

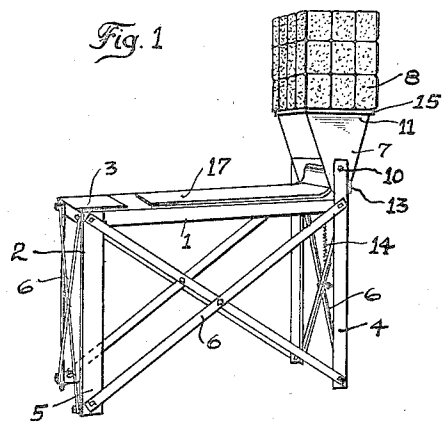
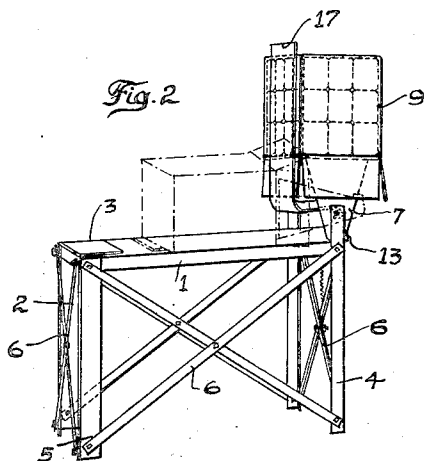
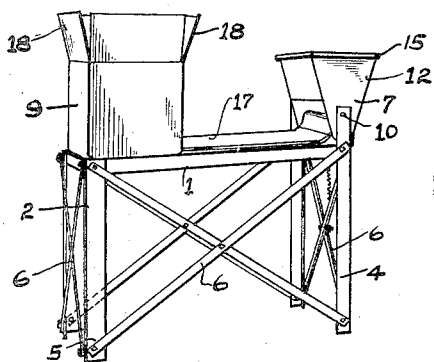
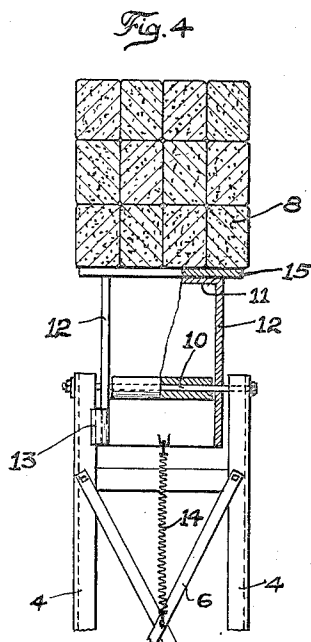
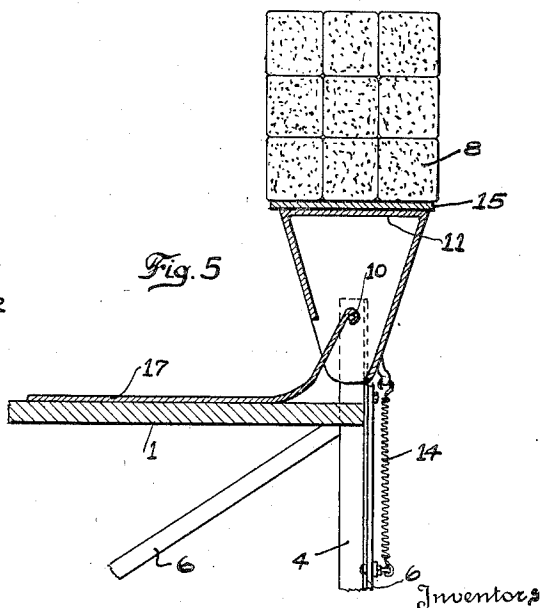
Oct. 8, 1935.

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2,016,418

APPARATUS FOR AND METHOD OF FILLING CARTONS WITH FUEL BRIQUETTES

Filed Feb. 7, 1933



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2,016,418

APPARATUS FOR AND METHOD OF FILLING
CARTONS WITH FUEL BRIQUETTESCharles M. Eberling and Raymond F. Mitten,
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Application February 7, 1933, Serial No. 655,674

3 Claims. (Cl. 226—14)

Our invention relates to apparatus for and method of filling cartons with fuel briquettes.

Fuel briquettes now on the market are generally formed in a suitable matrix, of a mixture of coal screening and a Portland or natural cement binder. When these briquettes come from the matrix they are very fragile and must be stored for approximately one week until sufficiently cured to permit of free handling. The loss from slack incident to handling storing and subsequent shipment has amounted to approximately 1% to 5% of the total volume. Furthermore frequent objection is made by consumers that the coal content of the briquettes soils the hands and clothes.

