

(No Model.)

2 Sheets—Sheet 1.

J. A. HART, H. SCOTT & B. F. PANCOAST.

MOTOR.

No. 295,121.

Patented Mar. 11, 1884.

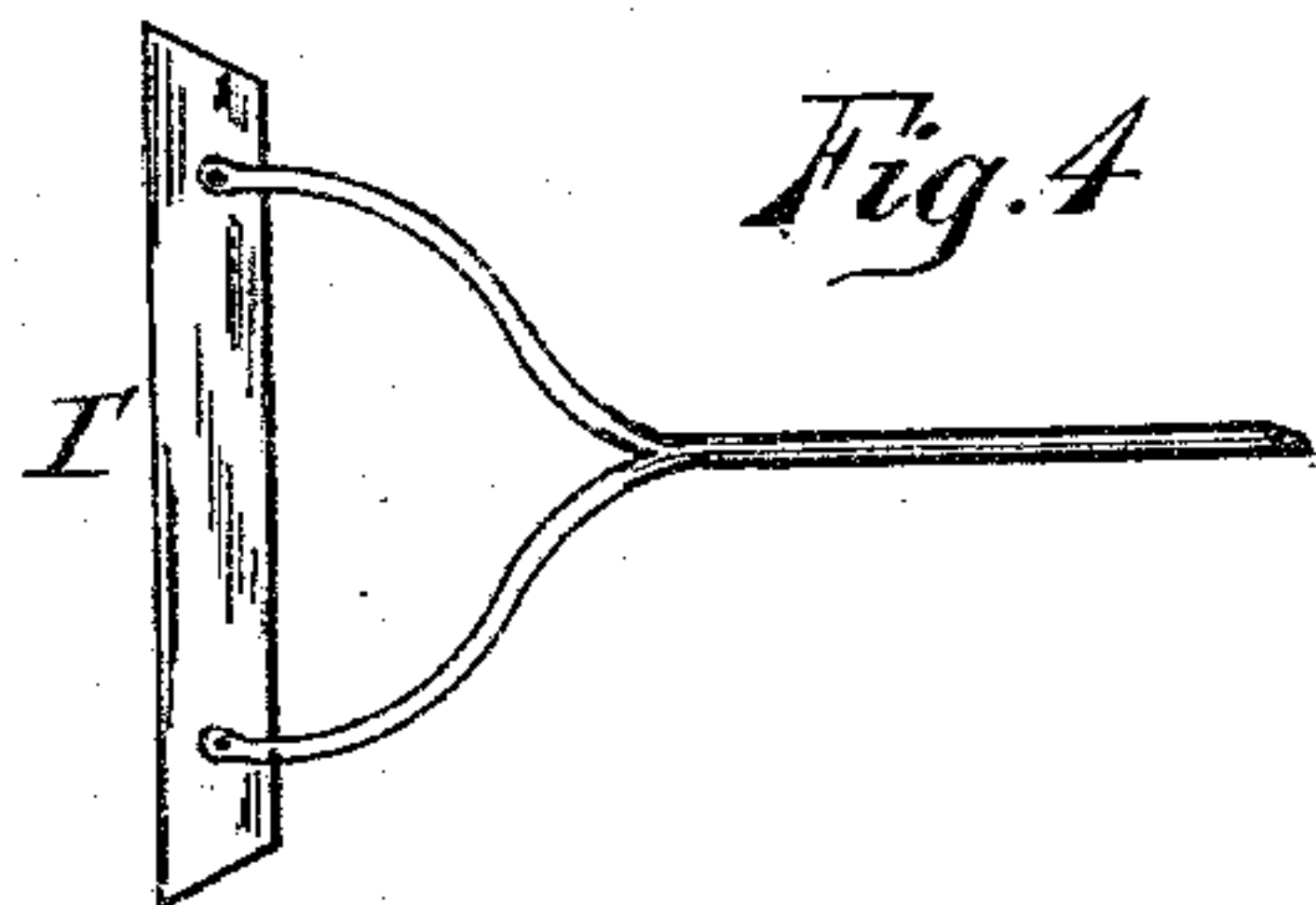


Fig. 4

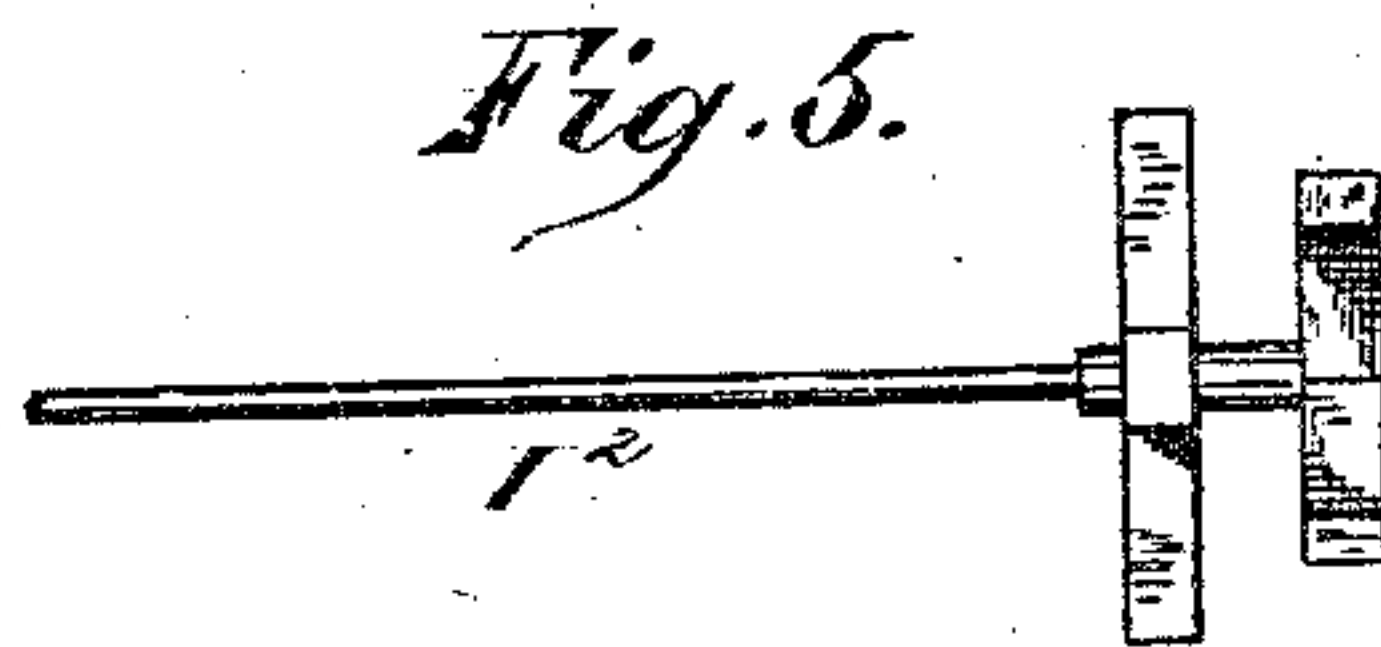


Fig. 5.

