

A. B. LIPSEY.
Ore-Crusher.

No. 203,054.

Patented April 30, 1878.

Fig. 1.

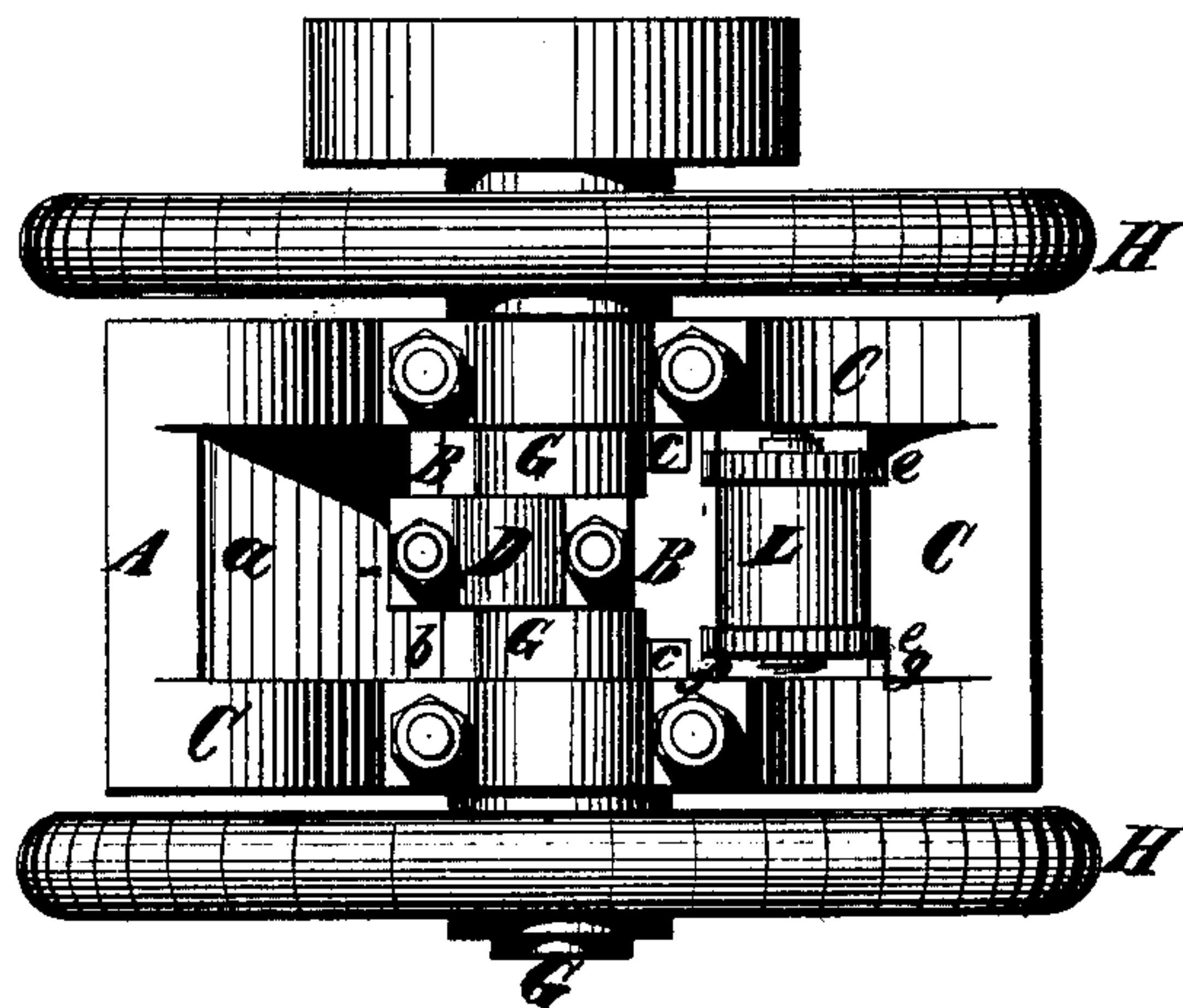
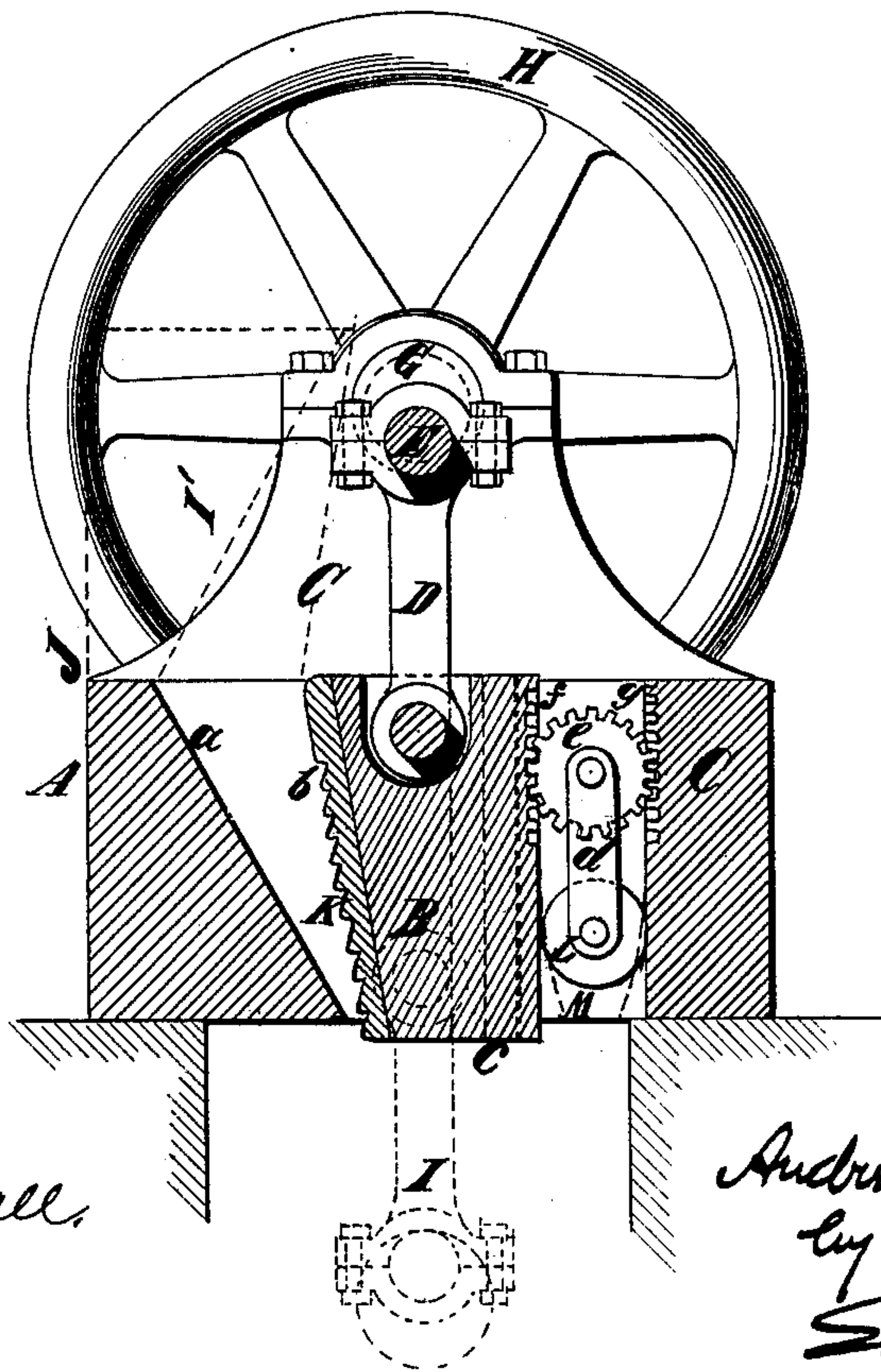


