

No. 708,574.

W. A. MILNE.

Patented Sept. 9, 1902.

PEAT PRESS.

(Application filed Sept. 30, 1901.)

(No Model.)

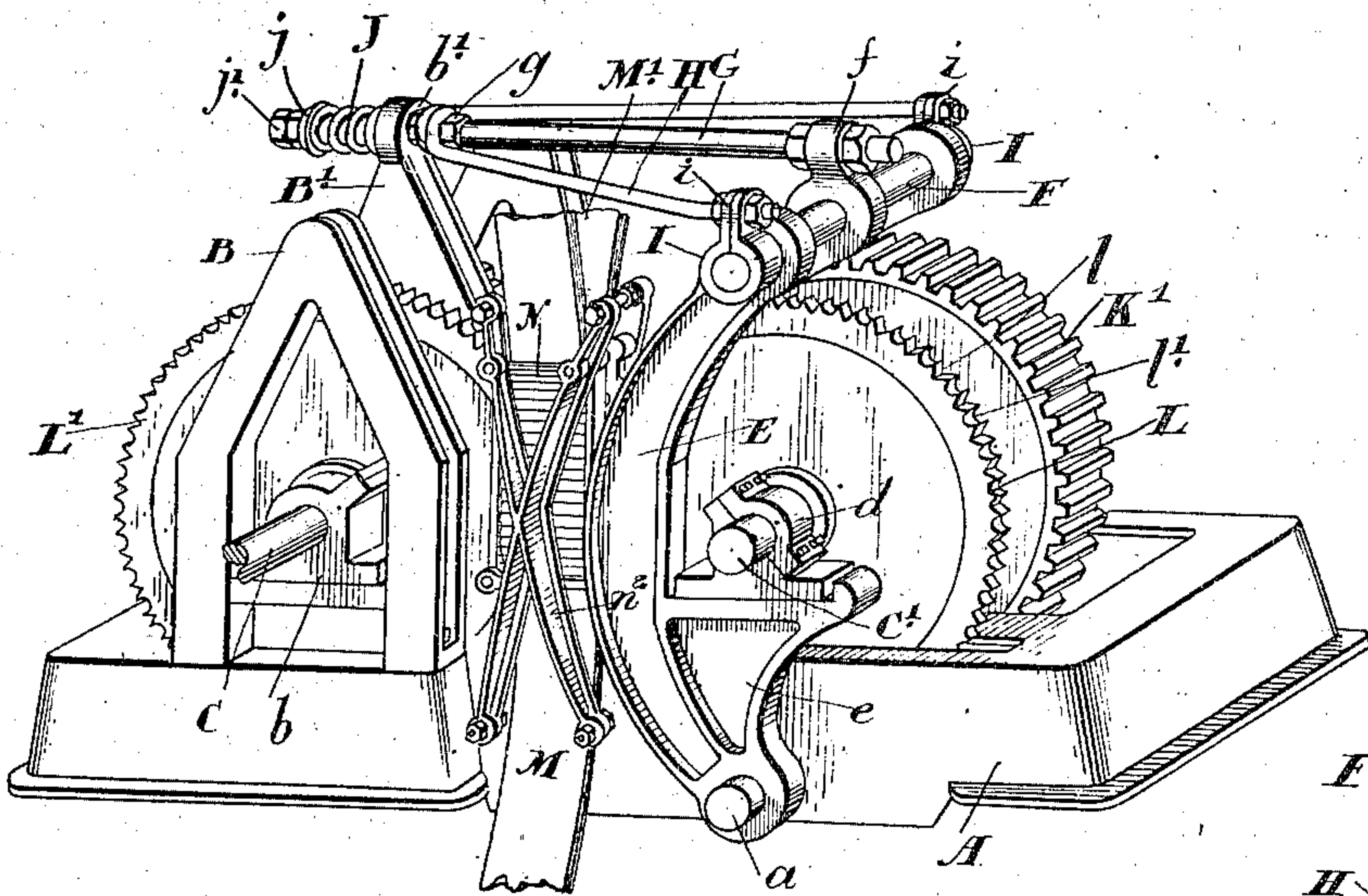


Fig. 1.

