Dec. 13, 1966 J. RICHEY 3,290,712

COMBINATION TROWEL AND GAUGE

Filed May 11, 1965

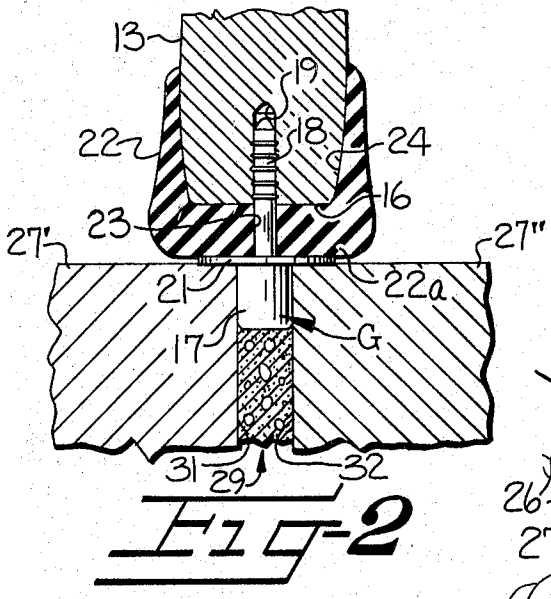


Fig-2

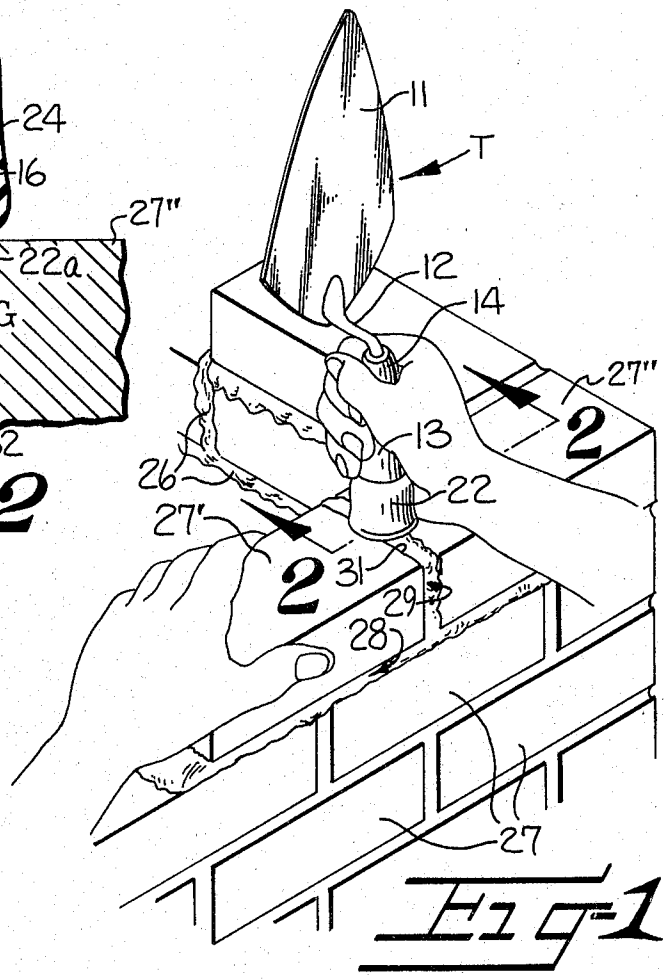
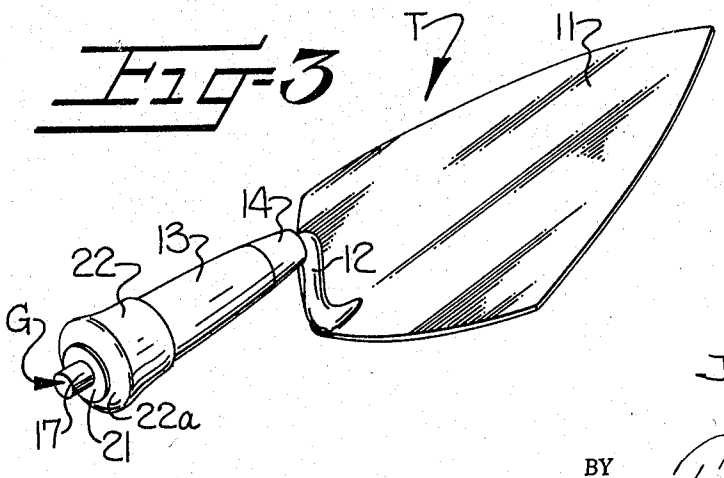


Fig-1

Fig-3



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United States Patent Office 3,290,712 Patented Dec. 13, 1966

3,290,712

COMBINATION TROWEL AND GAUGE

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Filed May 11, 1965, Ser. No. 454,861
5 Claims. (Cl. 15—105.5)

This invention relates to construction tools and more particularly to a trowel of the type used by workmen in applying mortar to bricks and the like.

