R. W. LINVILLE.

ADJUSTABLE TROWEL.

APPLICATION FILED MAR. 16, 1909.

961,302. Patented June 14, 1910.

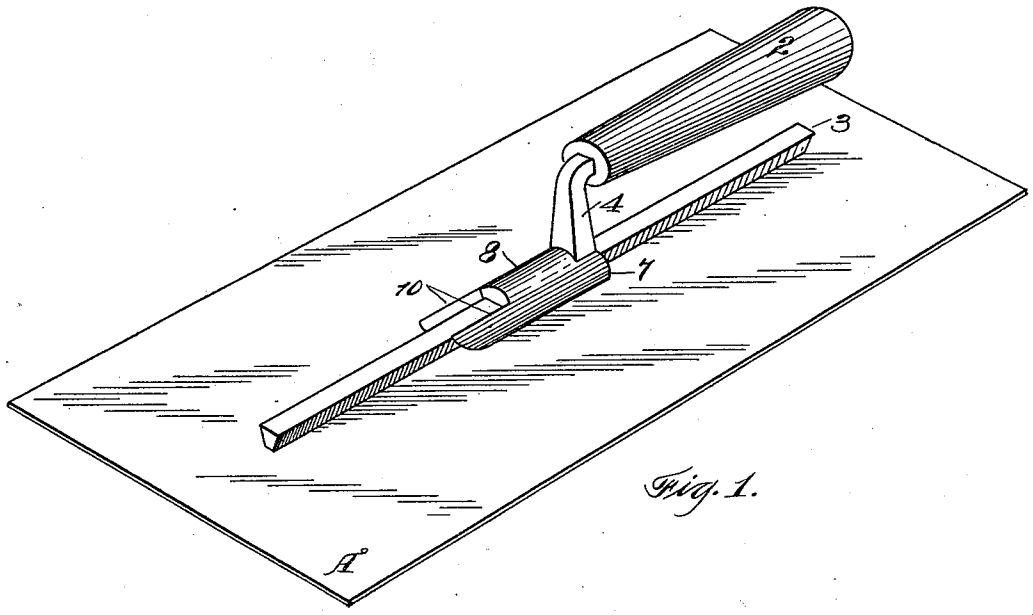


Fig. 1.

Fig. 2.

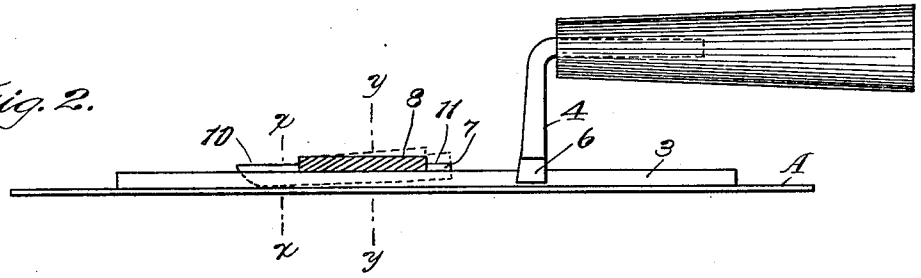


Fig. 3.

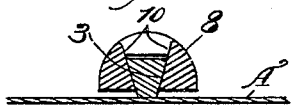
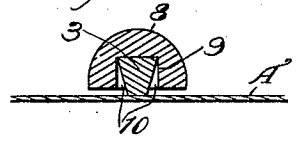


Fig. 4.



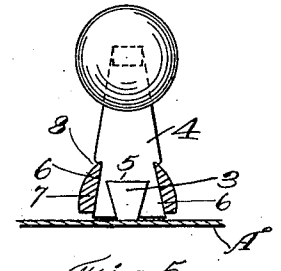


Fig. 5.

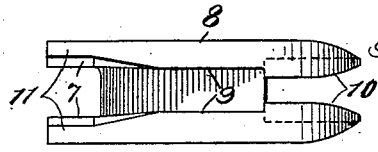


Fig. 6.

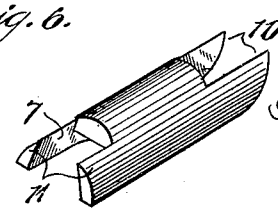


Fig. 7.

Witnesses:

F. E. Maynard.

Charles A. Penfield

Inventor:

Robert W. Linville,

By Geo. H. Strong

his Atty.

UNITED STATES PATENT OFFICE.

ROBERT W. LINVILLE, OF SAN FRANCISCO, CALIFORNIA, ASSIGNOR OF FORTY-NINE ONE-HUNDREDTHS TO JOHN F. SNYDER, OF RICHMOND, CALIFORNIA.

ADJUSTABLE TROWEL.

961,302. Specification of Letters Patent. **Patented June 14, 1910.**

Application filed March 16, 1909. Serial No. 483,711.

To all whom it may concern:

Be it known that I, ROBERT W. LINVILLE, citizen of the United States, residing in the city and county of San Francisco and State of California, have invented new and useful Improvements in Adjustable Trowels, of which the following is a specification.

