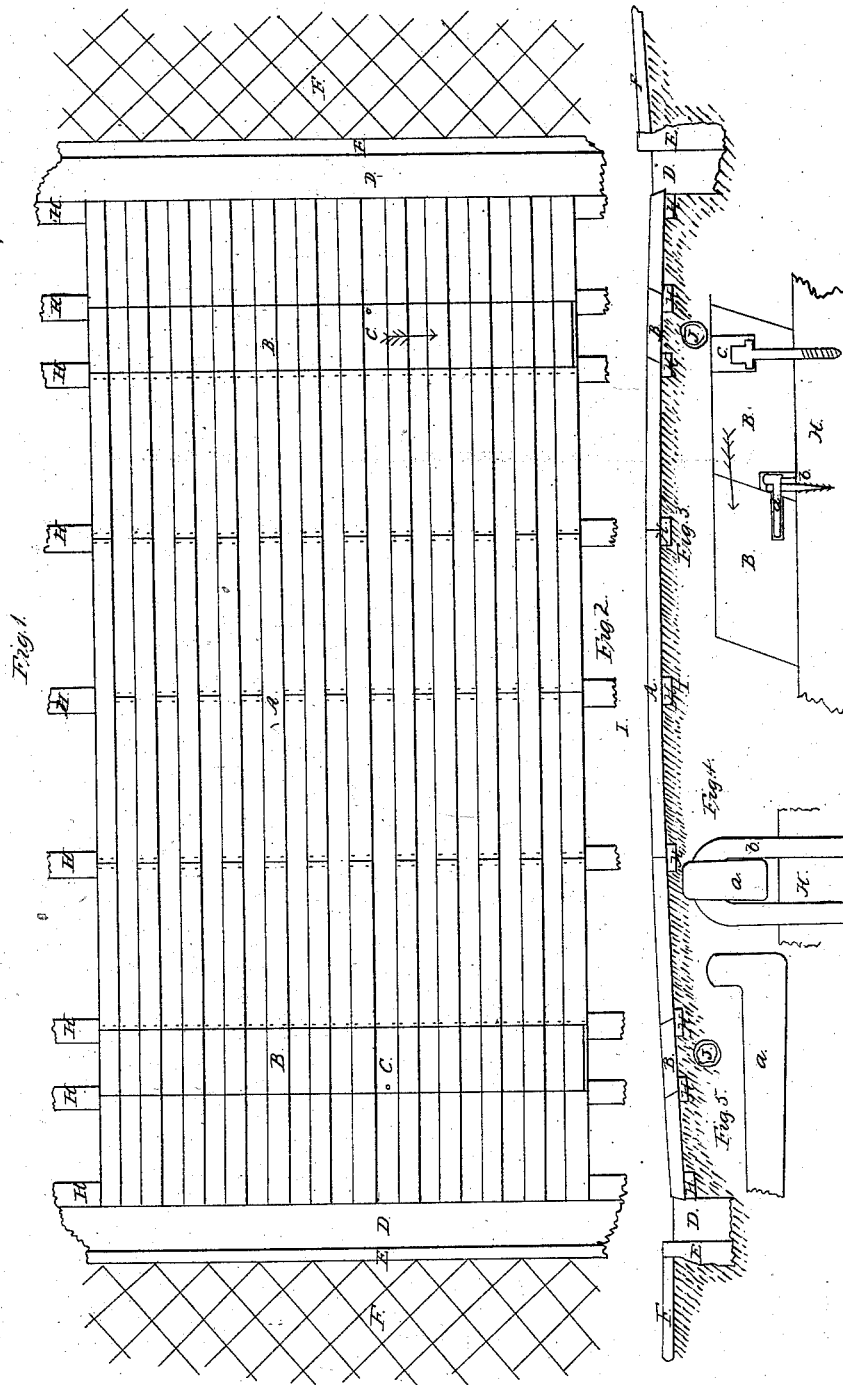


J. E. Ware.

Wood Pavement

N^o 7,933.

Patented Feb. 11, 1851.



UNITED STATES PATENT OFFICE.

JOSEPH E. WARE, OF ST. LOUIS, MISSOURI.

METHOD OF SECURING RANGES OF SHORT PLANK IN PAVEMENTS.

Specification of Letters Patent No. 7,933, dated February 11, 1851.

To all whom it may concern:

Be it known that I, JOSEPH E. WARE, of the city of St. Louis and county of St. Louis and State of Missouri, have invented a new and useful Improvement in Street and Road Planking, which is described as follows, reference being had to the annexed drawings of the same, forming a part of this specification.

Figure 1, is a top view of a section of street laid down on my plan supposing the section to be 25 feet long. Fig. 2, is a cross section of a street so built, showing the method adopted for securing the various parts, and also the position of the pipes, and the proper angle of the curb, to cause it to overlap, and hold down the ends of the planks. Fig. 3, is an enlarged view of the short pieces used in the detachable range the end and side bevels being exhibited. Fig. 4, shows the forms of the staple and key—for fastening the plank down. Fig. 5, is a separate view of the fastening used.