The general object of this invention is to provide a method of and means for packaging a plurality of uncured briquettes of the kind described in a combustible substantially air tight enclosing or covering member, which can be conveniently handled and thrown into the furnace with the briquettes thus avoiding the foregoing disadvantages of direct handling of the briquettes.

A further object of the invention is the provision of means for economically and conveniently packing fuel briquettes in cartons, with a minimum of handling as the briquettes come from the mold or matrix in a more or less "green" or uncured condition.

The foregoing and further objects and advantages of the invention will be apparent from a consideration of the specification in connection with the accompanying drawing, in which:

Figure 1 is a perspective view of a machine according to the invention showing the briquettes stacked on the rocking platform, the backing plate being shown in lowered position.

Figure 2 is a view similar to Figure 1 showing in full lines an inverted cardboard carton enclosing the stacked briquettes, the backing plate being shown in upright backing position. The plate and carton together with the briquettes are shown in dotted dash lines resting upon the table;

Figure 3 is a perspective view showing the carton after having been manually tilted to upright position;

Figure 4 is a front view partly in section of the machine shown in Figure 1; and

Figure 5 is a fragmentary longitudinal sectional view through the said machine.

Referring more particularly to the drawing 1 denotes an elongated rectangular table comprising frame member 2, and a top 3, supported by

front and rear legs 4 and 5 respectively, cross braces 6 being employed to brace and strengthen the structure. A rocking platform or member 7 on which the briquettes 8 are temporarily placed preparatory to packing in cardboard cartons 9, is pivotally supported on a shaft 10, in turn mounted in the extended upper ends of front legs 4. The member 7, which is of slightly less width than the table top and preferably made of sheet metal, comprises a rectangular top portion 11, and two depending V-shaped wing or side portions 12. The shaft 10, which is fixed at its opposite ends in the upper extremities of legs 4, extends loosely through aligned openings in the wings 12 of the pivotally movable platform. A stop lug 13 on one of the wings 12, engages one of the legs 4 when the platform is in full elevated or vertical position, and limits further upward and outward movement, while a coil spring 14 offers resistance to movement in an inward and downward direction.

In practice the uncured briquettes are stacked upon a pallet 15 as they come from the matrix and the briquettes together with the pallet are then deposited upon the platform (see Figure 1). The operator then forces an inverted substantially air and water proof combustible paper carton 9, over the stacked briquettes, as indicated in Figure 2. A lowering and backing plate 17, normally resting upon the table top 3, and loosely pivoted at its outer end upon shaft 10, between the wings 7, is now raised to bring its outer end face into parallel contact with the inverted carton. While pressing the lowering and backing plate against one side of the filled carton with one hand, the operator forces the platform and its load inwardly and downwardly about shaft 10 as a pivot with the other hand until the lowering plate, carton and briquettes, pallet and platform rest upon the table top, in the position illustrated in dash dotted lines in Figure 2. The carton is then tilted to upright position at the outer end of the table and the flaps 18 closed and sealed. Coiled spring 14 automatically returns the platform to normal upright position when the latter is relieved of its load. Pallet 15 is then reloaded and the operation repeated.

It will be noted that the inner pivoted end of the lowering plate is upwardly bent or offset to cause the body of the plate, when elevated, to assume a position parallel to the stacked briquettes and carton. Also that the movable platform is so shaped and the mounting thereof such that the top of the platform will be at right angles to the table top, and the edges of the wings 7 will

be flush with the table top when the lowering plate is in its lowered position.

The lowering plate 17 cooperates with the platform and carton to permit of the fragile uncured briquettes being lowered to the table top without danger of jolting or jarring. As the briquettes are thereafter handled in a sealed protected condition all loss from slack, which heretofore has amounted to approximately 1% to 5% is eliminated. Furthermore the ease and cleanliness with which the fuel can be handled adds greatly to its saleability. The carton is made of a size to easily go through a furnace door and will accommodate approximately twenty pounds of fuel.

Having thus described our invention; what we claim is:

1. A machine for packing uncured coal briquettes comprising a table, an elevated platform having depending leg portions pivotally secured to said table above the top surface thereof, means to hold said platform in upright position and a lowering plate adapted to rest on the top surface of said table, said lowering plate being pivotally

connected to said table above said top surface thereof and together with said platform to permit joint tilting of said platform and plate when said plate is rested on said table.

2. A machine for packing uncured coal briquettes comprising a table, an elevated platform having depending leg portions pivotally secured to said table above the top surface thereof, means for holding said platform yieldingly in upright position, and a lowering plate adapted to rest on said table, said plate being pivotally mounted on the pivotal support of said platform to permit joint tilting of said platform and plate when said plate is to be rested on said table.

3. A machine for packing uncured coal briquettes as described in claim 2 wherein said lowering plate is angularly offset at its pivotally supported end for forming a backing wall adapted to abut the edge of said platform and extend at a right angle with respect to the surface of said platform.

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