My invention relates to adjustable trowels such as used by plasterers and brick-masons. There are many objections to a trowel having a fixed handle. A plasterer's trowel usually has the handle fixed in the middle, and with such a trowel it is difficult to work in behind pipes, or into the corners of restricted spaces. Furthermore, such a trowel is often poorly balanced when made at the factory, and the user of the trowel has to cut off more or less one end or other of the trowel, until it has the right balance, or otherwise fits his hand. Furthermore, where trowels with fixed handles are used, it requires several trowels to do different kinds of work.

The object of my invention is to provide a cheap, simple, practical blade and adjustable handle which can be adapted for all sorts of uses and for work under various conditions, and by means of which handle, and particular form of blade construction, the same handle will serve for a number of blades.

The invention consists of the parts and the construction and combination of parts as hereinafter more fully described and claimed, having reference to the accompanying drawings, in which—

Figure 1 is a perspective view of a trowel embodying my invention. Fig. 2 is a side elevation of the same partially in section. Fig. 3 is a cross sectional view on the line X—X of Fig. 2. Fig. 4 is a cross sectional view on the line Y—Y of Fig. 2. Fig. 5 is an end view of the device showing a part of the blade and the beveled sides 7 in section. Fig. 6 is a bottom view of the locking key. Fig. 7 is a perspective view of the locking key.

A represents a flat sheet-metal blade of suitable dimensions. These blades usually run from ten inches to twelve inches in length, according to the requirements of the user. I purpose to have a series of these blades in a set, all for use with the same handle 2.

The back of the blade has a lengthwise-extending, central, dovetailed flange 3 constructed as a permanent and substantial part of the blade. The handle 2 has a vertical stem 4 which is provided with a dovetailed slot 5 corresponding with the cross-section of the flange 3 and adapted to receive the flange, the handle and stem 4 being slidable along the flange and adapted to be set and locked thereto at any suitable point. The outside edges of the walls of the slot 5 are oppositely beveled, as shown at 6, and adapted to be engaged by the correspondingly beveled sides 7 of the locking-key 8. This locking-key 8 has a lengthwise-extending channel on its under side, the portion 9 of the channel having vertical sides of a width approximately equal to the greatest width of the dovetailed flange 3, while the forward portion 10 of the channel is dovetailed, and the front end of the key curved upward, so that the key can be engaged in the portion 10 endwise of the flange 3, and pivoted at any point along the length of the flange when the opposite forked end is not engaged with the stem 4.

In operation, the key 8 is slipped on to the flange 3; but the shape of the dovetailed part 10 of the slot is such that in order to engage the key with the flange 3, the key will stand at a slight incline with relation to the plane of the blade A, as shown in dotted lines, Fig. 2. The key in this position is slipped along the blade until the fork 11 of the key is at a point where it is desired to attach the handle. The handle is then engaged by means of the dovetailed slot 5 with the flange 3 and slipped along the latter, and the key is pressed down until it stands parallel with and lies upon the flange 3, whereupon the double beveled wedge members 6 of the stem 4 are driven forward into the spaces provided between the beveled sides 7 of the key and the flange 3. In pressing down the key upon the blade, it causes the beveled walls of the slot portion 10 to bind against the under sloping walls of the flange 3, which, coupled with the friction bearing of the entire length of the key on top of the flange, locks the key fixedly in position, so that neither it nor the handle will move, and a firm brace and support is offered for the handle. Thus it is seen that by means of my attachment and special lock-

ing arrangement, I can adjust the handle so that it may be set at any desired point along the length of the trowel, and by providing a number of blades A of different sizes with flanges 3, the same handle will fit all these blades; and a complete kit will occupy scarcely more room than one ordinary trowel with a fixed handle now occupies.

Having thus described my invention, what I claim and desire to secure by Letters Patent is—

1. The combination of a tool having a dove-tailed flange, a handle having a stem with a dove-tailed slot to receive said flange, said stem having beveled outer walls, and a key slidably mounted on the flange and normally inclined relatively thereto, said key having beveled walls adapted to be forced downwardly into locking engagement with the corresponding walls of said stem.

2. The combination with a trowel blade and a handle therefor, of means for adjustably securing the handle to the blade at different points in the length thereof, said means including a dovetailed flange on the blade, and a sliding key engaging with said flange, said key having means whereby it may be tilted relative to the flange and a handle having means thereon engaging said key and locking it to said flange.

3. The combination with a trowel blade and a handle therefor, of means for adjustably securing the handle to the blade at different points in the length thereof, said means including a dovetailed flange on the blade, and a sliding key engaging with said flange, said key having a combined sliding and pivotal movement on said flange.

4. The combination with a trowel blade and a handle therefor, of means for adjustably securing the handle to the blade at different points in the length thereof, said means including a dovetailed flange on the blade, and a sliding key engaging with said flange, said key having a combined sliding and pivotal movement on said flange, and said key also having a forked end engageable wedge-fashion with the handle portion.

In testimony whereof I have hereunto set my hand in presence of two subscribing witnesses.

ROBERT W. LINVILLE.

Witnesses:
CHARLES A. PENFIELD,
CHARLES EDELMAN.