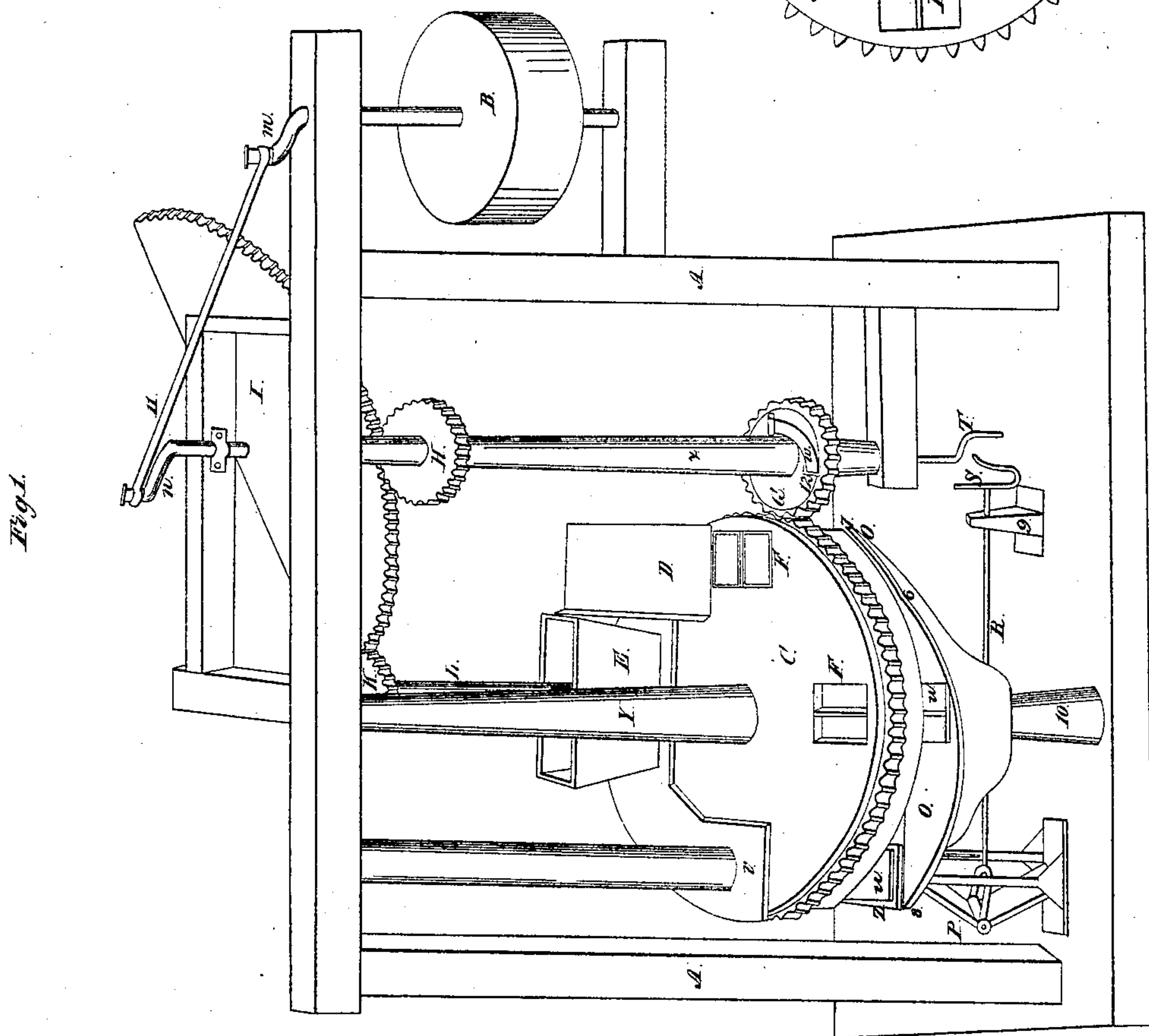
