

(No Model.)

C. S. FREER.

PROCESS OF ROUGHENING PENS.

No. 362,885.

Patented May 10, 1887.

Fig 1.

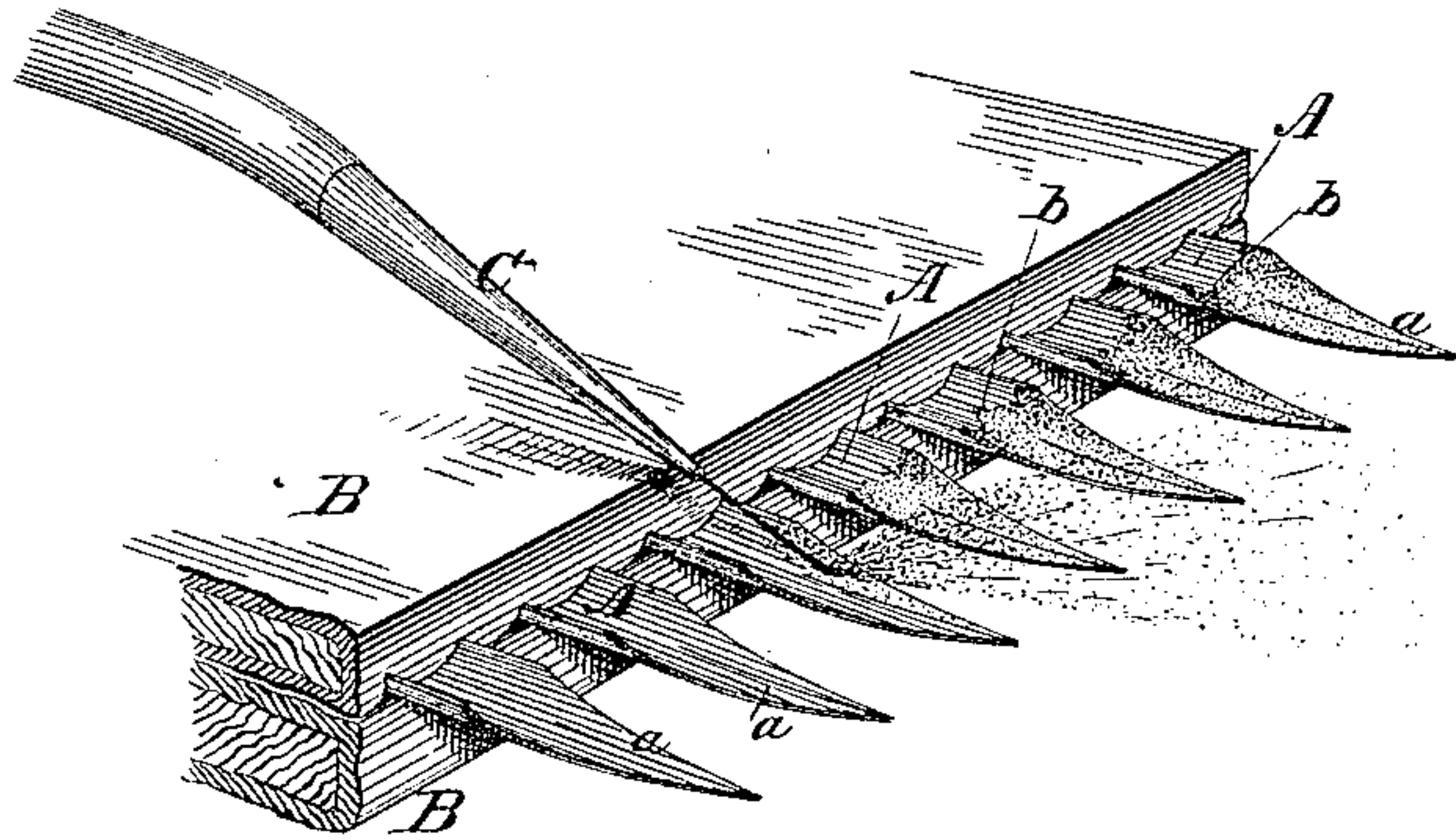


Fig 2.

