No. 875,344. PATENTED DEC. 31, 1907.

E. F. GLOCK.

CLAMPING DEVICE.

APPLICATION FILED JUNE 10, 1907.

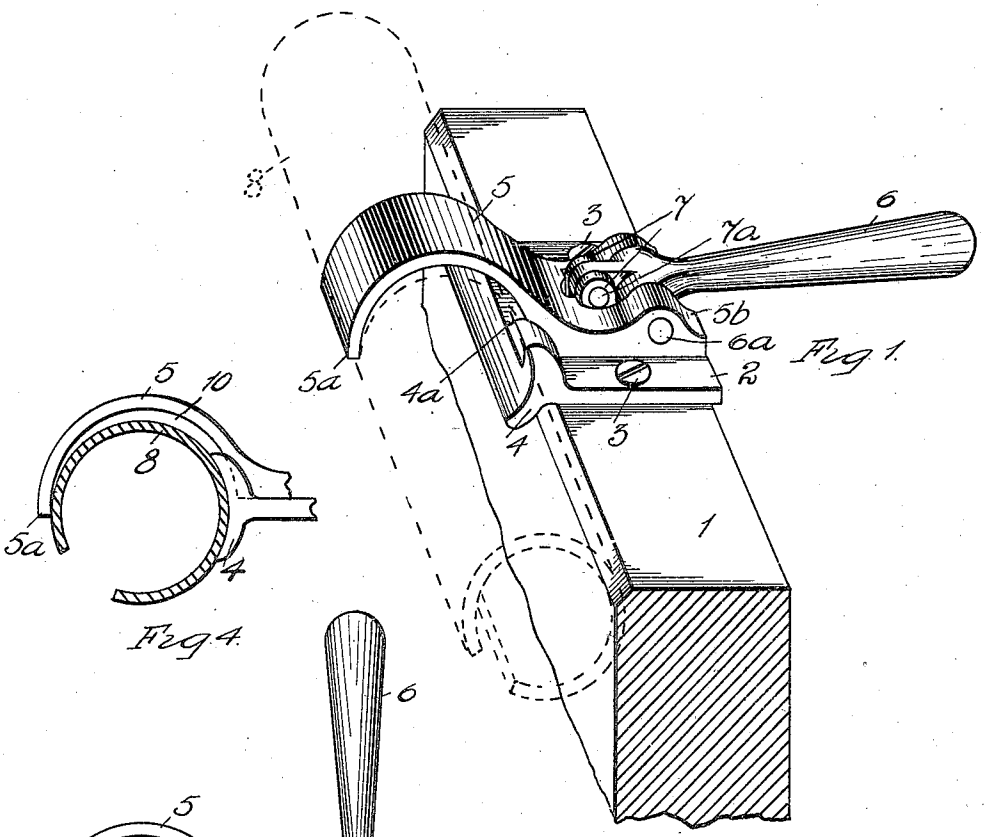

Fig 1.

Fig 4.

Fig 2.

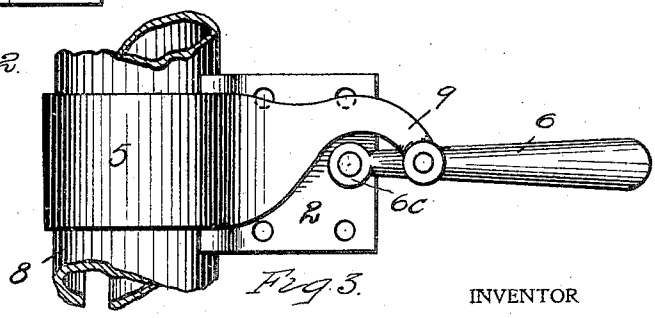

Fig 3.

WITNESSES

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CLAMPING DEVICE.

No. 875,344. Specification of Letters Patent. Patented Dec. 31, 1907.

Application filed June 10, 1907. Serial No. 378,104.

To all whom it may concern:

Be it known that I, EUGENE F. GLOCK, who am a citizen of the United States, residing at Detroit, county of Wayne, State of Michigan, have invented a certain new and useful Improvement in Clamping Devices, and declare the following to be a full, clear, and exact description of the same, such as will enable others skilled in the art to which it pertains to make and use the same, reference being had to the accompanying drawings, which form a part of this specification.

