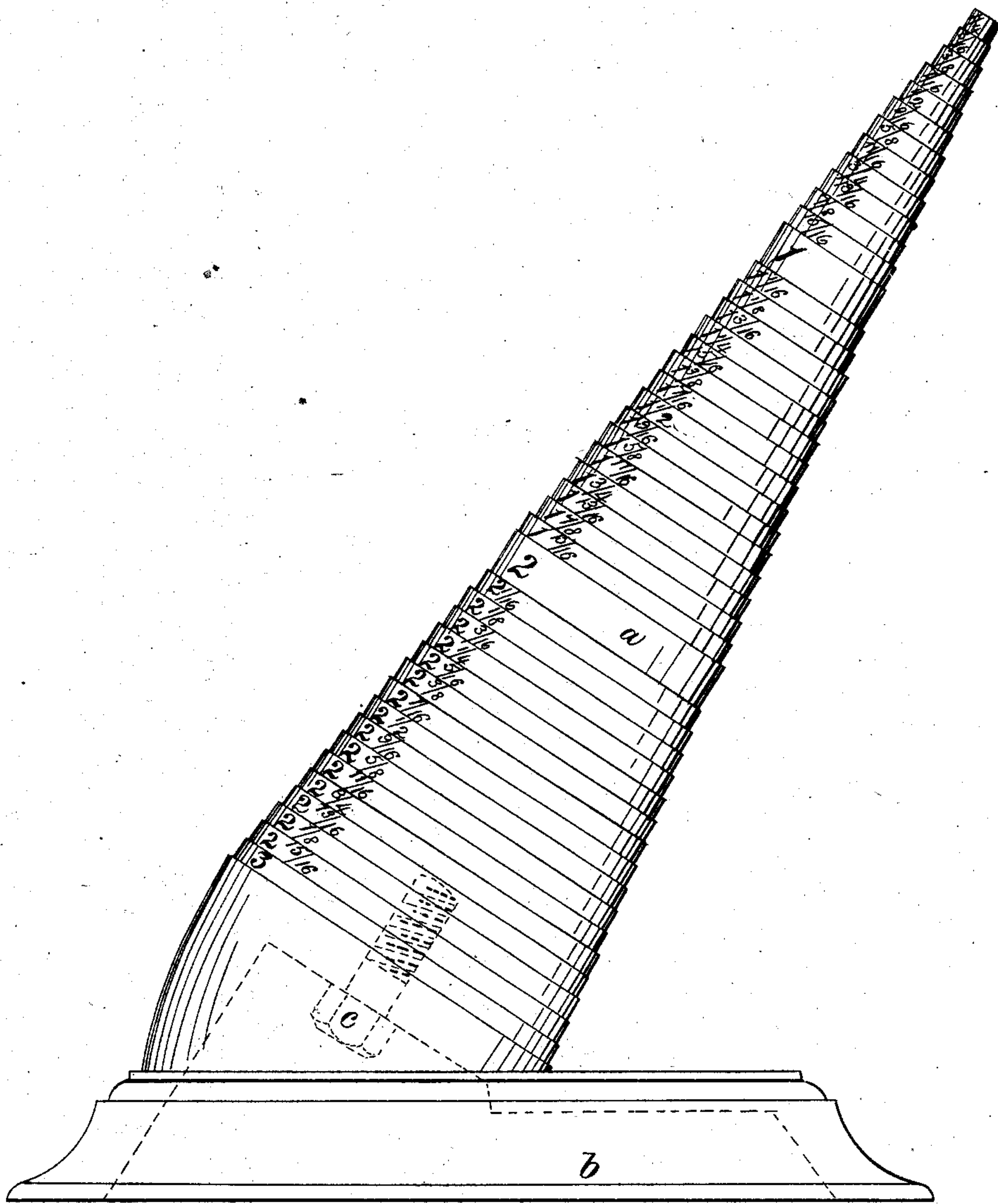


J. RICHARDS.
Standard Gage.

No. 69,954.

Patented Oct. 15, 1867.



Witnesses;
W. C. Board
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United States Patent Office.

JOHN RICHARDS, OF CINCINNATI, OHIO.

Letters Patent No. 69,954, dated October 15, 1867.

IMPROVEMENT IN STANDARD GAUGES.

The Schedule referred to in these Letters Patent and making part of the same.

TO ALL WHOM IT MAY CONCERN:

Be it known that I, JOHN RICHARDS, of Cincinnati, in the county of Hamilton, and State of Ohio, have invented a new and useful Standard Gauge for obtaining true dimensions for mechanical work; and I do hereby declare the following to be a full and exact description of the same, reference being had to the drawing, showing an elevation of the same.

The nature of the invention consists in a pyramid-cone, the different sections being turned to accurate standard sizes, varying by fractional parts of an inch to suit all dimensions usually called for in fitting mechanical work, and in attaching the same to a pedestal, or otherwise arranging it so that it will stand in an inclined position, for objects hereinafter explained.

The value of machinery depends, in a measure, upon its different parts being fitted to standard gauges, convenience in repairing, and an interchange of parts; and shop system demands their use. The ring and plug gauges hitherto used consist, for general use, of from fifty to one hundred pieces, while the caliper form has from eight to sixteen to the inch, making them inconvenient for shop use, and liable to be mislaid and broken.

The object of the invention here illustrated is to produce a compact and simple gauge, with sizes arranged in regular order, and within a space that can be seen at a glance, and so supported that both hands of the workman can be used in adjusting calipers to the different sizes; also to produce a standard gauge for general shop use sufficiently cheap in construction to be supplied to each room or department of shops, and of such form as to not be injured nor lost in such general usage.

To enable others skilled in the art to make and use my invention, I will proceed to describe the manner of constructing and using the same, referring to the accompanying drawing, forming a part of this specification.

The cone-pyramid A is formed from material sufficiently hard to withstand wear from use, and may be constructed of a single piece of hardened steel, or from thin disks of the same bolted together with a through bolt, or can be made from disks of cast iron with their edges chilled, or the whole may be turned from a solid piece of iron and case-hardened. Each step or disk is adjusted to a standard size of inches or fractions of the same, the range of sizes, as well as the variation, being adapted to the use intended. This cone is mounted on a pedestal, b, and set at a convenient inclination, generally about sixty degrees, to enable the workmen to see the index on the front and to adjust their calipers to the gauge. This pedestal is arranged to stand upon a bench or some accessible part of the room, and all the different sizes can be read and used without altering its position. The cone A is fastened to pedestal b by a screw, C, shown in dotted lines. On the front of the cone is an index, showing the different sizes, while the gauge for inches is left of greater width than the fractional parts, to enable the workmen to find sizes with greater facility. Intermediate sizes between those formed upon the cone can be found very accurately by putting on the calipers slightly diagonal over the base of one ring and the top of the next, as will be understood.

Having thus described the nature of my invention, what I regard as new, and desire to secure by Letters Patent, is—

1. I claim a standard gauge, constructed in the form of a pyramidal cone, in the manner and for the purposes specified.

2. I also claim the pedestal b, or equivalent means of supporting the gauge in an inclined position, substantially in the manner and for the objects specified.

JOHN RICHARDS.

Witnesses:

W. C. HARD,

H. R. HYDE.