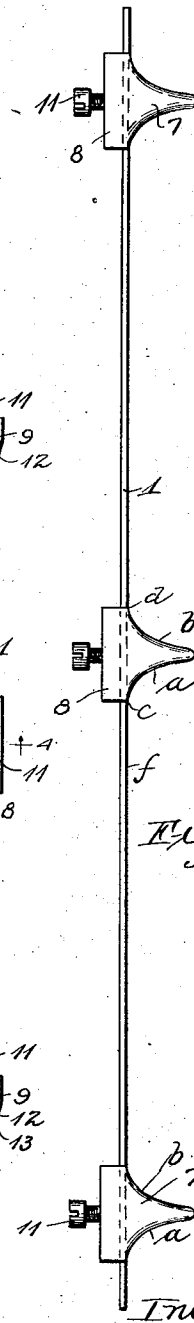
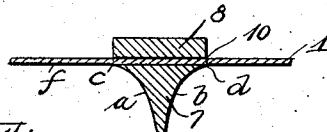
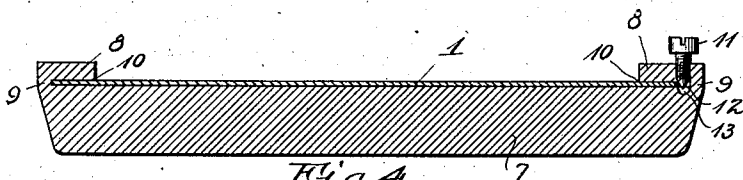
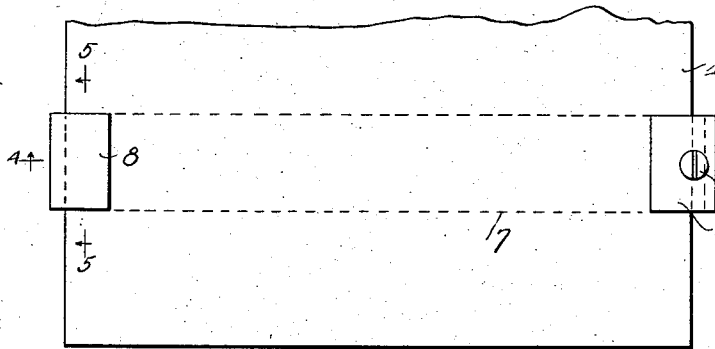
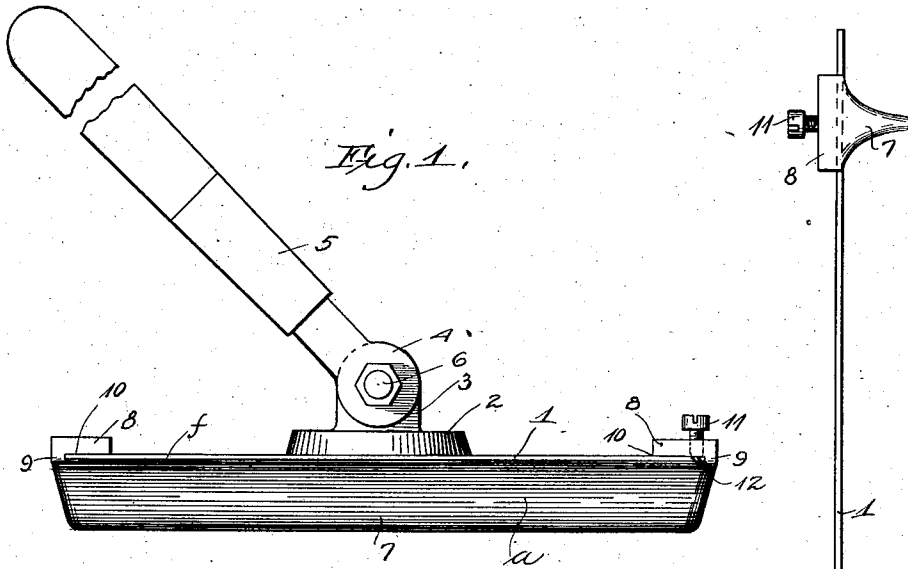


I. M. ABRAM.
TROWEL ATTACHMENT.
APPLICATION FILED AUG. 17, 1910.

1,027,396.

