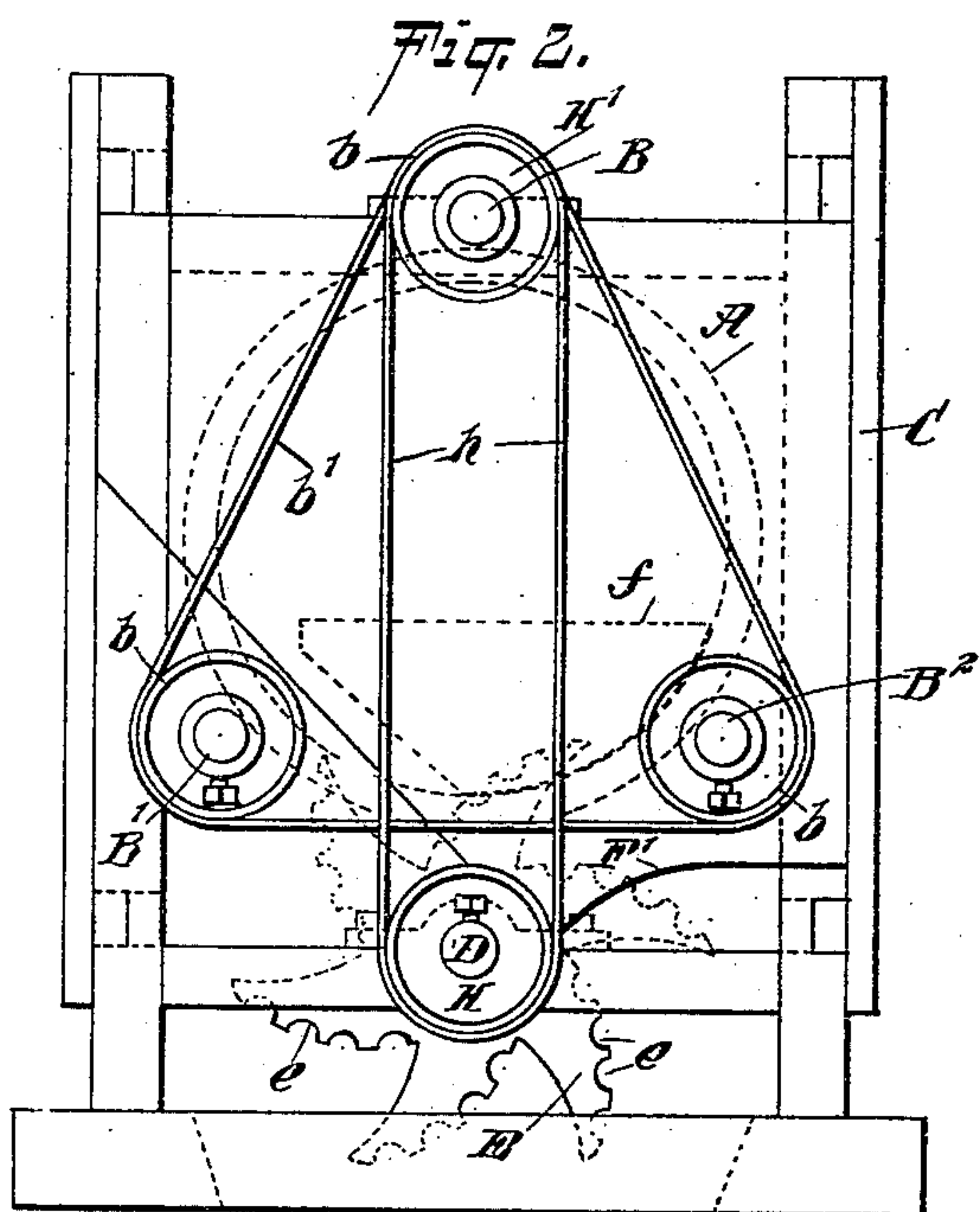