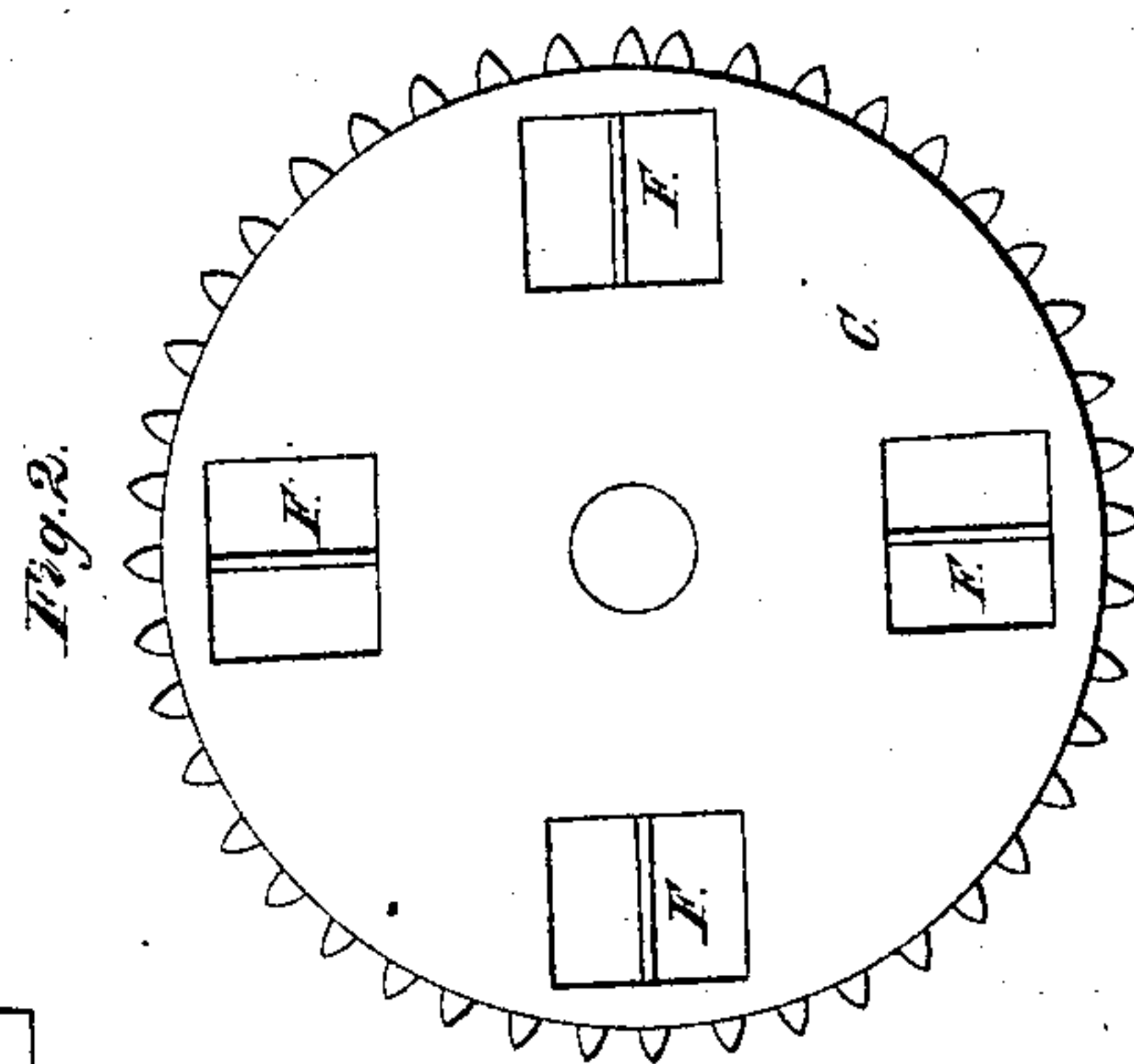
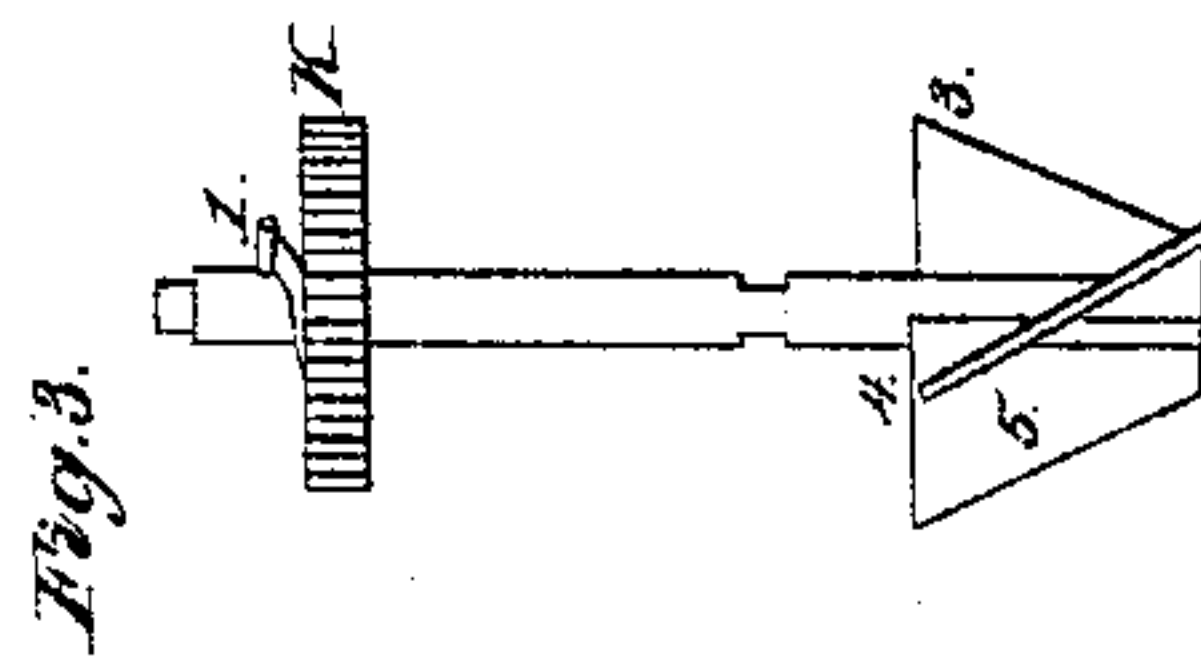