The tool referred to as a trowel is in universal use by workmen in construction work such as bricklayers for applying mortar to building blocks such as bricks. Such a trowel generally comprises a handle and a blade with a suitable member for connecting the handle to the blade such as a "gooseneck" shank. The formation of a structure such as a wall by a bricklayer using bricks cemented together with mortar calls for the exercise of a high degree of skill on the part of the bricklayer in properly positioning the bricks forming the wall. Unless the vertical and horizontal spacing between bricks is uniform and of the proper dimensions, the resulting wall structure is not only unattractive in appearance but structurally unsound.

In the laying of bricks, the bricklayer is required to visually determine at least in one direction the proper spacing between bricks in a structure and must apply the proper amount of mortar so that the space between adjacent bricks is filled with the desired amount of mortar. It is easy to see that even bricklayers whose experience and skill is of the highest degree cannot be sure of always producing the precise spacing required between adjacent bricks as they are successively laid and some variation is bound to result. Although the vertical spacing of tiers of bricks is generally guided by suitable strings or the like set out at predetermined heights, the horizontal spacing between the vertical faces at the ends of adjacent bricks is subject to variation for reason of the unavoidable human error previously referred to. Thus, the resulting structure fails to measure up to the desired standard.

Accordingly, a primary object of this invention is to provide a new and novel combination trowel and gauge.

Another object of this invention is to provide a new and novel combination trowel and gauge which permits the spacing between adjacent bricks to be precisely and easily determined as the bricks are laid.

A further object of this invention is to provide a new and novel combination trowel and gauge which may be formed by a simple and inexpensive addition to a trowel of conventional construction.

This invention further contemplates the provision of a trowel of conventional construction having combined therewith a gauge by means of which the horizontal spacing between adjacent bricks may be easily established without removing the trowel held in the bricklayer's hand, which provides a friction grip for the bricklayer as well as protecting the trowel and which may be positioned on existing conventional type trowels in a simple and easy manner.

Other objects and advantages of the invention will become apparent from the following description taken in connection with the accompanying drawing.

The objects stated above and other related objects in this invention are accomplished by providing a trowel of conventional construction such as the type used by a bricklayer for applying mortar to bricks. The trowel includes a blade, a handle and a member for connecting the handle to the blade. A gauge member, preferably an elongated rod, is secured to the rear end of the trowel handle together with a cap of resilient material so that the rod projects rearwardly and centrally from the handle rear end. This rod is provided with a thickness corresponding to the spacing between adjacent bricks in the laid position. The rod is thus adapted to be simultaneously engaged by the opposed walls of adjacent bricks as the bricks are laid and as the trowel is held by the bricklayer so that the desired spacing between the bricks is automatically obtained.

The novel features which are believed to be characteristic of the invention are set forth with particularity in the appended claims. The invention itself, however, both as to its organization and method of operation may be best understood by reference to the following description taken in connection with the accompanying drawing in which:

FIGURE 1 is a perspective view of a wall structure showing bricks laid with the use of the invention;

FIGURE 2 is an enlarged sectional view taken substantially along line 2—2 of FIGURE 1 in the direction of the arrows; and

FIGURE 3 is a perspective view of the combination trowel and gauge of the invention.

Referring now to the drawing and to FIGURE 3 in particular, there is shown the combination trowel and gauge of the invention. The tool of FIGURE 3 includes a trowel of conventional construction designated generally by the letter T, such as is commonly used by workmen such as bricklayers for applying mortar to bricks during a bricklaying operation which has been modified in accordance with the invention. It should be understood that the tool of the invention may be of any suitable form for use by workmen in applying mortar to spaced building blocks for forming a structure but is preferably in the form of a trowel T for applying mortar to bricks in a bricklaying operation as shown. Therefore, the description to follow will be directed to the use of the tool T of the invention in a bricklaying operation.