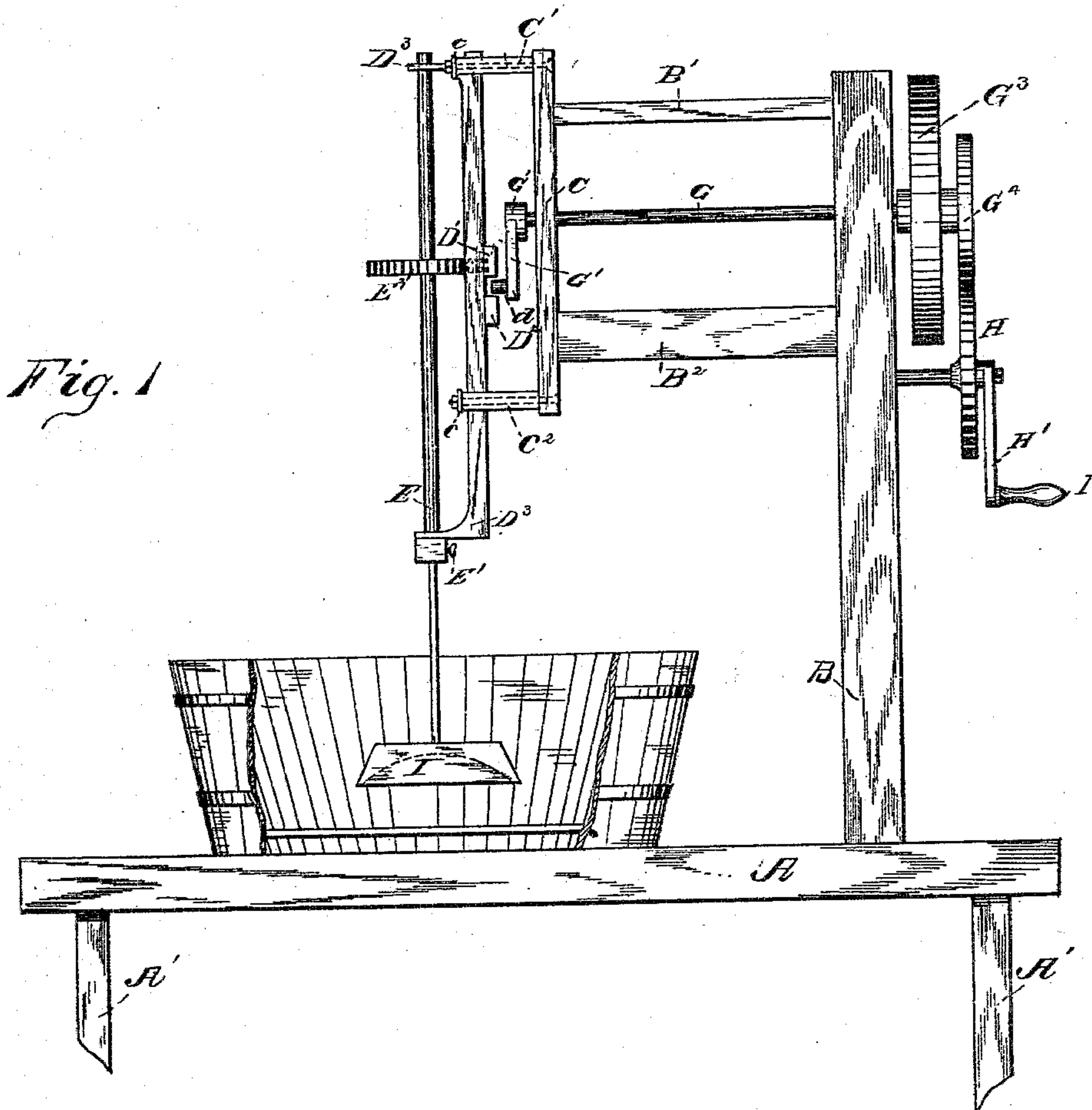


Fig. 1

Witnesses:

E. J. Murdoch

W. A. McKenna

Inventor:

*John A. Hart, Harmon Scott,
& Benjamin F. Pancoast.*

Wm. A. Iron, Atty.

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Fig. 2.

