

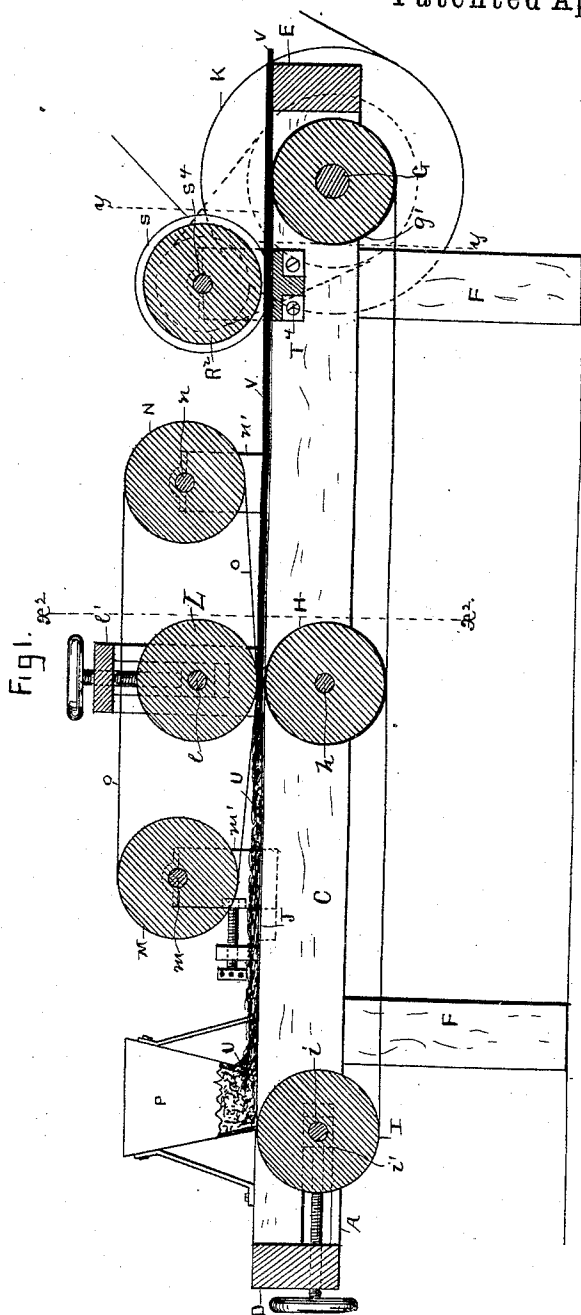
(No Model.)

3 Sheets—Sheet 1.

G. FRANK.
FUEL PRESS AND CUTTER.

No. 473,834.

Patented Apr. 26, 1892.



WITNESSES:
Franklin B. Smith
Otto Kraus

INVENTOR:—
Gustave Frank
BY
James H. Lancaster
ATTORNEY.

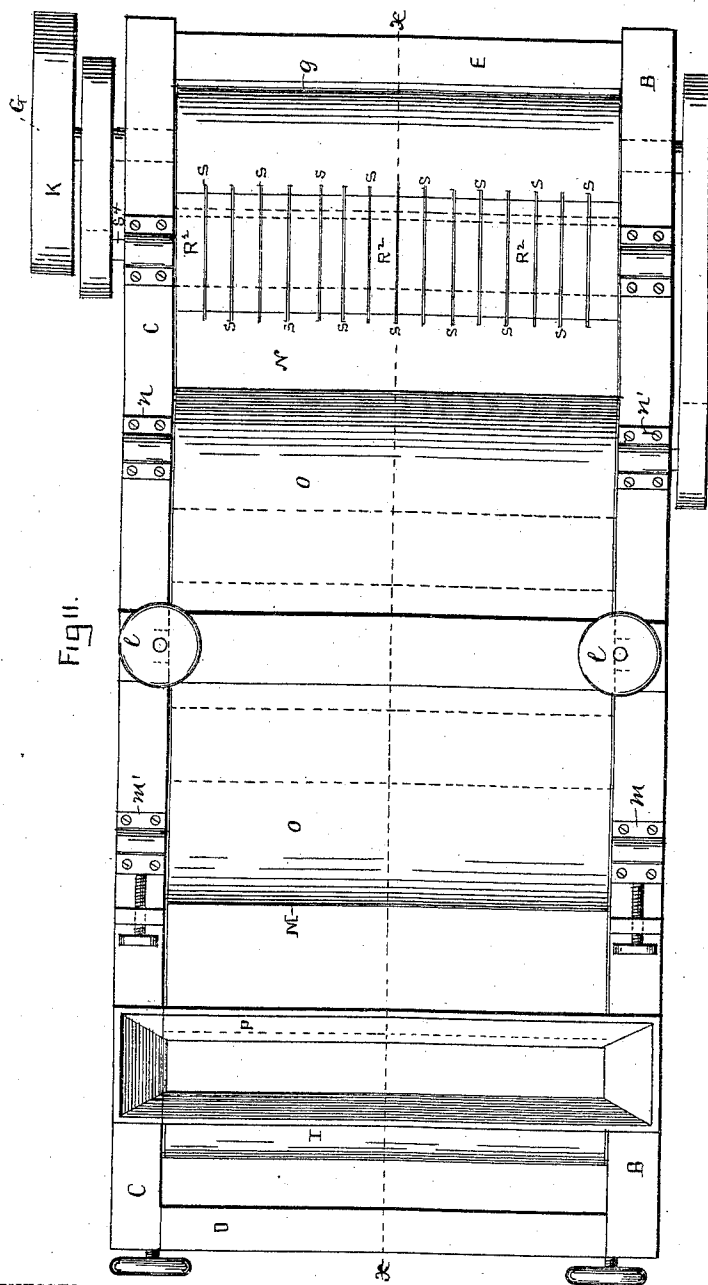
(No Model.)

