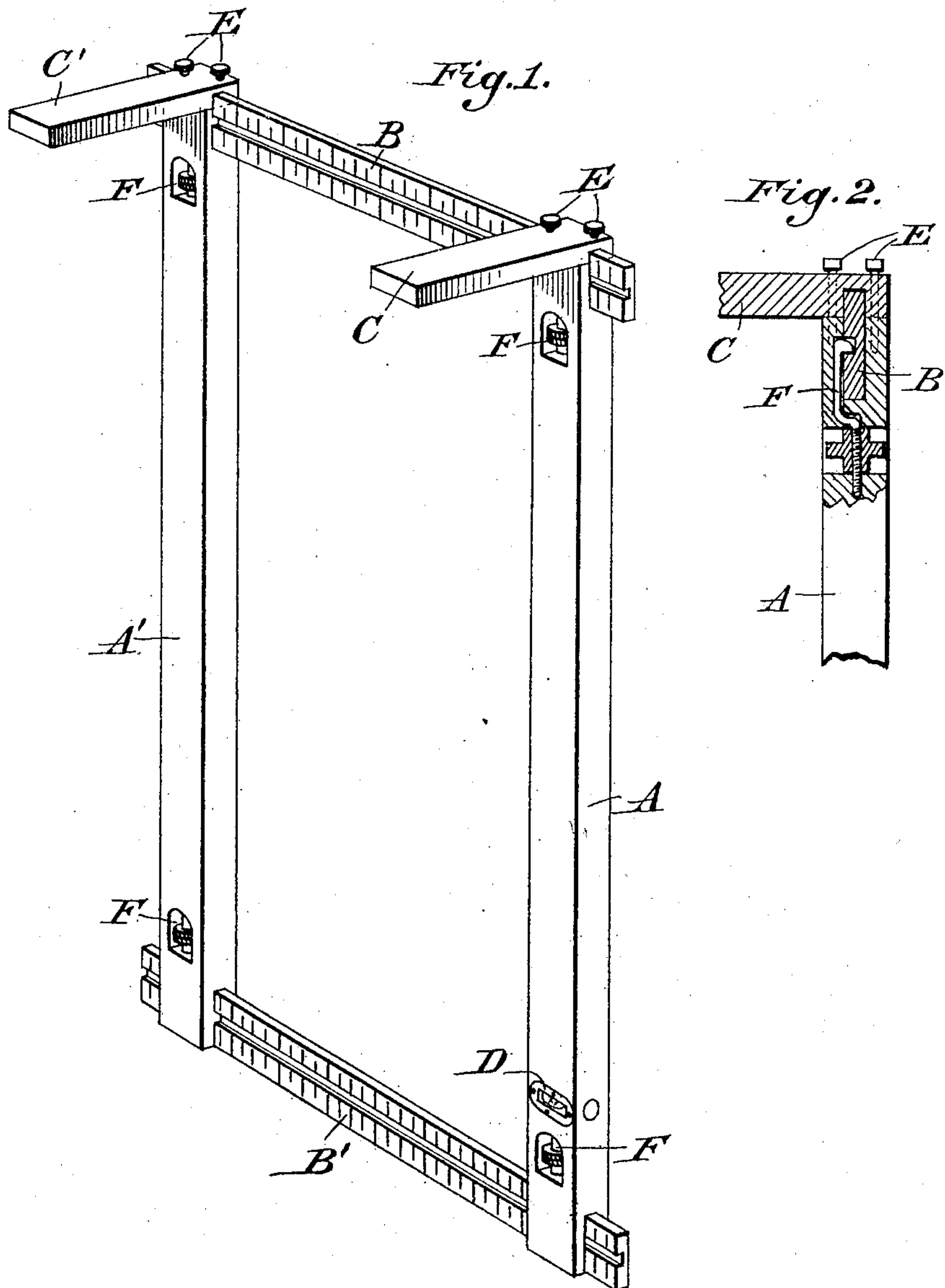


No. 826,759.