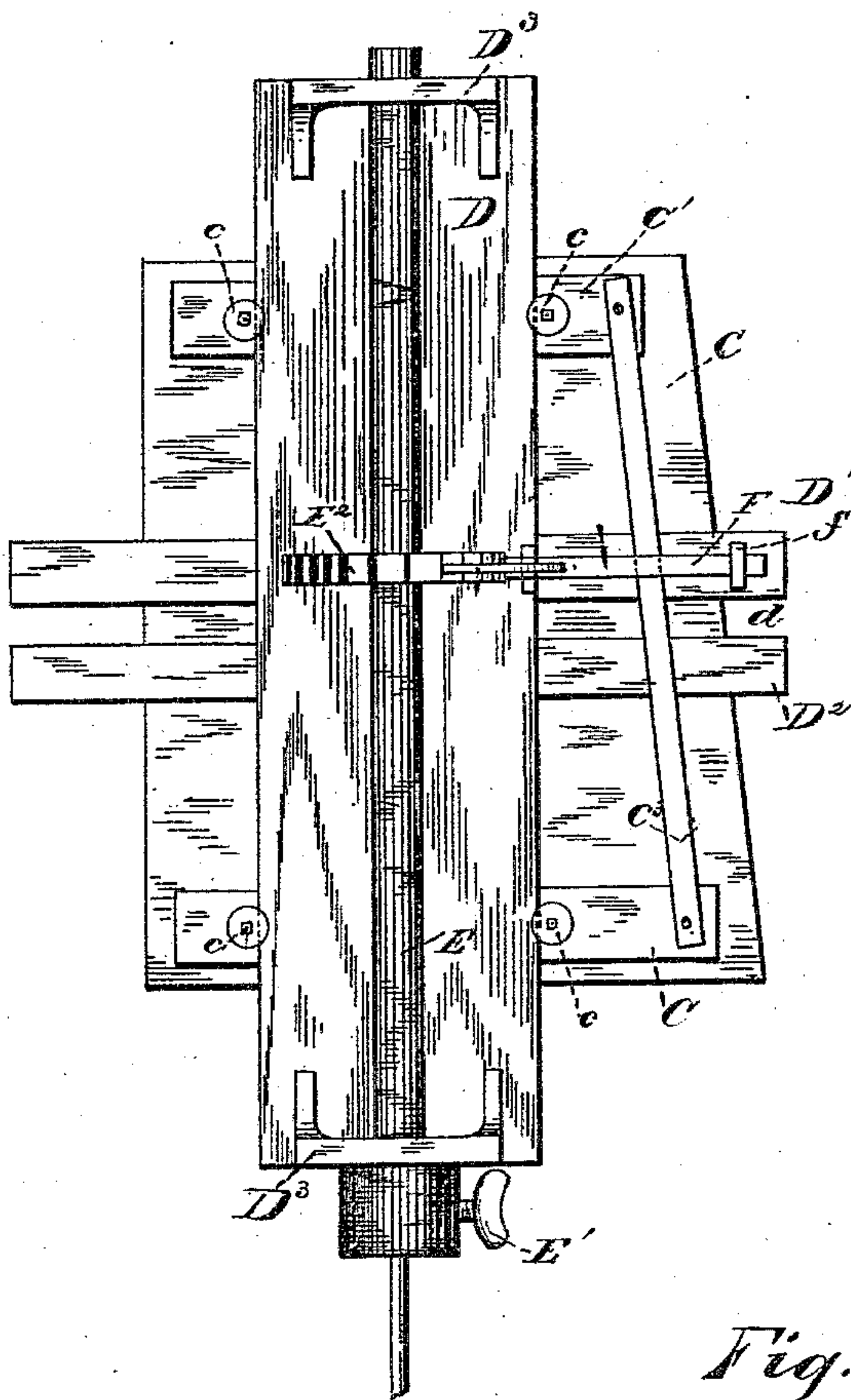