Patented May 28, 1912.



Witnesses:
Charles J. Schmidt.
Nelly B. Dearborn

Fig. 5.

Inventor:
Ira M. Abram
By Office, Jewell, Graves & Office
Atty's.

UNITED STATES PATENT OFFICE.

IRA M. ABRAM, OF DUGGER, INDIANA.

TROWEL ATTACHMENT.

1,027,396.

Specification of Letters Patent.

Patented May 28, 1912.

Application filed August 17, 1910. Serial No. 577,602.

To all whom it may concern:

Be it known that I, IRA M. ABRAM, a resident of Dugger, in the county of Sullivan and State of Indiana, have invented certain new and useful Improvements in Trowel Attachments, of which the following is a full, clear, and precise specification.

My invention relates to trowel attachments, particularly to attachments for cement working and finishing trowels.

In cement work, such as side-walks, the concrete is usually laid in sections or blocks, and a top dressing of cement applied thereover to give a smooth upper surface. This upper surface is in main part smoothed off by a trowel and then a separate tool, known as a jointer tool, is used to mark the seams or joints between the blocks. Sometimes it is desirable to apply a great number of transverse or criss-cross grooves in the surface of the block to form a drive-way for horses or to give a tile effect, and where such grooves are applied by a single tool the cost of labor runs very high.

One of the important objects of my invention is, therefore, to provide an attachment for trowel blades which can be applied in any number and combination to a trowel blade so that a plurality of grooves can be made at the same time in the cement surface, thereby greatly reducing the expense.

My attachment is particularly adaptable to trowel devices such as disclosed in the co-pending application, Serial No. 535,885, filed December 31, 1910, in which myself and Joseph E. Runner are the joint inventors. One of my attachments can be applied to the troweling blade to mark the dividing line or joint between the cement blocks, or a number of attachments can be applied to the blade so that a corresponding number of transverse or criss-cross lines or grooves can be applied simultaneously to form a drive-way surface or one giving a tile effect.

The attachments may be of various forms and shapes, and the essential feature thereof is the ease and readiness with which they can be applied and adjusted in position on the trowel blade.

The nature of my invention will be fully understood by reference to the following specification and the accompanying drawings, in which drawings—

Figure 1 is a side elevational view of a trowel device showing a finishing attachment applied thereto, Fig. 2 is a plan view

taken of one end of the trowel blade, showing an attachment applied thereto, Fig. 3, is a view of the front edge of the troweling blade, showing the attachments thereon, Fig. 4 is a sectional view taken on plane 4—4 Fig. 2, and Fig. 5 is a sectional view taken on plane 5—5, Fig. 2.

The main trowel device to which I have shown my invention applied comprises the ordinary rectangular blade 1 having a central block 2 secured thereto and provided with a bearing lug 3, to which is pivoted the head 4 of a handle 5 by means of a bolt 6. The particular form of attachment shown is adapted when applied to the plate to cooperate with the blade to form a jointing outfit. The attachment has a body part 7 of substantially V-shaped cross-section, as best shown in Fig. 5, the sides *a* and *b* being slightly concave and running to sharp points *c*, *d* at the upper ends to form practically a continuation of the lower surface *f* of the blade to which the attachment is applied. Above each end of the body part is a block 8 held integral with the body part by a small transverse section 9 and forming with the body part a groove 10 for receiving the corresponding edge of the blade. In practice, these blocks are primarily entirely connected with the body part, and then the slots 10 are cut therein to the desired depth.

