

UNITED STATES PATENT OFFICE.

JOSEPH ROSS HUNTER, OF PHILADELPHIA, PENNSYLVANIA, ASSIGNOR
TO WILLIAM HINCKLE SMITH, OF PHILADELPHIA, PENNSYLVANIA.

PRODUCT FROM OSSEIN.

SPECIFICATION forming part of Letters Patent No. 781,884, dated February 7, 1905.

Application filed December 22, 1904. Serial No. 238,004.

To all whom it may concern:

Be it known that I, JOSEPH ROSS HUNTER, a citizen of the United States, residing in the city and county of Philadelphia, State of Pennsylvania, have invented a new and useful Product from Ossein, of which the following is a specification.

My invention consists of a new product from ossein and method of producing the same.

10 In carrying out my invention I treat bone with acid to remove therefrom substantially all the mineral matter, which in this case consists chiefly of phosphate of calcium, and preferably to remove also moisture and fatty matter therefrom. In this condition the bone, if
15 dried, would have a tendency to shrink or collapse transversely of the length of the cells. I compress the ossein preferably while in this condition—that is, before the walls of the cells
20 have returned to their condition of rigidity—to collapse the cells, elongating at least one axis thereof, and the cellular structure “sets” in the compressed position. The ossein may be compressed, however, to some advantage
25 even after it is completely set in its shrunk condition. I compress the ossein into sheets or blocks, in which forms it is most advantageously used by me.

30 My compressed material has all of the strength due to the stiffening of the cellular

walls which would exist in the ossein if allowed to set in its uncompressed form and in addition per unit cross-section that imparted to it by the compression of the material. In fact, my compressed material possesses all of
35 the advantages of uncompressed ossein and most of them to an unusual degree. It has a much higher coefficient of elasticity and is quite flexible, particularly in directions transverse to the elongated axes of the cells. 40

It will be evident that various changes may be made by those skilled in the art which will come within the scope of my invention, and I do not, therefore, desire to be limited in every
45 instance to the exact product and process herein shown and described.

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

1. As a new article of manufacture, ossein 50 compressed transversely of the length of the cells.

2. The process of treating bone which consists in removing mineral matter therefrom and compressing the residuum transversely 55 to the length of the cells of the original bone.

JOSEPH ROSS HUNTER.

Witnesses:

JOHN A. WIEDERSHEIM,
WM. CANER WIEDERSEIM.