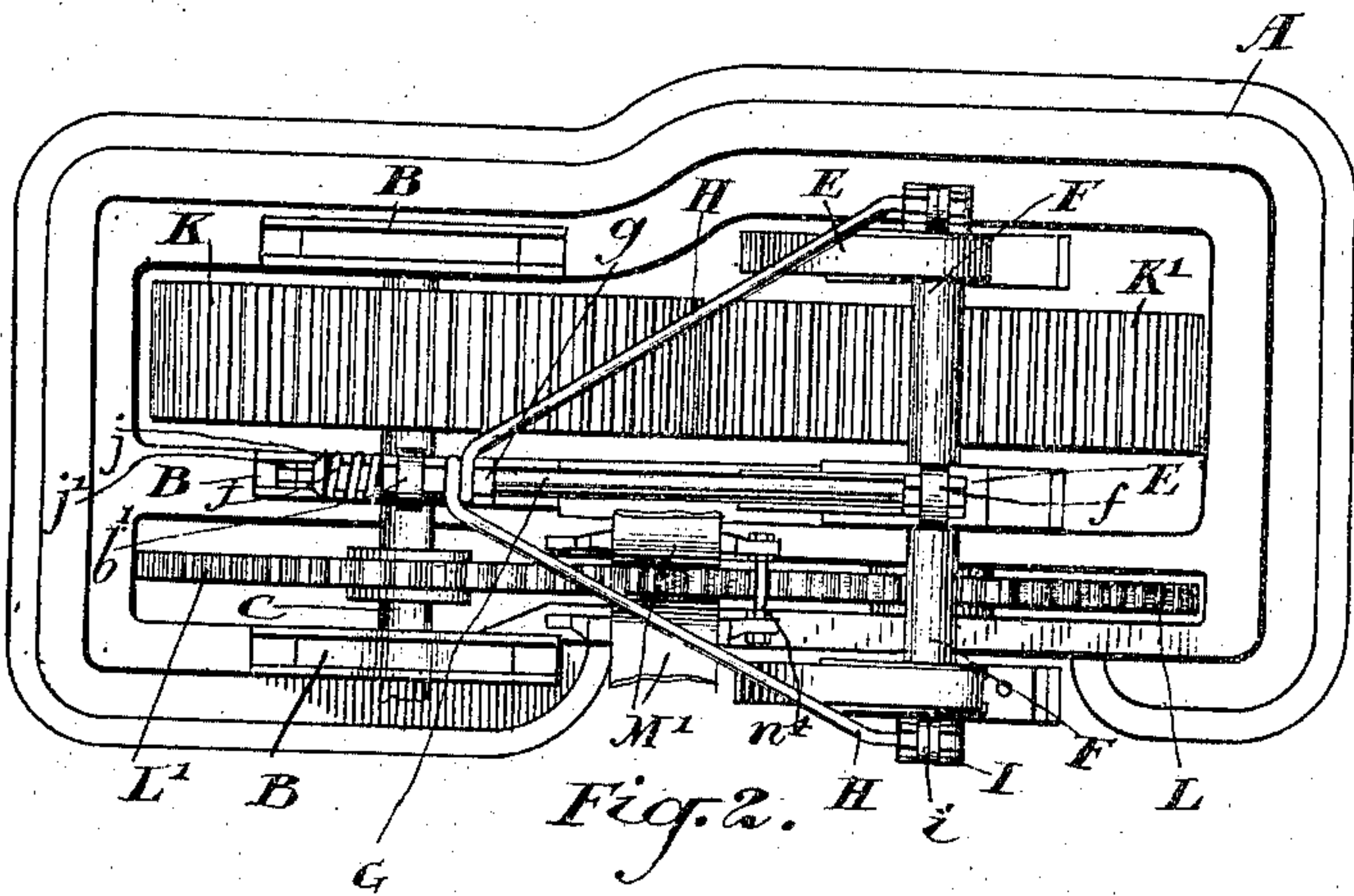


Fig. 2.

