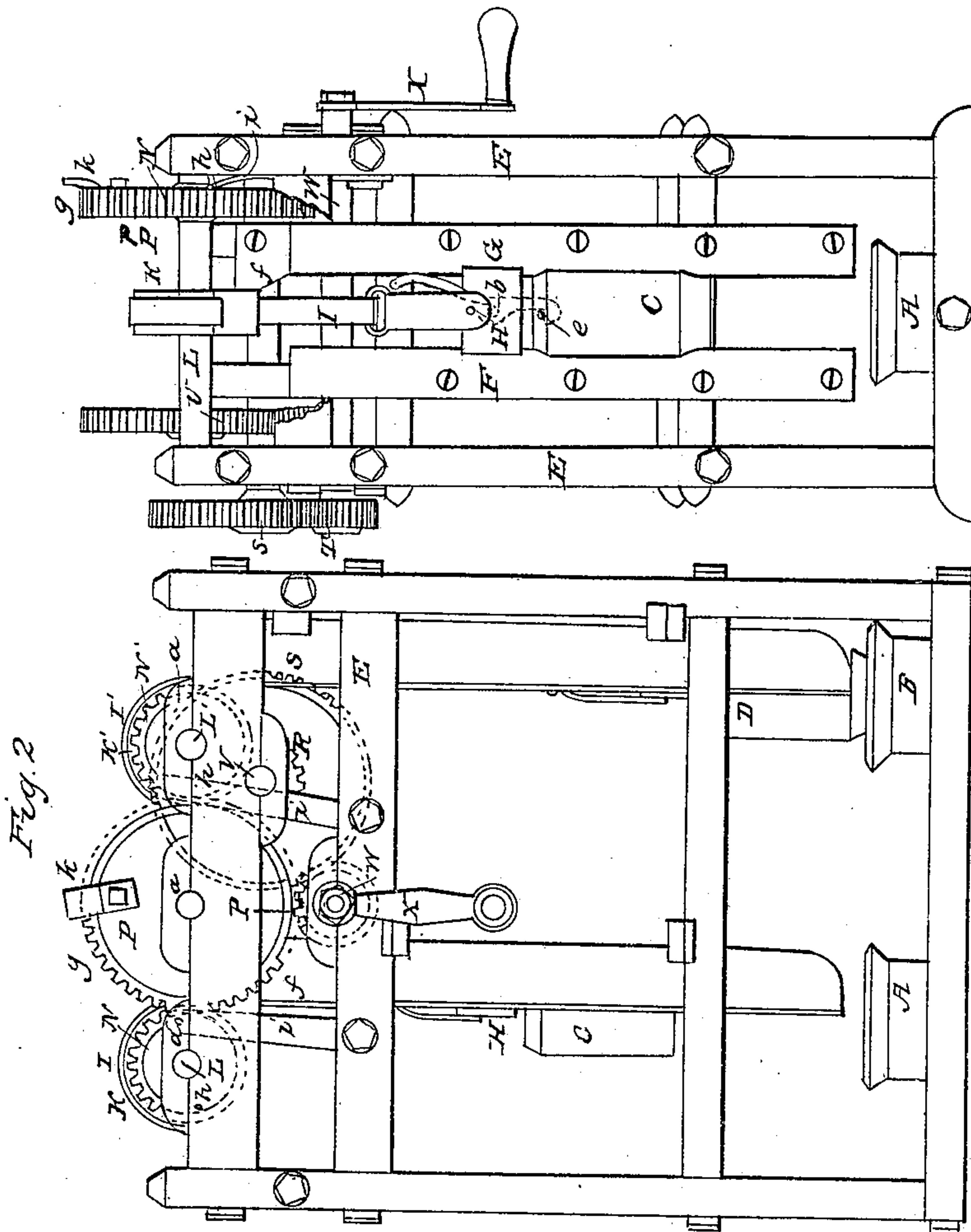
