SOME ASPECTS OF PITTSBURGH'S INDUSTRIAL CONTRIBUTIONS TO THE CIVIL WAR.

Pittsburgh as an industrial and commercial center is today universally known. Its position among the cities of the United States is unique. As a manufacturing center it is more noted since the products particularly of the steel mills are shipped to all parts of the world. Such epithets as "Smoky City," "Steel City" and the "Birmingham of America" bear witness to the fact.

The above could not be said of Pittsburgh prior to the Civil War. At that time it was known as the "key to the west," being the appropriate name given by those hardy, restless pioneers, who were tired of eastern aristocracy and desired to found a better home in the democratic west. Still, the position of Pittsburgh as the "key to the west" remains, but far different is her present position as such. It is no longer a pathway whereby settlers can enter the virgin forest and field of the west, but on the other hand is a point where many other cities buy their supplies.

At the time when the Southern States were seriously contemplating secession, Pittsburgh would seem (to the average man of today) to be in a precarious position. It had been accustomed to ship coal, iron, agricultural implements, and other products to the South. It would have been, therefore, not unnatural for its inhabitants and business men to at least sympathize with the seceding states. Nothing, however, could be farther from the truth.

Immediately after the election of Lincoln, the Southern States started on a period of gigantic seizure of government property. This began with the seizure of forts and arsenals, which were located within the boundaries of the dissatisfied states. Then, with many southern states-rights-men in the cabinet of President Buchanan, much ordnance and other munitions of war were shipped south. This was particularly true of the Secretary of War, Floyd. Mainly

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through his efforts several northern arsenals were relieved of much of their supplies, which were ordered south. Among the victims of such an order was the Allegheny Arsenal, located at Lawrenceville. An order was received by Major Symington, officer in charge of the arsenal, to ship one hundred twenty-pound guns to New Orleans, destined for Texas. The order was received on December 23, 1860. (1) The moment this order became known to the people much excitement resulted. A petition, signed by a number of influential citizens was sent to the mayor requesting him to call a public meeting, for the purpose of preventing the removal of the guns.

The Commander-in-Charge of the arsenal failed to give a satisfactory answer as to the destination of the guns. As a result, a meeting was called for the 27th of December; where a committee composed of Messrs. Wilkins, Shaler, Robinson and Williams read an order addressed to President Buchanan. (2) Excitement ran high. After passing a few resolutions expressing indignation and injustice at the removal of guns, the meeting adjourned.

Excitement went a pitch higher when General Moorhead received an answer to his telegram sent to Edwin M. Stanton, Chairman of the Committee of Military Affairs, to the effect that the shipment of the guns was to be prevented. (3) A contract had been made with the “Silver Wave” to carry the guns to New Orleans, (4) and the guns were being hauled to the wharf, when the above answer was received. Plans were prepared for the forceful prevention of the removal of the guns, when the Floyd order was countermanded, January 3, (5) and further trouble was avoided. These happenings clearly show that Pittsburgh was anything but in favor of secession.

As has been stated before, Pittsburgh was considered the “key to the west.” It would, therefore, be of great value to ascertain Pittsburgh’s efforts in helping to withstand the Confederate attack in the west and its contributions to this end.

In this respect the spotlight is turned on Ellet’s Ram Fleet, which was a part of the Mississippi Flotilla. It was the object of the flotilla to co-operate with the land forces
under Grant. It was Ellet’s purpose to repulse the rebel ironclads around Memphis, Island No. 10, and other southern strongholds. (6)

With this end in view Ellet purchased five of the nine boats, which were to constitute his fleet, at Pittsburgh. These were the Lioness, Sampson and Mingo, “three powerful Ohio river stern-wheel tow boats” and the Fulton and Homer, “two small stern-wheel tow-boats, as tender and dispatch boat for the fleet.” (7) In addition to these, one battery barge was also purchased here. Ellet in making his report to Commodore Foote, refers to the Pittsburgh tugs as “three of the strongest and swiftest stern-wheel coal tow-boats.” (8)

These were obtained as a result of instructions from Secretary of War, Stanton, March 27, 1862, which ordered Ellet to proceed immediately to Pittsburgh, Cincinnati and New Albany and take measures to provide steam rams for defense against ironclad vessels in western waters. (9)

