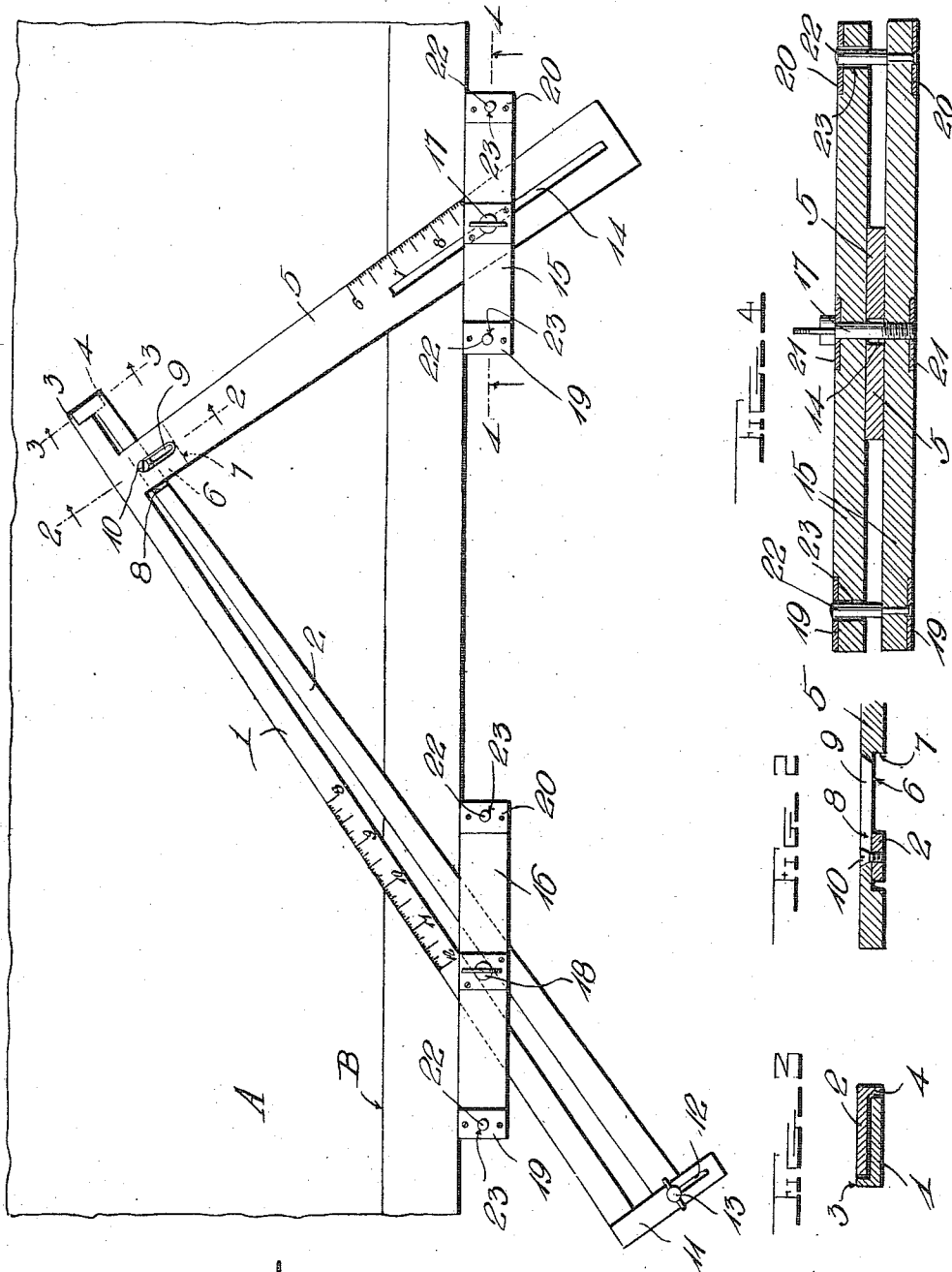


T. J. SMITH.
STAIR BUILDER'S SQUARE.
APPLICATION FILED MAY 5, 1910.

985,950.

Patented Mar. 7, 1911.



Witnesses
E. C. C. C. C.
E. H. C. C. C.

Inventor
T. J. Smith

by *A. B. Wilson & Co.*
Attorneys

UNITED STATES PATENT OFFICE.

THOMAS J. SMITH, OF OKLAHOMA, OKLAHOMA.

STAIR-BUILDER'S SQUARE.

985,950.

Specification of Letters Patent.

Patented Mar. 7, 1911.

Application filed May 5, 1910. Serial No. 559,440.

To all whom it may concern:

Be it known that I, THOMAS J. SMITH, a citizen of the United States, residing at Oklahoma, in the county of Oklahoma and State of Oklahoma, have invented certain new and useful Improvements in Stair-Builders' Squares; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to improvements in adjustable squares for laying out stairs.

The object of the invention is to provide a simply constructed, easily applied, and efficient device of this character.

With the foregoing and other objects in view the invention consists of certain novel features of construction, combination and arrangement of parts as will be more fully described and particularly pointed out in the appended claims.

In the accompanying drawings, Figure 1 is a top plan view of this improved square showing it applied. Fig. 2 is a transverse section taken on the line 2—2 of Fig. 1. Fig. 3 is a similar view taken on the line 3—3 of Fig. 1. Fig. 4 is a longitudinal sectional view taken on the line 4—4 of Fig. 1.

