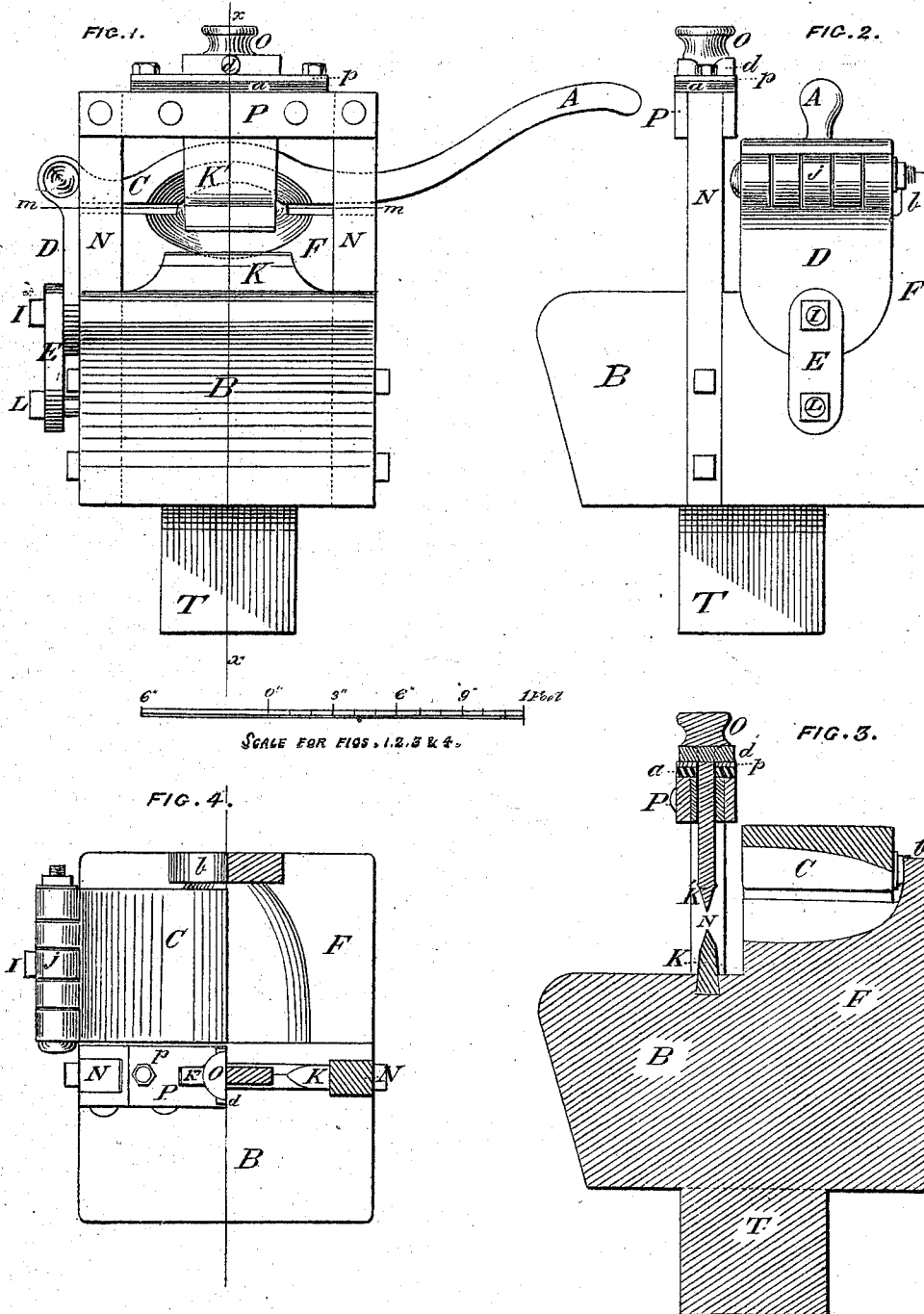


L. DUTERTRE.
Cobble-Stone Facing-Machines.

No. 142,089.

Patented August 26, 1873.



WITNESSES:

John H. Pitts
Henry S. Tibbey

INVENTOR:

Louis Dutertre
By his Att'y Lionel Varian

UNITED STATES PATENT OFFICE.

LOUIS DUTERTRE, OF SAN FRANCISCO, CALIFORNIA.

IMPROVEMENT IN COBBLE-STONE-FACING MACHINES.

Specification forming part of Letters Patent No. **142,089**, dated August 26, 1873; application filed April 21, 1873.