To see that Ellet’s motive and Stanton’s purpose were realized we need only to study the engagements of the Ram Fleet. At Memphis and Vicksburg it did memorable work, but more noteworthy was its engagement up the Yazoo where Farragut and Grant profited as a result. (10)

When the North proclaimed the blockade of the southern ports, ironclad vessels had not as yet made their appearance in the Navy. It was not until August 3, 1861, that Congress made provision for the investigation and construction of ironclad steamships or steam-batteries. (11) As a result of this act, three ironclad vessels were recommended to be built. Seventeen proposals were submitted to the board appointed by the Secretary of the Navy. Of these only three were accepted, being those of J. Ericson, New York; Merrick & Sons, Philadelphia; and C. S. Bushnell & Co., New Haven, Connecticut.

J. Ericson, as is commonly known, built the Monitor, which won that ever famous engagement with the Merrimac in Hampton Roads, March 9, 1862. This resulted in an increased number of orders for ironclads. Almost immediately after the contest, the government issued orders for ten Monitor type batteries. (12)
Pittsburgh's Industrial Contributions to Civil War

Pittsburgh also profited indirectly by the Monitor-Merrimac engagement. A contract was awarded Mason and Snowden in 1861, for the construction of a Monitor type boat. The specifications were somewhat different from those under which J. Ericson worked. This boat which was christened the Manayunk, was not launched until December 18, 1864. The cost was approximately $583,000. (13)

Though only a third class Monitor, it was nevertheless four times the size of the original Monitor, being 224 feet long, 33 feet wide and drawing 14 feet with a tonnage of 1034. (14) Thurston in referring to it says: "This vessel was pronounced by good naval authority as a most admirable boat, in all respects safe to sail around the world." (15)

Another boat of the same type which was also built by Mason and Snowden was the Umpqua. It was contracted for in 1863 and completed in September, 1866 at a cost of $595,652.66. (16) Being intended for river service it was somewhat lighter than its mate, the Manayunk. Its revolving turret—commonly known as "Cheese Box," was 9 feet high and 20 feet in diameter, being armed with an "eleven inch gun and one 150 pounder." On the other hand the turret of the Manayunk was 21 feet inside and somewhat stronger armed with two 15 inch guns. (17)

In addition to these two monitors two other smaller ironclads were built during the Civil War by Pittsburgh firms. Hartupee and Tomlinson was the fortunate firm in this case. The contract was awarded to them in 1862 although the boats were not launched until January 1865. These monitors were named the Marietta and Sandusky and were produced at a cost of $470,179.14. (18)

The production cost of these war vessels may seem trivial if viewed by present day standards, but two things must be taken into consideration: first, that the iron-ship was then in its infancy, and second, that the superdreadnaught was not even a dream.

Nor was Pittsburgh's naval energy entirely devoted to the building of ironclads, for in the field of deck plating and iron armor its position was prominent. Bailey, Brown and Co., produced half the iron plate for the Kensington, a mill-
Two other million dollar ironclads, the Meantonomah, and Tonawanda, were covered with Pittsburgh armor plate. The former was built in New York by the Novelty Iron Works and the latter in Philadelphia by the firm of Merrick and Sons. The plating for these vessels was furnished by the firm of M. K. Moorehead and G. F. McClave at a cost of $222,000.40. 

Pittsburgh also furnished one half of the armor plate for the Ironsides, an $800,000 vessel, under construction at Philadelphia. On this subject the Gazette says: “It may not be generally known that the immense iron plate for the new iron plated steamships now being built at Philadelphia by Messrs. Merrick & Son. for the government, are being manufactured in this city at the works of Messrs. Bailey, Brown & Co. The plates are 15 feet long, 28½ and 30½ inches wide and four inches thick.” Newspapers of Pennsylvania at that time made frequent note of the fact that Pittsburgh forges could turn out sufficient armor plates to cover every vessel in the navy.

