

No. 676,484.

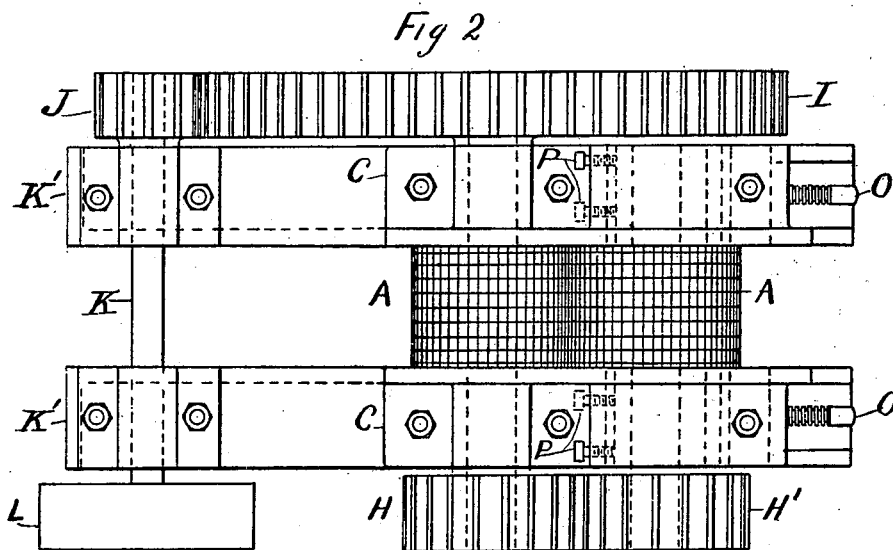
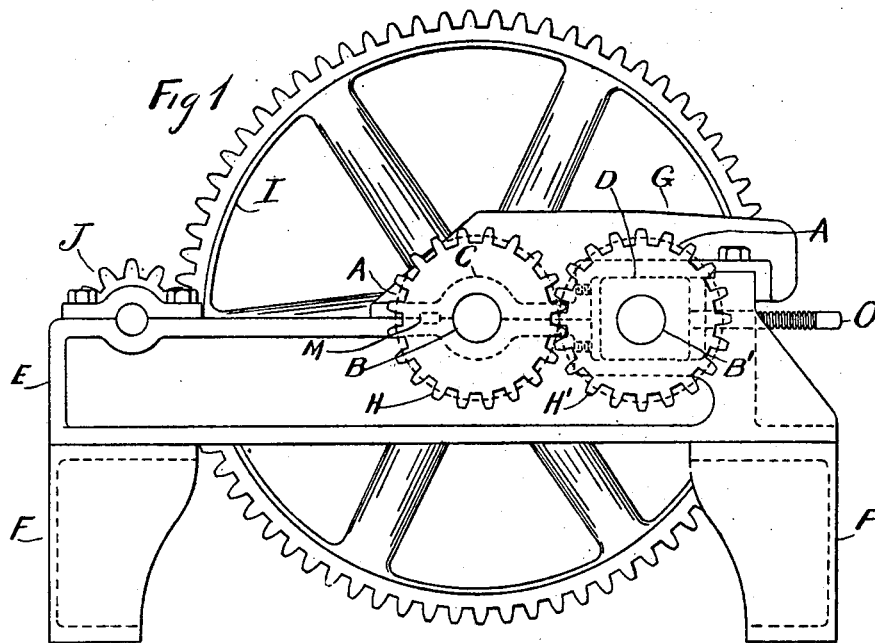
Patented June 18, 1901.

R. A. ZWOYER.
BRIQUET MOLDING MACHINE

(Application filed Feb. 21, 1901.)

(No Model.)

