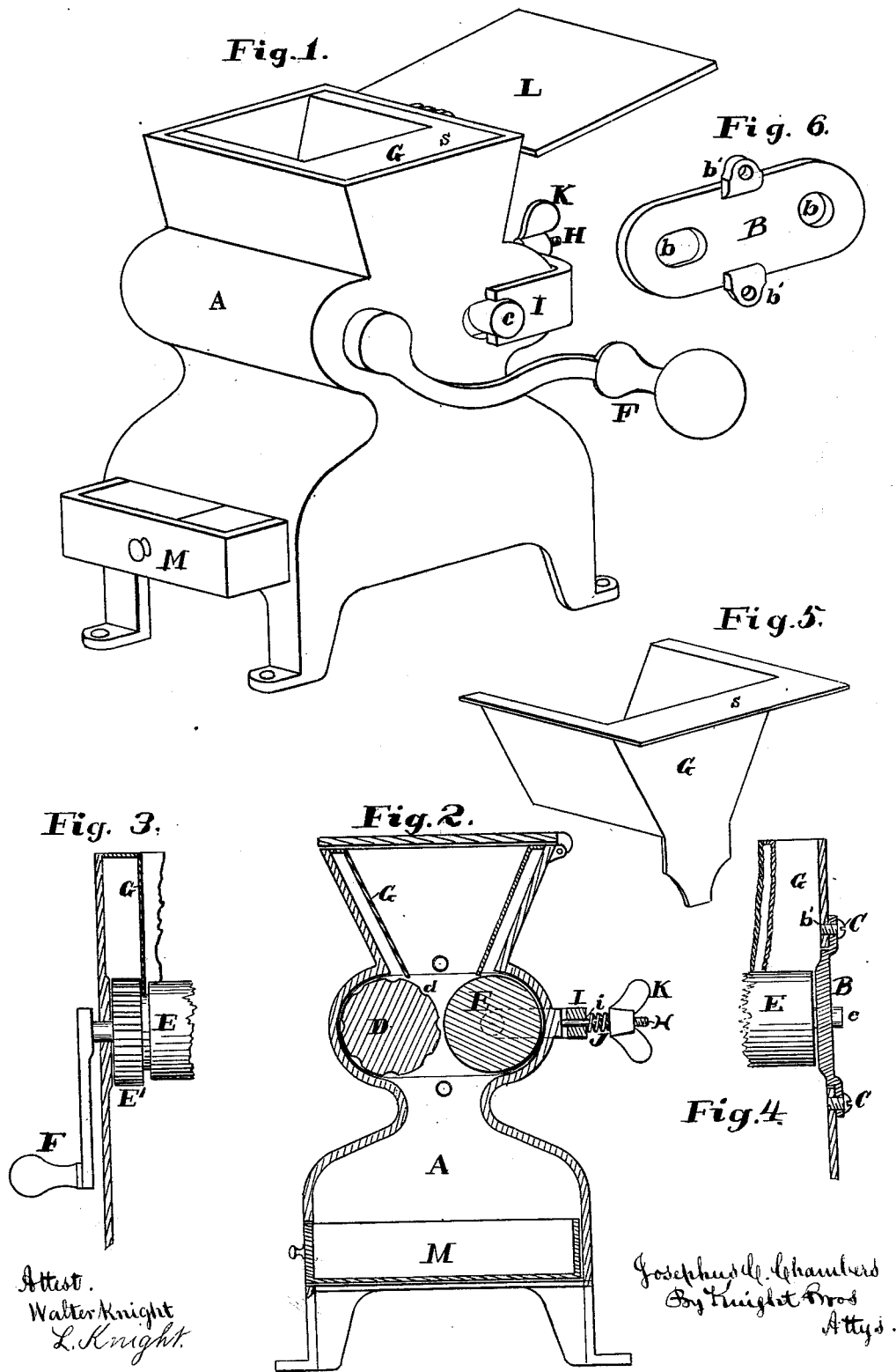


J. C. CHAMBERS.
Coffee-Crushing Rolls.

No. 218,664.

Patented Aug. 19, 1879.



UNITED STATES PATENT OFFICE.

JOSEPHUS C. CHAMBERS, OF CINCINNATI, OHIO.

IMPROVEMENT IN COFFEE-CRUSHING ROLLS.

Specification forming part of Letters Patent No. **218,664**, dated August 19, 1879; application filed February 14, 1878.

To all whom it may concern:

Be it known that I, JOSEPHUS C. CHAMBERS, of Cincinnati, Hamilton county, Ohio, have invented a new and useful Machine for Crushing Coffee, of which the following is a specification.

My invention relates to a device for crushing coffee preparatory to the customary decoction instead of grinding the same, as usually practiced.

My invention consists in the combination of a peculiarly-formed removable false hopper or lining-plate and a set of adjustable rolls having on their ends match gears, which are inclosed within the shell of the machine, said hopper lining-plate performing the various offices of a grain-conductor, a gear-guard, and a roll-scaper.

In the accompanying drawings, Figure 1 is an external view of my coffee-crusher. Fig. 2 is a vertical section through the same. Figs. 3 and 4 are vertical longitudinal sections of a portion of the mill. Fig. 5 shows my guard and conductor detached. Fig. 6 shows the cheek-plate detached.

A represents the shell or frame; B, a cheek-plate, perforated at *b* for the ends of the roller-journals, and at *b'* for bolts C, by means of which the said plate is fastened to the shell after insertion of the two geared rollers or cylinders D E.

Both cylinders may be smooth; but I prefer to make that one, D, to whose shaft the operative crank F is attached with shallow longitudinal channels or flutings *d*.

At one end of the rollers D and E are secured match gears, of which one is shown in Fig. 3. These rollers and their match gears are inclosed within the hopper, and are thus preserved from dust and danger of becoming broken by contact with other material. The gears being within the hopper will give the machine a better and less unsightly appearance than where the gears are outside. There is also less danger of accidents arising from persons' fingers or clothing becoming entangled in the gears.

G is a guard and conductor, which is preferably stamped out of sheet metal, as indicated in the present illustration, but which may be of cast metal or even of wood. The lining-plate G rests within the top of the hopper, and has at one end a shelf, *s*, which, by covering that portion of the hopper in which the match gears are situated, acts, together with the side of the plate dependent from the shelf, as a guard or housing thereto, and prevents any coffee or other material falling upon and clogging up the gears.

The sides of the lining-plate also act as a funnel or conductor for conveying the coffee directly down to and between the rollers at their point of contact. The lower ends of the sides of the lining-plate are in contact with the peripheries of the crushing-cylinders, and on the revolution of said cylinders in a reverse direction to that followed during the crushing operation said lower ends will scrape against the cylinders and remove therefrom all adhering matter.

A screw-stud, H, that projects from the rear wall of the shell, occupies an orifice, *i*, in a yoke, I, which, extending around both ends of the shell, engages the protruding extremities of the yielding roller-shaft *e*.

A spring, J, encircling the screw-stud H, and a thumb-nut, K, which fits the stud, enable any desired pressure to be given to the roller E.

L is a lid, and M a drawer.

I claim as new and of my invention—

The combination of the adjustable crushing-rollers D E, having match gears within the case A, and the removable false hopper, guard, and scrapper G, substantially as and for the purpose set forth.

In testimony of which invention I hereunto set my hand.

JOSEPHUS C. CHAMBERS.

Attest:

GEO. H. KNIGHT,
WALTER KNIGHT.