rejecting the application of the appellant for a patent for his invention as set forth, and that the said patent ought to have been granted. The decision ought, therefore, to be reversed and annulled.

A. B. Stoughton, for the appellant.

IN RE EDWARD MAYNARD. APPEAL FROM REFUSAL TO GRANT PATENT.

INVENTION—CHANGE OF MATERIAL—METALLIC CARTRIDGE.—The mere selection of a superior material, which is so by reason of its well-known qualities—as substituting steel or case-hardened iron for sheet metal in constructing the firing end of a cartridge—is not invention.

SM—SM—BETTER ARTICLE.—Within the range of materials known to possess the proper qualities for the purpose, it is not invention to select that one which exhibits these qualities in a more marked degree, and thereby make a better article than had before been made.

(Before MERRICK, J., District of Columbia, October, 1857.)

MERRICK, J.

The claim of the applicant is for combining with the tubular portion of a metallic gun-cartridge, when that is made of brass or its equivalent of soft and tough metal, a base or bottom of steel or other hard metal, which hard-metal bottom capacitates the cartridge for repeated discharges, and that without injury to the vent-hole perforation in the centre of the bottom. And his claim is further for constructing this said bottom with a flange extending beyond the walls of the cylindrical tube of brass, by means of which flange the cartridge may be more readily handled, withdrawn from the gun after discharge, and also strengthened and guarded against rough handling and other casualties.

The claim has been rejected by the Commissioner as wanting both the grounds of novelty alleged in the specification. A flanged-bottom cartridge is shown to have been previously used in the patent of G. W. Morse (No. 15,996, October 28th, 1856) and in the improvements of Chambers, described in

Brevets d'Invention, N. S., volume 13, pages 71 and 72. This branch of the claim and specification was, therefore, destitute of novelty, and properly rejected. As to the other branch of inquiry, it is well stated in the report of Examiner Baldwin, made in the case on the 5th of June, that "the advantages of the brass cylinder are the same in his patent (viz., Morse' patent of 1856) as to the position of the charge, the expansion of the metal, and the durability of the tubular portion of the cartridge as they are in the same cylinder with the steel disc, except what of additional strength it derives from the disc and the permanency of the vent, and all that the disc does for the brass in the application it does in the patent of Morse for the soft-metal tube." In other words, by using a hard metal, as steel, the bottom of the cartridge is stronger and the small size of the vent-hole is better preserved than with the other softer metals. The claim does not, therefore, rest upon the idea of combining a hard metal for the bottom of a cartridge with a soft one for the tubular part. Clearly, if this form of statement of the proposition be all, Morse has anticipated the discovery. But the essence of this claim seems to consists in this: That inasmuch as steel, case-hardened iron, &c., have that greater degree of strength and hardness, as compared with sheet-iron and, perhaps, other metals which especially adapt them to this combination, he is entitled to a patent for being the first to make this particular combination. But these qualities of comparative strength and hardness were not discovered by him; they are functions or capacities of the metals well and long known. What, then, does the claim amount to? Stripped of the incidents with which it is colored, it is this: That within the range of metals having strength and hardness he has selected one amongst many, and has applied it in the manufacture of his cartridges, so as to make a better cartridge than has been made before by similar combinations of a hard with a soft metal. His improvement consists in the superiority of the material, and which is not new; one that was previously employed to make the cartridge.

The case seems to me to fall within the principles and meaning of the Supreme Court in the case of Hotchkiss *v.* Greenwood, 11th Howard. At page 266, Judge Nelson, delivering the opinion of the court, says: "Now, it may very well be that by connecting

the clay or porcelain knob with the metallic shank in this well-known mode an article is produced better and cheaper than in the case of the metallic or wood knob; but this does not result from any new mechanical device or contrivance, but from the fact that the material of which the knob is composed happens to be better adapted to the purpose for which it was made. The improvement consists in the superiority of the material, which is not new, over that previously employed in making the knob. But this of itself can never be the subject of a patent. No one will pretend that a machine made in whole or in part of materials better adapted to the purpose for which it is used than the materials of which the old one is constructed, and for that reason better and cheaper, can be distinguished from the old ones, or, in the sense of the patent law, can entitle the manufacturer to a patent. The difference is formal, and destitute of ingenuity or invention. It may afford evidence of judgment and skill in the selection and adaptation of the materials in the manufacture of the instrument for the purpose intended, but nothing more."

The foregoing explanations seem to me to cover all that is embraced in the assignment of reasons of appeal; and therefore I am of opinion that the decision of the Commissioner rejecting the claim must stand. And accordingly I now certify to the Hon. Joseph Holt, Commissioner of Patents, that pursuant to notice heretofore given and filed with the papers in the cause the claimant was heard by his counsel at the City Hall on the 5th of October instant in oral explanation and by reading a written argument, and after having fully considered the claim, the decision of the Commissioner, the reasons of appeal, and the reasons filed in support of the decision, the judgment of the Commissioner rejecting the claim must be affirmed; and herewith I return all the papers, drawings, molds, &c.

Z. C. Robbins, for the appellant.