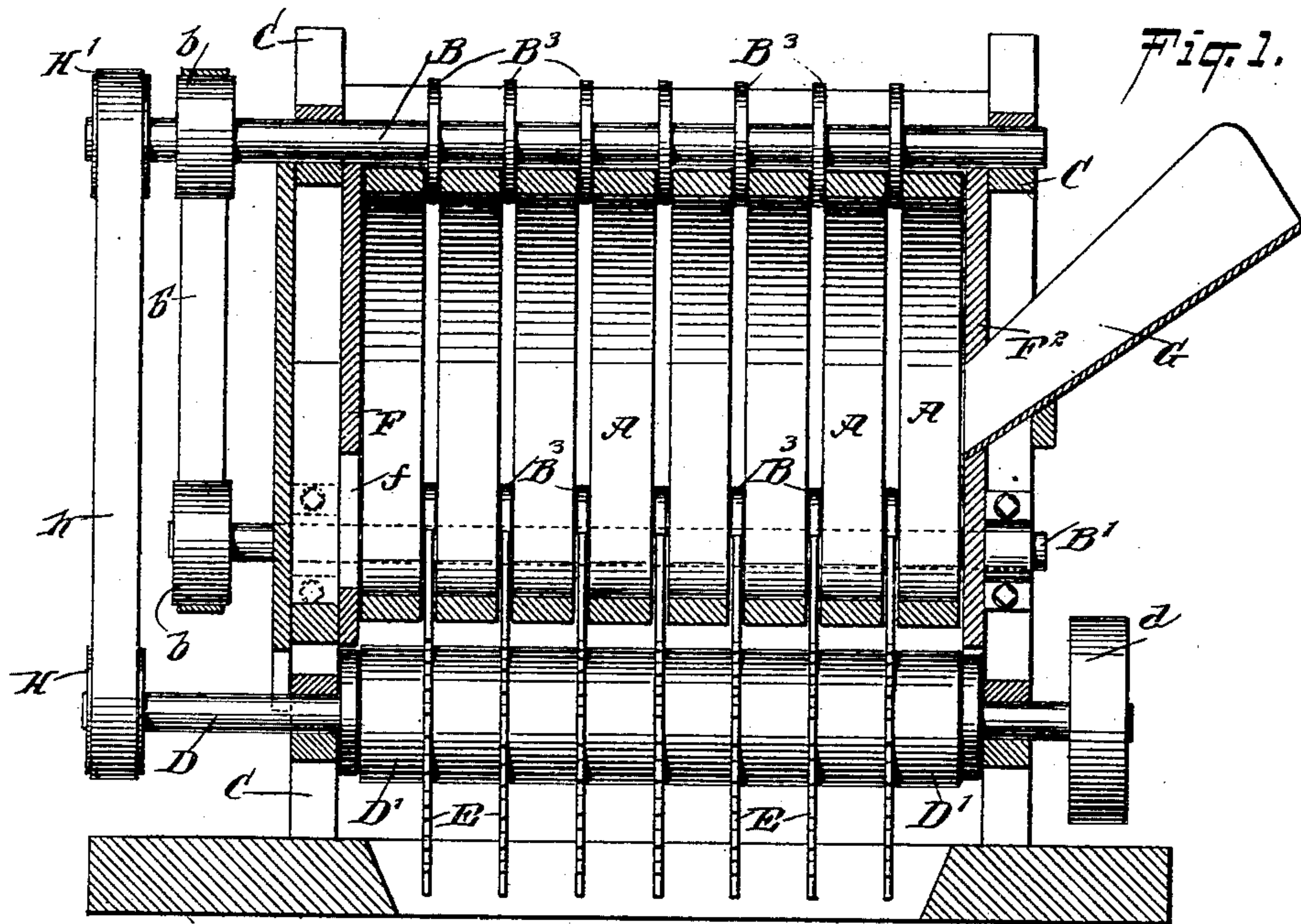