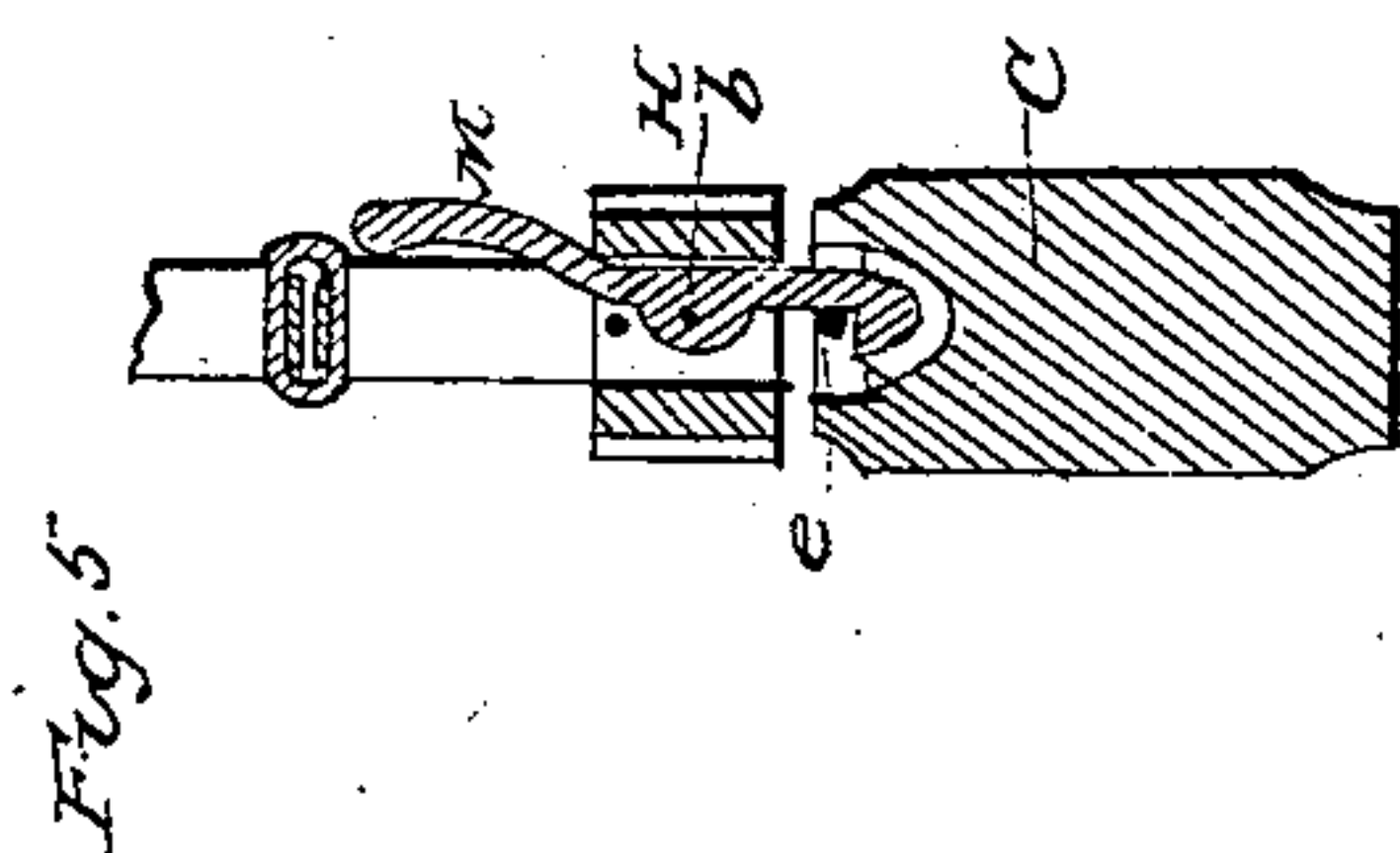
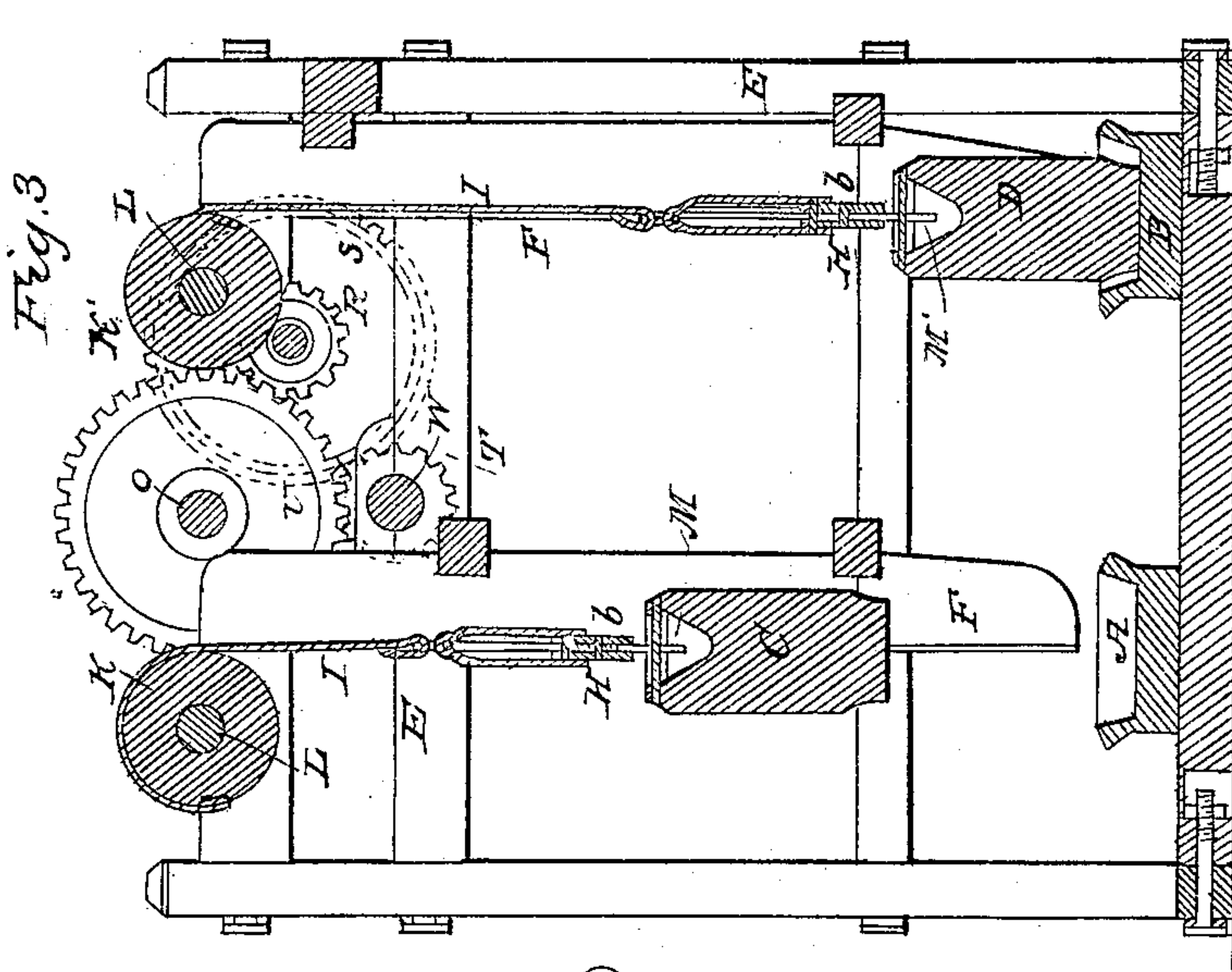
