

(No Model.)

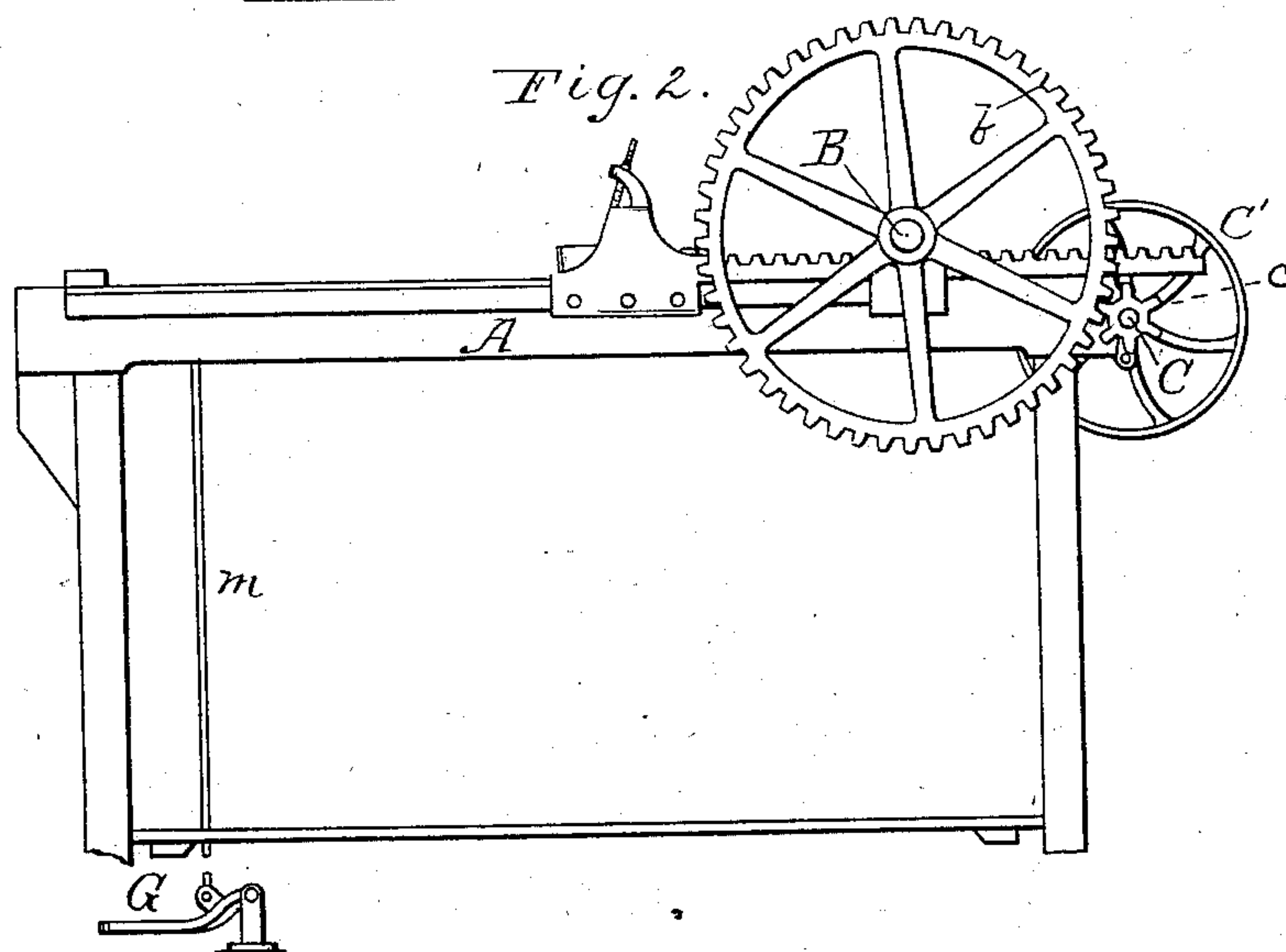
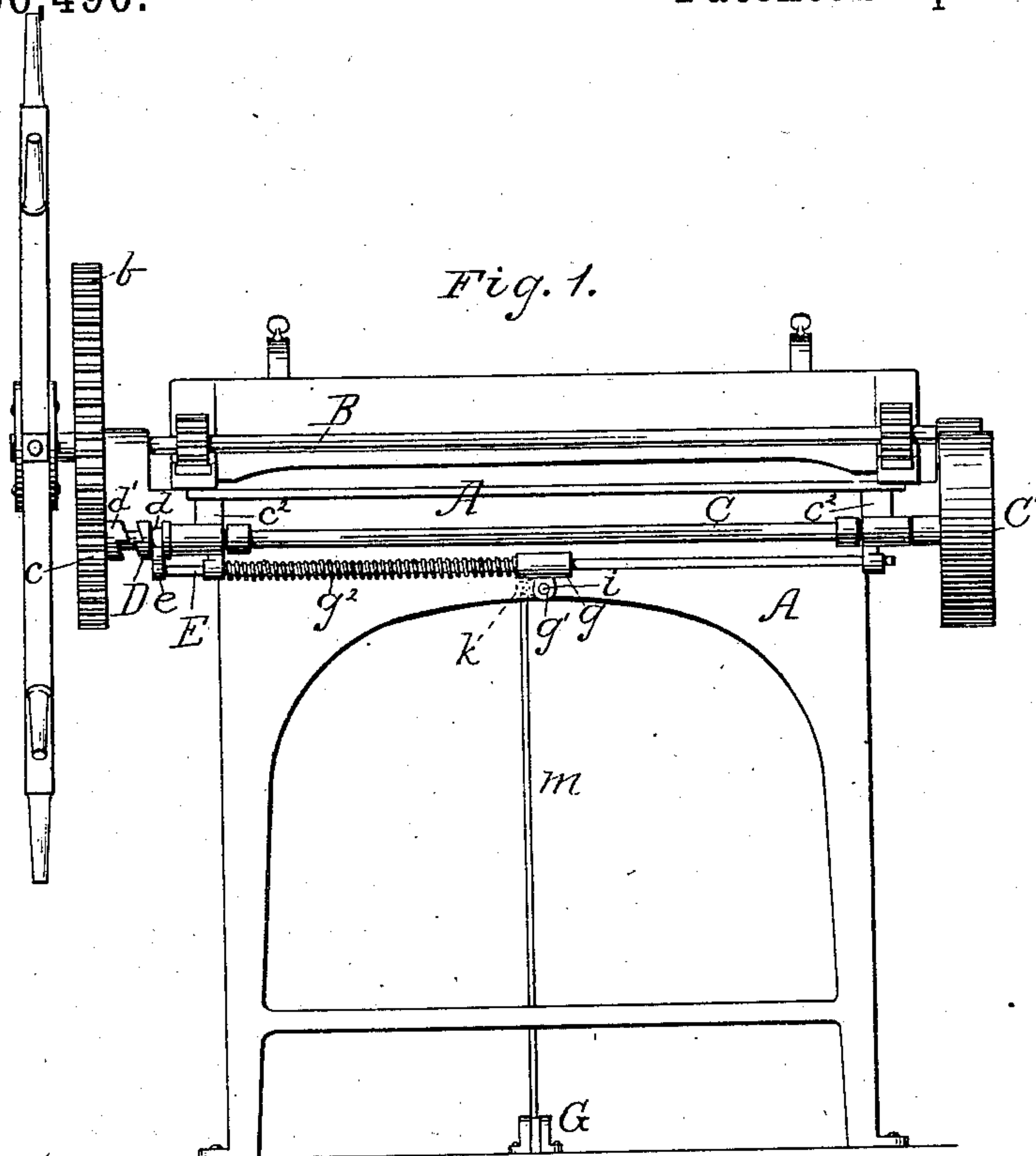
2 Sheets—Sheet 1.

