

UNITED STATES PATENT OFFICE.

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INSERT-SUPPORT.

1,037,242.

Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, RUSSELL GRINNELL, of the city and county of Providence and State of Rhode Island, have invented certain new and useful Improvements in Insert-Supports; and I do hereby declare the following specification, taken in connection with the accompanying drawings and forming a part of the same, to be a full, clear, and exact description thereof.

In the construction of modern buildings the floors and walls are frequently made of concrete, cement, or the like, built or formed upon false wood-work, which false wood-work, when the concrete or similar material is set, is removed. My invention relates to an insert support for pipe hangers and the like which is especially adapted for use in floors or walls constructed in the manner above referred to.

The object of my invention is to provide an insert support adapted to be placed in position before the concrete or cement is applied, and to be embedded and held in the concrete or cement when set, and constructed to permit a certain adjustment of the pipe hanger with relation to said support.

To that end the invention consists of an insert support embodying certain features of construction to be hereinafter described and claimed.

Referring to the drawings, Figure 1 is a side elevation of an insert support embodying my invention; Fig. 2 is an end elevation; Fig. 3 is a central longitudinal section on the line *x, x* of Fig. 5; Fig. 4 is a transverse section on the line *y, y* of Fig. 5; and Fig. 5 is a bottom view thereof.

The insert support comprises a body portion 1 and a web or supporting portion 2. The body portion is made hollow and is preferably of a tapering form, as shown in Fig. 4. Said body portion 1 is shown as provided with two forked projections 3, 3, one on each side of said body portion for a purpose to be hereinafter described. The web or supporting portion as shown comprises a longitudinal web 4, two transverse webs 5, 5, and a horizontal web or flange 6.

The body portion is provided at the bottom with inwardly extending flanges 7, 7, which flanges extend along the greater part of two sides of said body portion and form a relatively narrow or contracted opening or slot 8 extending lengthwise of said body

portion, as shown in Fig. 5, and thus providing within the body portion an undercut recess. Beyond the ends of the flanges 7, 7, and at the left, as shown in Fig. 5, the opening to the interior of the body portion is enlarged as at 9, the width of said opening 9 in one direction, however, being preferably less than the width of the head of the bolt to be inserted therein. Preferably the wall of the body portion adjacent to and overlying said opening 8 is curved as shown.

At the ends of the flanges 7, adjacent said opening 9, projections 10, 10, are formed for a purpose to be hereinafter described.

11 represents a bolt, the head 12 of which is to be received in the undercut recess of the body portion. Said bolt is shown as provided at its lower end with a screw-thread by means of which a clamp-holder or other suitable pipe supporting means may be applied.

In employing the insert support above described said insert is secured in the desired position to the false wood work before the concrete or cement is applied, the forked projection 3, 3, affording convenient means for holding the nails employed in securing said support in place. When the concrete or cement is applied it is caused to surround the insert or support and so that when the concrete or cement has become set said support will be firmly embedded therein. The construction of the flange or web portion 2 with its webs or flanges serves to hold the support securely in place, and the tapering form of the body portion also furnishes additional resistance against downward pull. It will be understood that the insert support is so located in the concrete or cement that the lower face of said insert will come substantially flush with the face of the concrete.

In order to insert the bolt 11 in the insert or support said bolt is simply turned into the position indicated in dotted lines in Fig. 3, in which position the head 12 of said bolt may be readily passed through the enlarged opening 9, as shown. The bolt is then turned back to a vertical position and moved along to a position where the head 12 will be beyond the projections 10, 10, and so that when released the bolt will drop into the position shown in full lines in Fig. 3, and with the head of the bolt resting upon the flanges 7 on opposite sides.

As will be seen, when the head of the bolt has been thus inserted in the undercut recess, said bolt may be moved or adjusted lengthwise of the elongated slot 8 to any desired position within the range of said slot. It will also be seen that the projections or stops 10 serve as stops to prevent the head of the bolt being moved to a position where any portion thereof will overlie the enlarged opening 9. By this construction, therefore, the bolt cannot be moved accidentally or otherwise to a position where more or less of the head of the bolt would be unsupported by the flanges 7 on opposite sides, but instead the head of the bolt will always occupy a position where it will be fully supported on opposite sides by said flanges. Moreover, by reason of the presence of the projections or stops 10, it is necessary to lift the head of the bolt above said stops, before the head of the bolt can by tipping be removed from the insert or support. This is also a desirable feature, as the further manipulation involved in thus lifting the bolt furnishes an additional precaution against accidental displacement or removal of the bolt.

It will be understood that in place of the headed bolt shown a hook-hanger, or any other desired form of hanger, provided with a suitable head may be employed. While it is preferred to employ two pro-

jections or stops 10, it is evident that, if desired, only one of said stops need be provided.

What I claim as my invention and desire to secure by Letters Patent is:

1. A device of the character described embodying a body portion provided with an elongated slot open at one end and an enlarged opening adjacent the open end of said slot, and with a stop located near the open end of said slot.

2. A device of the character described embodying a supporting portion and a body portion, said body portion being provided with an elongated slot open at one end, and an enlarged opening adjacent the open end of said slot, and with a stop located near the open end of said slot.

3. A device of the character described embodying a supporting portion and a body portion, said body portion being provided with inwardly extending flanges forming an elongated slot open at one end, and an enlarged opening adjacent the open end of said slot, each of said flanges being provided with a stop located near the open end of said slot.

RUSSELL GRINNELL.

Witnesses:

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