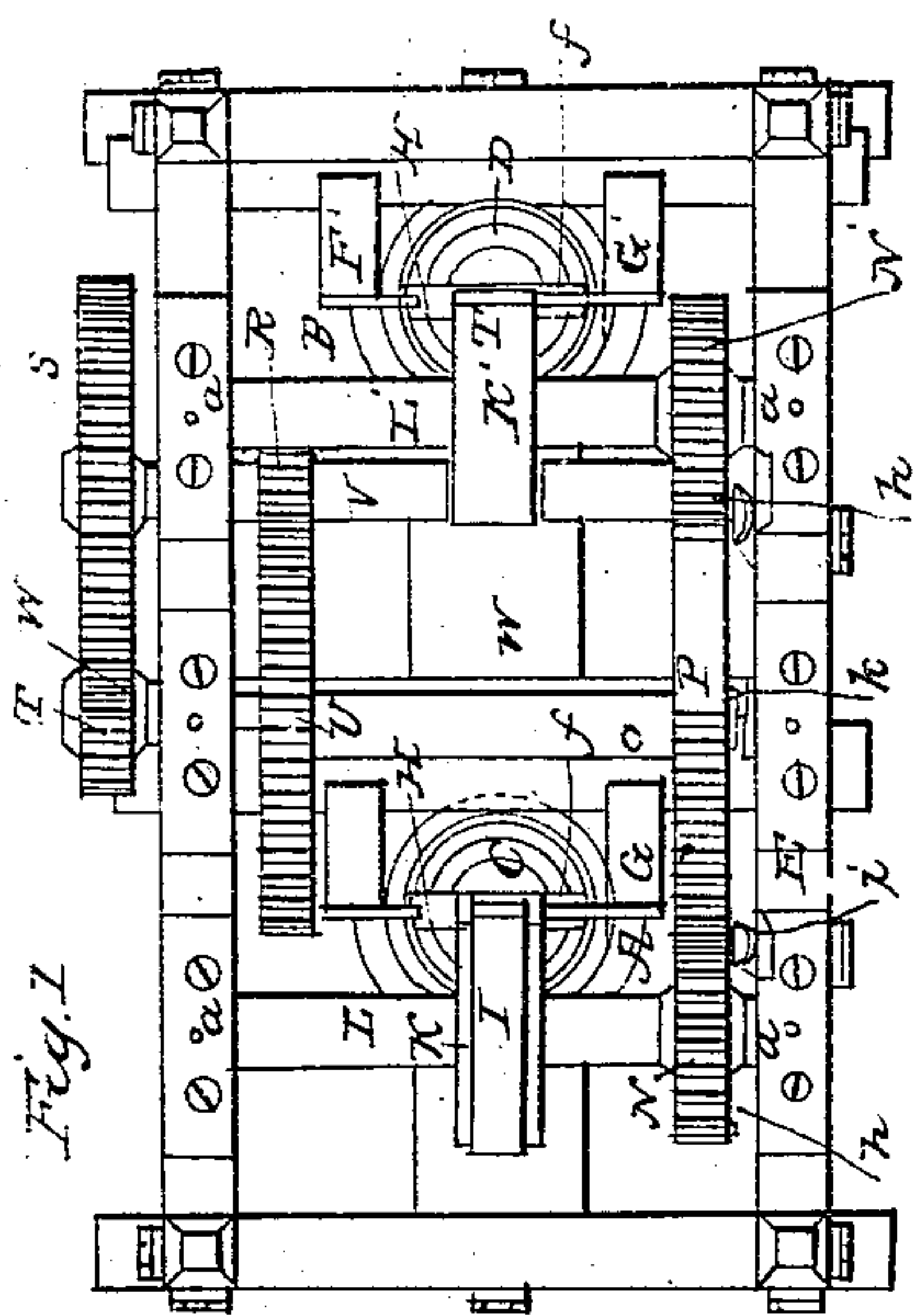