**Patented Sept. 19, 1899.**

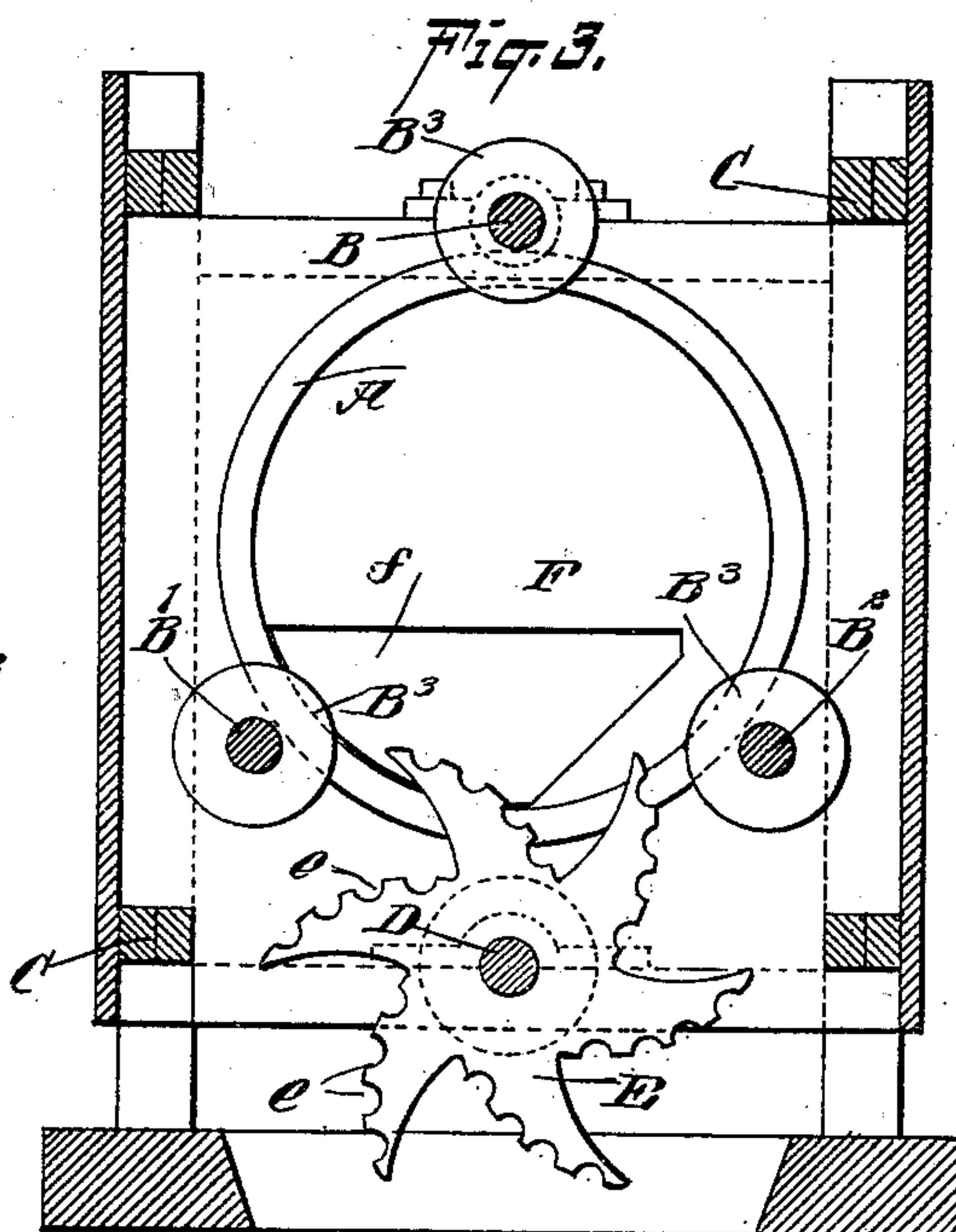
(Application filed June 13, 1899.)

(No Model.)



WITNESSES:

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# UNITED STATES PATENT OFFICE.

EDWARD B. RADER AND HENRY A. RADER, OF COPLAY, PENNSYLVANIA.

## CLAY-SCREENER.

SPECIFICATION forming part of Letters Patent No. 633,486, dated September 19, 1899.

Application filed June 13, 1899. Serial No. 720,406. (No model.)

*To all whom it may concern:*

Be it known that we, EDWARD B. RADER and HENRY A. RADER, of Coplay, in the county of Lehigh and State of Pennsylvania, have invented a new and Improved Clay-Screener, of which the following is a full, clear, and exact description.

Our invention relates to an improvement in devices for screening clay preparatory to using it for making brick, and comprises the novel features hereinafter described and claimed.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar characters of reference indicate corresponding parts in all the figures.

Figure 1 is a longitudinal section through our device. Fig. 2 is an end elevation, and Fig. 3 is a cross-sectional elevation.

