

that brings results. It is pleasant to think of them as "carrying on" in civil life as they did during their period of military service, with the same thoroughness and determination, each a better man and a better worker on account of his experience. The work of the chemist is not always spectacular, but it is very important, for it reaches into all the details of life, the necessities, the comforts, the luxuries, everything that makes for the welfare and advancement of the human race.

We, who served in the world war, have abundant opportunity for patriotic service. Let us in every way possible exert our influence to bring about a just and reasonable peace between the captains of industry and the industrial workers, and promote harmony between these two great forces, who hold in their hands the happiness, the comfort and convenience of the people, the prosperity and progress of our country. I am confident that the returned army man can be counted upon to array himself on the side of law and order, which must prevail if we are to maintain the permanence and the security of the nation.

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### HISTORICAL DATA ON THE NAVAL STORES INDUSTRY IN THE UNITED STATES.\*

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The products of the naval storage industry, as generally understood at the present time, consisting of turpentine, oil of turpentine, rosin, tar, and pitch, are of vastly greater commercial than strictly pharmaceutical interest. Nevertheless the first three, and a derived product of the fourth are official in the last revision of either the U. S. Pharmacopoeia or the National Formulary.

Through the courtesy of Daniel Hanbury, a copy of a publication entitled "Instructions for suche thinges as are to be sente from Virginia," was supplied to the American Pharmaceutical Association in 1871. This publication was dated 1610. Relative to turpentine, pitch and tar, we read the following:<sup>1</sup>

"Pyne trees, or ffire trees are to wounded wth in a yarde of the grounde, or boare a hoale wth an agar the thirde pte into the tree, and lett yt runne into anye thinge that may receyue the same, and that wch yssues owte wilbe Turpentyne worthe 18L P Tonne. When the trees beginneth to runne softelye yt is to be stopped vp agayne for preserbingethe tree."

"Pitche and tarre hath bene made there and we doubt not but wilbe agayne, and some sente for a sample, your owne tournes beinge firste served."

That the expectation expressed there was not fully realized was evidenced from the following, under date of November 1627:<sup>2</sup>

"His Majesty is much troubled how little account can be given of any substantial commodity from the colony (Virginia), and how truly it may be said 'That this plantation is wholly built upon smoke, tobacco being the only means it has produced,' they are therefore, not only recommended but commanded to take special care in the making of pitch, tar, pipe staves, soap ashes, and potashes, iron and baysalt, to search for mines and to plant vines."

The Governor, council and burgesses of Virginia replied to the King in March 1628, relative to naval stores that "Materials in plenty for making pitch and tar are at hand."<sup>3</sup>

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\*Read before the Section on Historical Pharmacy, A. Ph. A., City of Washington meeting, 1920.

<sup>1</sup> Proceedings A. Ph. A., 19, p. 491.

<sup>2</sup> "Calendar of State Papers—Colonial Series—1574—1660," p. 86.

<sup>3</sup> *Ibid.*, p. 89.

Progress was not rapid in the production of the above-mentioned products in Virginia or any of the other colonies during the 17th century. Efforts were made to produce them in the colonies to the north, as well as in the colonies to the south, as soon as they were settled. All of the territory from Virginia to Newfoundland was included in a report on the possible sources of production of these products in 1667.<sup>1</sup>

Several of these products were produced in New Hampshire, Massachusetts, New York, as well as Virginia, previous to 1700.<sup>2</sup> A common reference in the records of Massachusetts is to the effect that the salary of the preacher was frequently paid at least in part with tar.<sup>3</sup>

Owing to the fact that Sweden had established a complete monopoly in the tar and pitch industry, England passed an act of Parliament 1704-5 granting a bounty on all turpentine, rosin, oil of turpentine, tar, and pitch made in the colonies and shipped to England.<sup>4</sup>

This action undoubtedly did much to stimulate the industry and especially in the more southern colonies. In 1707, 4704 barrels of tar were received in England from the colonies.<sup>5</sup> North Carolina in 1718 led all the other colonies in the production of turpentine, rosin, pitch and tar. In 1719 a regulation concerning the proper packing of tar and pitch and providing for the appointment of packers "under oath" was made in South Carolina.<sup>6</sup> In that same year statement is made "That by the naval store laws, now in force, which comprehend only pitch, tar, and turpentine, such great quantities thereof are produced and imported from our plantations, as enables us to export great quantities thereof to the Streights, Spain, Portugal, Holland and Hamberg."<sup>7</sup>

Governor Johnson of the Carolinas in 1734 writes to the Lords of Board of Trade as follows:<sup>8</sup>

"There is more pitch and tar made in the two Carolinas than in all the other provinces on the continent, and rather more in this than in South Carolina."

The producers were not satisfied to make these products from material on their own land; they early began the practice that obtains to the present day, in some localities, of appropriating the timber of other owners and making whatever products they desired from such acquired property. This condition is complained of as early as 1738.<sup>9</sup>

Unfortunately the records are not complete enough to give data from year to year, of the production or exportation of these products. Export statistics for individual years reveal the fact that the industry was firmly established in North Carolina early in the 18th century and remained there for nearly a century and a half. To this is undoubtedly due the fact that the industry has left its imprint on the state to a greater extent than upon any other state. Tar river is a stream, Tarboro is a city and a "Tar Heel" is a native of North Carolina.

<sup>1</sup> "Calendar of State Papers—Colonial Series—1661-1668," p. 503.

<sup>2</sup> "Colonial History of the State of New York," v. 4, p. 531.

<sup>3</sup> "Collections of the Mass. Hist. Soc.," v. 3, s. 2, p. 186.

<sup>4</sup> "Colonial History of the State of New York," v. 4, p. 1140.

<sup>5</sup> *Ibid.*, v. 5, p. 117.

<sup>6</sup> "Collection of Hist. Soc. of S. C.," v. 2, p. 238.

<sup>7</sup> Anderson, "Origin of Commerce," v. 2, p. 283.

<sup>8</sup> "The Colonial Records of North Carolina," v. 4, p. 5.

<sup>9</sup> *Ibid.*, p. 285.