No. 882,130. PATENTED MAR. 17, 1908.

A. G. URBAN.

FOLDING SQUARE.

APPLICATION FILED OCT. 25, 1907.

FIG. 1.

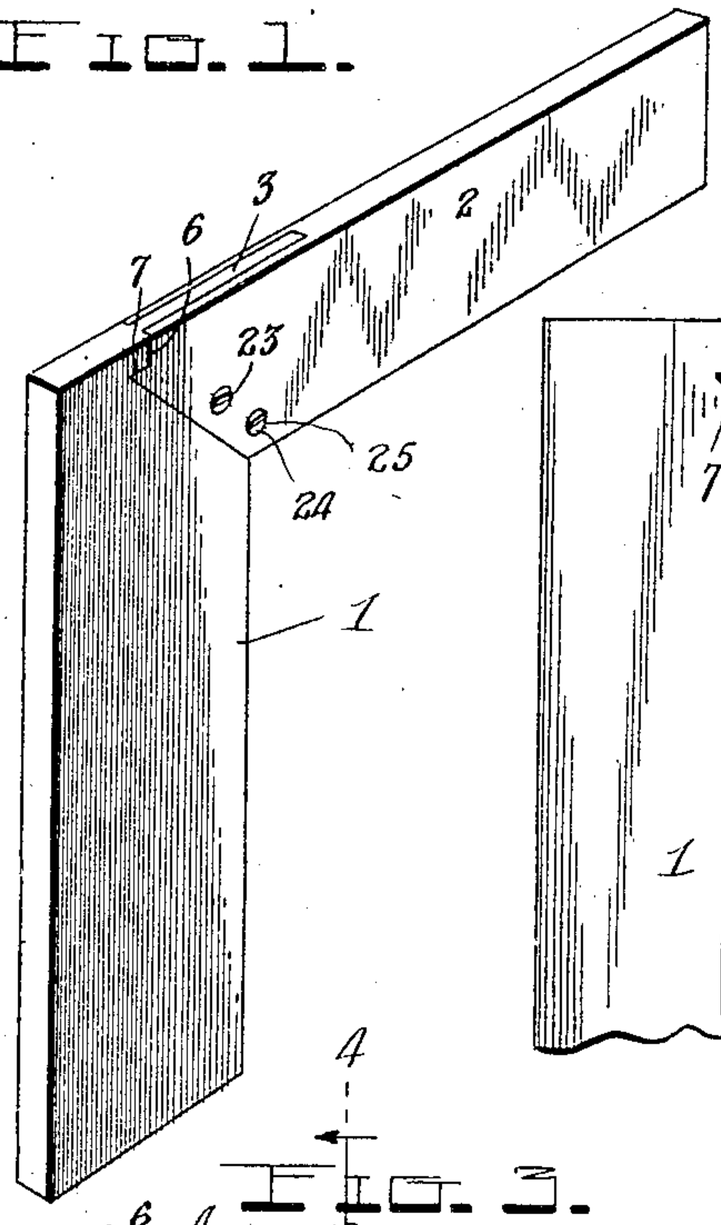

FIG. 2.