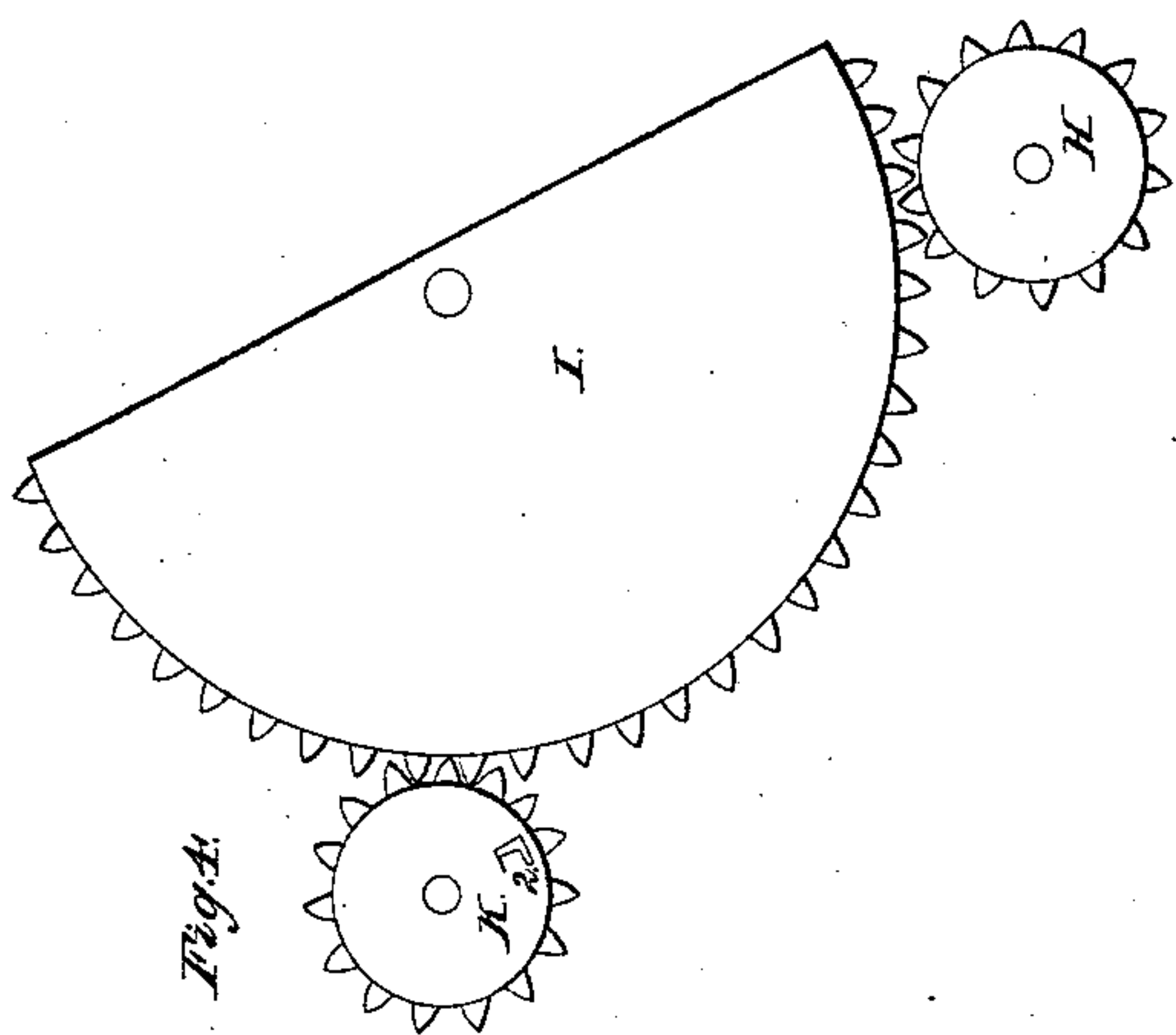