The combination trowel and gauge T of FIGURE 3 includes a substantially flat blade **11** somewhat triangular in form which, as is well known, provides the working surface for the application of mortar. Means such as a "gooseneck" connecting member or shank **12** are provided for connecting the rear portion of the blade **11** to one end of an elongated handle **13** formed of material such as wood. As is well known, the handle **13** is connected so as to project rearwardly from the blade **11** for easy manipulation by the bricklayer. The handle **13** is preferably provided with a metal ferrule **14** in the well known manner and the blade **11**, connecting member **12** and handle **13** form a trowel of well known construction.

As shown best in FIGURE 2, the rear or other end of the handle **13** is provided with an end wall **16**. Means are provided for securing a gauge member, designated generally by the letter G to the handle end wall **16** with the gauge member projecting rearwardly as shown. More specifically, an elongated cylindrical rod **17** having a diameter corresponding to the spacing between adjacent bricks in the laid position is provided which is secured to the handle **13** by means of a screw **18** threadedly engaged within a recess **19** in the handle end wall **16**. Preferably the rod **17** is provided with a base plate **21** preferably formed integrally therewith in the form of a washer or circular flange and the rod **17** and screw **18** extend in coaxial relationship on opposite sides of the base plate **21** so as to position the rod **17** in a rearwardly projecting, centrally positioned relationship with the handle end wall **16**. Although the rod **17** may be of any selected diameter and length in the preferred embodiment, the diameter of the rod **17** is about 0.375 inch and the rod has a length of about 0.5 inch.

In order to provide a grip for the workman or bricklayer and to protect the tool handle, a tubular cap **22** of resilient material such as rubber having an end wall **22***a*

with a central opening 23 and formed so as to provide a recess 24 is provided for the tool of the invention. The cap 22 is positioned over the end portion of the tool handle 13 as shown best in FIGURE 2 with the cap end wall 22*a* in overlying engagement with the handle end wall 16 and with the rear end portion of the handle 13 fitted into the cap recess 24. The screw 18 is then inserted through the cap opening 23 into the handle recess 19 with the base plate 21 in engagement with the cap end wall 22*a* to position the rod 17 in the reawardly projecting position shown.

The tool of FIGURE 3 comprising the combination of the trowel T and gauge G may, for simplicity, be referred to by the combination letters TG. In the use of the tool TG of the invention, the workman or bricklayer grips the tool handle 13 somewhat in the manner shown in FIGURE 1 but with the blade extending forwardly rather than upwardly as shown. The trowel blade 11 may thus be readily manipulated in the well known manner for applying mortar 26 to the appropriate surfaces of building blocks such as bricks 27 in the wall structure of FIGURE 1. The tubular rubber cap 22 on the rear end of the tool handle 13 is thus in contact with a portion of the bricklayer's hand so as to reduce slipping and providing a more secure grip on the tool TG.

In the illustrated embodiment, the structure of FIGURE 1 is a typical brick wall and mortar is applied to the top surface of the bricks 27 in the conventional manner using the blade 11 of tool TG. In this manner, the horizontally extending spaces 28 between tiers of bricks 27 are filled with mortar 26, the level of each tier being gauged by suitable means such as a guide string or the like.

In order to fill the vertically extending spaces 29 between the bricks with mortar, the bricklayer applies a suitable amount of mortar to the end face of the brick to be laid, such as end face 31 on brick 27′ in FIGURES 1, 2 and positions the brick as shown. The end face 31 of brick 27′ thus defines with the end face 32 of adjacent brick 27″ a vertically extending space 29 which is filled with mortar.

In accordance with the invention, the tool TG is positioned as shown in FIGURE 1 so that the gauge member or rod 17 is directed vertically downward with the flange 21 of gauge G in engagement with the upper surface of the adjacent bricks 27′, 27″. With the tool TG positioned as shown in FIGURES 1, 2, the brick 27′, having mortar applied to its end face 31, is moved to the right as viewed in FIGURE 1 so that the opposed walls 31, 32 of bricks 27′, 27″, respectively, simultaneously engage the rod 17 limiting further movement of the brick 27′ previously laid brick 27″ being maintained stationary. Thus the cylindrical rod 17 having a selected diameter automatically sets a predetermined distance or gap for the space 29 between end faces 31, 32 of the bricks 27′, 27″. The rod 17 of tool TG is then withdrawn and if the small recess in the mortar is objectionable, additional mortar may be easily trowled into the recess. This operation is repeated as each brick is laid so that the clearance spaces 29 are uniform and of the proper dimension throughout the entire wall structure of FIGURE 1.