In preparing clay for use in making brick it is desirable to remove all gravel and stones therefrom, leaving as nearly as possible only the pure clay. This object our device is intended to accomplish.

Within any suitable framework C is mounted a cylinder which consists of a series of independent rings A. These rings are supported upon longitudinally-extending shafts B<sup>1</sup> and B<sup>2</sup>, and are further held in place by a shaft B, which extends along the upper side of the rings, the rings being thus inclosed between three triangularly-disposed shafts. These shafts are mounted to turn in suitable bearings in the frame and are provided at one end with a pulley b, over which passes a belt b', so that all the shafts are turned at the same rate of speed and in the same direction. The shafts are also provided with spacing-collars B<sup>3</sup>, which lie between the edges of adjacent rings, keeping them spaced a uniform distance. These spacing-rings are made very thin, usually about a quarter of an inch thick, the thickness varying, however, with the fineness to which it is desired to screen the clay. Extending longitudinally beneath the cylinder formed by these rings is a shaft D, upon which is mounted a series of disks D', having projecting curved arms E, said curved arms being of a thickness to pass freely between the adjacent rings A and to enter within the cylinder a short distance. The curve of these

arms herein shown is a preferred shape, although the device may be operated with differently-curved arms. The forward edges of these arms are preferably provided with a series of concavities or notches e, forming teeth which are adapted to better engage the clay and break it up.

A head F<sup>2</sup> is secured to the frame close to one end of the cylinder and is provided with an opening which receives the lower end of a feed-chute G, by means of which the clay is introduced to the cylinder. The head F, which closes the opposite end of the cylinder, has an opening f located in its lower part and through which the stones and gravel are discharged.

The shaft D has a pulley H thereon in line with a pulley H' upon the upper shaft B, and these two pulleys are connected by a belt h. The other end of the shaft D is provided with a pulley d, adapted to receive the power-belt.

In using our device the clay will be thoroughly broken up by contact with the toothed arms E of the disks D', and the finer particles of the clay will all pass through the spaces between the rings A, while the gravel and the hard lumps of clay will pass onward toward the other end of the cylinder and be discharged through the opening f. The rings A being supported upon revolving shafts are thereby turned; so that the clay within the cylinder is kept stirred up and prevented from packing on the inner surfaces of the rings.

Having thus described our invention, we claim as new and desire to secure by Letters Patent—

1. A clay-sifter, comprising a transversely-slotted cylinder adapted to receive the clay, means for turning the cylinder, and revolving disks having arms entering said slot, substantially as described.

2. A clay-sifter, comprising a transversely-slotted cylinder having a feed-chute at one end, and a discharge-opening at the other, said cylinder being adapted to receive the clay, means for turning the cylinder, and revolving disks having arms entering the slots in said cylinder, substantially as described.

3. A clay-sifter, comprising a clay-receiving cylinder composed of a series of rings, rotating shafts forming a support for the rings,



and a shaft having a series of disks thereon provided with arms entering the slots between the rings, substantially as specified.

4. A clay-sifter, comprising a transversely-slotted cylinder adapted to receive the clay, and revolving disks having arms entering said slots, said arms being toothed on their forward edges, substantially as described.

5. A clay-sifter, comprising a clay-receiving cylinder composed of a series of rings, rotating shafts forming a support for said rings, and a shaft having a series of disks thereon provided with arms entering the slots between the rings, said arms being toothed on their forward edges, substantially as described.

6. A clay-sifter, comprising a clay-receiving cylinder composed of a series of rings, longitudinal shafts engaging the outer surfaces thereof, rotative connections between said shafts, and a shaft having a series of disks thereon provided with arms entering the slots between the rings, substantially as described.

7. A clay-sifter, comprising a cylinder com-

posed of a series of rings, three triangularly-disposed shafts engaging the outer surfaces of said rings, rotative connections between said shafts, a shaft extended beneath said cylinder, and a series of disks upon said shaft having arms entering the slots between said rings, substantially as described.

8. A clay-sifter, comprising a cylinder composed of a series of rings, three triangularly-disposed shafts engaging the outer surfaces of said rings and having spacing-collars entering between said rings, rotative connections between said shafts, a shaft extending beneath said cylinder, a series of disks mounted on said shaft and having arms entering the slots between said rings, and means for turning said shaft, substantially as described.

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Witnesses:

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