2 Sheets—Sheet 1.



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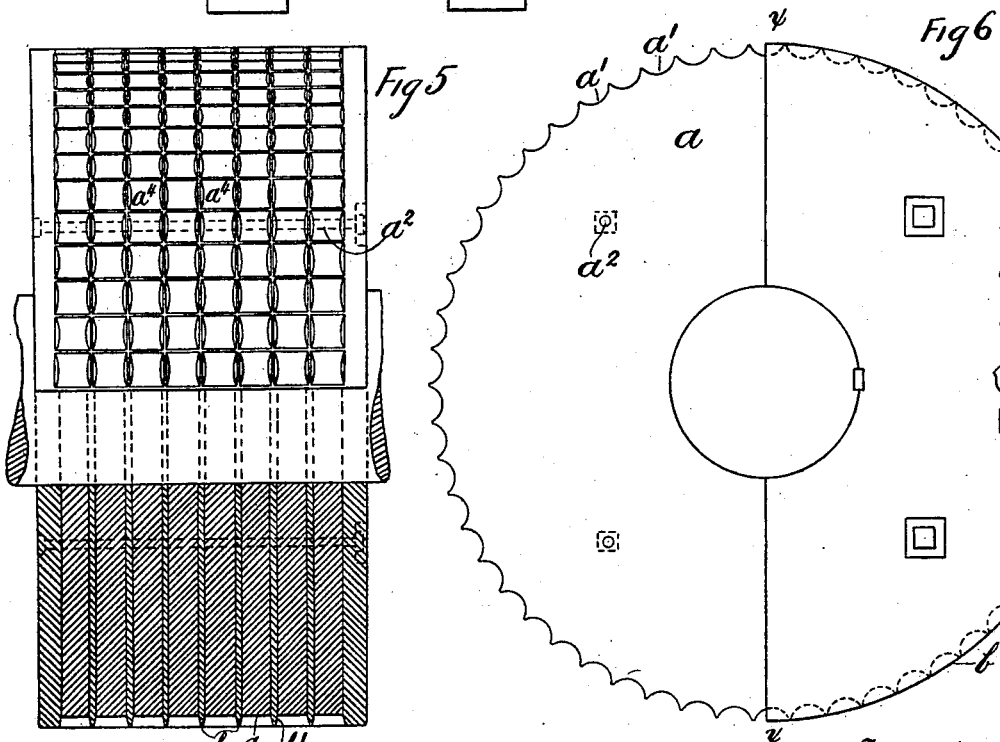
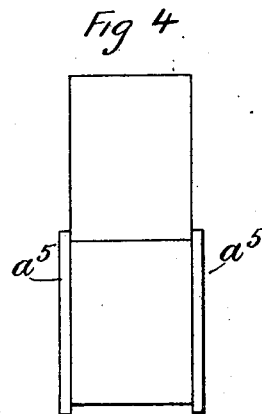
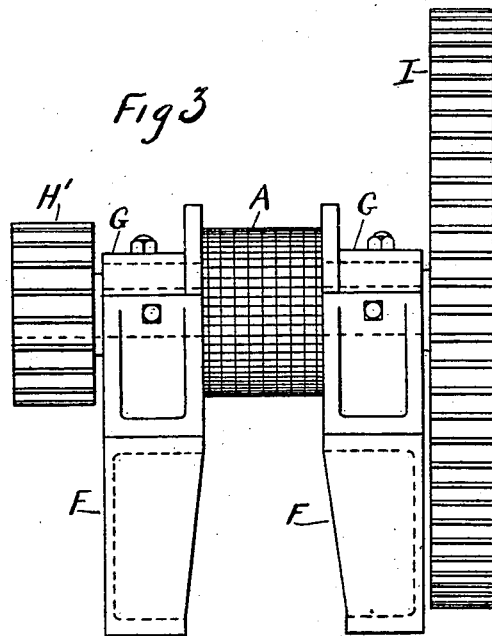
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2 Sheets—Sheet 2.



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UNITED STATES PATENT OFFICE.

ROLLAND A. ZWOYER, OF PORTSMOUTH, RHODE ISLAND.

BRIQUET-MOLDING MACHINE.

SPECIFICATION forming part of Letters Patent No. 676,484, dated June 18, 1901.

Application filed February 21, 1901. Serial No. 48,215. (No model.)

To all whom it may concern:

Be it known that I, ROLLAND A. ZWOYER, a citizen of the United States, and a resident of Portsmouth, in the county of Newport and State of Rhode Island, have invented certain new and useful Improvements in Briquet-Molding Machines, of which the following is a specification.

