

March 19, 1940.

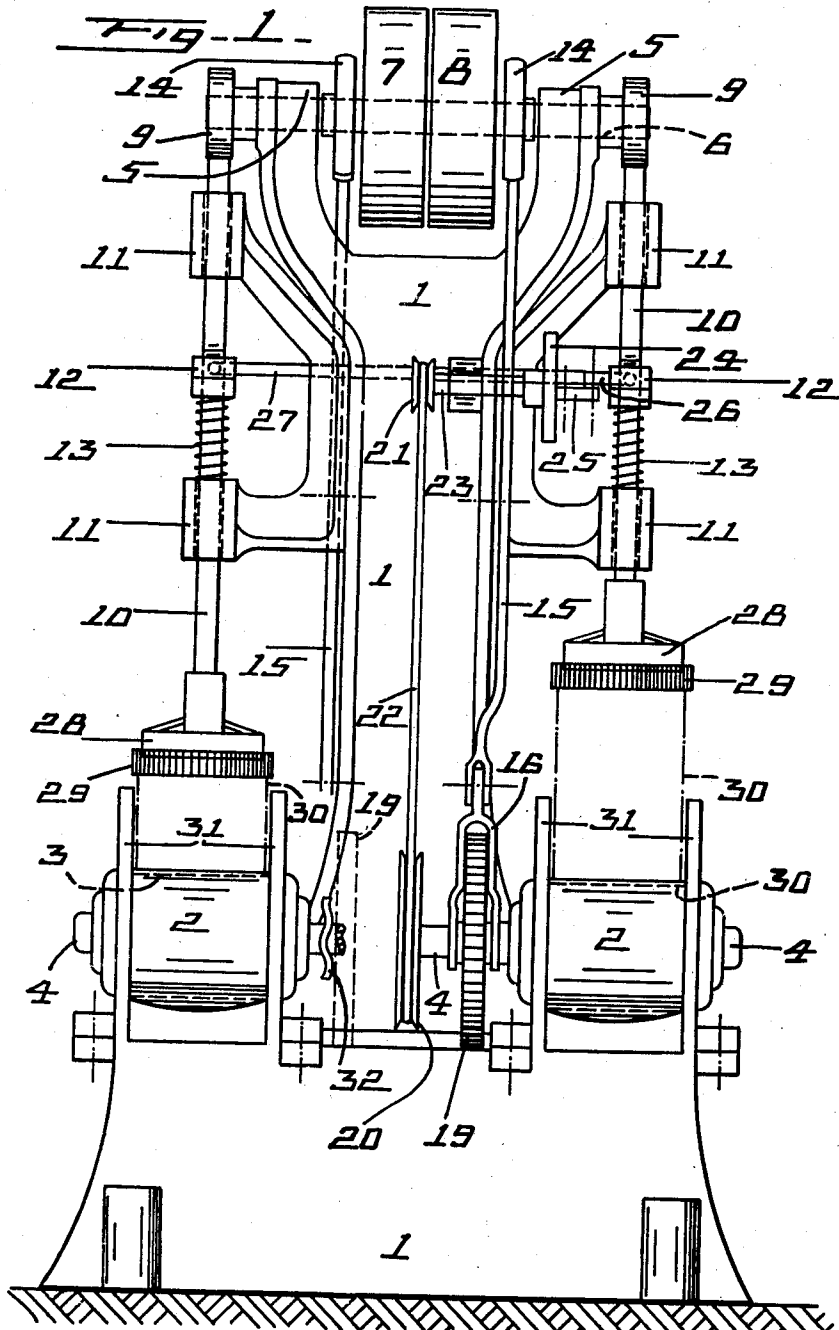
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2,193,916

