No. 712,075. Patented Oct. 28, 1902.

J. H. KNIGHT.

MACHINE FOR LAYING BRICKS FOR BUILDING PURPOSES.

(Application filed Dec. 27, 1901.)

(No Model.)

FIG. 1.

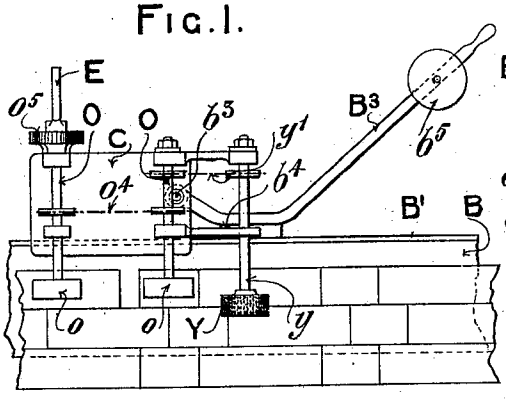


FIG. 2.

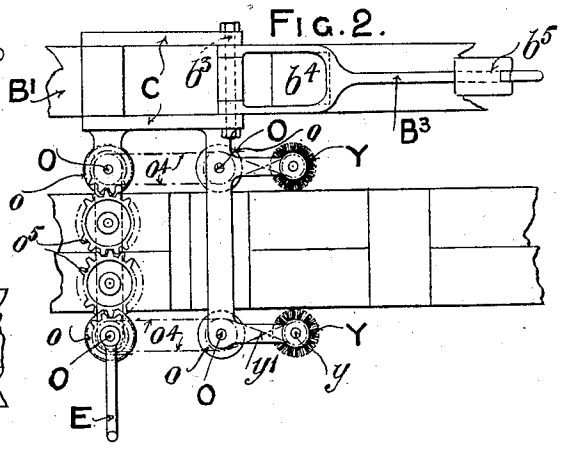


FIG. 3.

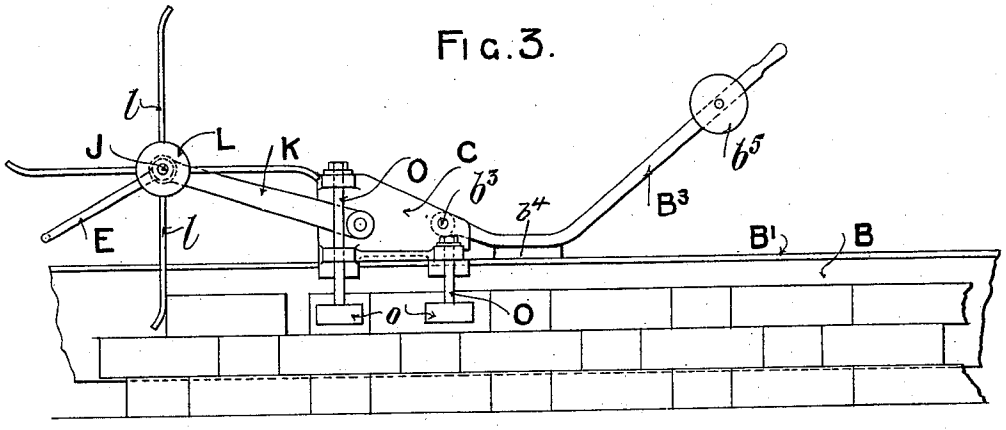
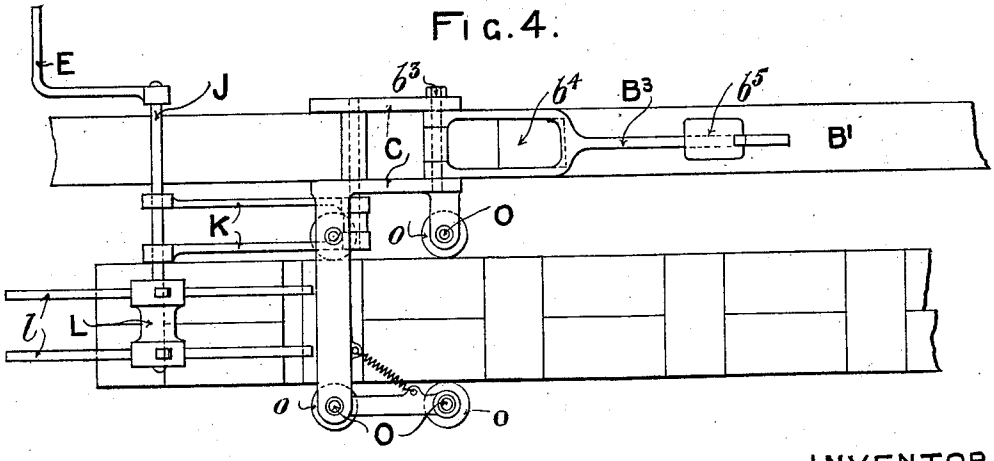


FIG. 4.



WITNESSES:
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UNITED STATES PATENT OFFICE.

JOHN HENRY KNIGHT, OF BARFIELD, NEAR FARNHAM, ENGLAND.

MACHINE FOR LAYING BRICKS FOR BUILDING PURPOSES.

SPECIFICATION forming part of Letters Patent No. 712,075, dated October 28, 1902.

Application filed December 27, 1901. Serial No. 87,487. (No model.)