This invention relates to means for molding briquets or blocks from comminuted material. Its object is the production of a machine in which rolls acting jointly will easily mold briquets or blocks, so as to form the same without the danger of injury from abrasion. To obtain these results, pockets are formed in the peripheries of the rolls, the rolls being constructed to easily allow the surfaces of the said pockets to be made perfectly smooth.

In the accompanying drawings my invention is shown applied to a machine for molding coal briquets; but it is of universal application.

Figure 1 represents an elevation of the molding-machine. Fig. 2 is a top view of Fig. 1. Fig. 3 shows an end view of Fig. 1. Fig. 4 represents a modified form of my rolls. Fig. 5 is an end view and fragmentary section of one of my rolls on the line xx of Fig. 6. Fig. 6 shows a fragmentary side view of one of the rolls with a portion represented without its end plate.

Referring to Figs. 1, 2, and 3, the rolls are shown at A, turning with shafts B B', secured in journal-boxes C and adjustable bearings D, carried on the frame E, which is supported on the legs F. The caps G serve for both the top half of the journal-boxes C and for the covers of the adjustable bearings D. The shaft B carries the spur-gear H, which meshes with the gear H' on the shaft B'. On the shaft B is also secured the spur-wheel I, which meshes with the pinion J, carried on the shaft K, turning in bearings K'. A pulley L on the shaft K receives power from any convenient source, which is transmitted to the rolls through the train of gearing. A key M is fitted between the cap G and the frame E for stability.

The bearings D are made adjustable by

means of the screws O and P, which turn through the frame E.

The rolls, which are shown on an enlarged scale in Figs. 5 and 6, form the distinctive features of this invention. They are represented to consist of the disks a , with the indentations a' in their peripheries. The indentations are formed through the disks, as plainly shown in the left-hand half of Fig. 6, by reason of which they can be easily formed and machined to obtain perfectly smooth surfaces. The disks are separated by the annular plates b , the peripheries of which are slightly beveled or curved, as shown at b' , the outside diameters of the disks and plates being the same. The peripheries of the plates and disks are formed to make thin cutting edges. The disks and plates are bolted together with bolts a^2 and form pockets a^4 in the peripheries of the rolls, as clearly shown in Fig. 5. Both rolls have similar pockets and are secured on their respective shafts so that when they roll the cavities will be exactly opposite at their point of tangency to form molds for the material passing between them.

In Fig. 4 I have shown in outline a pair of adjoining rolls in which flanges on one roll incase the end faces of the adjoining roll to confine the material to the rolls.

It is evident from the form of construction shown and described that the different portions constituting my improved rolls can be easily provided with smooth surfaces, giving to the molds the smoothness and finish required to form briquets. It is also evident that more than two rolls could be used. Any combination by means of which the briquets could be formed might be employed.

Having described my invention, I desire to secure by United States Letters Patent and claim—

1. In a machine for molding blocks, briquets and the like, circular disks and plates bolted together forming rolls, the disks containing indentations across their peripheries, and the peripheries of the plates beveled, and means for driving the rolls.

2. In a machine for molding briquets, blocks and the like, rolls, the said rolls con-

sisting of disks and plates bolted together, cavities in the peripheries of the disks, shafts supporting the rolls, adjustable bearings for one of a pair of rolls, and means for driving
5 the rolls.

3. A briquet-molding machine, comprising rolls, the rolls consisting of disks and circular plates, cavities in the peripheries of the rolls, a pinion-shaft, shafts supporting the
10 rolls, adjustable bearings for one of these latter shafts, spur-gears meshing with each other on the shafts, a gear-wheel on the oppo-

site end of one of the shafts, a pinion driving said gear-wheel and driving-pulley on the pinion-shaft, a frame to support the shafts substantially as described. 15

Signed at Portsmouth, in the county of Newport and State of Rhode Island, this 19th day of February, A. D. 1901.

ROLLAND A. ZWOYER.

Witnesses:

HENRY F. ANTHONY,
Mrs. R. A. ZWOYER.