PATENTED JULY 24, 1906.

M. BRANCH.
PARALLEL SQUARE.
APPLICATION FILED FEB. 5, 1906.



Witnesses:

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PARALLEL SQUARE.

No. 826,759.

Specification of Letters Patent.

Patented July 24, 1906.

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To all whom it may concern:

Be it known that I, MICHAEL BRANCH, a citizen of the United States, residing at Richmond, in the county of Henrico and State of Virginia, have invented a new and useful Parallel Square, of which the following is a specification.

My invention relates to improvements in a parallel square in which two parallel bars can be moved from one end to the other of two parallel steel rules.

The object of this invention is to form a square for laying off shoes and wedges on locomotives.

It is necessary that there be two lines drawn on each shoe and wedge—one on the inside and one on the outside—for the guidance of the workman who runs the planer and shapes up these parts. The lines on the shoes must be parallel with the lines on the wedges, as the driving-box, the front and back of which are parallel, fits in between the shoe and the wedge so that while it may be moved up and down freely there is no horizontal play or "lost motion." The lines on the shoes and wedges are supposed to be perpendicular or a right angle with the top of the frame of the locomotive, assuming that the frame is true and not bent or sprung. Should the frame be bent, sprung, or "out of true," it can be quickly detected with my invention and the lines above mentioned obtained quickly and accurately.

Figure 1 is a vertical view of a square constructed in accordance with the invention. Fig. 2 is a sectional view of a portion of the square, showing the manner of adjusting and fastening the rules to the bars.

The drawings show the parallel square complete.

A and A' are two parallel bars of cast-iron. The bars are rectangular. There is a slot in each end of both bars through which fits a steel rule at right angles with the bars. These two bars are alike, except a small level D, inserted near the bottom and midway between the edges of bar A.

B and B' are two flat steel rules tempered and graduated on both sides. Each rule has

a slot or groove on one side running lengthwise and midway between the edges, the depth of the slot or groove being half the thickness of the rule. The rules are duplicates.

C and C' are two cleats, made of steel, to be fastened to the top ends of bars A and A' by means of thumb-screws. The cleats have a slot or groove cut crosswise their length in the end that is attached to bars, this slot being to fit over the edge of the rule which projects above the end of the bar. Thus the cleats are duplicates.

D is a small level inserted near bottom end of bar A.

E shows the thumb-screws which fasten the cleats to the ends of bars A and A'.

F shows a bolt having a hook on one end and thumb-nut on the other. There are four of these bolts in number—one inserted in each end of bars A and A'. The hook engages in the slot or groove on the side of the steel rule where it passes through the slot in end of bar, and by tightening the thumb-nut the rule is secured rigidly and at right angles with the bar.

In using the parallel square it is simply necessary to adjust the bars A and A' to equal the size of the driving-box and hang the cleats (assuming the square being assembled) over the top of the frame of the locomotive in the position where the driving-box is to be located when the locomotive is completed, see that the frame is level by the little level inserted in bar A and then draw lines alongside bars A and A' on the shoe and wedge, also across top of frame alongside cleats C and C', then turn the square to inside of frame, so that cleats coincide with the lines just drawn on the top of the frame, and draw lines alongside bars A and A' again on shoe and wedge. By this method all lines are obtained. The square can be used to a great advantage by any one familiar with the art. Changes in form, proportion, size, and the minor details of construction within the scope of the appended claim may be resorted to without departing from the spirit or sacrificing any of the advantages of this invention.

Having thus described the invention, what is claimed as new, and desired to be secured by Letters Patent, is—

5 A parallel square, comprising two rectangular bars and two flat rules, the rectangular bars having slots at each end adapted to receive and fit the rules respectively, the rules and bars when connected together forming a

rectangular frame, and cleats C and C', suitably connected to corresponding ends of the bars and projecting therefrom at right angles to the plane of such frame. 10

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