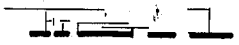
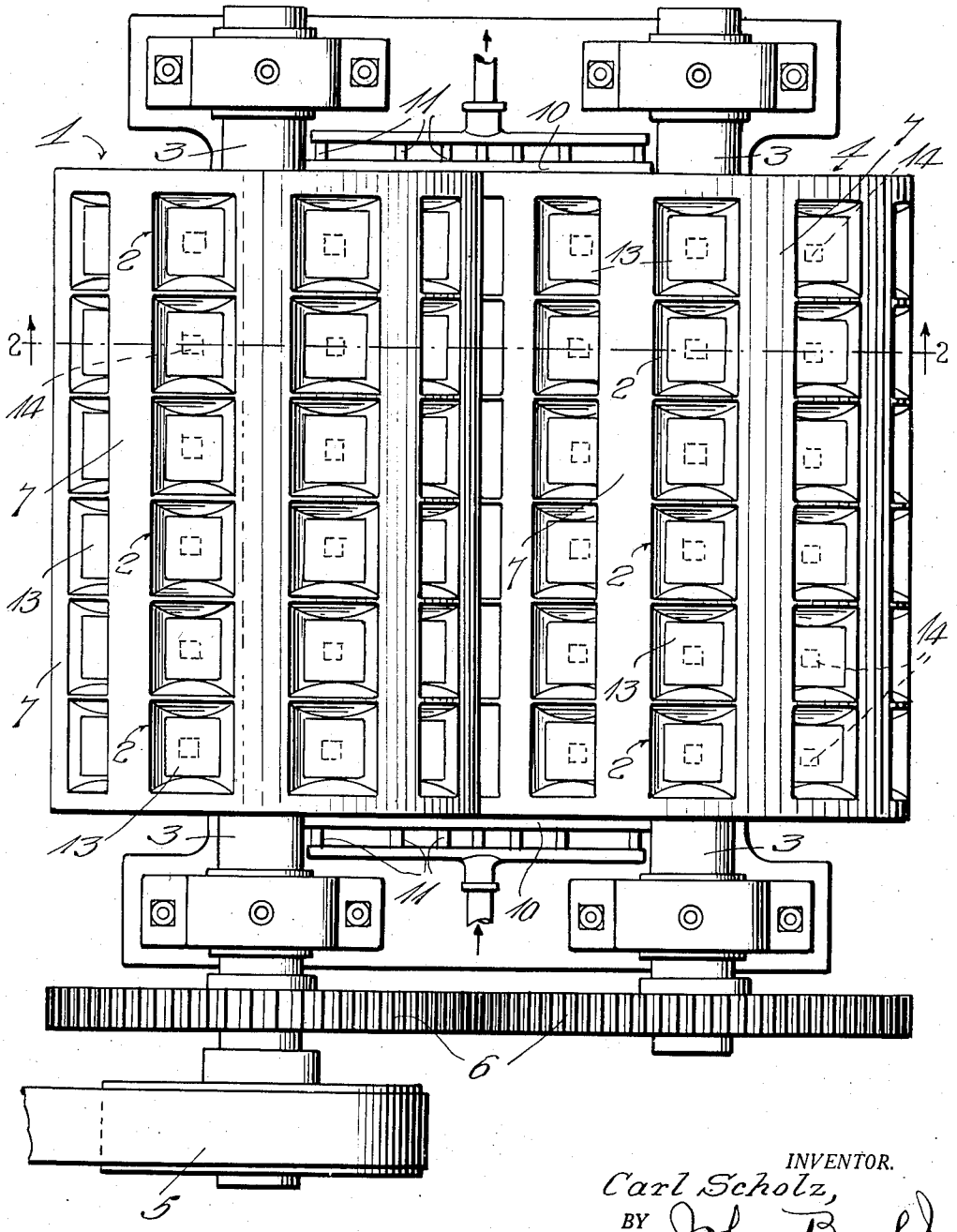
Jan. 1, 1935. C. SCHOLZ 1,986,365

BRIQUETTING MACHINE

Filed Oct. 14, 1932 3 Sheets-Sheet 1





INVENTOR.
Carl Scholz,
BY John Boyle
ATTORNEY.

