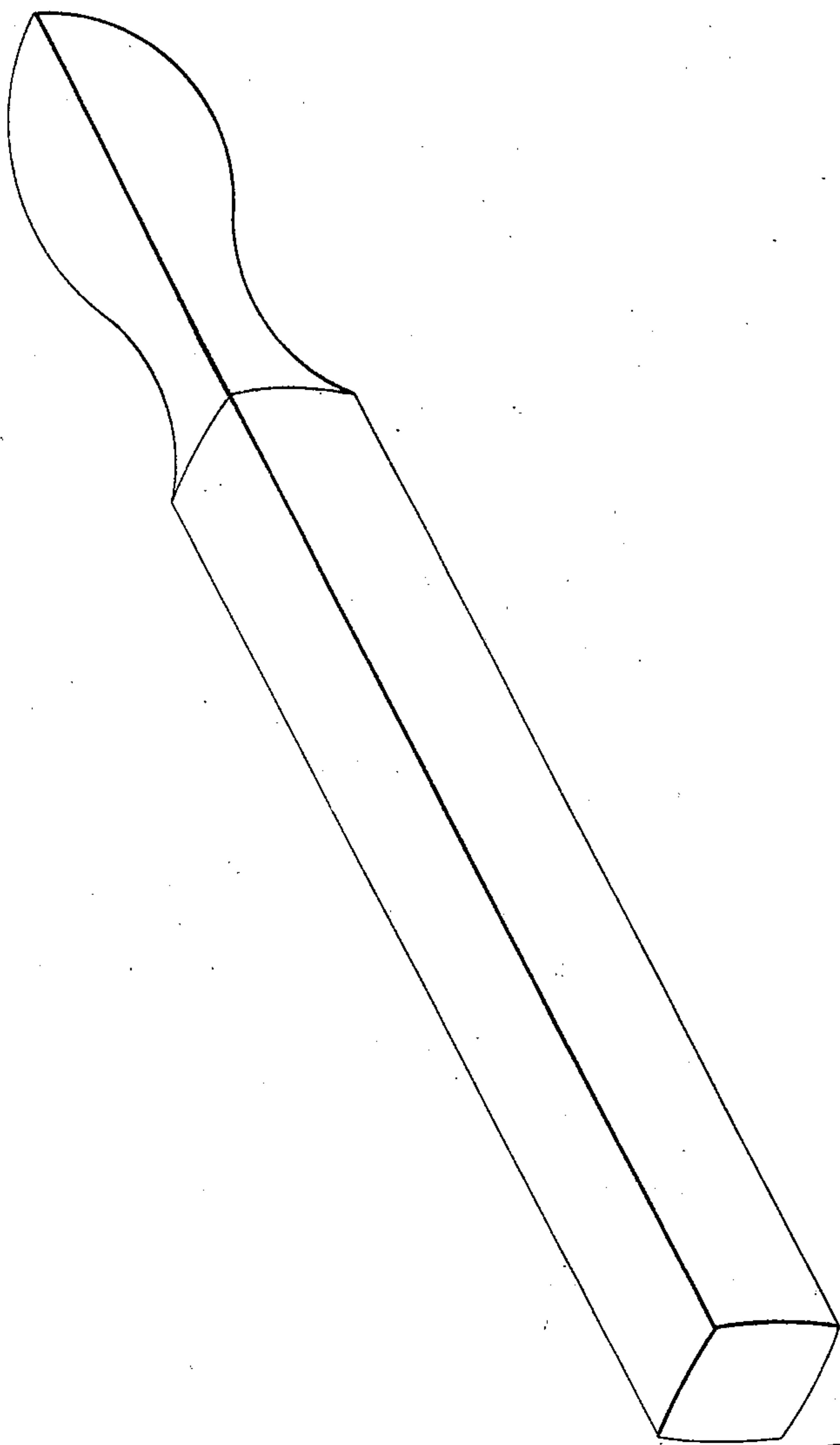


J. W. Wood,

Stroper.

No 29,336.

Patented July 24, 1860.



*Witnesses:
W. Fairfax
E. Ring*

*Inventor:
J. W. Wood by
A. Black
his atty*

UNITED STATES PATENT OFFICE.

JOHN W. WOOD, OF WATERTOWN, NEW YORK.

EDGE-TOOL SHARPENER.

Specification of Letters Patent No. 29,336, dated July 24, 1860.