To all whom it may concern:

Be it known that I, JOHN HENRY KNIGHT, a subject of the King of Great Britain, residing at Barfield, near Farnham, in the county of Surrey, England, have invented a new and useful Improvement in Machines for Laying Bricks for Building Purposes, (for which I have applied for Letters Patent in Great Britain, numbered 23,084 and bearing date the 18th day of December, 1900,) of which the following is a full and complete specification.

This invention relates to an improvement in the apparatus for laying bricks for building purposes for which Letters Patent No. 669,220, bearing date the 5th day of March, 1901, were granted to me; and it consists of an improved method of and means for imparting a forward movement to the machine whereby the parts are materially simplified.

In the accompanying drawings, which illustrate this invention, Figures 1 and 2 are views in side elevation and plan, respectively; and Figs. 3 and 4 are similar views showing a modification.

Throughout the views similar parts are marked with like letters of reference.

According to the present invention I dispense with the rack or chain and cog-wheel for imparting motion to the machine and make use of the bricks already laid to obtain the requisite forward motion.

Referring to Figs. 1 and 2, the frame C, carrying the feeding-rollers, slides freely on a plain plate B′ on the guide-beam B and carries in suitable bearings vertical spindles O, on which are mounted the feed-rollers *o*, arranged in pairs, as shown. The spindles O are geared together by suitable spur-gearing, so that they rotate in unison, motion being imparted to them from the cranked handle E by means of chains and sprocket-gearing o^4 and spur-gearing o^5. When a brick is presented to the forward pair of these rollers *o*, they grip it, and by reason of the frictional resistance imparted by the brake or drag, which prevents the frame C moving forward, the brick is caused to move backward until it is firmly bedded up against the last-laid brick. This brake or drag may be of any suitable construction, that illustrated being a convenient one. It consists of a lever B^3, pivoted at b^3 to the frame C and carrying a block or shoe b^4, adapted to slide on and frictionally engage the plate B′ on the beam B. The lever B may also be provided with an adjustable weight b^5 to increase the friction between the block or shoe b^4 and the plate B′.

Instead of employing the pair of vertically-arranged feeding-rollers *o*, I sometimes employ a horizontally-arranged feed-wheel, as shown in Figs. 3 and 4. This feed-wheel L consists of a series of arms *l*, which are spaced to engage the bricks, as shown in Fig. 3. The wheel L is mounted on an axle J, mounted in bearings carried by links K, pivoted to the frame C, and motion is imparted to the said axle by the cranked handle E or by power.

In order to clear the laid bricks of superfluous mortar, one or more revolving scrapers or brushes may be fitted to the machine. A convenient arrangement is that illustrated in Figs. 1 and 2, in which circular brushes Y, carried by spindles *y*, mounted in the frame C, are adapted to engage each side of the wall and to be revolved—preferably in an opposite direction to that of the feeding-roller spindles—by chain and sprocket or other gearing *y′* from the feeding-roller spindles O.

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

1. A machine for laying bricks, consisting of an adjustable guide-beam arranged parallel with and in close proximity to the position of the wall to be built, of a frame mounted on the said guide, of a brick-feeding device, and of a drag or retarding mechanism carried by said frame and operating to retard the forward travel of the machine to enable the bricks to be fed by means of and pressed against the last-laid bricks, as set forth.

2. A machine for laying bricks consisting of an adjustable guide-beam arranged parallel with and in close proximity to the position of the wall to be built, of a frame mounted on the said guide, of brick-feeding rollers arranged in pairs carried by the frame on each side of the wall and geared positively together and with each other and of a drag or retarding mechanism carried by said frame and operating to retard the forward travel

of the machine to enable the bricks to be fed by means of and pressed against the last-laid bricks, as set forth.

3. In a machine for laying bricks consisting of an adjustable guide-beam arranged parallel with and in close proximity to the position of the wall to be built of a frame mounted in said guide and provided with brick-feeding and laying mechanism, the combination of one or more brushes carried by said frame and caused to revolve against the face of the work in order to remove superfluous mortar from the joints, as set forth.

4. A machine for laying bricks consisting of an adjustable guide-beam arranged parallel with and in close proximity to the position of wall to be built, of a frame mounted to slide on the said guide, of a brick-feeding device, of a brush carried by the frame and caused to revolve against the face of the work in order to remove superfluous mortar from the joints, and of a drag or retarding mechanism operating to retard the forward travel of the machine to enable the bricks to be fed by means of and pressed against the last-laid bricks comprising a block or shoe sliding on and frictionally engaging the plate carried by a lever pivoted to the frame and carrying a weight, as set forth.

5. A machine for laying bricks consisting of an adjustable guide-beam B arranged parallel with and in close proximity to the position of wall to be built, of a frame C mounted to slide on the said guide, of brick-feeding rollers O arranged in pairs carried by the frame C on each side of the wall and geared positively together, of a brush Y carried by the frame C and caused to revolve against the face of the work in order to remove superfluous mortar from the joints and of a drag or retarding mechanism operating to retard the forward travel of the machine to enable the bricks to be fed by means of and pressed against the last-laid bricks comprising a block or shoe b^4 sliding on and frictionally engaging the plate B′ carried by a lever B^3 pivoted to the frame C and carrying a weight b^5, as set forth.

JOHN HENRY KNIGHT.

Witnesses:
ROBERT E. PHILLIPS,
JAMES A. DAVIES.