This invention relates to clamps for holding in place the metallic guard pieces or edge protectors illustrated in United States Letters Patent No. 813,334 issued to Avila Thomas and myself on February 20, 1906, and has for its object an improved device adapted to be attached to the wooden form within which the concrete is held in desired outline during its period of plasticity, and in its proper and desired relation with respect thereto, and as it is intended to be fixed for permanent use.

In the drawings:—Figure 1, is a perspective, showing a clamp attached to the edge of the form, and with the section of tube which it is designed to hold in place shown in dotted lines. Fig. 2, is a side elevation of the same, with the clamp in disengaged position. Fig. 3, is a plan of a slightly modified form of clamp. Fig. 4, is an elevation of the tube-engaging portions of the clamp about the tube, showing particularly the spacing of the finger portion of the clamp from the tube at certain portions of its periphery.

Attached to the upper edge of the wooden form 1 is the base portion 2 of the clamp, which is held in place by screws 3 along the interiorly facing edge. The base piece is formed at 4 so that its exposed or wearing edge is of a curvature to correspond quite closely with that of a section of pipe or tubing placed thereagainst. The center portion of this curved face is broken away somewhat to permit the engagement between the end portions 4^a of the overreaching clamping finger 5, whose curved portion is adapted to engage over and partially about the section of tubing whose location is desired, its outer point or end 5^a being almost diametrically opposite to the center of curvature of the face 4, so that when the tube is held therebetween there is no chance of its slipping out. The forked rear portion 5^b of this finger engaging between the points 4^a and movably over the base portion 2 of the clamp, is adapted, when the same is locked in place, to lie closely against its upper surface, though before the tube is finally locked in position it is projected upwardly and forward in order to more easily overreach it; this is accomplished by the engagement of the locking lever 6, which is pivoted between the tongues 7, which rise from the base 2, and which is also pivoted, intermediate its point of pivoting to the tongues 7 and its free end, to the forked rear ends 5^b of the overhanging finger 5. When the forward projection of the finger is desired, the handle 6 is raised to a nearly vertical position with respect to the base piece, resulting in throwing the finger 5 forward and over the pipe or tube 8; the finger is then pressed down upon the tube and the lever thrown as far to the rear as possible. This results in drawing the point 5 of the finger closely against the pipe and forcing the pipe against the surface 4. The center of the pivot pin 6^a is, when the lever is forced to its lowermost position, preferably a trifle nearer the base than that of the pivot pin 7^a, so that the locking or clamping is thus made complete and positive; it is then left to hold the tube in place until the concrete poured thereabout has hardened, when without pounding or jarring it is released from engagement about the pipe by merely lifting the lever 6.

The modified form shown in Fig. 3 embodies a finger piece which extends completely over the base portion, and is provided with a horn portion 9, whose tip is pivoted to the lever 6 intermediate its free end and its pivoted end 6^c. When the clamp is locked in position, its inner face adjacent to the end 6^c of the lever, engaging as it does thereagainst, determines, in connection with the pivoted end portion of the horn 9, the degree of possible throw of the lever.

As shown in both Figs. 1 and 4, the curvature of the finger 5 is not necessarily designated to follow exactly the curvature of the tube, as I have found it preferable to provide for a very close engagement against the tube at its outer end 5^a, and for a noticeable space between its inner periphery and that of the outer periphery of the tube near its top, say at the point 10.

What I claim is:—

1. In combination with a base, a movable clamping finger adapted to coöperate with

an edge thereof in the holding in place of a tube, a locking lever pivotally attached to the base and to said finger whereby said finger may be so moved and locked in position relatively to the base, that, in coöperation therewith, it holds the tube in place, substantially as described.

2. In combination with a fixed base, a clamping finger engaging thereover, and a locking lever pivoted at different points along its length to said base and to said finger, adapted to throw the finger into locking engagement about a pipe interposed between its free end and an opposing portion of said base, substantially as described.

3. In combination with a base portion having one lateral edge shaped to receive a horizontally extending tube along its side portion, a clamping finger adapted to engage with its free end against the opposite side of the tube from that engaged by the base, and a locking lever hinged to said base and to said clamping finger, whereby the same is forced into locking engagement about said tube and positively held in such position, substantially as described.

In testimony whereof, I sign this specification in the presence of two witnesses.

EUGENE F. GLOCK.

Witnesses:

WILLIAM M. SWAN,

CHARLES C. JENNINGS.