C. SCHNEIDER.

BRIQUETING PRESS.

APPLICATION FILED JULY 9, 1914.

1,125,916.

Patented Jan. 19, 1915.

FIG. 1.

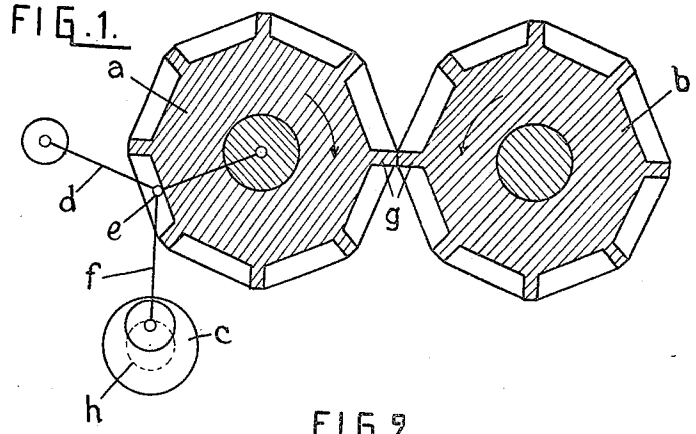


FIG. 2.

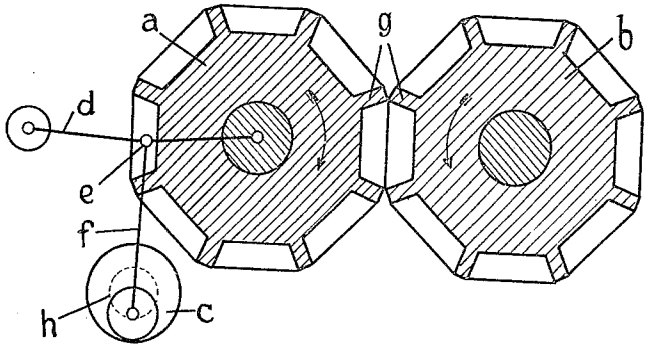
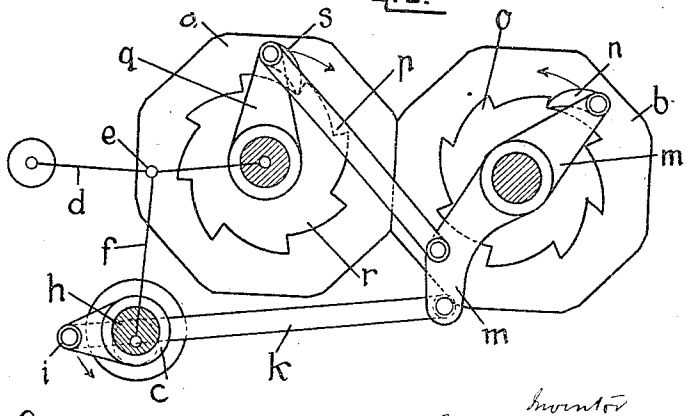


FIG. 3.



Witnesses
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UNITED STATES PATENT OFFICE.

CARL SCHNEIDER, OF PLAU, GERMANY.

BRIQUETING-PRESS.

1,125,916. Specification of Letters Patent. Patented Jan. 19, 1915.

Application filed July 9, 1914. Serial No. 849,954.

To all whom it may concern:

Be it known that I, CARL SCHNEIDER, engineer, a subject of the Grand Duke of Mecklenburg-Schwerin, in Germany, residing in Plau, in the Grand Duchy of Mecklenburg-Schwerin, Germany, and whose post-office address is Plau, have invented certain new and useful Improvements in Briqueting-Presses; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to letters or figures of reference marked thereon, which form a part of this specification.

The present invention relates to a roller press for producing compressed bodies in a continuous operation, and in which the molds are provided in the rollers.

According to the present invention polygonal rollers are employed which are intermittently but synchronously rotated in opposite directions; not both of these rollers are stationarily journaled. When the rollers reach their pressing position at which the two halves of the mold are opposite to each other symmetrically to their central axis, the rollers are quickly pressed against each other. In consequence thereof the molds are completely closed and the material which, falling through the feed slot, fills the mold is actually compressed. Either both rollers may be moved toward each other at the moment when they cease revolving, or only the one roller may be adjustable toward the second roller, the latter being stationarily journaled. The constructional form exemplified in the accompanying drawings is constructed in the latter manner.