The attachment is slid onto the trowel blade from one end thereof and then slid longitudinally to the position desired on the blade, whereupon the attachment is properly secured in place in any desirable manner, but in such fashion that the blade is not in any way cut or marred or destroyed for its independent ordinary use as a troweling device for flat surfaces. A preferable way for securing the attachment in its adjusted position is by means of a screw 11 threading through one of the blocks 8 and having a tapered end 12 for engaging the adjacent edge of the blade, as indicated in Fig. 4, a pocket 13 being formed in the body part below the slot 10 to receive the tapered end of the screw. The attachment itself does not form a complete jointing device, as jointing devices must have both side surfaces for forming the joint slot and must also have horizontal under surfaces at the upper ends of the side surfaces for smoothing out the ridges caused adjacent the slots in the cement by the tapered sides engaging in the cement. However, when the attachment of my con-

struction is applied to the ordinary trowel blade, the side surfaces *a* and *b* thereof at their upper ends or points *c* and *b* merge into and coincide with the surface *f* of the blade, the surfaces *a* and *b* then forming the finishing continuations of the surface *f*. When the resulting device is used the V-shaped attachment will form the jointing slots in the cement, and the cement adjacent the slots will be leveled and smoothed off by the engagement of the blade surface *f* therewith. In other words, the attachment serves only to define the joint or other groove, and the trowel blade itself smooths out the surfaces adjacent the formed grooves. The ordinarily straight blade is therefore transformed into a jointing or other finishing device upon application of the attachments thereto, and the troweling blade is itself an effective part of the combination and does not serve merely as a support for complete jointing or other finishing attachments. In edging cement work, such as side-walks, the attachment will round off and smooth over the edges, and the blade itself will smooth off and maintain the level of the top surface of the work.

Instead of one attachment a number may be applied to the blade at desired intervals, so that the resulting device can be used for simultaneously applying a number of grooves to cement surfaces, as for drive-ways or to produce a tiled effect, the attachments forming and defining the grooves, and the blade itself finishing off and maintaining the level adjacent the grooves. Where the attachments are used in conjunction with the troweling device disclosed in my co-pending application referred to, the attachments will automatically partake of the movement of the device to raise the advancing ends.

The attachments of my construction can be quickly slid onto any troweling blade and secured thereon in adjusted position without the necessity of re-constructing the troweling blade or making provision thereon for the combination of the attachments, and when the attachments are removed the troweling blade can be used in its ordinary capacity.

I do not desire to be limited to the precise form and construction shown, as other forms

and constructions are of course possible which would still come within the scope of my invention, and

I therefore claim the following:

1. A finishing attachment for a troweling blade, comprising a body part having side finishing surfaces for cooperating with the finishing surface of the blade, extensions on said body part forming slots therewith for receiving the edges of the blade whereby said attachment may be slid into various positions on said blade, and set screw mechanism cooperating with said extensions and blade to lock the attachment in its adjusted position on said blade.

2. An attachment for a troweling blade, comprising a body part having side finishing surfaces for cooperating with the finishing surfaces of the blade, an extension over each end of said body part forming with said body part slots for receiving the edges of the blade whereby the attachment may be slid into various positions on said blade, and a screw passing through one of said extensions and having a tapered end for engaging the adjacent edge of said blade to thereby clamp the attachment in its adjusted position to said blade.

3. In combination, a troweling blade, a detachable finishing member having grooves for receiving the longitudinal edges of the blade whereby said member may be slid into various positions on said blade to have its finishing surface cooperate with the finishing surface of the blade, and means for locking the attachment readily in adjusted position.

4. In combination, a troweling blade, a plurality of finishing attachments each having grooves for receiving the longitudinal edges of the blade whereby said attachments may be slid into various positions on said blade, and means provided for each finishing member for locking said member rigidly in adjusted position to said blade.

In witness hereof, I hereunto subscribe my name this 12 day of Aug., A. D., 1910.

IRA M. ABRAM.

Witnesses:

N. W. RINGO,
EFFIE PIGG.