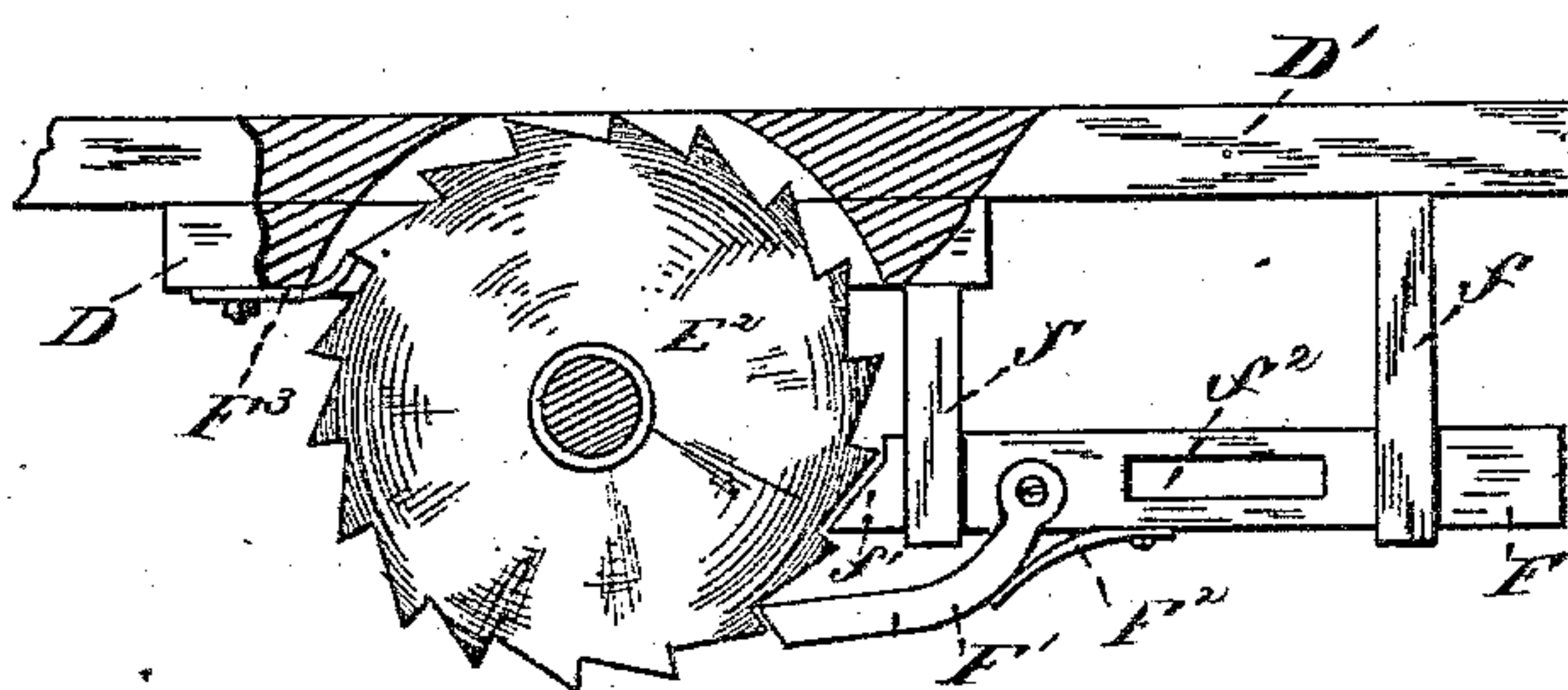