MACHINE FOR ORNAMENTING BRICKS

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3 Sheets-Sheet 1



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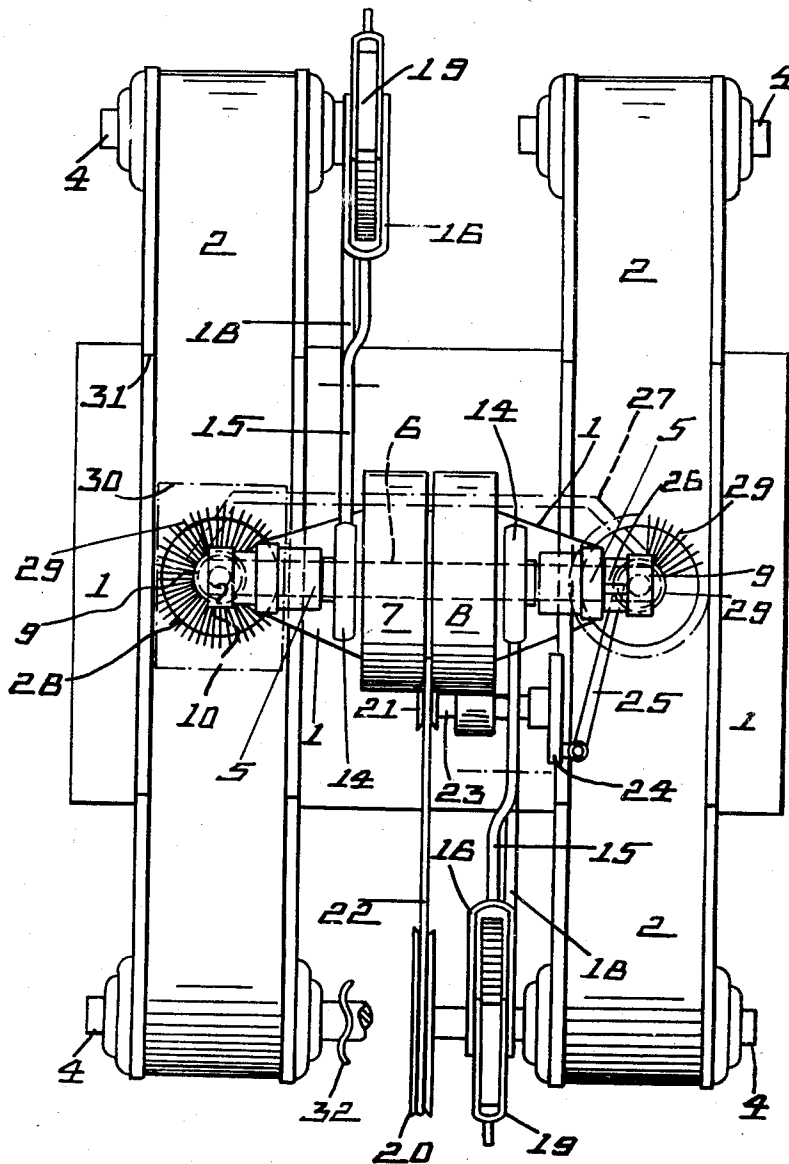
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Fig. 2 -