Similar letters refer to corresponding parts.

The nature of this invention and improvement consists in a method of securing certain parts of planking on streets in such a manner as to permit their removal, so as to reach pipes or sewers underneath, the planks being cut in short pieces for such ranges and with such bevels or overlaps as to cause one piece to aid in holding down the other. The pipe when laid down in the middle of the street requires the removable range also in the center, and otherwise when the pipes are laid near the sides of the street, the main part of my invention being in the method of cutting the ends of the permanently fastened planks under so as to offer quite an overlapping angle—the sleepers as a matter of course over the removable range being just so wide apart as is needed for trenches, &c., the removable short pieces being designed to cover the space designed to be occupied by pipes, &c., being about 3 feet commonly. The sleepers in all other parts of the street ought to be about $4\frac{1}{2}$ feet apart. The removable pieces are cut with an angle of about 1 in 3, being the same angle as is intended to cut on the end of the permanent planks the space between the removable range and the curb is about five feet wide, and is covered as follows: The ends of the planks intended for this space are cut at an angle of about 90, which conforms to

the angle of the curb. The inside sleeper is laid close to the curb, and if the short piece is properly cut its angle or overlap will hold the end of the piece between it and the curb down by means of a corresponding angle cut upon it, and by a key that is driven into the short piece. Consequently the four ends of the planks thus cut are held down by one fastening. This part of the invention is as follows: A staple or eye bolt is intended to be driven down into the sleeper that the ends of the short planks rest upon, and close to the side and end of the removable pieces, the staple is to be driven down so as to leave enough above the face of the sleeper to form an eye for the reception of a key which passes through the eye into a hole bored into the side of each short removable piece. At distances of 25 feet I use a screw of sufficient size which is inserted from the top the plank being countersunk by boring an auger hole about $1\frac{1}{2}$ inches deep. This sinks the head of the screw out of the action of the wheels, &c. The hole of the counter I fill with melted rosin or other suitable waterproof matter.

To enable others skilled in the art to make and use my invention, I will proceed to describe its construction and mode of operation.

A is the planking; B B, lines of short removable pieces of planks; C, form of screw used in fastening; D, gutter; E, curb; F, sidewalk; "a b," key and staple fastenings.

Its construction is as follows: The part of the street designed to be permanent is laid as is usual excepting the ends of the planks that are near the line of any water or gas pipe. Those ends are cut with a bevel of one inch in three. The pieces to be removed are cut with the same bevel ends and sides if need be. The end of the short piece will therefore pass under the lapping angle of the permanent plank. The piece then to fill the space between the short piece and the curb must be cut at its outer end with the same bevel as the others. The inner end must then be cut with the same angle as the curb. The fastenings are a screw, staple and key. The screw may be the common bed-screw, and ought to be galvanized. The key is made about $\frac{3}{4}$ inch thick at the thickest part and tapering to $\frac{1}{2}$ inch and has a lug like a sprig, by which to

draw it out of the wood. The key should also be galvanized. The key may either be an eye-bolt or a common staple 4 inches long $2\frac{1}{2}$ inches of it driven into the sleeper 5 leaving enough for an eye.

To fasten the range, lay your short piece against the end of the permanent plank, then introduce the piece to reach to the curb between the curb and the end of the short 10 piece having the bevel cut so as to make a somewhat tight fit, then drive down the staple to the proper depth. After scribing the center of the eye raise the short piece and bore a little higher than the center 15 making the hole a sixteenth less than the key, lay the piece down in its place and then drive the key in. The key draws the short piece close to the sleeper, by the bevels acting as wedges the pieces press with great 20 force against the ends of the permanent plank and the curb lay down 24 feet in this way, and then use a screw, bore a hole $1\frac{1}{2}$ inches deep and one inch diameter, then bore into the plank and sleeper with a 25 three-eighths auger drive with a key if a square head is used. When sufficiently down pour a little melted rosin into the counter, then commence as before with

staples and key using a screw at every distance that a house may occur. Square 30 staples may be used, and for greater security they may be driven so as to clamp the pieces with great firmness. The head of the key requires a notch in the contiguous piece for its reception. 35

The operation is as follows: Proceed to the nearest screw fastening and withdraw it, then raise as many short pieces as may be deemed requisite by extracting the keys. When the object is accomplished relay as in 40 the first place.

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

The method above described of securing ranges of short pieces of the planking of 45 a street or road in longitudinal lines over water or gas pipes by means of screws or keys with staples aided by the double bevel of the short planks, and the ends of the permanent interval planks securely holding, 50 and permitting of the easy removal of such short piece.

JOSEPH E. WARF

Witnesses:

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