Fig. 3.



Witnesses
E. F. Murdoch
A. B. McKenna

Inventors.
John A. Hart, Harmon Scott
& Benjamin F. Pancoast.
Howard A. How. Atty

UNITED STATES PATENT OFFICE.

JOHN A. HART, HARMON SCOTT, AND BENJAMIN F. PANCOAST, OF IOLA,
KANSAS.

MOTOR.

SPECIFICATION forming part of Letters Patent No. 295,121, dated March 11, 1884.

Application filed September 8, 1883. (No model.)

To all whom it may concern:

Be it known that we, JOHN A. HART, HARMON SCOTT, and B. F. PANCOAST, citizens of the United States, residing at Iola, in the county of Allen and State of Kansas, have invented certain new and useful Improvements in Washing-Machines, Churns, and Vegetable-Cutters, of which the following is a specification, reference being had therein to the accompanying drawings.

Our invention relates to improvements in motors or machines for giving a reciprocating motion to washing-machine pounders, churn-dashers, vegetable-cutters, and similar machines; and it consists in the construction, combination, and arrangement of the several parts, hereinafter described and claimed.

In the drawings, Figure 1 is a side elevation of our machine. Fig. 2 is a detail view of the vertically-moving slide. Fig. 3 is a cross sectional view of Fig. 2. Fig. 4 shows a vegetable-cutter, and Fig. 5 a churn-dasher, all of which will be described.

In carrying our invention into effect we employ, preferably, a bench, A, having legs A'. On one end of this bench is mounted the standard B. A bar, B', is projected from the upper end of this standard at right angles, as shown, and a similar bar, B², is projected parallel with and below the said bar B'. Both these bars extend over the bench A and project toward the opposite end thereof to that on which the standard A is mounted. We connect these bars B' B² at their outer ends by the face-plate C, which is preferably extended slightly above and below the bars B' B². Bearing-plates C' C² are projected forward from the upper and lower ends of the face-plate C, and are provided on their outer ends with guide-rollers c, or suitable means for guiding the slide D in its vertical movements. A bar, C³, is secured at its opposite ends to the bearing-plates C' C², between which it extends, and it is inclined from the vertical, as shown, for the purpose hereinafter described.