G. E. LLOYD.

STEREOTYPE SHAVING MACHINE.

No. 256,490.

Patented Apr. 18, 1882.



Witnesses:

Frank Thomason
James H. Capra

Inventor:

James E. Lloyd
by J. H. Coyne
Att'y.

(No Model.)

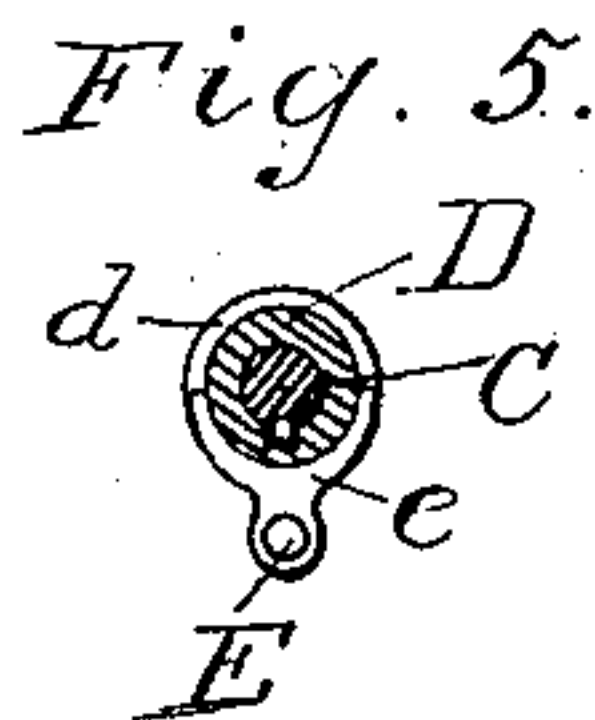
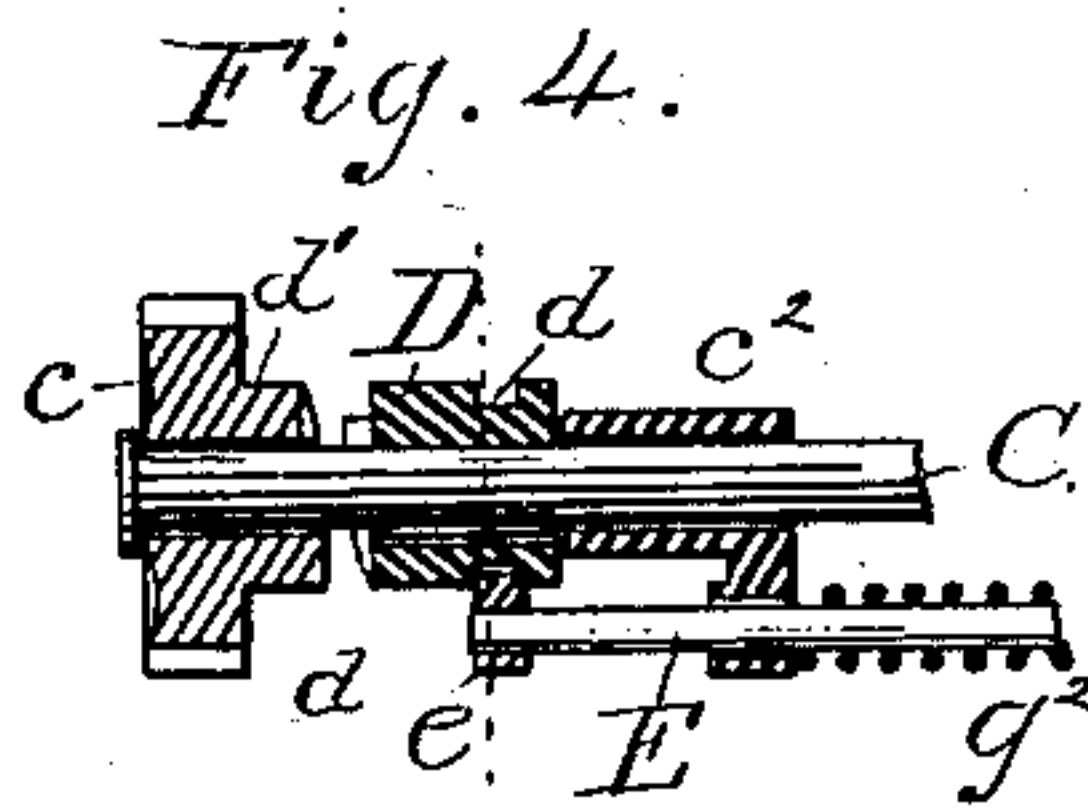
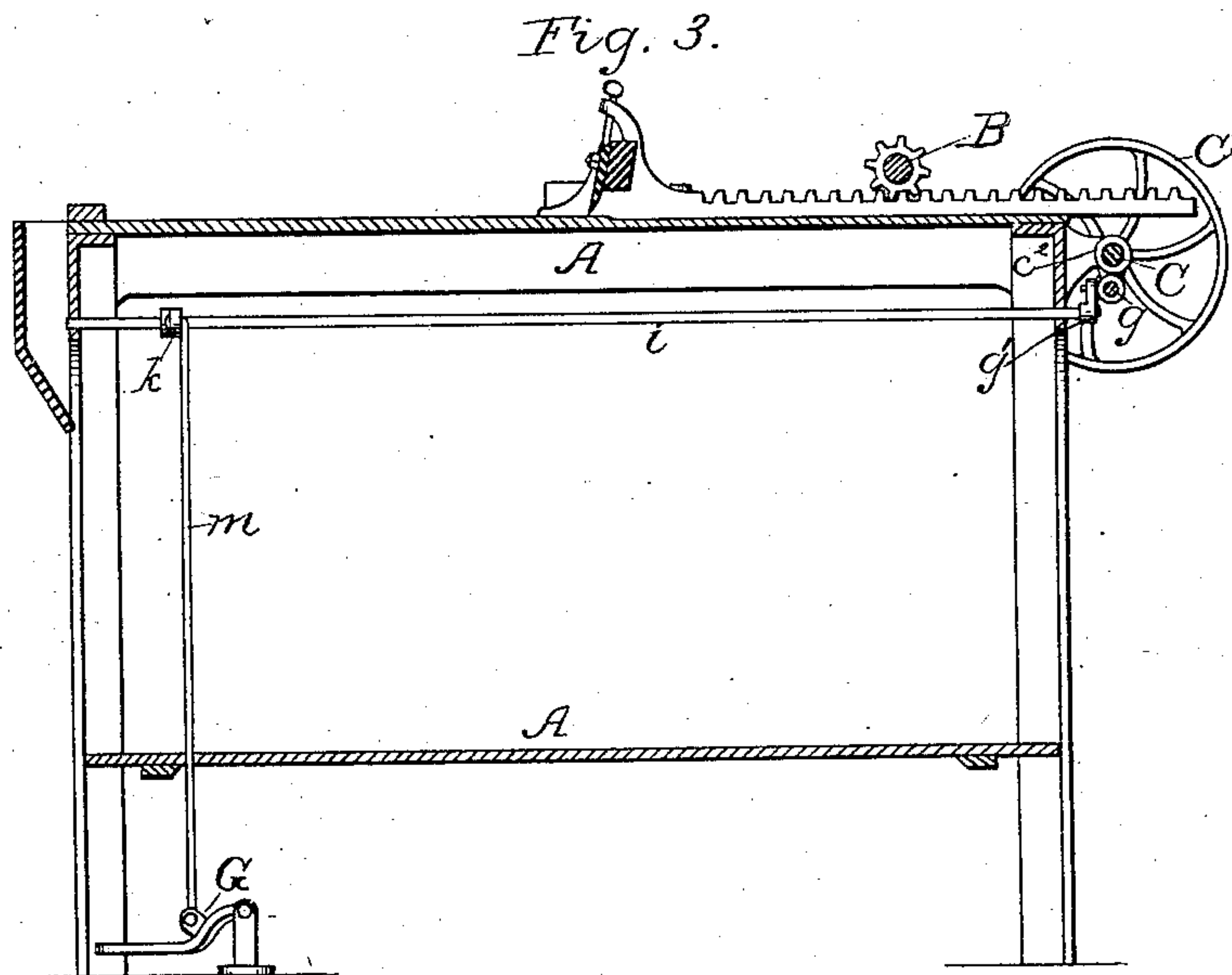
2 Sheets—Sheet 2.