*G. L. Smull,*  
*Brick Machine,*  
*No 20,594,* *Patented June 15, 1858.*





# UNITED STATES PATENT OFFICE.

GEO. L. SMULL, OF MEADVILLE, PENNSYLVANIA.

## BRICK-MACHINE.

Specification of Letters Patent No. 20,594, dated June 15, 1858.

*To all whom it may concern:*

Be it known that I, GEORGE L. SMULL, of Meadville, in the county of Crawford, in the State of Pennsylvania, have invented a new and Improved Machine for Making Pressed Bricks; and I do declare that the following is a full and exact description of the same, reference being had to the accompanying drawings and the letters of reference marked thereon.

Figure 1 is a perspective view of my machine with all its parts adjusted in working order as far as they can be represented in such a view; A, A, is the frame of my machine. C, is a wheel on a perpendicular shaft Y; on the periphery of this wheel is fixed segments of cogs which gear into the pinion wheel G on the shaft X on which is another pinion H which gears into the half wheel I which is driven by the crank N the connecting rod 11 the crank M which are moved by the driving pulley B. Fig. 2 shows the face of the molding wheel C with four pair of molds F, F, F, F, only two of which are shown in Fig. 1 one of the other two being under the press V and the other under the hopper E.

Now the pinion wheel G is just one fourth of the size of the molding wheel C, so that every revolution of G gives a quarter revolution of C and therefore brings the mold which is under the hopper E under the press V and the mold which was under V in front at F'. Now the crank N is longer than the crank M and consequently one revolution of the driving pulley B causes only a half revolution of the half wheel I or a quarter of a whole revolution and as the driving pulley B revolves it is evident that H will make one revolution in one direction and one in another. Now G is hung loose on the shaft X and is turned in one direction by means of the catch or pawl W and as the shaft X revolves in the other direction the pawl W moves around and drops into the notch 12 as before and when the motion X is reversed the pinion G is made to revolve again which causes a quarter revolution of C, as before described.

The molds F, F, F, F, are holes of the size of a brick through the wheel C and in each of them are "followers" U U. When the molds are filled with clay from the hopper E they pass under the press V and the follower U is over the platform Z this platform is raised by the "toggle joint" P which

is worked by the rod R with a hook S which receives the crank T at every revolution which of course operates the "toggle joint" P. Now the toggle joint P forces the follower U up and the brick is pressed between U and V while the wheel G is not moving i. e. while X is making its backward revolution. O is an inclined plane on which the followers U, U, rest after passing off the platform Z. This inclined plane gradually rises from 8 to 6 and from 6 to 7 is on a level. Now it is evident that as the wheel C revolves the followers U U are gradually pushed up by the inclined plane O, until when they get to 6 the bricks in the molds are lifted out of the molds and are on a level with the upper surface of the wheel C and as it revolves they are pushed onto the apron D which has a thin knife edge which rests on the wheel C and as the wheel revolves passes under the brick lifting them off the wheel C and from D they may be carried to the kiln by means of an endless belt or otherwise as desired.

The clay is put into the hopper E and in this hopper is hung a shaft L with flanges on its lower end constructed in the form of the flanges of a screw propeller (see Fig. 3) on the upper end of this shaft is a pinion wheel K hung loosely and made to revolve exactly like the pinion G by means of a pawl 1 (Fig. 3) and a catch in the upper surface of the wheel like 12 (Fig. 1). Now the wheel K is made to revolve on the shaft L in an opposite direction from X by placing the pawl and catch in a reverse position from G so that the shaft L revolves while the wheel C is standing still and as there is a mold under E at this time the clay is forced into it by the flanges at the end of the shaft L and is filled ready for the press.

Fig. 4 shows the half wheel I and the pinions K and H which drive the shafts L and X.

The wheel C may have any number of molds in its face and may be constructed of any size to suit the power that is desired to drive it and may be made of wood or iron or any suitable material.

What I claim as my invention and desire to secure by Letters Patent of the United States is as follows to wit:

1. I claim the molding wheel C in combination with the press V toggle joint P and the inclined plane O for operating the followers U U when these several parts are

constructed arranged and operated as described and for the purposes set forth.

2. I claim the hook S constructed as described and operated by the crank J for operating through the rod R the toggle joint P in the manner and for the purpose set forth.

3. I claim the half wheel I in combination with the pinions H and G cranks *n* and *m*

and connecting rod 11 for giving intermittent motion to the molding wheel C when these several parts are constructed arranged and operated as and for the purposes described.

GEORGE L. SMULL.

Witnesses:

A. B. RICHMOND,  
COOPER RAY.