Jan. 1, 1935. C. SCHOLZ 1,986,365

BRIQUETTING MACHINE

Filed Oct. 14, 1932 3 Sheets-Sheet 2

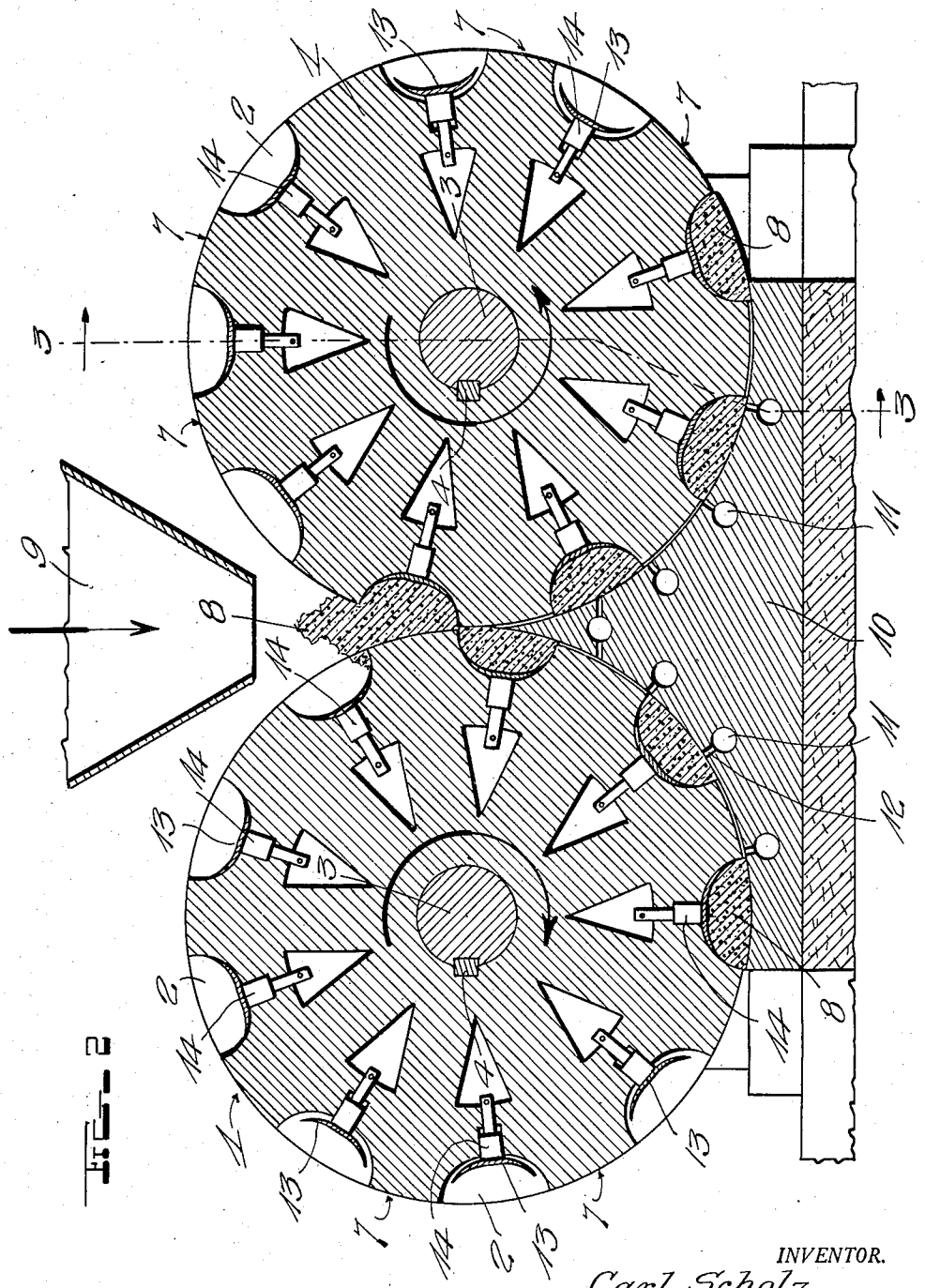


FIG. 2

INVENTOR.
Carl Scholz,
BY John Boyle Jr.
ATTORNEY.