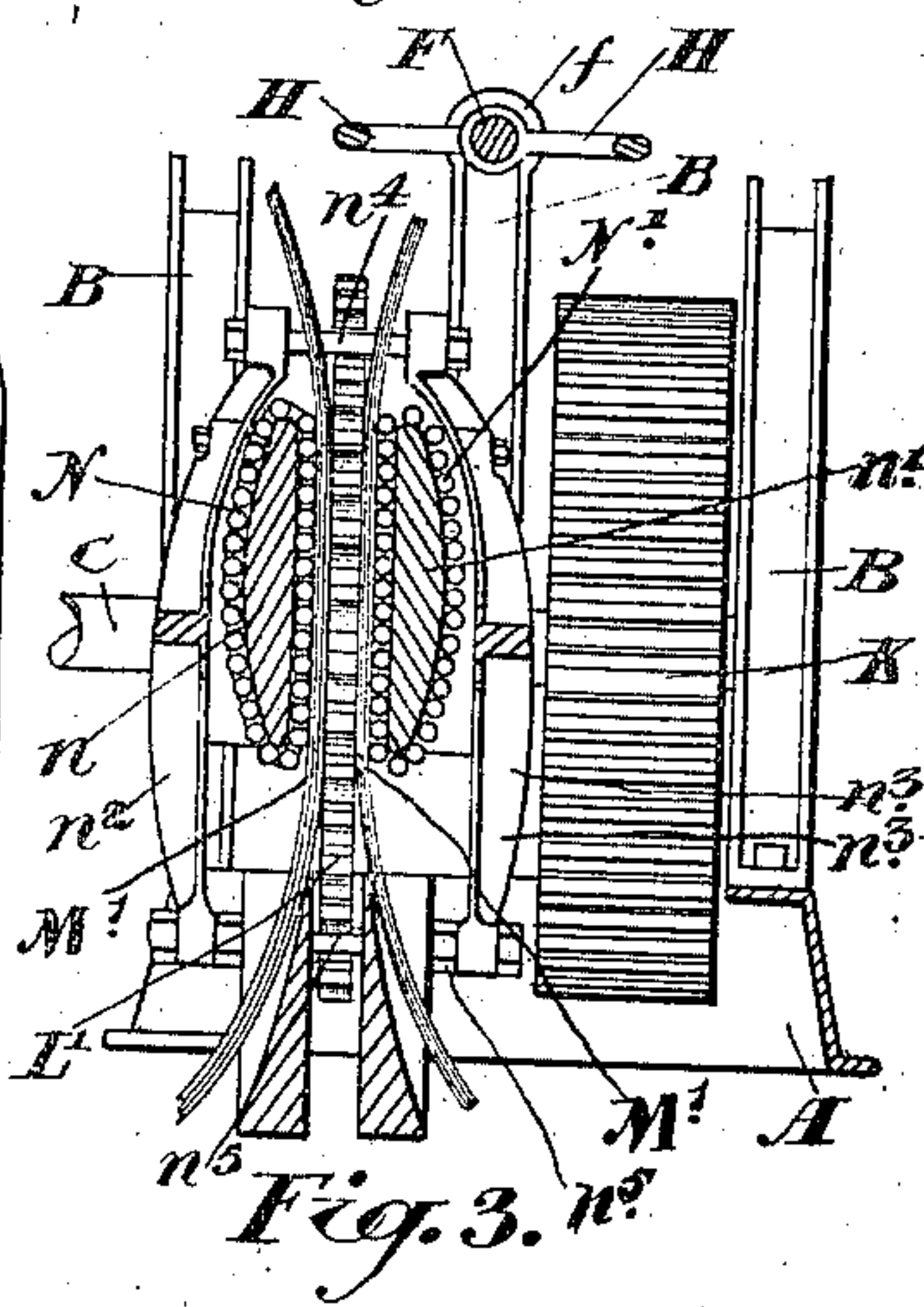


Fig. 3.