The slide D is placed and moves vertically between the guide-rollers c, and is provided on its rear side with a horizontal way, d, for the crank-pin. This way is formed by the cleats D' D², arranged a slight distance apart and secured on the rear face of the slide, as

shown. The slide is provided at its upper and lower ends with bearings D³ D³, in which the shaft E is secured, so that it can rotate freely on its axis, but is held from any vertical movement independent of the slide, as will be readily understood. This shaft E is made hollow from its lower end, at which point it is provided with a clamping-screw, E', which serves to connect the shaft E and the clothes-pounders, churn-dashers, or vegetable-cutters in the operation of the invention.

In order to rotate the shaft E, we provide the ratchet-wheel E², the slide F, and the pallet F'. The wheel E² is keyed on the shaft E, and its periphery turns into a groove formed through the slide D and into the upper cleat, D', as clearly shown in Fig. 3. The horizontal slide F is supported in two arms, f f, projected forward from the cleat F, and is free to move in said arms, and its ends f' are formed to engage the wheel E² and hold the same from being moved more than the width of one tooth with each stroke of the slide. A vertical slot, f², is formed through the slide F, to receive the bar C³, which is passed through it, as shown in Fig. 2, and causes the horizontal slide to move to and fro with each stroke of the vertical slide. The pallet F' is pivoted to the slide F, and is supported by a spring, F², which holds the point of the pallet at all times in engagement with the wheel E². A detent, F³, is arranged to engage the teeth of the ratchet-wheel and prevent any backward movement thereof.

In order to operate the slide, we provide the shaft G, journaled in the plate C and standard B, and provided between plate C and slide D with a crank, G', the pin G² of which operates in the way d, as most clearly shown in Fig. 1. This shaft is provided at its outer end with fly-wheel G³ and the pinion G⁴, the latter being geared with spur-wheel H, journaled on the side of the standard, and provided with hand-crank H', as clearly shown.

The operation of our machine is simple and will be clearly understood from the foregoing description. As the shaft G is revolved, the crank G' drives the vertical slide up and down, and the inclined bar operates the horizontal slide, to cause a partial revolution of the shaft at each stroke of the machine.

The clothes-pounder I (shown in Fig. 1) may be removed, and the vegetable-cutter I' (shown in Fig. 4) or the churn-dasher I² (shown in Fig. 5) be substituted therefor, a proper vessel being provided for each implement.

It is obvious that our framing might be varied without departing from our invention, also that the vertical slide may be operated in various ways; but we prefer the construction shown, as thereby a simple, durable, and convenient arrangement is provided.

What we claim as our invention, and desire to secure by Letters Patent, is—

1. In a motor for washing-machines, churns, and similar devices, the combination of the vertical slide, the shaft journaled on the face thereof, and provided with a ratchet-wheel, the slotted horizontal slide having a pallet engaging the ratchet-wheel, the inclined bar, and operating-framing and operating mechanism, substantially as set forth.

2. In a motor, substantially as described and shown, the combination of the vertical slide, the shaft journaled on the face thereof, the ratchet-wheel secured on said shaft, the horizontal slide provided with pallet, and having its end extended to engage the wheel and limit its revolution at each stroke of the ma-

chine, and the necessary operating mechanism, as set forth.

3. A motor having a vertical slide, a shaft journaled thereon and carrying the implement to be operated, and means for partially revolving said shaft at each stroke of the machine, substantially as set forth.

4. The combination of the vertical slide, the cleats secured on the rear face thereof, and the operating-shaft having a suitable crank, the pin whereof is arranged and operates between the cleats on the slide, as set forth.

5. The motor, substantially as described, composed of the slide, the shaft journaled on the face of said slide, and provided with the ratchet-wheel, the horizontal slide provided with a suitable pallet, the inclined bar engaging the horizontal slide, and suitable framing and operating devices, as set forth.

In testimony whereof we affix our signatures in presence of two witnesses.

JOHN A. HART.

HARMON SCOTT.

BENJAMIN F. PANCOAST.

Witnesses:

J. F. CARNAGY,

C. A. STEELE.