The diagrams are sectional views.

Figure 1 shows the position at the commencement of the compression, the edges of the molds just meeting together. Fig. 2 shows the position at which the rollers are pressed together. Fig. 3 shows the driving gear.

Of the two rollers *a* and *b*, the one *b* is stationarily journaled, whereas the other roller *a* can be approached axially toward the roller *b*. Each of the rollers is made of an octagonal section and on each of the eight surfaces there is a half mold. The adjustable roller *a* is journaled at the one end of a toggle lever *d*, on the joint *e* of which the rod *f* of an eccentric *c* acts. At the position shown in Fig. 1 at which the walls of the molds just meet, the material to be compressed is filled into the mold. When the rollers then revolve further and the walls *g* of the mold would tend to move apart, the eccentric begins to straighten the toggle lever *d*, moving roller *a* up to roller *b* until the mold is completely closed as in Fig. 2. When the rollers revolve still further the roller *a* is again removed from the contact with the roller *b* by the action of the toggle and eccentric so that the compressed body can easily fall out of the mold.

The shaft *h* of the eccentric is coupled to the driving gear of the rollers for intermittently rotating the latter. On the said shaft *h* is further fitted, beside the eccentric *c* a crank *i*, to which is coupled a lever *k* connecting with the roller *b*. This lever *k* is coupled to a double-armed lever *m* loosely fitted on the shaft of the roller *b*. At the upper end of this double-armed lever *m* is arranged a pawl *n*, which engages in a ratchet wheel *o* fitted to the roller *b*. To the other arm of the double-armed lever *m* is linked a rod *p* which is connected to an arm *q* loosely fitted on the shaft of the roller *a* and intermittently turning this roller by means of a pawl *s* on said arm *q* and a ratchet wheel *r* on said roller *a*. The intermittent rotation of the two rollers is thus a positive and synchronous movement.

I claim—

1. In a briqueting press the combination of a plurality of cylinders having recesses on their circumference, said cylinders arranged in pairs, one of the cylinders of each pair movably journaled, the shaft of said movably journaled cylinder coupled by means of a toggle lever to a fixed point, an eccentric, a rod coupled to said eccentric and acting on the joint of said toggle lever and adapted to gradually stretch said toggle lever so that the radial walls of said recesses remain in contact during the compression.

2. In a briqueting press the combination of a plurality of cylinders having recesses on their circumference, said cylinders arranged in pairs, one of the cylinders of each pair movably journaled, the shaft of said movably journaled cylinder coupled by means of a toggle lever to a fixed point, an eccentric, a rod coupled to said eccentric and acting on the joint of said toggle lever

and adapted to gradually stretch said toggle lever so that the radial walls of said recesses remain in contact during the compression, on the shaft of said eccentric a crank, a connecting rod coupling said crank with a double-armed lever fitted loose on the shaft of the stationarily journaled roller, the far end of said double-armed lever carrying a pawl, adapted to engage in a ratchet wheel on said stationarily journaled roller and intermittently rotate the same, at the other end of said double-armed lever a connecting rod coupled to an arm loosely fitted on the shaft of the other roller, on said arm a pawl adapted to engage in a ratchet wheel on said roller and rotate the same intermittently and synchronously with the first roller.

3. A press of the character described comprising in combination a pair of cylindriform mold carriers, means for synchronously and intermittently rotating said mold carriers, and means for pressing said carriers relatively one toward the other in the intermissions of their rotary movement.

4. A press of the character described, comprising in combination a pair of mold cylinders, said cylinders axially movable relatively one to the other, means to rotate said cylinders intermittently, said means comprising a ratchet on each cylinder, a pawl-carrying arm for each cylinder with the pawls thereof respectively engaging said ratchets, a link connecting said pawl-arms, means for oscillating said pawl-arms to rotate said cylinders synchronously, and means operating in intermissions of rotation of the cylinders to move the same relatively to and from one another.

In testimony that I claim the foregoing as my invention, I have signed my name in presence of two subscribing witnesses.

CARL SCHNEIDER.

Witnesses:

CASPAR FREDRIK HANSEN,

WOLDEMAR HAUPT.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."