In the embodiment illustrated, a section of a skirt board A is shown provided with a gage line B arranged an inch and a half from the edge of the board and having this improved square adjusted thereon in position for laying out the housing for a stairway having a seven inch rise and a ten inch run, and with the tread thirteen-sixteenths of an inch thick.

This improved square is provided on both sides with similar markings so that either side thereof may be used as desired.

This square, as shown, comprises a fixed blade 1, and an adjustable blade 2, which are provided on one end thereof with lips 3 and 4 respectively, which overlap each other as shown in Fig. 3, to provide for the moving of the adjustable blade away from the fixed blade without causing a gap between them at this end as it is necessary that they should be connected at this end to provide for the laying out of the housing for a step having a square nosing.

An arm or tongue 5 extends in a plane at right angles, the fixed blade 1 being preferably made integral therewith and increasing in width toward its free end. This

tongue 5 is provided on its lower face, adjacent the adjustable blade 2, with a cut-out portion or recess 6 which extends from the inner edge of the fixed blade 1 to the shoulder 7 (see Fig. 2). The adjustable blade 2 is provided on its upper face below the tongue 5 with a cut-out portion or recess 8 of slightly greater length than the width of the tongue and which is adapted to engage the cut-out portion of the said tongue to provide for the outward movement of the blade 2 without binding on said tongue.

The tongue 5 is provided near its inner end with a longitudinally extending slot 9 which is preferably countersunk to receive the head of a screw 10 which extends through the slot and engages the adjustable blade to hold it in adjusted position. A blade 11, preferably of steel, is secured at one end to the end of the fixed blade 1 and extends transversely across the movable blade 2 and is provided near its free end with a longitudinally extending slot 12 through which a set screw 13 extends into engagement with the blade 2 for locking the said blade in adjusted position relatively to the fixed blade.

The tongue 5 is provided with a longitudinally extending slot 14 extending from the free end thereof inwardly any suitable or desired distance for a purpose to be described.

Two guides 15 and 16 are slidably mounted on the free end of the tongue 5, and on the blades 1 and 2, respectively. Each of these guides is preferably composed of two strips or bars of wood about one-half inch thick, more or less, one of which engages one face of the blades or tongue to which it is to be applied and the other the other face thereof and the strips of the respective guides are separably connected by means of thumb screws 17 and 18. The screw 17 passes through the body member of the guide 15 through the slot 14 in the tongue 5 and engages the bottom member of said guide and clamps it securely in adjusted position on said tongue. The screw 18 extends through the upper member of the guide 16 and between the blades 1 and 2 and engages the bottom member of the guide for locking it in adjusted position on the blades 1 and 2. Each member of these guides 15 and 16 is preferably provided with end plates as 19 and 20, and with an intermediate plate as 21, the end plates on

the lower member being provided with laterally extending studs as 22 which are adapted to engage apertures as 23, in the plates of the upper member to hold the two members parallel with each other and to permit them to be separated for the insertion of the member to which they are to be applied.

The free ends of the blades 1 and 2 and the free end of the tongue 5 are preferably made about one-eighth of an inch thick and the blade 1 is preferably made about three-sixteenths of an inch thick near its pivoted inner end.

In the operation of this improved square the thumb screw 10 is first loosened, together with the screws 13, 17 and 18 and the adjustable blade 2 is moved outwardly from the fixed blade a distance commensurate with the required thickness of the step to be measured and the screws 10 and 13 are then tightened to hold the plates adjusted relatively to each other. The square is then laid on the skirt board A with the figures of the required run or rise of the step arranged opposite the gage line B. The guides 15 and 16 are then moved inward until they engage the edge of the board A, when the screws 17 and 18 are tightened to hold them in adjusted position.

From the foregoing description taken in connection with the accompanying drawings, the construction and operation of the invention will be readily understood without requiring a more extended explanation.

Various changes in the form, proportion and the minor details of construction may be resorted to without departing from the spirit or sacrificing any of the advantages of the invention.

What is claimed is:

1. A stair builder's square comprising

two blades one of which is movable relatively to the other, said blades having connected ends, and one end of each blade having a lip, means for holding said movable blade in adjusted position, a tongue extending at right angles from the inner end of said fixed blade, said tongue and movable blade being provided in their lower and upper faces, respectively, with engaging recesses, a guide adjustably carried by said tongue and a similar guide adjustably carried by said blades.

2. A stair builder's square comprising a fixed and a movable blade, provided at one end with overlapping lips, each blade having a recess to receive the lip of the other whereby the outer faces thereof are arranged flush with each other, a metal plate secured to the other end of said fixed blade and extending transversely across said movable blade, means for adjustably connecting said plate with said movable blade, a tongue extending in a plane at right angles from said fixed blade and increasing in width toward its free end, said tongue having longitudinally extending slots arranged in its opposite ends, means extending through the slot in the inner end of said tongue for adjustably connecting it to said movable blade, a guide, a fastening for the latter adjustably mounted in the slot on the outer end of said tongue, a similar guide, and a fastening adjustably mounted between the fixed and movable blades for adjustably securing the last mentioned guide.

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

THOMAS J. SMITH.

Witnesses:

JOHN A. SCOTT,
REX E. LAMB.