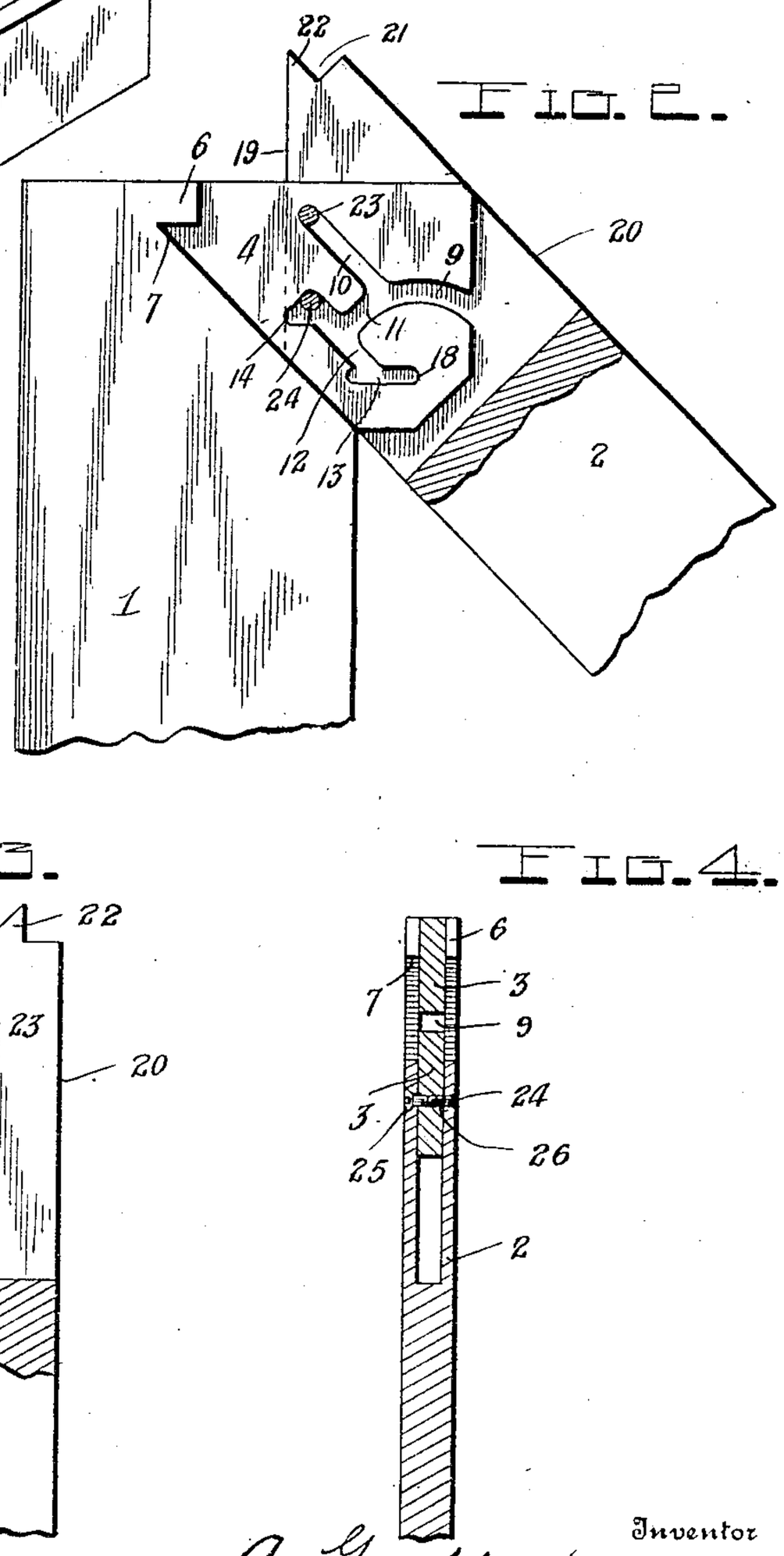

FIG. 3.