Jan. 1, 1935. C. SCHOLZ 1,986,365

BRIQUETTING MACHINE

Filed Oct. 14, 1932 3 Sheets-Sheet 3

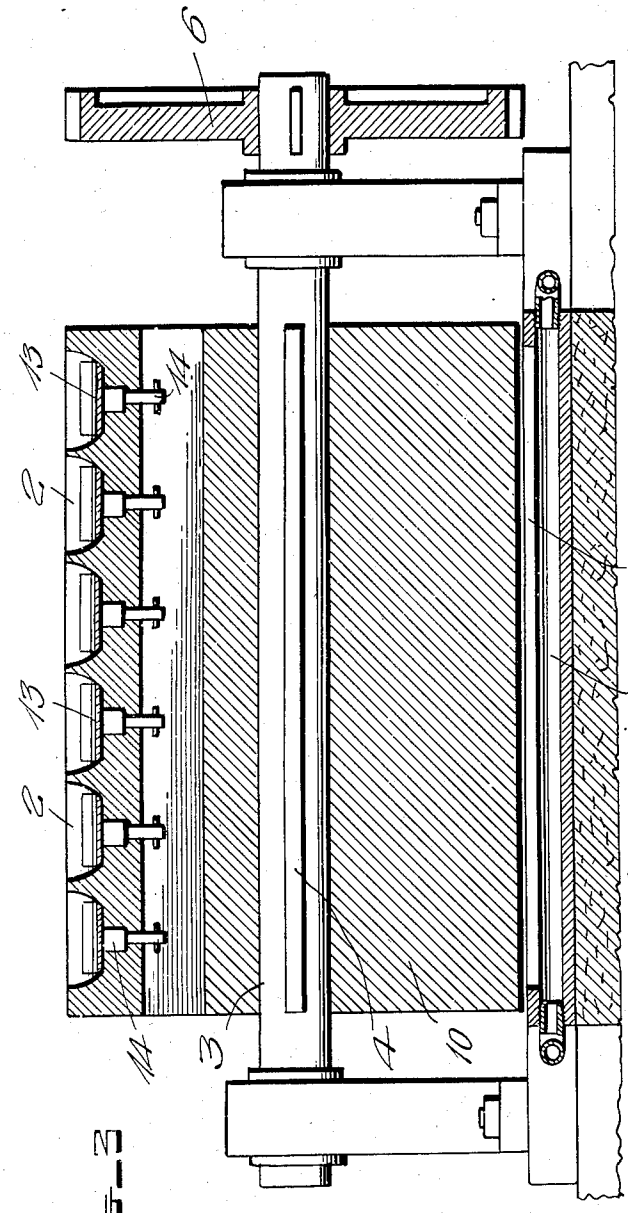


FIG. 2

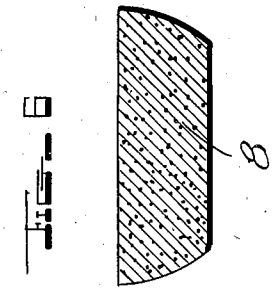


FIG. 6

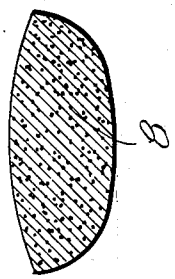


FIG. 5

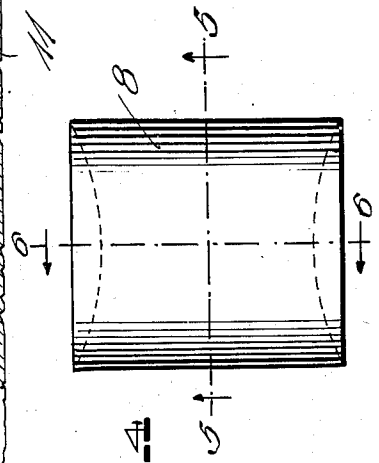


FIG. 4

INVENTOR.