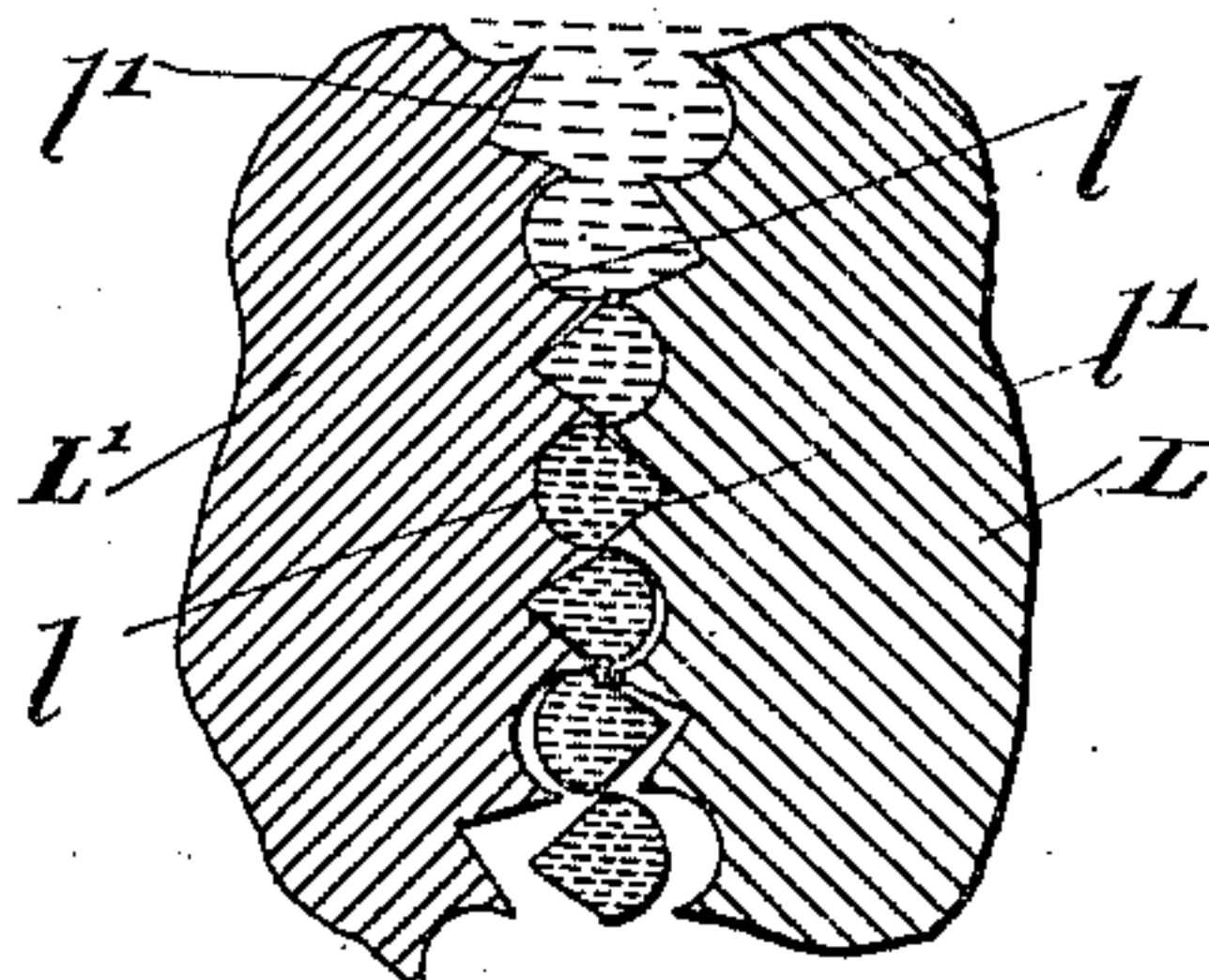


Fig. 4.

Witnesses.
L. Trimble
C. Reynolds.

Inventor:
W. A. Milne.
by J. H. Sturges & Co.
Attys

UNITED STATES PATENT OFFICE.

WILLIAM ATKINSON MILNE, OF BROWN'S CORNERS, CANADA.

PEAT-PRESS.

SPECIFICATION forming part of Letters Patent No. 708,574, dated September 9, 1902.

Application filed September 30, 1901. Serial No. 77,099. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM ATKINSON MILNE, lumberman, of the village of Brown's Corners, in the county of York, in the Province of Ontario, Canada, have invented certain new and useful Improvements in Peat-Presses, of which the following is a specification.

My invention relates to improvements in peat-presses; and the object of the invention is to produce an economically-operated machine of this class which will produce perfect briquets of peat of a superior and uniform density; and it consists, essentially, of two meshing gear-wheels secured on suitable shafts having bearings upon a suitable bed plate or frame, the one bearing being stationary and the other adjustable, and two wheels, each on opposing shafts, provided with recesses in the peripheries alternately arc-shaped and angular, the angular recesses on one of the wheels being designed to come opposite to the arc-shaped recess on the coacting wheel, so as to make the briquets, and the sides of the wheels at their tangential point being inclosed by suitable bands suitably supported and fitting closely to the wheel, so as to form ends for the briquets, the parts being otherwise constructed and arranged in detail as hereinafter more particularly explained.

Figure 1 is a perspective view of a peat-press constructed in accordance with my invention. Fig. 2 is a plan. Fig. 3 is a sectional detail looking upon the periphery of one of the forming-wheels. Fig. 4 is an enlarged sectional detail of the forming-wheels, showing the manner in which the briquets are compressed and discharged.

In the drawings like letters of reference indicate corresponding parts in each figure.