3 Sheets—Sheet 2.

G. FRANK.
FUEL PRESS AND CUTTER.

No. 473,834.

Patented Apr. 26, 1892.



WITNESSES:

Franklin Barnett.
Wm. Kraus.

INVENTOR: -

Gustav Frank

BY

James M. Lancaster
ATTORNEY.

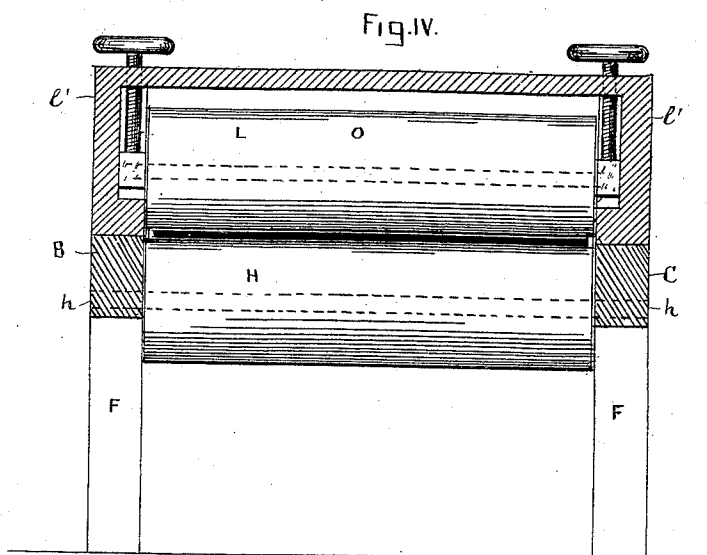
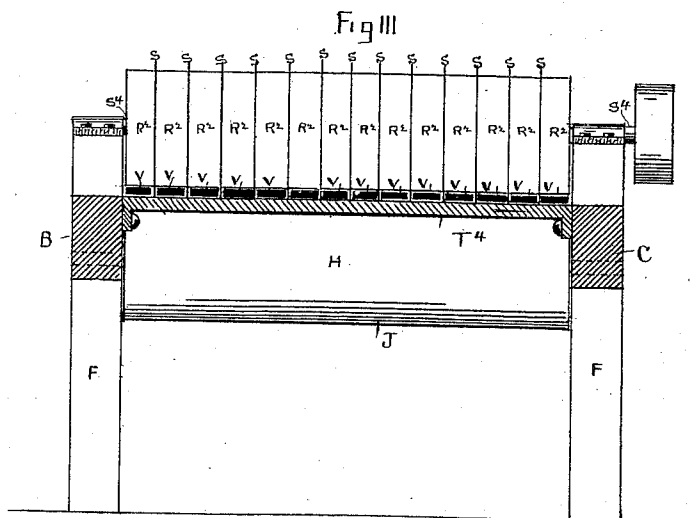
(No Model.)

3 Sheets—Sheet 3.

G. FRANK.
FUEL PRESS AND CUTTER.

No. 473,834.

Patented Apr. 26, 1892.



WITNESSES:

Franklin Barrett
John Frank

INVENTOR:

Gustave Frank
BY
James H. Lancaster
ATTORNEY.

UNITED STATES PATENT OFFICE.

GUSTAVE FRANK, OF NEW YORK, N. Y.

FUEL PRESS AND CUTTER.

SPECIFICATION forming part of Letters Patent No. 473,834, dated April 26, 1892.

Application filed March 2, 1892. Serial No. 423,530. (No model.)

To all whom it may concern:

Be it known that I, GUSTAVE FRANK, a citizen of the United States, and a resident of New York, in the county of New York, State of New York, have invented certain new and useful Improvements in a Fuel Presser and Cutter, of which the following is a full, clear, and exact specification.

The object of my invention is to produce a simple and easily-operated machine for pressing and cutting artificial fuel or other plastic or semi-plastic material or composition.

My invention chiefly consists of rollers and an endless belt for conveying the material under a set of adjustable presser-rollers, which may, if necessary, be suitably heated.