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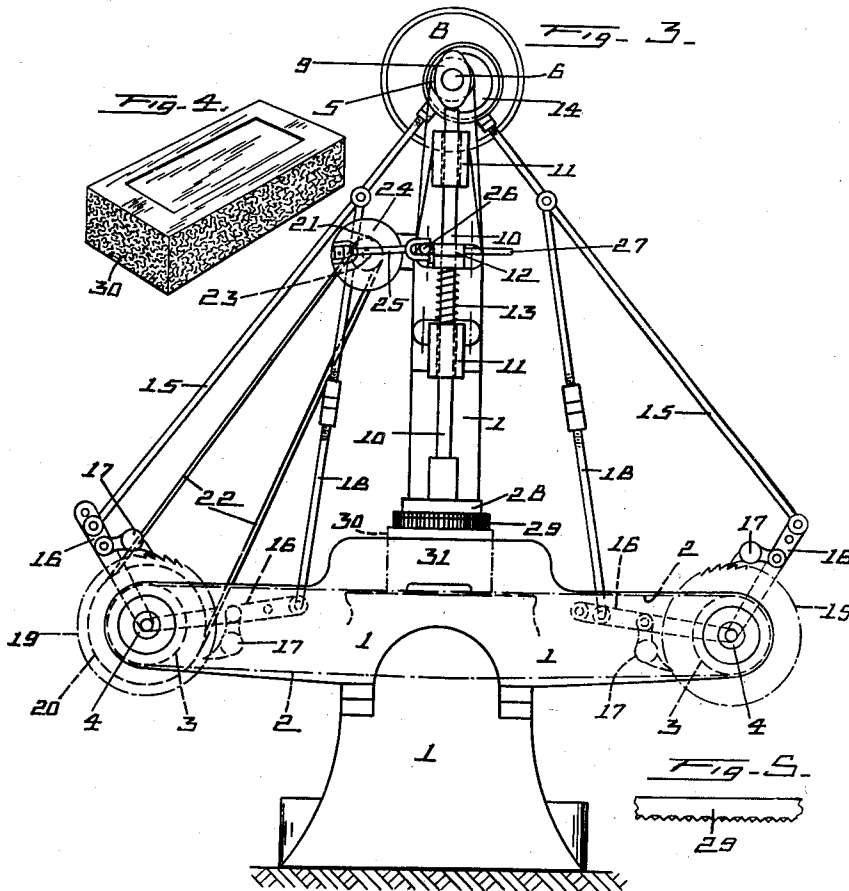
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MACHINE FOR ORNAMENTING BRICKS

Lionel Bentley, Batley Carr, and Edward
Garforth, Batley, EnglandApplication September 14, 1938, Serial No. 229,983
In Great Britain September 28, 1937

2 Claims. (Cl. 25—1)

The object of the present invention is to provide a machine capable of imparting to the surface of bricks a more finished, artistic or rustic appearance by subjecting said surface to the action of cutters, knives or the like, whereby the brick surface obtains a stippled, serrated or undulating effect.

are pivotally connected to the aforesaid rods 15 and are in turn provided with links 16 and pawls 17. Both sets of pawls are normally in engagement with the teeth of ratchet or toothed wheels 19.

A belt pulley or chain wheel 20 mounted upon one of the shafts 4 is intended for driving a further pulley or wheel 21 by means of a belt or chain 22, pulley 21 being secured to a shaft 23 upon which is keyed or otherwise secured a disc 24.

A universally coupled rod 25 connects disc 24 to a stud 26 upon collar 12 of the ram for imparting a turning motion to said collar and ram, whilst a further link rod 27 coupled to said collar and to collar 12 of the other ram is adapted to cause both rams to turn in unison.

Secured to the bottom of each ram is a cutter holder 28 provided with a number of radially arranged cutters or knives 29 securely and adjustably retained in position by means of bolts or other similar or suitable means. The aforesaid knives are provided with a serrated or toothed cutting edge, alternate serrations being preferably given a "set" after the manner of a saw blade as more clearly shown in Figure 5 of the drawings.

In practice the machine is started whereupon the conveyor belts 2 are caused to revolve intermittently by means of the eccentrics 14, connecting rods 15, 18, links 16, pawls 17 and ratchet wheels 19. Bricks 30 in a green state are fed to the conveyors and eventually assume a position beneath the cutters 29 and between the guides 31 forming part of the machine frame. Rams 10 are caused to continuously vibrate in a vertical direction by means of cams 9, against the action of springs 13 in such a manner that an intermittent or vibratory action is imparted to the cutters or knives 29 to cause said knives to percussively engage the bricks 30 and cut or stipple a pattern on one surface thereof. In order that the stippling may be varied and not assume a monotonous character it will be observed that the ram and knives are given a partial turning movement through the intermediary of the disc 24, rod 25 and stud 26, said turning movement intermittently occurring owing to the pulley 21 taking its drive from intermittently moving pulley 20.

The bricks may be treated upon one or more sides, for instance in the machine illustrated in the drawings it will be seen that the left-hand ram and knives treat one side of a brick whilst the right-hand ram and knives treat the end of a brick, the process being a continuous one.

