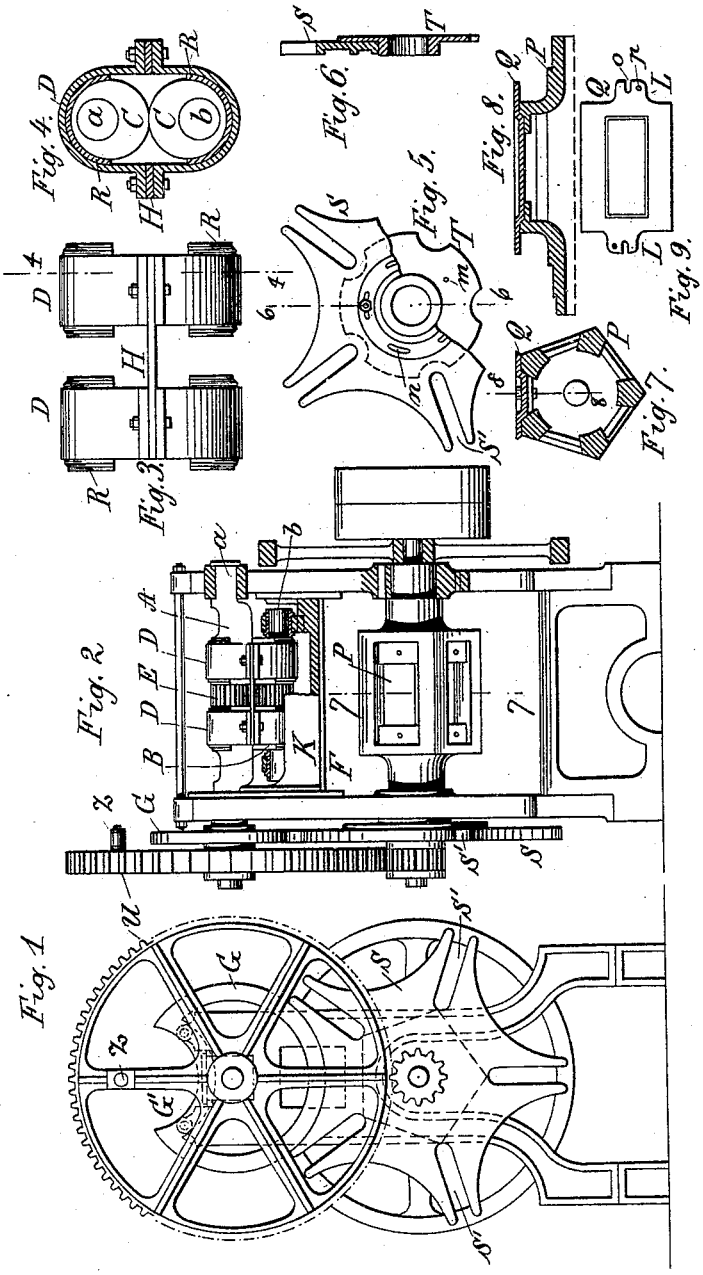
(No Model.)

W. LUDOWICI.

RIDGE OR GUTTER TILE MACHINE.

No. 493,366. Patented Mar. 14, 1893.



Witnesses:

Inventor:
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UNITED STATES PATENT OFFICE.

WILHELM LUDOWICI, OF TOCKGRIM, GERMANY.

RIDGE OR GUTTER TILE MACHINE.

SPECIFICATION forming part of Letters Patent No. 493,366, dated March 14, 1893.

Application filed October 24, 1892. Serial No. 449,888. (No model.)

To all whom it may concern:

Be it known that I, WILHELM LUDOWICI, a subject of the King of Bavaria, German Empire, and a resident of the city of Tockgrim, in the German Empire, have invented certain new and useful Improvements in Ridge or Gutter Tile Presses; and I do hereby declare that the following is a full, clear, and exact description of the invention, which will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to a ridge or gutter tile press in which the up and down motion of the stamp is effected by the rotation of two eccentric shafts and the tiles pressed between the stamp and a five sided prism.