To all whom it may concern:

Be it known that I, JOHN W. WOOD, of Watertown, in the county of Jefferson and State of New York, have invented a new and useful Improvement in Edge-Tool Sharpeners; and I hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawing, which represents an isometrical perspective view of my improved edge-tool sharpener.

The object of my invention is the production, as an article of manufacture of an edge tool sharpener made of steel, castiron or any other suitable metal in one piece, of a prismatical form or of any other form, having three or more faces, such faces presenting different degrees of fineness in the texture or grain of the metal; whereby one and the same instrument may be adapted to the various uses or purposes herein after described and is otherwise more advantageous than any instrument of like character heretofore made.

To enable others skilled in the art to make and use my said improvement, I shall now describe the manner in which the same is or may be carried into effect.

It is well known that the different kinds of edge tools require different means for sharpening their edges after they have become dull by wear or other cause; and it was heretofore generally believed that the difference in the means ought to consist, if metal sharpeners be used, in the degree of hardness or softness of the metal. I have discovered that the superior adaptation of a certain kind of sharpeners to a certain kind of edge tools is not due to the comparative hardness or softness of the metal of which the sharpener is made; but that hardness of the metal is a *sine qua non* in all sharpeners, and that the coarseness or fineness of the grain or texture alone presents the condition that affects the result. Thus steel plates of equal hardness, will answer the purpose of a razor-strop, a riffle for sharpening scythes a scissor sharpener etc., according to the smoothness or roughness the surface of such plates present. From these preliminary remarks it will be readily understood, that the modes of producing my improved edge tool sharpener, are quite numerous but I shall only describe those, I find most practicable.

I first produce the instrument of metal independently of the various degrees of rough-

ness upon its faces, that is, I only give it the required form and general hardness, temper, etc., either by forging it of wrought iron or steel into the desired shape and then case-hardening tempering and finishing it, or by casting it of steel or iron in molds of suitable form and then finishing it. If cast iron be used it should be chilled in a metallic mold for the purpose of imparting to the surface the necessary degree of hardness. The next operation consists in giving each of the several faces of the instrument such a fine or coarse texture or grain as will best adapt it to the special use intended. This I effect in various ways, but preferably by means of grindstones or emery wheels, and I use as many of them as there are faces to the sharpener, each of said stones or wheels being of a degree of grit; so that on grinding off the surface of each face, with its corresponding wheel or stone, a smoothness or polish will be produced that is more or less perfect according to coarseness or fineness of the grit in the grindstone or emery wheel. Each of the faces bear marks or numbers indicating the degree of roughness. Sometimes, when the instrument is first made of wrought iron, I give it the proper degree of roughness before hardening, by means of files or other means. Such instruments, *i. e.*, the texture or grain of which is produced by draw filing—are completed on being hardened or tempered.

Among the advantages of this my improved edgetool sharpener over all others heretofore constructed I would mention its extreme facility of making the same, its compactness, durability, general applicability to a great variety of edgetools and its more perfect operation as a sharpener. Thus I am able to construct in the manner above described, instruments of comparatively smaller or portable dimension at a less expense than any other made heretofore. If the minute asperities be worn away by constant use, I am able readily to repair it and put it in perfect working condition by merely passing each face over a grindstone or emerywheel of corresponding grit. By my improvement I am also able to have in one instrument as many shades or degrees of roughness as desirable by multiplying the faces of the prismatical instrument. It may then be made three or foursided, or polygonal that is having 5, 6 or more faces. It may also for the sake of lightness be

made hollow by casting it with a core in the center. Among its uses I would mention the sharpening of razors, scissors, scythes, surgical instruments, knives, etc.

5 Having thus described my improved edgetool sharpener I would here observe that I do not wish to be understood as claiming the discovery of a mere principle irrespective of the peculiar manner in which I have embodied the same in a practical form nor do I restrict my claim to the use of grind stones, etc., of special grit or grain to produce a requisite degree of roughness on the surface of the metallic edge tool sharpener; but

15 What I claim as a new article of manufacture is—

The edgetool sharpener produced in the

manner substantially as herein described; the same being made of steel castiron or other suitable metal in one piece of a prismatic or other form, having three or more faces, such faces presenting different degrees of superficial roughness in the grain or texture of the metal; whereby one and the same instrument may be adapted to the various uses or purposes as set forth herein. 20 25

In testimony whereof I have signed my name to this specification before two subscribing witnesses.

J. W. WOOD.

Witnesses:

JNO. M. SIGOURNEY,
E. DELANO.