Carl Scholz,

BY John Boyle

ATTORNEY

Patented Jan. 1, 1935 1,986,365

UNITED STATES PATENT OFFICE

1,986,365

BRIQUETTING MACHINE

Carl Scholz, Charleston, W. Va.

Application October 14, 1932, Serial No. 637,853

2 Claims. (Cl. 25—76)

My invention relates to a briquetting machine and has particularly in view the briquetting of coal.

In the roll type of presses that have heretofore been used for briquetting coal, the pockets in which the briquets have been formed were matched or opposite each other so that one half of the briquets was made on each roll. The principal objection to roll presses of this type is that once the center line of compression is passed and the pressure on the briquet is released, the hot briquets expand and separate along the center line of the briquet.

In order to overcome this objection, the pockets in my machine are staggered so as to eliminate the center line or ridge that is formed on the briquets that are made in a roll press where the pockets are matched or opposite. Thus a complete briquet is made on a single roll.

In the old type of roll press, full pressure is exerted against the briquet only at the point where the rolls are in contact, that is, along the center line of the rolls. After the center line is passed, the pressure diminishes and the material being of a plastic nature, the freshly compressed briquet expands and cracks, particularly along the center line.

In my machine, I hold the briquet in its compressed state for a predetermined period of time so as to give it an opportunity to set after it has passed the center line of the rolls, thereby overcoming the breakage of the briquets.

Referring to the drawings for a more complete disclosure of the invention,

Fig. 1 is a plan view,

Fig. 2 is a vertical transverse section on the line 2—2 of Fig. 1,

Fig. 3 is a section on the line 3—3 of Fig. 2,

Fig. 4 is a plan view of a briquet,

Fig. 5 is a section on the line 5—5 of Fig. 4, and

Fig. 6 is a section on the line 6—6 of Fig. 4.

The coal fines are dried out so that there will be about 4% of moisture. About 5% of pitch is added to the fines so as to provide a binder and thereby make a plastic moldable mass.

Each of the two cast iron rolls 1, are provided with a series of pockets 2, of the shape of the briquet. The pockets may be ground out or the rolls may be fluted and cast iron partition plates may be set in and welded to the roll. Each roll is secured to its shaft 3 by a key 4 and the shafts are driven from a power source 5 through meshing spur gears 6. The rolls are so mounted and the size of the pockets are such that the smooth part 7 of one roll is opposite the pocket 2 of the opposite roll. Coal 8 may be fed into a hopper 9 and drops down between the bite of the rolls and as the rolls rotate toward each other, the coal is compressed into the pockets.

In order to hold the coal in the compressed condition, I provide a cast metal pressure block 10 fitted to the shape of the rolls and forming a tight covering for about ¼ of the periphery of the roll. In the block are pipes 11 having outlets 12 through which may be circulated a suitable cooling and lubricating fluid.

In the bottom of the pockets 2 are ejector plates 13 carried by pins 14 which may be operated in any suitable manner to eject the briquets from the pockets after passing the block 10.

Since the mixture of coal and binder is plastic, due to the heat of compression as the mixture is compressed into the pockets, it becomes more so, and if immediately released before sufficient time has been had to permit the mass to set, the briquet would not be in as solid condition as when it is held compressed for a period of time and also permitted to cool.

While I have disclosed my machine for use with briquetting coal, it is apparent that it could be used for briquetting other materials.

I claim:

1. In a briquetting machine for coal fines comprising opposed rolls provided with pockets on their periphery in which the coal is compressed, and a pressure block closely fitting the exit side of the rolls to hold the coal in a compressed condition for a predetermined period of time, the improvement consisting in providing the pressure block with conduits through which is circulated a cooling or lubricating fluid, and means for conducting the fluid between the contacting surfaces of the pressure block and rolls.

2. In a briquetting machine for coal fines comprising opposed rolls provided with pockets on their periphery in which the coal is compressed, and a pressure block closely fitting the exit side of the rolls to hold the coal in a compressed condition for a predetermined period of time, the improvement consisting in providing the pressure block with conduits through which is circulated a cooling or lubricating fluid, and outlets, from the conduits for the said fluid, opening into the space between the contacting surfaces of the pressure block and rolls.

CARL SCHOLZ.