(No Model.)

# T. A. HENDERSON.

## PENCIL SHARPENER.

No. 353,061. Patented Nov. 23, 1886.

Fig. 1.

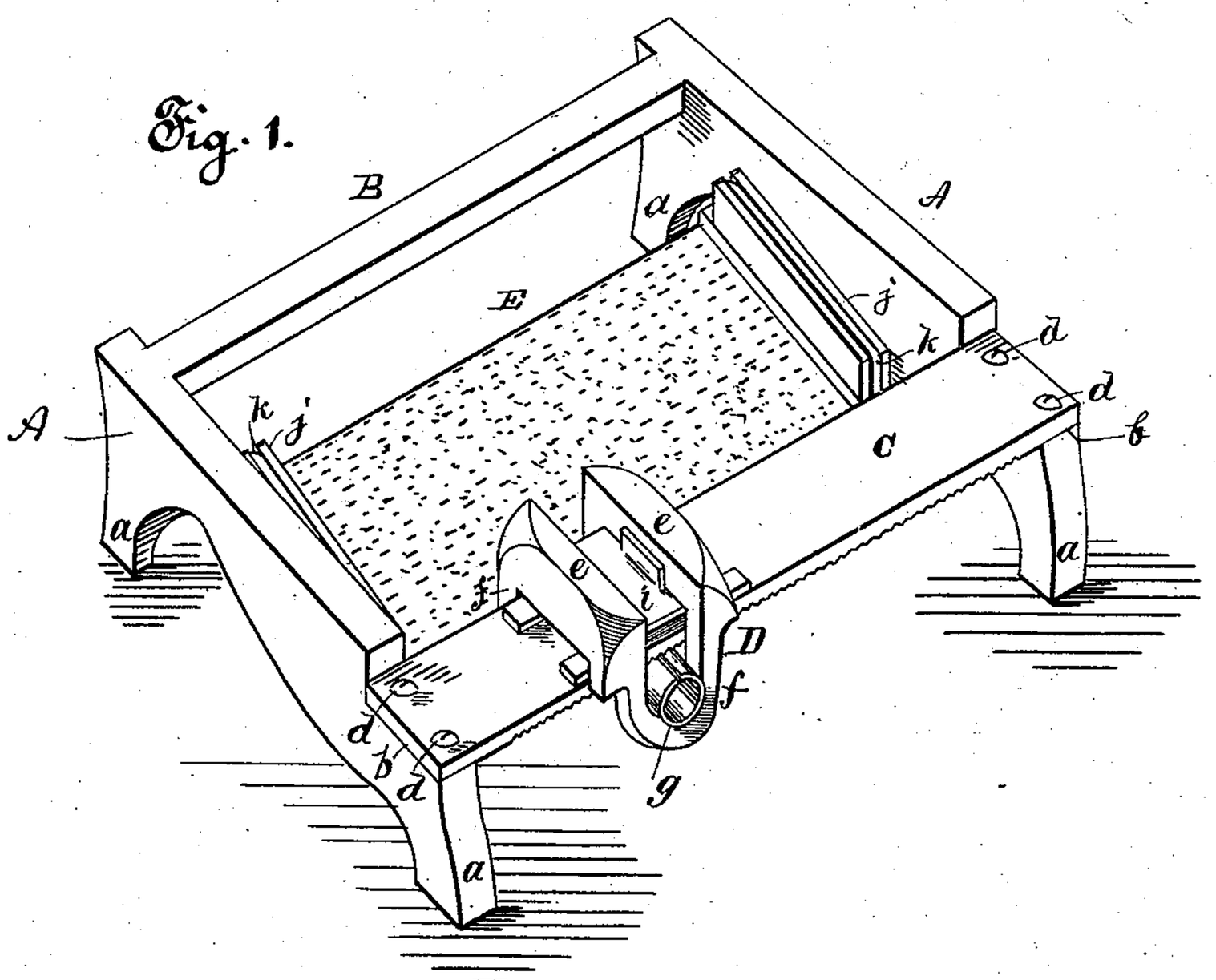
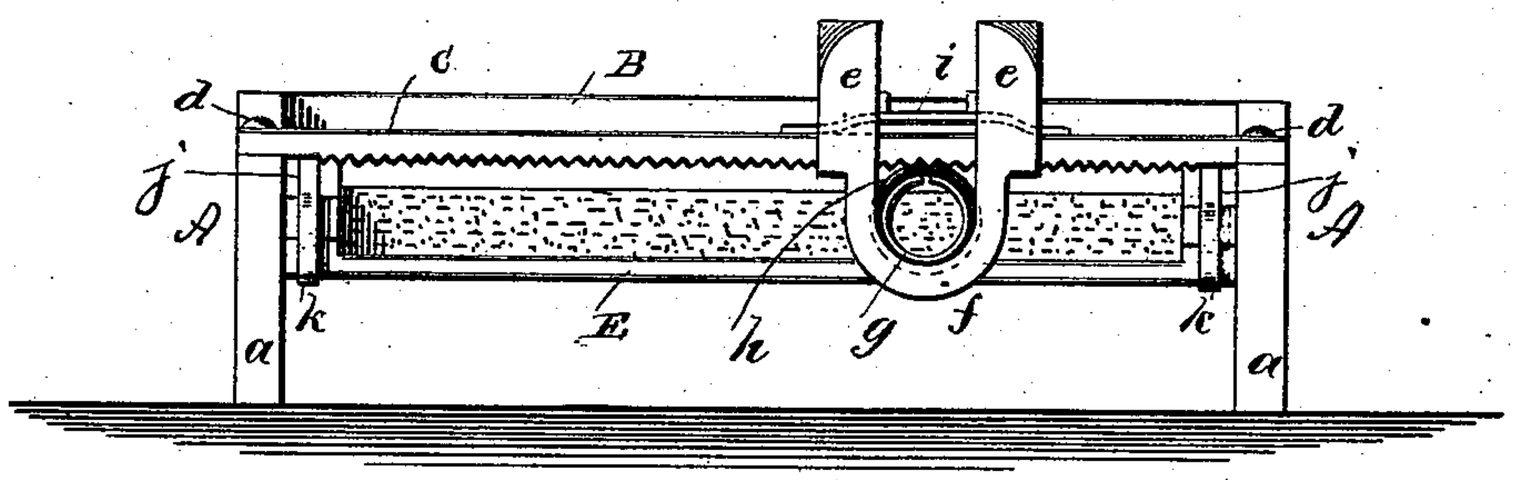