It can be seen that there has been provided with the novel construction of this invention a combination trowel and gauge which is not only simple and inexpensive in construction, but which may be formed by a simple modification to a trowel of conventional construction. With the use of the tool TG of the invention, a workman such as a bricklayer need no longer depend on visual measurement and its inherent variations for determining the spacing between the vertical end walls of adjacent bricks in a structure. Without removing the tool from his hand, a bricklayer with a simple motion can now automatically set the proper spacing between adjacent bricks, not only conserving time, but insuring a structure which is uniform in appearance and of high strength. The gauge G

incorporated in the tool TG of the invention may be provided with a gauge member or rod 17 of any desired diameter or length in addition to the preferred dimensions referred to above and its base plate or flange 21 automatically centers and retains the rod 17 in the gauging position. In addition, the rubber cap 22 incorporated in the tool TG provides a friction surface for improving the bricklayer's grip on the tool, protects the handle of the tool and imparts a certain resiliency to the gauge G so as to absorb shock when in use.

While there has been described what at present is considered to be the preferred embodiment of the invention, it will be understood by those skilled in the art that various changes and modifications may be made therein without departing from the invention and, therefore, it is the aim of the appended claims to cover all such changes and modifications as fall within the true spirit and scope of the invention.

Having thus described the invention, what is claimed is:

1. In a trowel of the type for use by a bricklayer for applying mortar to bricks and the like having a blade, an elongated handle and means for connecting one end of said handle to said blade, the improvement which consists of, an elongated cylindrical gauge member projecting rearwardly from the other end of said handle with its longitudinal axis extending coaxially with the axis of said handle, said gauge member having a diameter corresponding to the spacing between adjacent bricks in the laid position, said gauge member being adapted to be simultaneously engaged by the opposed walls of adjacent bricks as said bricks are laid by said bricklayer thereby permitting said adjacent bricks to be positioned in the desired spaced relationship.

2. In a trowel of the type for use by a bricklayer for applying mortar to bricks and the like having a blade, an elongated handle, and means for connecting one end of said handle to said blade, the improvement which consists of, an end wall on the other end of said handle, an elongated cylindrical rod having a diameter corresponding to the spacing between adjacent bricks in the laid position, means for securing said rod to said handle end wall in a rearwardly projecting, centrally positioned relationship therewith with the longitudinal axis of said rod extending coaxially with the axis of said handle, said elongated rod being adapted to be simultaneously engaged by the opposed walls of adjacent bricks as said bricks are laid by said bricklayer thereby permitting said adjacent bricks to be positioned in the desired spaced relationship.

3. In a trowel of the type for use by a bricklayer for applying mortar to bricks and the like having a blade, an elongated handle, and means for connecting one end of said handle to said blade, the improvement which consists of, an end wall on the other end of said handle, a tubular cap of resilient material positioned over said handle other end, an elongated cylindrical rod having a diameter corresponding to the spacing between adjacent bricks in the laid position, means for securing said rod to said handle end wall in a rearwardly projecting, centrally positioned relationship therewith with the longitudinal axis of said rod extending coaxially with the axis of said handle, said elongated rod being adapted to be simultaneously engaged by the opposed walls of adjacent bricks as said bricks are laid by said bricklayer thereby permitting said adjacent bricks to be positioned in the desired spaced relationship.

4. In a trowel of the type for use by a bricklayer for applying mortar to bricks and the like having a blade, an elongated handle, and means for connecting one end of said handle to said blade, the improvement which consists of, an end wall on the other end of said handle, a tubular cap of resilient material having an end wall positioned over said handle other end with said cap end wall in overlying engagement with said handle end wall, an elongated cylindrical rod having a diameter correspond-

ing to the spacing between adjacent bricks in the laid position, a base plate on one end of said rod, a screw secured to the opposite side of said base plate from said rod and in coaxial relationship with the rod, said screw being threaded into said handle end wall through said cap end wall with said base plate in overlying engagement with said cap end wall and with said rod positioned in a rearwardly projecting, central relationship with both said end walls, said cylindrical rod being adapted to be simultaneously engaged by the opposed walls of adjacent bricks as said bricks are laid by said bricklayer thereby permitting said adjacent bricks to be positioned in the desired spaced relationship.

5. A trowel in accordance with claim 4 wherein said cylindrical rod has a diameter of about 0.375 inch and a length of about 0.5 inch.

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