G. E. LLOYD.

STEREOTYPE SHAVING MACHINE.

No. 256,490:

Patented Apr. 18, 1882.



Witnesses:

Frank Thomason

James H. Taylor

Inventor:

George E Lloyd

by J. H. Coyne.

Att'y.

UNITED STATES PATENT OFFICE.

GEORGE E. LLOYD, OF CHICAGO, ILLINOIS.

STEREOTYPE-SHAVING MACHINE.

SPECIFICATION forming part of Letters Patent No. 256,490, dated April 18, 1882.

Application filed December 6, 1881. (No model.)

To all whom it may concern:

Be it known that I, GEORGE E. LLOYD, of Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Stereotype-Shaving Machines; and I do hereby declare that the following is a full, clear, and exact description of the invention, which will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to letters of reference marked thereon, which form a part of this specification.

My invention relates to that class known as "stereotype-shaving" machines, which shave the blocks upon which stereotype-plates are mounted and said plates to a requisite thickness. These machines have heretofore been operated solely by the spoke-lever, which is cumbersome to manipulate, requiring the operator to attend to the proper adjustment of the plate on the bed and exert his utmost strength at the same time, which naturally gives rise to a great deal of inaccurate work, and especially is this the case when inexperienced workmen manipulate the machine. My invention obviates this defect by a simple arrangement of mechanical devices, by means of which steam-power can be utilized and transmitted at the will of the operator to run the machine, allowing the free use of the hands and more attention to be given to the proper adjustment of the plate on the bed.

In the drawings, Figure 1 is an end view of my invention. Fig. 2 is a side elevation of the same with the spoke-lever removed. Fig. 3 is a vertical longitudinal section on the line $x x$ in Fig. 1, and Figs. 4 and 5 are detail views of the clutch.