Fig. 2.




WITNESSES:

D. D. Mott

E. M. Clark

INVENTOR:

T. A. Henderson

BY Munn & Co

ATTORNEYS.

# UNITED STATES PATENT OFFICE.

THOMAS ALEXANDER HENDERSON, OF NATCHEZ, MISSISSIPPI, ASSIGNOR TO HIMSELF AND AUGUST P. KUEHN, OF SAME PLACE.

## PENCIL-SHARPENER.

SPECIFICATION forming part of Letters Patent No. 353,061, dated November 23, 1886.

Application filed June 18, 1886. Serial No. 205,551. (No model.)

*To all whom it may concern:*

Be it known that I, THOMAS ALEXANDER HENDERSON, of Natchez, in the county of Adams and State of Mississippi, have invented a new and Improved Pencil-Sharpener, of which the following is a specification, reference being had to the annexed drawings, forming a part thereof, in which—

Figure 1 is a perspective view of my improved pencil-sharpener. Fig. 2 is a front elevation.

Similar letters of reference indicate corresponding parts in both figures of the drawings.

The object of my invention is to provide a simple and efficient device for carrying and rotating a pencil in contact with a spring-pressed plate provided with an abrasive surface.

My invention consists in a sliding carriage mounted on a corrugated bar supported in a suitable frame, the carriage being provided with a rubber-covered sleeve which rolls along the corrugated surface of the bar, and with springs for holding the rubber-covered sleeve in contact with the corrugated surface of the bar, to cause the sleeve to revolve as the carriage is slid along the bar, and in the combination, with the sliding carriage and rotating sleeve, of a spring-supported plate or board having an abrasive surface, all as hereinafter more fully described.

The end pieces, A, of the frame of the machine are provided with legs *a*, and are connected at the back of the machine by a bar, B. In notches *b*, formed in the forward ends of the end pieces, are clamped the ends of the bar C by the screws *d*, passed through the ends of the bar C and into the end pieces, A. The under surface of the bar C is ribbed or corrugated, and to the bar is fitted a carriage, D, formed of transverse bars *e* and the downwardly-projecting loops *f*, which reach down below the under surface of the corrugated bar C, and in which is received the metallic sleeve *g*. The sleeve *g* is designed to receive the pencil to be sharpened, and is split longitudinally, to adapt it to pencils of different diameters. Around the sleeve *g*, between the loops *f*, is placed a covering, *h*, of elastic rubber, which rolls in contact with the corrugated surface of the bar C. Between the bars *e* of the carriage D and the top of the corrugated bar C is placed a spring, *i*, formed of a metallic plate slit twice in opposite ends, with the lateral arms thus formed bent downward, to cause the spring to press upon the top of the bar C, and with the central arm bent upward to engage the inner surfaces of the bars *e*; but any preferred form of spring may be used.

Upon the inner surfaces of the end pieces, A, are secured inclined cleats *j*, the ends of the cleats nearest the corrugated bar C being the lowest. From the cleats *j* is suspended a plate or board, E, by means of elastic cords or bands *k*, the board being held in an inclined position by contact with the under surfaces of the cleats *j*. The angle of the board E, relative to the sleeve *g*, is that required for the sharpened end of the pencil. To the upper surface of the board E is secured a piece of sand-paper or emery-paper; or the board is coated with sand or emery secured to the surface of the board by glue or other cement; or a fine-cut file may be substituted for the sand or emery coated surface.

By inserting a pencil in the sleeve *g* so that the end upon which the point is desired rests upon and pushes down the board E, and moving the carriage D back and forth along the bar C the end of the pencil is slid along the abrasive surface of the board E, while the sleeve containing the pencil is turned by the contact of the rubber covering *h* with the corrugated surface of the bar C. By means of the sliding and rotary motions of the pencil and the upward pressure of the board E, due to the elasticity of the bands *k*, both the wood and the lead of the pencil are rapidly reduced to the required form.

To retain the rubber bands *k* in their position on the cleats *j*, the upper edges and the ends of the cleats are grooved for the reception of the bands.

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

1. In a pencil-sharpener, the combination, with a sliding and rotating pencil-holder, of a spring-supported plate provided with an abrasive surface, substantially as shown and described.

2. In a pencil-sharpener, the combination of

the sliding carriage D, the rubber-covered sleeve *g*, journaled in the carriage, the bar C, arranged to support and guide the carriage and to contact with the rubber-covered sleeve, and the spring-supported board E, provided with an abrasive surface, substantially as herein shown and described.

3. In a pencil-sharpener, the combination of the frame formed of end pieces, A, and the longitudinal bar B, and provided with inclined grooved cleats *j*, the board E, having an abrasive surface, the elastic bands *k*, extending around the cleats and around the ends of the board E, the corrugated bar C, the carriage D, placed on the bar and provided with the spring *i*, and the sleeve *g*, journaled in the carriage D and having the rubber covering *h*, substantially as described.

THOMAS ALEXANDER HENDERSON.

Witnesses:
GEORGE W. KOONTZ,
THOMAS J. CARSON.