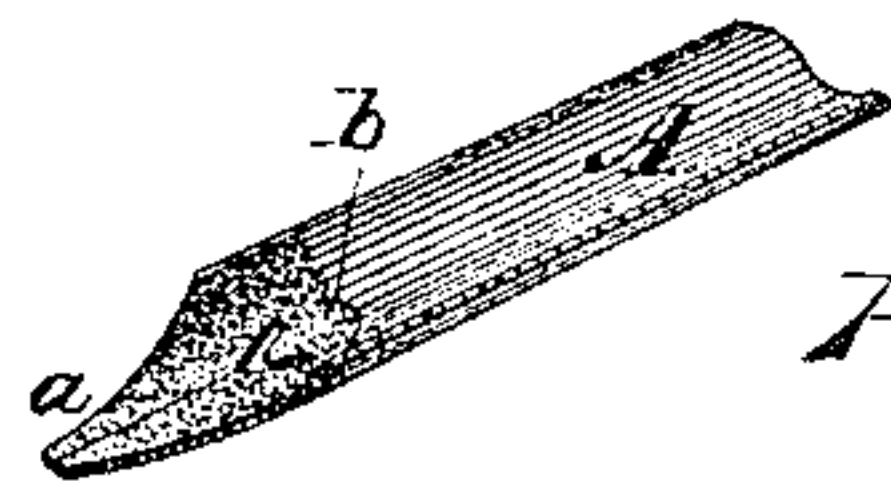
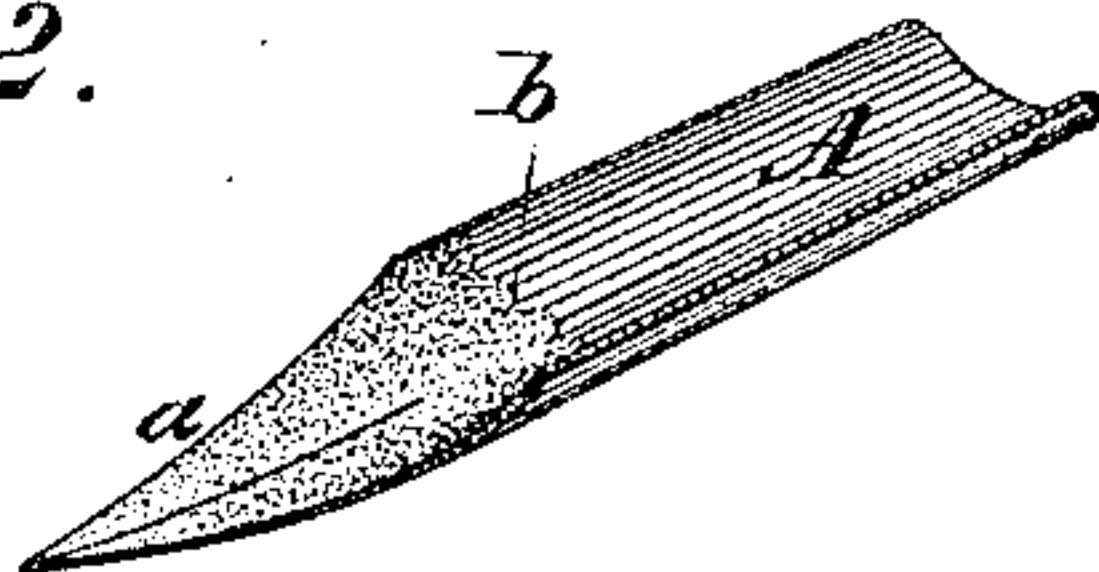


Fig 3.

WITNESSES:

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PROCESS OF ROUGHENING PENS.

SPECIFICATION forming part of Letters Patent No. 362,885, dated May 10, 1887.

Application filed December 3, 1886. Serial No. 220,591. (No model.)

To all whom it may concern:

Be it known that I, CHARLES S. FREER, a citizen of the United States, residing at New York, in the county of New York and State of New York, have invented certain new and useful Improvements in Processes of Roughening Pens; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention relates to a process of roughening pens; and it consists in a novel method or process of "roughening" or abrading the ink-holding surface of "pen-nibs" by means of a blast of sand or equivalent cutting material, whereby increased friction is presented to the downward flow of the ink, greater economy in the cost of fabrication of the pens is secured, a more finely-finished, attractive, and salable article is provided, and such injury to the pen-points incidental to the old process of roughening is entirely obviated, as will be hereinafter more fully set forth.

In the accompanying drawings, illustrative of my process, Figure 1 is a perspective view of a row or galley of pens clamped in a frame and being operated upon. Fig. 2 is a perspective view of a gold pen, showing the nibs roughened in the same way; and Fig. 3 is a similar view of a common "broad-nibbed" steel pen, also roughened by the same process.

The method or process of roughening heretofore adopted required generally that each pen should be successively clasped in one hand of the operator while the polished surface of the pen-nibs is rubbed rough with a stone held in the other hand, the outer end of the pen meanwhile resting upon a flat solid surface. This method of roughening pens one at a time materially increases their cost. In rubbing with a stone, as above described, it also very frequently occurs that the stone comes in contact with the point of the pen, breaking it off or damaging it, thereby rendering the pen useless.

In my improvement, as shown in Fig. 1, a number of pens, A, are clamped in any suitable frame, B, their nibs or points *a* protruding outwardly. By means of the blast C a stream of sand, emery, or similar sufficiently-

hard granulated substance is forcibly projected against the smooth surface of the nibs, thus uniformly abrading the same and securing a rougher and more even surface than was possible by any method heretofore used. The upper edge of the roughened surface may be fringed or margined in any artistic or fancy manner, as shown at *b*, which ornamentation, in conjunction with the uniform frosty and attractive character of the roughening, materially adds to the appearance and therefore the market value of the pen.

Owing to the soft character of the metal, no trouble has been encountered in roughening the nibs of gold pens; but the hardened surfaces of steel pens have heretofore rendered their roughening impracticable. By my improved process steel pens can be roughened as readily as gold, as shown in Fig. 3.

I am aware that pens have heretofore been provided with roughened surfaces, such roughening being produced either by a stone held in the hand or by a revolving grindstone. This roughening process has also heretofore been applied to either a blank sheet of metal from which a series of pen-blanks were subsequently punched or cut, or to a series of flat pen-blanks themselves after the same were cut out, but prior to their being "bent up" or finished. I am also aware that sand-blasts have been used in connection with metal surfaces generally. I do not, therefore, broadly claim these methods; but

What I do claim, and desire to secure by Letters Patent, is—

The process of producing an improved frictional surface on the nibs of pens for retarding the downward flow of ink when in use and securing increased economy in the construction of the pens themselves, which consists in subjecting the nibs of a series of finished pens held in a galley or other suitable holder to the action of sand or equivalent abrading material under propulsion, substantially as set forth.

In testimony whereof I affix my signature in presence of two witnesses.

CHAS. S. FREER.

Witnesses:

BERNARD J. KELLY,
EDWARD TODD.