To all whom it may concern:

Be it known that I, LOUIS DUTERTRE, of the city and county of San Francisco, State of California, have invented certain Improvements in a Cobble-Stone-Facing Machine, of which the following is a specification:

My invention relates to the combination of a block with fixed knife and form for holding the cobble-stone, together with a descending knife for clipping the same, in such manner that the cobble-stone shall be partially held in the form, while its top rests on the edge of the fixed knife within the block, so that a blow struck on top or descending knife facing it may clip off that portion of the cobble; the object of my invention being to cut off the ends or tops of cobble-stones, and thus face them with a flat surface by means of the apparatus herewith presented, so that they may be suitable for the construction of an even roadway or pavement.

Figures 1 and 2 are front and side elevations, respectively, of a machine embodying my invention. (Cover shown reversed in side view.) Fig. 3 is a vertical transverse section of Fig. 1 through the central line *x x*. Fig. 4 is a plan of Fig. 1 with right-hand half shown in section through the line *m m*.

B is the block, which should be made of solid cast-iron to resist the blows for the cutting of the cobble-stones. T is the projecting piece at the bottom of the block B, for fitting into a suitable wooden frame, so as to give stability to the whole. K is the fixed knife, which is dovetailed at the bottom so as to slide into its position in the groove prepared for it at the top of the block B, or be removed at pleasure. The form F is a raised portion of the block B, and is so hollowed out in its shape as to constitute a suitable bed or nest for a cobble-stone to rest in, while at least one-third of the cobble projects over and rests on the edge of the knife K. Attached to the form F on one side is the cover C with long arm A. This cover is hinged to a plate, D, by the knuckle-joint *j*, and the plate D is pivoted at I by the screw-bolt there fixed; also, in order to strengthen this pivoting, and to somewhat limit the movements of the plate D, a link-piece, E, is fastened over it and se-

cured by another screw, L. This arrangement of the cover C admits of its adapting itself to the size and shape of the stone to be held by pivoting on I. At the back of the form F is a raised piece of metal, *b*, of considerable thickness, for receiving the shock of the blow as the cobble-stone attempts to swing backward when struck by the descending knife. K' is this top or descending knife, and is constructed of wrought-iron faced with steel for the cutting-edge, and is also so arranged as to be capable of sliding vertically up and down within a slot in an iron frame, P, which is fitted to the two upright bars N N, and stretches across between them. In the center, on the top of the knife K', a large circular wrought-iron knob, O, receives the blows from an ordinary sledge-hammer. To prevent the edges of these knives K K' coming in contact a vulcanized piece of India rubber, *a*, is placed around the slot on the top of the frame P, and an iron plate, *p*, fitted over to secure it to the same, as well as protect it when the fixed pin *d* belonging to the knife K' strikes this plate on a blow of a sledge-hammer being administered to the knob O for the cutting of a cobble-stone; the pin *d* preventing contact and the India rubber acting as a spring to lessen the jar to the several parts of the machine.

The cobble-stone to be cut is inserted within the nest of the form F, its end touching the back *b* and its top projecting over and resting on the bottom knife K. The cover C, which fits the stone, is then shut down over it, and power applied to the end of the arm A to hold it in its place as much as possible. The top knife K' is then adjusted within its slot, so that its edge rests on the top of the cobble and faces the edge of the bottom knife K. In this position the apparatus is ready, and a blow of sufficient force struck by a sledge-hammer on the circular knob O of the knife K' will clip off the top of the cobble, so that several such surfaces as that produced by this clipping or facing process, when placed together in a roadway, shall form a comparatively smooth and even pavement.

By this arrangement of top knife K' I obtain a surer and more even cutting or facing

than if the cobble-stone rested on the bottom knife K, and the stone itself were struck on the top by the sledge.

I make no claim to this bottom knife K, nor to the cover C, with its pivoting attachments, nor to the block B and form F, as I am aware that these are not new, having been described and claimed by Jacob Bolliger in his patent, No. 131,389; but

I claim as my invention—

The top knife K' with fixed pin *d*, actuated within a frame, P, provided with India-rubber

packing *a* and covering-plate *p*, as described, together with the raised back piece *b* of the form F, in combination with the lower knife K fixed within the anvil-block B, and cover C with attachments D and E for the form F, substantially as and for the purpose hereinbefore set forth.

LOUIS DUTERTRE.

Witnesses:

HENRY S. TIBBEY,
LIONEL VARICAS.