A represents the ordinary stereotype-shaving machine, consisting of a stationary bed-plate the same width as and about one-half the length of the machine, with a ledge running transversely across the outer end to hold the block or plate in position while the knife moves over it, shaving it to the required thickness. The knife is fastened to a transverse carrier, which slides on beveled tracks extending from the sides of the machine and running longitudinally from that end of the machine near which the ledge is situated to and terminating in the L-shaped bracket projecting

from the sides of the table or frame, the upright arms of which form a bearing for the drive-shaft B. The carrier and knife are operated by means of two racks, one on either side of the machine, extending from said carrier parallel to each other, and moving longitudinally under and meshing with corresponding pinions on the drive-shaft B. On one end of said shaft B is placed a spoke-lever located far enough from the machine to revolve freely, and constituting in the old invention the only means for operating the same. When used in connection with my improvement the necessity for its use is limited to the return movement of the carrier and knife.

Thus far I have confined myself to the construction of the old machine.

To apply my improvement for transmitting steam-power, I place on the shaft B, immediately next to and between the spoke-lever and the L-shaped bracket, a gear-wheel, b , which meshes with the pinion c , loose on the end of the shaft C, said pinion being prevented from slipping off said shaft by the head c' . The shaft C is journaled in the brackets $c^2 c^2$ extending from the ends and near the sides of the table or frame. On the end of the shaft opposite to that on which the pinion is placed is a pulley, C' , driven through the medium of ordinary shafting by steam-power. Placed within and next to the brackets $c^2 c^2$ on said shaft are collars, so placed to prevent any lateral movement of the shaft.

Near that end of the shaft C on which is placed the loose pinion c , situated and moving longitudinally between the bracket c^2 and said pinion, is a clutch, D, which is provided with a circumferential groove, d , to receive the embracing-arms of the fork e , and has one or more serrations in its outer face to engage with corresponding serrations in the contiguous face of the counterpart box d' , which projects from the inner side of and is of a piece with the pinion c . The clutch D is fixed on the shaft C by a spline, d^2 , secured longitudinally in and projecting slightly from said shaft, and entering a corresponding groove in the clutch, thus rotating yet allowing it to engage with its counterpart or transmit its rotary motion to the pinion.

The fork e , the arms of which embrace and enter the circumferential groove in the clutch

D, is secured on the end of the reciprocating rod E, which runs transversely across one end of the machine immediately under the shaft C, being journaled in hangers extending downward from the brackets c^2 c^2 .

Midway on the rod E is a head, g , permanently secured thereto, and provided on its inner side with two projections, between which is movably situated the end of the arm g' on the end of the rock-shaft i , said rock-shaft running centrally the length of the machine under the bed-plate, and having its bearings in the cross-beams of the frame or table. On the reciprocating rod E, between the head g and the bearing c' , is a strong expansion-spring, g^2 , arranged to disengage the clutch and return it to its first position when the pressure of the foot is removed from the treadle, as will be hereinafter explained. Near the other end of the rock-shaft i is an arm, k , perforated in its extremity to receive the hook of the connecting-rod m , which, passing downward through the frame, is operated by a foot-treadle, G.

To operate my machine, the spoke-lever is used to move the carrier and knife back away from the ledge on the bed-plate; then the block or plate being adjusted properly, the foot is pressed on the treadle, thus connecting the clutch with its counterpart and transmitting the steam-power to operate the machine while it performs the cutting movement.

What I claim as new, and desire to secure by Letters Patent, is—

1. The combination, in a stereotype-shaving machine, of the foot-treadle G, connecting-rod m , and rock-shaft i with the reciprocating rod E, fork e , and clutch D, substantially as and for the purpose described. 35

2. The combination, in a stereotype-shaving machine, with the expansion-spring g^2 , of the reciprocating rod E and clutch D, for the purpose hereinbefore specified. 40

3. A device for transmitting steam-power to perform the cutting movement of a stereotype-shaving machine, consisting of a pulley on the end of the drive-shaft, near the other end of which is a clutch engaging with its counterpart box on the contiguous side of a pinion which transmits its intermittent motion to a gear-wheel on the end of the hand-lever shaft, said clutch being forced into gear through the medium of a foot-lever, and being returned to its original position by the expansion-spring on the reciprocating shaft, substantially as and for the purpose hereinbefore described and set forth. 50 55

In testimony that I claim the foregoing as my own I affix my signature in presence of two witnesses.

GEO. E. LLOYD.

Witnesses:

JAMES H. COYNE,

FRANK D. THOMASON.