The object of the invention is first to provide an easy working press and secondly to produce tiles of a very exact form. I attain this object by the mechanism shown in the accompanying drawings in which

Figure 1 is a side view of the press. Fig. 2 a front view thereof partly in section. Fig. 3 a front view of the straps or frames which hold the eccentric shafts together. Fig. 4 a section through line 4—4 of Fig. 3. Fig. 5 a front view of star wheel S with disk T. Fig. 6 a section through line 6—6 of Fig. 5. Fig. 7 a section in line 7—7 of Fig. 2, of the five sided prism P with plate Q. Fig. 8 a section through line 8—8 of Fig. 7. Fig. 9 a top view of plate Q.

A, B, (Figs. 2, 4) are the eccentric shafts by the rotation of which the stamp K is moved up and down in its guides. The shafts are held in their respective positions by the straps or frames D and are in connection with each other through teeth E cut in the same. The ridge tile is pressed between stamp K and five sided prism P the top mold being fixed to the former and the bottom mold to the latter which after each pressing operation is turned round one fifth of a revolution or to the extent of one of its sides by means of star wheel S fixed on the same shaft and driven by pin Z of spur wheel U which upon the rotation of this latter engages in one of the slots S′ of the star wheel and carries it round until the pin becomes disengaged from the slot.

G is a disk by which the star wheel S and with it the prism P is held in a fixed position upon every fifth of a revolution. It is fixed on the same shaft as spur wheel U and is provided with a recess or break G′. The pressing operation is effected by the rolling upon one another of eccentrics C of shafts A, B, in pairs within straps or frames D, the eccentrics turning in semicircular bearings R (Figs. 3, 4). When shaft A is rotated the action of its eccentrics C causes straps or frames D to ascend carrying with them shaft B and as these two shafts are in connection with each other by teeth E the shaft B is further both rotated and raised carrying with it the stamp K which is attached to it. Upon further rotation of shaft A the straps or frames D descend and with them the shaft B and stamp K to the lowest position. The straps or frames D with bearings R are held in place by stays H and teeth E. Upon each down stroke the bottom bearings dip into a lubricant contained in an open case formed at the top of stamp K with the result that these and teeth E are lubricated and the lubricant carried from these parts to the top bearings. In this way the heaviest working parts are automatically lubricated upon each stroke of the stamp giving them durability and causing them to work easy.

As star wheel S may be worn away on one side by disk G in the pressing operations so that after a time the planes of prism P and stamp K do not stand precisely parallel the one to the other and in order that prism P may at any time be quickly adjusted, the star wheel S is mounted so that it may be turned on a disk T fixed on the prism shaft (Figs. 5, 6). Disk T is provided with five screw studs or bolts *m* and star wheel S with five slots *n* through which studs or bolts *m* are passed so that when the nuts of these are loosened, star wheel S may be turned on disk T and its position thus adjusted relatively to prism P, this being very important for the production of goods of equal thickness throughout. Further, the rapid wearing away of the five sides of prism P by the moist clay and the consequent frequent repair of the prism surfaces, are avoided by the employment of plates Q (Figs. 7, 8, 9) having a recessed top surface, one of such plates being fixed by two screws or bolts to each side of the prism. They are provided at each end with a lug L, slot *o*, and stud *p* for the purpose of allowing of the bot-

tom mold or form being readily bolted thereto and may be slightly displaced in any direction when any one or more surfaces of the prism is, or are, not located exactly in the proper position opposite the stamp K. They also prevent the entrance into the interior of the prism of grit or dirt which is injurious to the prism shaft.

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

1. In a tile press the two straps or frames D, holding together by semi-circular bearings R, the eccentrics C of shafts A, B, and connected with each other by stays H, the eccentrics C and toothed gearing E being automatically lubricated at each stroke of the stamp K, substantially as described and shown.

2. In a tile press the prism P in combination with disk T on which star wheel S is fixed and readily adjustable thereon, for the purpose specified substantially as described and shown.

3. In a tile press the prism P in combination with plates Q having a recessed surface, lugs L, slots *o*, and studs *p* for fixing the bottom molds or forms substantially as described and shown.

In testimony whereof I have signed this specification in the presence of two subscribing witnesses.

WILHELM LUDOWICI.

Witnesses:
OTTO SCHMELTZER,
JOSEPH SCHULDHEIS.