V. WOODCOCK.

Ore Stamp.

No. 9,042.

Patented June 15, 1852.



UNITED STATES PATENT OFFICE.

VIRGIL WOODCOCK, OF SWANZEY, NEW HAMPSHIRE.

MACHINE FOR STAMPING ORES.

Specification of Letters Patent No. 9,042, dated June 15, 1852.

To all whom it may concern:

Be it known that I, VIRGIL WOODCOCK, of Swansey, in the county of Cheshire and State of New Hampshire, have invented a
5 new and useful or Improved Portable Machine for Stamping Auriferous Ore or other Matter; and I do hereby declare that the same is fully described and represented in the following specification and the accom-
10 panying drawings, letters, figures, and references thereof.

Of the said drawings Figure 1 denotes a top view of my said machine. Fig. 2 is a side elevation of it. Fig. 3 is a central,
15 vertical and longitudinal section of it. Fig. 4 is an end view of it.

In the said drawings A and B represent two crushing beds or mortars in connection with each of which a heavy ram, battery,
20 or weight C or D is made to operate, each ram being alternately raised up above and allowed to fall down upon its bed, so as to crush or pulverize by percussion any stones or ore that may be laid therein. The
25 said crushing beds or mortars and rams together with the mechanism for operating the latter are sustained by and within a suitable frame E made as represented in the drawings or in any other proper man-
30 ner.