Fig. 2.



Witnesses.
Chandler Keane,
Thomas, E. Birch.

Inventor
Andrew B. Lipsey,
by his Atty.,
Edwin H. Brown.

UNITED STATES PATENT OFFICE.

ANDREW B. LIPSEY, OF WEST HOBOKEN, NEW JERSEY.

IMPROVEMENT IN ORE-CRUSHERS.

Specification forming part of Letters Patent No. **203,054**, dated April 30, 1878; application filed March 29, 1877.

To all whom it may concern:

Be it known that I, ANDREW B. LIPSEY, of West Hoboken, in the county of Hudson and State of New Jersey, have invented certain new and useful Improvements in Crushing and Squeezing Machinery, of which the following is a description:

This invention consists in a crushing or squeezing machine comprising the combination, with a box-like frame provided with racks and a reciprocating plunger, of rollers arranged between said frame and plunger, connected by links and provided with gear-wheels engaging with said racks, whereby the said plunger is adequately supported throughout its movement.

The invention also consists in details of construction to be hereinafter described.

In the accompanying drawing, Figure 1 is a plan of a machine embodying my improvements, and Fig. 2 is a central longitudinal section thereof.

Similar letters of reference designate corresponding parts in both figures.

A designates a stationary bed or table, having an inclined face, *a*, and comprised in a frame, C, which at the sides of said bed is provided with vertical guides *c*. B designates a vertically-reciprocating plunger, having a face, *b*, inclined correspondingly to that of the bed A. This plunger fits on the guides *c*, and is operated through a rod or pitman, D, by a crank, E, or equivalent device on a rotary shaft, G, supported on the frame C, said shaft being preferably provided with one or more fly-wheels, H.

As the plunger reciprocates up and down

along the guides *c*, its upper portion alternately approaches and recedes from the lower portion of the bed or table, so that intervening material will be subjected to an intermittent crushing or squeezing action.

As represented, the plunger is provided with a series of transverse ridges, forming a series of hammers, K, which, acting on the bed or table A, accomplish the crushing of material very effectively.

The plunger is additionally supported transversely by rollers L, interposed between its back and the frame C. To insure these rollers moving with the plunger, they are connected together by links *d*, and provided with toothed sectors or pinions *e*, gearing with racks *f* on the back of the part B, and other racks *g* on the frame C.

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

1. In a crushing or squeezing machine, the combination, with a box-like frame provided with a rack, of rollers arranged between said frame and plunger, connected by links and provided with gear-wheels engaging with said racks, substantially as and for the purpose specified.

2. The combination of the frame C, bed or table A, longitudinally-reciprocating plunger B, guides *c*, pitman D, crank E, rollers L L, pinions *e*, and racks *f g*, substantially as and for the purpose set forth.

ANDREW B. LIPSEY.

Witnesses:

A. J. DE LACY,
CHANDLER HALL.