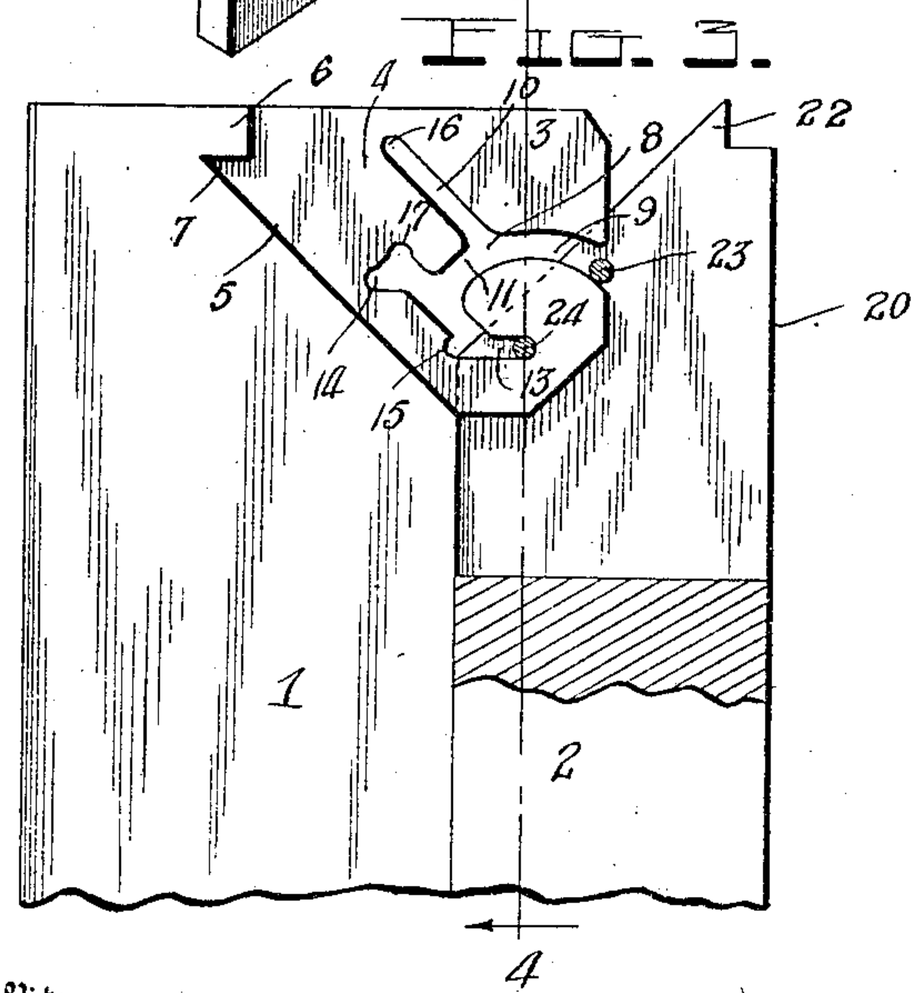

FIG. 4.

Witnesses

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FOLDING SQUARE.

No. 882,130. Specification of Letters Patent. Patented March 17, 1908.

Application filed October 25, 1907. Serial No. 399,174.

To all whom it may concern:

Be it known that I, ALBERT G. URBAN, a citizen of the United States, residing at Johnstown, in the county of Cambria and State of Pennsylvania, have invented certain new and useful Improvements in Folding Squares, of which the following is a specification, reference being had to the accompanying drawings.

My invention relates to improvements in folding squares and consists of the novel features of construction and the combination and arrangement of parts hereinafter described and claimed.

The object of the invention is to provide a folding square of simple, strong, durable and inexpensive construction in which one of its blades or arms may be readily set at right angles or at an angle of 45 degrees to its other arm and also folded parallel with the same to permit the device to be placed in a small tool chest.

The above and other objects are attained in the preferred embodiment of the invention illustrated in the accompanying drawings in which

Figure 1 is a perspective view of my improved folding square showing its blades or arms set at right angles to each other; Fig. 2 is a side elevation partly in section showing the blades or arms set at an angle of 45 degrees to each other; Fig. 3 is a view similar to Fig. 2 showing the blades or arms folded together in parallel relation; and Fig. 4 is a detailed section taken on the plane indicated by the line 4—4 in Fig. 3.

My improved folding square comprises two arms 1, 2, the former of which I will term the body and the latter of which the blade. These parts may be of any desired form and construction and may be provided upon one or both of their faces with scales of any description. At the inner end of the body 1 is provided a right angularly projecting extension 3 which has its opposite faces cut away to provide a reduced tongue 4 and angular shoulders 5. The shoulders 5 are disposed at an angle of 45 degrees with respect to the parallel edges of the body 1 and since both faces of the upper end of the latter are recessed or cut away to provide the tongue 4 one of said shoulders is disposed upon each side of the body. The shoulders 5 extend from the inner edge of the body to projections 6 formed by leaving the said faces of the body at the upper and inner end of the tongue 4. These projections 6 are of rectangular form and together with the shoulders 5 provide V-shaped notches or seats 7 for a purpose presently explained. In the tongue or projection 4 is formed an irregular shaped slot 8 consisting of a plurality of communicating branches 9, 10, 11, 12, 13 and having an entrance at the outer end of the extension or tongue as shown. The slot 8 is adapted to receive pins carried by the blade 2 and in its several branches are arranged seats 14, 15, 16, 17, 18 for a purpose presently explained.

The blade 2 has its inner end beveled as shown at 19 and formed with a transverse opening or slot 20 adapted to receive the tongue 4. The extremity of the beveled end of the blade is formed with recesses 21 adapted to receive the projections 6 on the body and to provide V-shaped projections 22 adapted to enter the similar shaped recesses or seats 7 in the body when the body and blade are at right angles to each other as shown in Fig. 1. Extending transversely across the opening 20 in the beveled end of the blade are two pins 23, 24 preferably in the form of screws which have their heads 25 countersunk upon one side of the blade and their threaded ends 26 engaged with threaded openings in the opposite side of the same, as clearly shown in Fig. 4.