Each ram is raised upward between a set of two parallel and vertical slides or gins, F, G, or F', G', which serve to guide a frame H, on H', that is suspended from the
35 lower end of a belt or strap I or I', as seen in the drawings. The upper end of the said strap is fastened to the periphery of one of two drums or pulleys K, K', which are respectively fastened on two horizontal and
40 parallel shafts L, L', disposed on the frame E as seen in the drawings, and made to rotate in suitable boxes a, a, a, a. Each frame H carries a tripping catch lever M or M', shaped as represented in Fig. 5, which is a
45 section through it and its frame and the ram below it. The said tripping lever turns on a fulcrum at b, and has its superior arm made heavier than the inferior one, so that when the catch of the inferior arm is be-
50 low the cross bar e of the ram, the weight of the superior arm will throw the catch under the bar. While the weight or ram is being raised the superior arm moves against the inner edge of the gin next adjacent to it.
55 When it reaches nearly the top of the gin it meets and moves against an inclined plane

or cam f that throws the arm inward and causes the catch of the inferior arm to be withdrawn from under the bar e of the ram and thereby sets the ram free so as to en-
60 able the force of gravity to cause it to drop down upon the charge of its mortar or bed.

On each of the shafts L, L', a spur gear N, or N', is fixed, and between the spur gears and on another shaft O is a wheel P
65 which has a row g' of cogs on but an arc nearly equal to a semicircle of its periphery, such cogs being made to engage with those of the gears N, N', to successively or alter-
70 nately revolve such gear.

On the outer side of each of the spur gears N, N', there is a small stud or pro-
jection h, which is made to enter a corre-
sponding hole made in one of two upright
springs i, i', whose lower ends are fastened
75 to the frame.

A cam k is fixed on the outer side of the wheel P and is made of such a shape as to bear either spring entirely away from its
80 projection h or h' during the revolution of the wheel P, and this just previous to the action of the arc g' of teeth on the next adjacent spur wheel N, N'. The object of the spring and the stud applied to each gear
85 N, or N', is to catch such when it has completed its proper extent of back movement and hold it in the required position to be met by the arc of teeth of the wheel P when such arc next meets it.

As soon as the arc of teeth has passed
90 by either gear, such gear is at liberty so as to enable the weight of the frame H or H' and its tripping lever to cause a descent of the said frame.

Just previous to the separation of the arc
95 and the gear, the disengagement of the weight or ram from the tripping catch should take place. This having been effected the tripping lever and its frame descend
100 so as to latch the frame again to the weight or ram that has just previously descended on the charge of its mortar.

The shaft O is put in motion by any suitable power, a train of spur gears R, S, T, U, being represented in the drawings
105 as applied to it, and two other shafts V, W, on the latter of which there is a crank X for enabling a person to turn it.

My experience in the mines of California has led me to the construction of the above
110 described machine as particularly adapted to the use of the miners there. It is very

advantageous that any machinery for pulverizing the auriferous granite rock in that part of the world should possess as few parts as possible that may be liable to derangement. Besides this it should be light and easily transportable, and it should possess the power of successfully competing with the ordinary stamps operated by cams. For this purpose I have designed my machine to work with the heavy ram or weight as do pile driving engines, and it has been found to particularly possess three important requisites to the miner, viz: simplicity and cheapness of construction combined with great effectiveness in operation. It can be worked either by the power of a miner or by that of a horse properly applied to it.

I do not claim as my invention the combination of the drum or pulley K, the strap I, the frame H, its catch lever, and the cam at the top of the gins, as employed to elevate the ram or weight and disengage it so as to enable it to fall down on the bed or mortar. Nor do I claim the arc g' of cogs and the two gears N, N', (applied to their two shafts) for the purpose of alternately imparting a rotary motion to each

shaft; as I am aware that such are old contrivances; but

What I do claim as my invention is—

1. The combination and arrangement of the said arc of cogs and its wheel, the two spur wheels N, N', the shafts thereof, the drums K, K', straps I, I', frames H, H', their catch levers and disengaging cams; the whole being applied to the two weights or rams and made to operate or alternately raise them, disengage them, allow them to fall, and afterward reengage them all as specified.

2. And in combination with the two spur gears N, N', and the arc gear g' P, I claim the cam k on the wheel P, the two spring catches i, i' , and the two pins or studs h, h' , all arranged, applied, and made to operate substantially in manner and for the purpose as hereinbefore specified.

In testimony whereof I have hereto set my signature this tenth day of March, A. D. 1852.

VIRGIL WOODCOCK.

Witnesses:

R. H. EDDY,
GEO. W. CUTLER.