It also consists of circular cutters or knives which are arranged to cut and divide the material longitudinally and also laterally when necessary. All the said parts are supported on a suitable horizontal frame and driven either by suitable belting or gearing.

Referring to the drawings, Figure I is a sectional elevation of my improved machine, taken on line *xx*, Fig. II. Fig. II is a plan view of Fig. I. Fig. III is a cross-sectional view on line *yy*, Fig. I. Fig. IV is a cross-sectional view on line *xx'*, Fig. I.

Similar letters refer to similar parts throughout the several views.

Letter A is the frame of the machine, consisting of the two horizontal beams B and C, connected and held apart the required distance by two or more cross-pieces D and E, the whole being supported on the four posts or legs F F F F.

G is a shaft extending across the framework at *g* and supported at each end in suitable bearings secured to the horizontal beams B C, and to this axle is fastened the roller *g'*, made sufficiently wide to freely revolve within the space between the said horizontal beams B and C. H is another roller secured to the axle *h*, journaled to the under side of the horizontal beams B C. I is another roller secured to the axle *i*, which is journaled to the movable bearings *i'* *i'*, adjustably secured to the horizontal beams B C. Over and around these rollers *g'*, H, and I is stretched the endless carrying-apron J. This said apron J is revolved by the belt-wheel K, which is keyed to the shaft or axle G. At the center of the

frame directly above the endless carrying-belt is placed the adjustable pressing-roller L, secured to the axle *l*, journaled in the vertical standards *l'* *l'* and which are fastened to the horizontal beams B C. To the right and left of this roller L and a little distance therefrom are placed the adjustable roller M and fixed roller N on shafts *m* and *n*, respectively, journaled to standards *m'* *n'*. The standards *n'* are secured rigidly to the beams B C and the standards *m'* are adjustably secured to the beams B C. Over and around these rollers L, M, and H revolves the endless apron O. The axle of the roller L is adjustably journaled to the standards *l'* *l'*, in order to regulate the required pressure of the said rollers.

P is a hopper placed over the endless carrying belt or apron J and supported on a suitable frame secured to the beams B and C. This hopper may be provided in the inside with a stirrer, agitator, or regulator secured to an axle journaled in the side frame of the hopper and provided with a belt-wheel for revolving the said agitator.

S S S are circular cutters or knives keyed upon the axle *S'*, supported on suitable brackets secured to the frame of the machine. These cutters may also have lateral blades, so as to cut the blocks into squares or other required shapes. These knives are usually placed at equal distances apart, such being determined by the desired width and sizes of the composite blocks of artificial fuel or other substances to be produced. Between these knives are placed the presser rollers or sleeves *R'*, made usually of less diameters than the knives. The diameters of these rollers, however, are governed by the thickness of the material or fuel to be pressed.

Beneath the circular knives is placed the presser-block *T'*, secured by bolts to the side beams B C.

Operation: The prepared material U is placed in the hopper P, and from said hopper it falls upon the endless carrying-apron J. From this apron J the material is carried forward to and between the pressing-rollers L and H, where it is pressed and afterward cut into the required shapes or blocks V. From these rollers the fuel or other composition or material passes under the knives S and is

there pressed and cut into strips or blocks of the required thicknesses and widths. These strips can, if desired, be cut into squares by a separate apparatus or by hand, or by other cross-knives acting in connection with knives B. (Not shown.) The presser-rollers L and M may be heated by steam admitted into the interior of the same.

Although I specifically refer to my apparatus or machine as being used for cutting or forming plastic substances or compositions that are intended for artificial fuel, I do not confine its use thereto, as it can be employed either in its present condition or modified to make cakes, tablets, balls, or blocks of almost any composite material and into a variety of shapes, and either lettered or plain.

Having thus described my invention, what I claim is—

1. In a machine for pressing and cutting artificial fuel, the roller g' , the roller H, and adjustable roller I, all journaled to the frame of the machine in the same horizontal plane, over all of which passes the endless apron J, combined with the belt O, and the adjustable pressure-roller L, substantially as and for the purpose set forth.

2. In a machine for pressing and cutting artificial fuel, the fixed presser-roller H and the adjustable presser-roller L, journaled to the machine, as described, in combination with the endless apron J, substantially as and for the purpose set forth.

3. In a fuel pressing and cutting machine, the arrangements of the following instrumentalities: the adjustable roller I and roller g' , the hopper P, the adjustable roller M and fixed roller N, the endless apron O, passing around rollers M and N, the fixed presser-roller H, the adjustable presser-roller L, the circular cutters S on shaft S^4 , the sleeves R^2 , the presser-block T^4 , all of said rollers keyed on suitable shafts journaled, as described, in bearing on the frame of the machine and revolved by suitable pulleys and belting, all arranged substantially as and for the purpose set forth.

In testimony that I claim the foregoing I have hereunto set my hand this 6th day of February, 1892.

GUSTAVE FRANK.

Witnesses:

FRANKLIN BARRETT,
JAMES H. LANCASTER.