The provision of the irregular shaped slot 8 in the tongues 4 and the two pins 23, 24 in the blade permit the body and blade to be readily connected and disconnected and also folded into parallel relation and adjusted at angles of 90 or 45 degrees with respect to each other, as will be readily understood upon reference to the drawings.

When it is desired to connect the two arms or members of the device, the tongue 4 is inserted in the slot 20 and the pins 23, 24 are successively forced into the branch 9 of the slot 8. The pin 23 is then moved up into the branch 10 and the blade is then swung to cause the pin 24 to pass through the branch 11 and into the branch 12 or the branch 13. When the pin 24 is engaged with the seat 18 at one end of the branch 13 and the pin 23 is disposed in the branch 9 the blade and body will be parallel to each other and in their folded position shown in Fig. 3. When it is desired to set the blade at right angles to the body the former is swung outwardly with the

pin 24 as a fulcrum until the pin 23 passes through the branches 9, 11 and into the branch 12, it being noted that the branch 9 is curved or arc shaped and concentric with the seat 18. When the pin 23 enters the branch 12 the blade will be at right angles to the body and it is then moved inwardly toward the same so that the pins 23, 24 respectively engage the seats 14, 15 and the projections 22 enter the seats or recesses 7, whereupon the two arms or blades of the square will be rigidly held at right angles to each other. When it is desired to set the blade at an angle 45 degrees with respect to the body so as to obtain a miter cut, the blade is manipulated to bring the pins 23, 24 into the parallel branches 10, 12 of the slot whereupon the blade is moved outwardly to cause the pins to respectively engage the seats 16, 17 and to cause the inner edge of the blade to engage the shoulders 5 of the body. When the members are thus adjusted, as shown in Fig. 2, they will be rigidly held or locked owing to their peculiar construction.

From the foregoing it will be noted that my improved folding square is exceedingly simple, in construction so that it may be produced at a small cost and will be strong and durable and not liable to be readily broken. It will also be noted that it may be conveniently adjusted to position its parts at different angles and that no fastening devices are required to hold the parts adjusted.

Having thus described my invention what I claim is:

1. A folding square, comprising a body formed at one end with a tongue, a diagonally arranged shoulder and a seat, said tongue being formed with the irregular shaped slot H having the communicating branches 9, 10, 11, 12, 13 and an entrance at the outer end of the tongue, said branches being formed with the seats 14, 15, 16, 17, 18, a blade having one end slotted to receive the tongue and beveled to engage said shoulder, said end of the blade being also provided with a projection to engage the first mentioned seat upon the body, and the transverse pins 23, 24 arranged in the slotted end of the blade and adapted to enter the slot in the tongue and to engage said seats in the branches of said slot, substantially as and for the purpose set forth.

2. A folding square comprising a body having at one end an extension provided with recessed faces to form a tongue, the latter being formed with an irregular shaped slot and with seats in said slot, the reduction of the extension to provide the tongue also forming upon opposite faces of the body inclined shoulders and notches or seats at the ends of said shoulders, a blade having its inner end beveled and formed with a slot to receive said tongue, the extremity of said end of the blade being cut away to provide projections to enter the seats or notches at the ends of the shoulders upon the body, and transverse pins arranged in the slot or opening in the blade and adapted to enter the slot in said tongue and to engage said seats in the slot, substantially as and for the purpose set forth.

3. A folding square comprising a body formed with an extension having its opposite faces reduced to provide a tongue, the shoulders 5 and the seats 7, said tongue being formed with a slot having the seats 14, 15, a blade having a beveled end formed with a slot or opening to receive the tongue and with projections on said beveled end to engage the seats 7, the beveled edges of said end being adapted to engage the shoulders 5, and transverse pins in said end of the blade adapted to enter the slot in the tongue and to engage the seats 14, 15, substantially as and for the purpose set forth.

4. A folding square comprising a body having an extension reduced to provide a tongue and an inclined shoulder, said tongue being formed with a slot having the seats 16, 17, a blade having a beveled end formed with a slot to receive the tongue, and transverse pins in said blade to enter the slot in the tongue and to engage said seats 16, 17, the edge of said blade being adapted to engage the shoulder 5, substantially as and for the purpose set forth.

In testimony whereof I hereunto affix my signature in the presence of two witnesses.

ALBERT G. URBAN.

Witnesses:

A. J. BOWIE,

D. F. COLLINS.