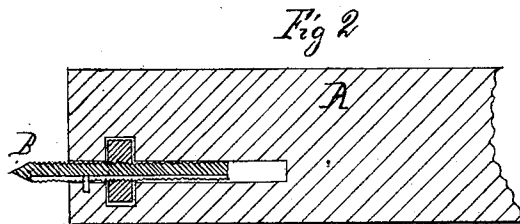
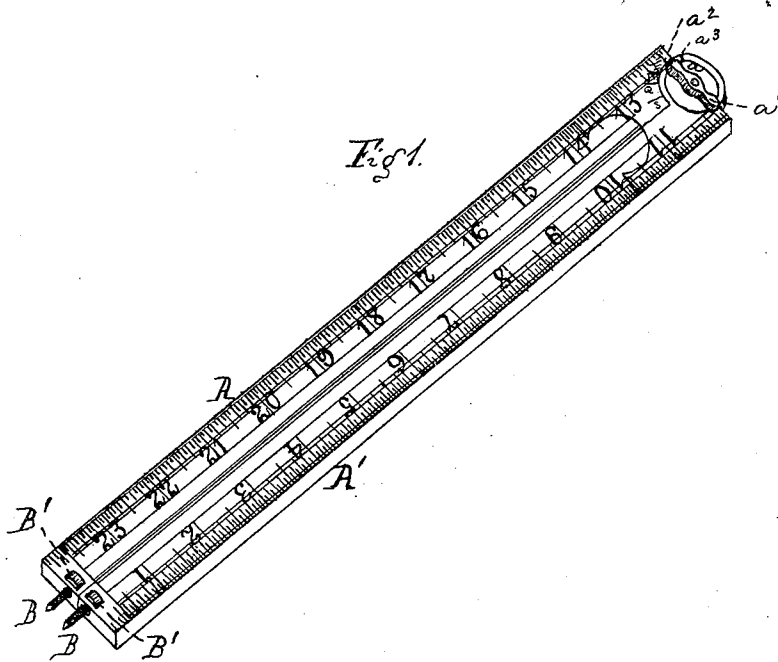


R. NICOL.

Improvement in Combined Rule and Dividers.

No. 128,417.

Patented June 25, 1872.



Witnesses
Alep Mahon
14 14 Doubleday

Robert Nicol
by his Attorney
J. M. Smith

UNITED STATES PATENT OFFICE.

ROBERT NICOL, OF ROCKFORD, ILLINOIS, ASSIGNOR TO HIMSELF AND
EDWIN F. THOMAS, OF SAME PLACE.

IMPROVEMENT IN COMBINED RULES AND DIVIDERS.

Specification forming part of Letters Patent No. 128,417, dated June 25, 1872.

SPECIFICATION.

To all whom it may concern:

Be it known that I, ROBERT NICOL, of Rockford, in the county of Winnebago and State of Illinois, have invented a new and useful Improvement in Multiple Tools; and I do hereby declare that the following is a full and exact description of the same, reference being had to the accompanying drawing and to the letters of reference marked thereon.

Figure 1 is a view of the tool. Fig. 2 is a partial longitudinal section.

Similar letters of reference denote corresponding parts in both figures.

The invention relates to the construction of what are known as multiple tools, which consist of a combination in one piece, or in one organization, of a number of different tools, so combined and arranged that it can be made to serve for a variety of purposes, and is at the same time compact in shape and convenient to handle. The invention consists in combining with the free ends of a carpenter's rule movable protruding spurs, by means of which the rule can be used as dividers or compasses, these spurs being withdrawn within the ends of the rule at will.

In the drawing, A A' represent the two parts or limbs of a carpenter's rule, which are of the ordinary construction, with the exceptions hereinafter described. They are united at one end by a long screw-rivet, with a large flat head upon one side, and a washer, *a*, and thumb-nut *a'* upon the opposite side. The male portion *a''* of the joint is provided with a series of points or lines, as indicated at S, Q, and M, while the corresponding surface of the female part has a single line or point, as at *a''*, Fig. 1, in such position that when the limbs are spread

apart, with either of the points S, Q, or M, exactly opposite to the point *a''*, the two limbs will stand at an angle of forty-five degrees, ninety degrees, or such other angle as may have been provided for, as will be readily understood without further explanation. B B are spurs arranged in sockets formed for their reception in the ends of the rule. Each spur is provided with a screw-thread, and engages with a thumb-nut, B', placed in a slot in the metallic end binding of the rule. Each spur has a longitudinal groove cut in one side, into which a stud enters (see Fig. 2) to prevent the spur from twisting around; hence, by turning the nuts B', the spurs may be thrust out from the ends of the rule or retracted at will.

It will be readily seen that when spurs B are thrust out the rule may be used as dividers. When it is desired, a pencil may be screwed to one of the spurs, or attached by means of a socket, or in any other way, as may be thought best.

As a modification of my invention I may so construct these spurs as to slide them out and in by means of a thumb-piece; but I regard the arrangement shown as the better one.

Having now described my invention, what I claim as new, and desire to secure by Letters Patent, is—

In combination with a jointed carpenter's rule A A', the sliding spurs B B, whether used with or without the screw-rivet and thumb-nut *a'*, substantially as described.

This specification signed and witnessed this 9th day of December, 1871.

ROBERT NICOL.

Witnesses:

G. W. FORD,
WM. T. SKIFF.