F. L. CARNELL.

Improvement in Wheels for Tempering Clay.

No. 114,919. Patented May 16, 1871.

Fig. 1.

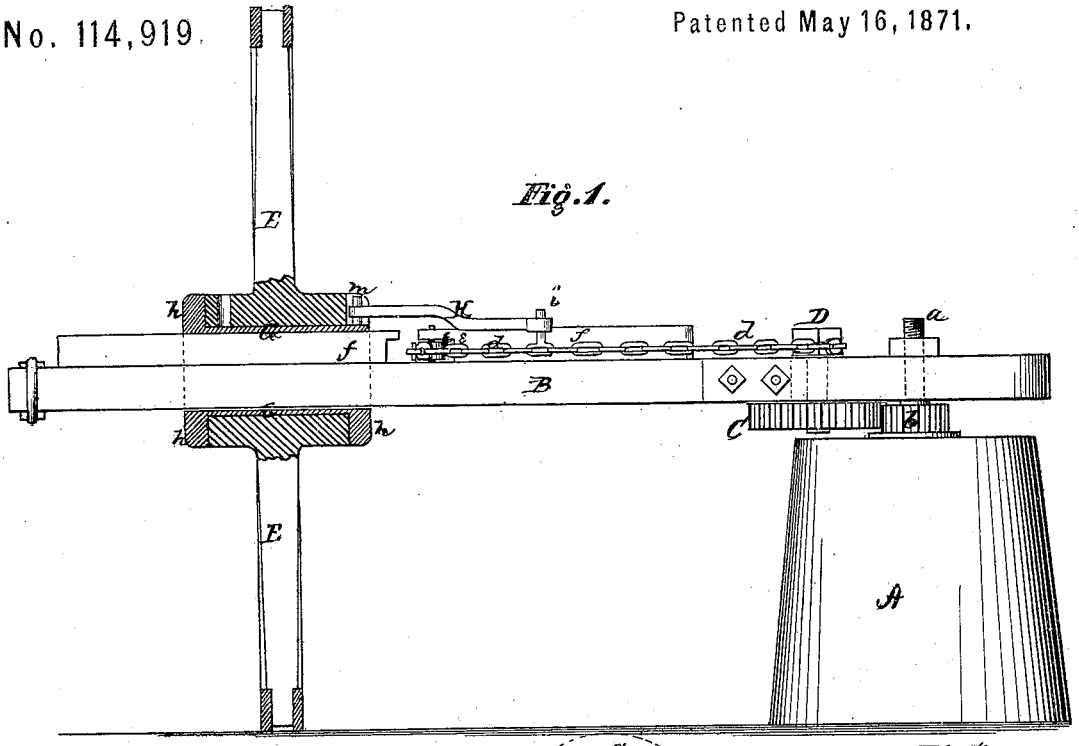

Fig. 3.

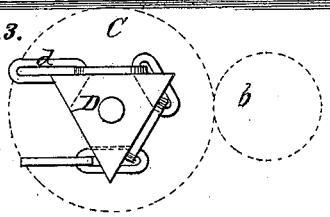

Fig. 4.

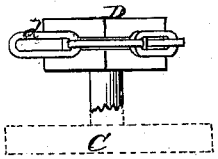

Fig. 2.

Witnesses.

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FRANKLIN L. CARNELL, OF PHILADELPHIA, PENNSYLVANIA, ASSIGNOR TO HIMSELF AND DAVID R. CARNELL.

Letters Patent No. 114,919, dated May 16, 1871.

IMPROVEMENT IN WHEELS FOR TEMPERING CLAY.

The Schedule referred to in these Letters Patent and making part of the same.

To all whom it may concern:

Be it known that I, FRANKLIN L. CARNELL, of Philadelphia, in the county of Philadelphia and in the State of Pennsylvania, have invented certain new and useful Improvements in Wheel for Tempering Clay; and do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawing and to the letters of reference marked thereon making a part of this specification.

The nature of my invention consists in the construction and arrangement of a wheel or machine for tempering clay, as will be hereinafter more fully set forth.

In order to enable others skilled in the art to which my invention appertains to make and use the same, I will now proceed to describe its construction and operation, referring to the annexed drawing, in which—

Figure 1 is a side elevation of my machine, the wheel itself being in vertical section;

Figure 2 is a plan view of the machine;

Figure 3 is an enlarged plan view; and

Figure 4, an enlarged side view of a triangular pinion which operates the endless chain to move the wheel in and out.

A represents a block or standard of suitable height, to be attached in the center of the circular tub or vessel in which the clay is to be tempered.

From the center of this block A rises a bolt, *a*, provided with a stationary pinion, *b*, and above the same on the bolt is placed the beam B, to the other or outer end of which the horse is attached to go around with said beam in the same manner as the usual sweep for horse-powers.

At a suitable point through the beam B is passed a bolt having upon its lower end a cog-wheel, C, which gears with the stationary pinion *b;* and upon its upper end is a double-flanged triangular sheave, D, around which the endless chain *d* is placed.

The beam B is made square or other suitable shape, and provided on its upper side with a longitudinal rib, *f*, which is cut and mortised at a suitable point, as shown in fig. 1, for the insertion of a roller, *e*, around which the chain *d* passes, and for the passage of a pin, *i*, projecting upward from one of the links in the chain.

Upon the beam B and rib *f* is placed a sleeve, G, with a collar, *h*, at each end, the outer one of these collars being removable, so that the wheel E may be placed upon the sleeve and held upon the same by the attachment of said outer collar by set-screws or other convenient means.

The hole in the sleeve G, through which the beam B passes, is made of such size and shape that the sleeve may be allowed to slide out and in on the beam and over the chain *d*.

On the upper side of the inner collar *h* is made a recess, with a pin, *m*, in the same, and the pins *m* and *i* are connected by a rod, H, placed on said pins, as shown fully in fig. 1.

As the beam B swings around on its pivot *a* the wheel C is slowly rotated by gearing with the pinion *b*, thereby also rotating the double-flanged triangular sheave D, which operates the endless chain *d*.

The sheave D is so constructed that its corners will catch on every other link in the chain, and by the movement of the chain the wheel E is, of course, drawn in and out on the beam; or, rather, the sleeve G is drawn in and out, carrying the wheel with it, the wheel at the same time revolving on the sleeve.

The rib *f* on the beam acts as a guard for the chain *d* when the sleeve passes over the same, and at the same time it prevents the wheel from canting to either side, but holds it in the proper position all the time.

The double-flanged triangular sheave D, operating the chain *d* to move the wheel back and forth on the beam, in addition to other advantages, acts with a more steady and uniform motion than the rack and pinion heretofore employed for that purpose.

Having thus fully described my invention,

What I claim as new, and desire to secure by Letters Patent, is—

1. The double-flanged triangular sheave D for operating the endless chain *d*, substantially as herein set forth.

2. The combination of the double-flanged triangular sheave D, chain *d*, roller *e*, pins *i m*, and rod H, substantially as and for the purposes herein set forth.

3. The combination of the beam B, rib *f*, sleeve G with collars *h h* and wheel E, pins *m i*, roller *e*, chain *d*, double-flanged triangular sheave D, cog wheel C, and pinion *b*, all substantially as and for the purposes herein set forth.

In testimony that I claim the foregoing I have hereunto set my hand this 25th day of April, 1871.

FRANKLIN L. CARNELL.

Witnesses:

E. R. BROWN,

JOHN MARTIN.