According to the invention the machine embodies a vibratory ram or rams provided with cutters or knives adapted to percussively engage a brick or bricks, further means being provided adapted to impart an intermittent feed movement to said bricks beneath the ram or rams. Means is or are also provided for imparting a more or less turning movement to said ram or rams. Furthermore, if desired, means may be associated with the machine adapted to impart a transverse reciprocating motion to an auxiliary cutter for cutting an undulating or wavy pattern upon the passing brick or bricks.

In order that the invention may be clearly understood and readily carried into effect the same will now be described with reference to and by the aid of the accompanying drawings, in which:

Figure 1 is a front view of the machine for ornamenting bricks, constructed according to the invention.

Figure 2 is a plan view of Figure 1.

Figure 3 is a side view of the machine.

Figure 4 is a perspective view of a brick ornamented by the machine.

Figure 5 is a side view of a fragmental portion of a cutter or knife used in connection with the machine, drawn to a larger scale.

Similar numerals refer to similar parts throughout the several views.

1 is the framework of the machine near the base of which are endless conveyor belts or bands 2 passing around appropriate guide pulleys 3 mounted upon suitable transverse shafts 4. The upper part of the frame is provided with bearings 5 within which is mounted a shaft 6 on which are secured fast and loose pulleys 7, 8, for taking the drive. Secured to the shaft 6 are cams 9 adapted to communicate a reciprocating movement to rams 10 mounted in guides 11 forming part of the machine frame, said rams being provided with collars 12 and springs 13 for returning rams 10 on their upward stroke.

Eccentrics 14 are also mounted upon upper shaft 6 and are secured to connecting rods 15, the lower ends of the latter being adjustably connected to links 16 adapted to have pivoted thereon a ratchet or pawl 17. Further connecting rods 18

The treated bricks are subsequently burnt in the usual or well known manner.

Although a "double-ram" machine has been shown and described it must be understood that
5 single ram or multiple ram machines may be constructed in accordance with the present invention.

What we claim as our invention and desire to secure by Letters Patent, is:

10 1. In a machine for ornamenting soft bricks, the combination of a base, an operating shaft connected to the base and positioned above the same, means for actuating said shaft, a vertically reciprocating ram, means operatively connecting
15 the ram to the operating shaft for imparting intermittent reciprocating movement thereto, a serrated blade connected to the lower end of the ram, an endless conveyor extending transversely of the base and beneath the ram and blade, guide
20 means for maintaining the bricks on the conveyor, a double acting ratchet mechanism connected to the conveyor, means operatively connecting the ratchet mechanism to the operating shaft for intermittently and sequentially moving
25 the bricks on the conveyor beneath the blade so that the blade percussively engages the adjacent surface of each brick to stipple the same, and means operatively connected to the ratchet mechanism and to the ram for intermittently imparting
30 a turning movement to the ram and blade during the operation of the machine.

2. In a machine for ornamenting soft bricks, the combination of a base, an operating shaft connected to the base and positioned above the same, means for actuating said shaft, spaced vertically reciprocating rams, means operatively connecting said rams to the operating shaft for
5 imparting an intermittently reciprocating movement to the rams, knives connected to the lower ends of the rams, spaced endless conveyors extending transversely of the base, each conveyor
10 being associated with one of the rams and arranged to be moved longitudinally beneath the same, guide means for maintaining the soft bricks on the conveyor, a double acting ratchet mechanism operatively connected to each of the con-
15 veyors, means operatively connecting the ratchet mechanisms to the operating shaft for intermittently and sequentially moving the bricks on the conveyors beneath the rams so that the knives percussively engage the adjacent surface of each
20 brick to stipple or ornament the same, means operatively connected to the ratchet mechanism on one of the conveyors and to the ram associated therewith, for intermittently imparting a turning
25 movement to the latter, and means connecting said last mentioned ram to the other ram for effecting simultaneous turning movement of the rams and knives during the operation of the machine.

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