A is the bed of the machine.

B and B' are the standards, which are suitably secured to one end of the bed and provided with suitable bearings *b*, in which the main driving-shaft C is journaled.

C' is a counter-shaft which is journaled in suitable bearings *d*, which are held on the hinged portion *e* of the arms E, which are pivotally supported on the bed A by studs *a*. The upper ends of the arms are connected by a cross-rod F.

G is a rod which extends through the boss *f*, formed at the upper end of the intermediate arm E, being rigidly held therein by nuts at each side of the boss. The opposite end of the rod G extends through a boss *b'* at the upper end of the standard B'. The rod G is provided with a limiting-nut *g*.

H H represent two braces, through the eye-shaped ends of which the rod G extends at one end, the opposite ends of the braces extending through the lugs *i*, formed on the end sleeves I I.

J is a spiral spring extending between the boss *b'* and the collar *j* on the end of the rod G, such collar being held in position by a nut *j'*.

K and K' are the gear-wheels, which are secured on the shafts C and C', respectively, such gear-wheels meshing, as indicated.

L and L' are the forming-wheels, which are provided with peripheries, having alternative arc-shaped and angular recesses *l l* and *l' l'*. The wheels L and L' are almost tangential, and are so arranged that the angular recesses of one wheel pass into the final compressing position always opposite the semicircular recesses of the other wheel. It is absolutely necessary that this should be so on account of the sweep that the angular recess takes as the wheels are rotating toward each other in compressing. If they are both angular recesses, the peat-block could not be discharged.

M and M' are bands, preferably made of steel, which abut the faces of the forming-wheels opposite the compressing-point. The bands are endless bands and are formed of one or more layers, and in order to reduce the friction I provide at the back of the bands two endless chains of rollers N and N', which pass over the supporting-plates *n* and *n'*, which are attached to or form part of the uprights *n²* and *n³*, secured together at the top and bottom by the rods *n⁴* and *n⁵*, which are suitably connected to the frame.

Having now described the principal parts involved in my invention, I shall briefly describe its operation and utility. The pulverized peat is preferably fed in by any suitable hopper and means to a point between the forming-wheels and between the endless steel bands, which substantially abut the faces of the wheels at the forming-point. The forming-

wheels being suitably driven from the main shaft C through the medium of the gears the peat passes down into the recesses, which are approaching each other as the forming-wheels rotate, and thereby gradually increases in density until it reaches the point directly on a line with the level of the shafts, which is the highest compressing-point. As the forming-wheels are still caused to rotate, the ends of the angular recess recede from the arc-shaped recess, and the blocks, now compressed, are gradually released by means of the opening up of the recess by which they have been formed. It is preferable in the formation of the blocks that the projecting points of the wheel forming the recesses slightly overlap, so as to completely separate or cut away the briquet when formed from the preceding one, which is partially formed. It will be seen that if the peat when being compressed should become so dense as to exert a breaking strain on the peripheral cavities that such strain would be relieved by means of the adjustable bearing-arms E, spring-held, as hereinbefore described.

By such a machine as I describe it will be seen that the power needed is reduced to a minimum, that the machine is always compressing, so that there is no lost time or motion, and the briquets are continuously turned out as long as the feed is kept up.

Although in this specification I describe the cavities or recesses in the wheels as being alternately arc-shaped and angular, it will of course be understood that the recesses in both

wheels might be arc-shaped, or the recesses in one wheel may be all angular and in the other arc-shaped without departing from the spirit of my invention.

What I claim as my invention is—

1. In a peat-press two forming-wheels both having their peripheries divided into arc-shaped and angular recesses, the arc-shaped recess of one wheel being designed to come substantially opposite the angular recess of the opposite wheel when they are on a level with the shafts as they rotate as and for the purpose specified.

2. The combination with the wheels supported and driven and approaching each other opposite their centers, of the endless bands suitably driven and having plain surfaces substantially abutting the faces of the wheels whereby the hopper thus formed is of the same width throughout and thereby form ends for the cavities or recesses, and backing-supports for the bands as specified.

3. The combination with the forming-wheels supported and driven and approaching each other opposite their centers, of the endless bands suitably driven and substantially abutting the faces of the wheels, so as to form ends for the cavities or recesses and roller-chains forming a bearing to the outside of the bands and suitable supports for such roller-chains as and for the purpose specified.

WILLIAM ATKINSON MILNE.

Witnesses:

B. BOYD,

R. SHIELDS.