Prior to the construction of Ericson's Monitor, the officials of the Navy Department doubted the ability of American foundries to produce plating of the 4½ inch thickness. However true the basis for their statements may have been, later facts did not support their contention. So great was the demand for iron plate that during the year 1863, in Pittsburgh alone, many rolling mills were constructed. Among these were Messrs. Lyon & Shorb, the Messrs. McKnight and Messrs. Reese, Graff and Dull. The newly constructed mill of the Messrs. McKnight had a capacity of 50 tons of armor plate per week, while Messrs. Reese, Graff and Dull's plate mill had a capacity of 100 tons per week. The plate mills were constructed for the purpose of rolling armor plate for naval use, 10 feet long, 1 to 1½ inches thick, and weighing from 1600 pounds to a ton each.

Pittsburgh’s industrial ingenuity and energy did not limit itself to naval construction but made a more enviable record in the manufacture of immense engines of war. In
the ordnance department, Pittsburgh's position is especially prominent. For these facts it is best to state the history of the Fort Pitt Foundry.

This industrial plant was established in 1803 and continued in existence until about 1870. It was originally located at the corner of Fifth Avenue and Smithfield Street where the Park Building now stands. During the Civil War it was located at 28th Street in Allegheny.

To it belongs the honor of supplying our government with ordnance for three wars: the War of 1812, the Mexican War and the Civil War. Even Perry's famous victory on Lake Erie was aided materially by the service of Pittsburgh cannon cast at this Foundry. (25) However as the Civil War concerns us most, let us turn our attention toward its contributions to the Union Forces.

Among the productions of the Fort Pitt Foundry, the big guns must receive primary consideration. The first of these, the 'Union' was a twelve inch rifled cannon, weighing 26 tons. It was completed in the latter part of May 1861 and shipped on the 31st, (26) destined for Fort McHenry. On reaching its destination it was favorably tested, much to the dismay of the troublesome Baltimoreans. A correspondent who was an eye witness of the official test wrote: "Some idea of the range of this immense missile may be formed from the fact that it fired the huge ball (of 500 lbs.) six miles. The effect was tremendous—shells were thrown through the long sand bank; the force of the firing shook the ground as no other gun has ever done before." (27) At the time this was considered the largest cannon in the world. (28) Though a subject of much comment at the time, many guns similar to the 'Union' were turned out during the period of the War. In all the Fort Pitt Foundry furnished to our government one thousand one hundred ninety-three guns, during the period ending June 30, 1865. This lot included 8, 10 and 12 inch siege mortars, 4½ inch rifled cannon, 8 and 10 inch howitzers, and 8, 10, 12, 15 inch columbiads and 20 inch "Rodmans." The total value of these contributions was approximately $1,600,000. (29)

We are prone to underestimate the value and number of guns, if no comparison is made with the total purchased
at that time. For the entire period of the war, our government purchased seven thousand, seven hundred thirty-one cannons, mortars and columbiads. (30) In other words the Fort Pitt Foundry alone furnished 15% of the entire amount of large ordinance purchased by the government for use in the Civil War.

Among the ordnance furnished by the Fort Pitt Foundry there were seventy-three 15 inch Rodmans, the price of which was $485,500.00. This again may seem insignificant to us, who in the late war have been accustomed to billion dollar appropriations, but let us not forget that only eight 15 inch guns were purchased elsewhere, which clearly shows that the Fort Pitt furnished 80% of these big guns. (31)

At this point it would not be inappropriate to observe the position held by the Fort Pitt Foundry, both at home and at Washington. From the above data it is evident that there is much truth in the statement made by the Gazette, commenting upon the outbreak of a fire there: “It is here that all the big guns are cast for the government and the destruction of these works would be almost as disastrous as the loss of a battle.” (32)

In his report for 1864, H. A. Wise, Chief of the Bureau of Ordnance says: “The Fort Pitt Foundry, with its immense facilities and very great experience in the art of founding cannon, was at first the only establishment willing and able to undertake the task of making the 15 inch gun!” (33)

The Confederates had as their main support in the manufacture of guns, the Tredegar Iron Works, Richmond. Its capacity was only two Dahlgren guns per week; this was greatly surpassed by that of the Fort Pitt Foundry, which produced twelve guns of the largest caliber per week. (34)

A product which excited much comment was the famous 20 inch Rodman gun. The first one, as would naturally be expected, was cast at the Fort Pitt Foundry on Feb. 12, 1864, at a cost of $32,000. (35) It was cast in the presence of many distinguished men, including Major Rodman, the inventor of the principle. The Gazette described the cast-
ing as "one of the greatest feats in iron founding yet achieved."

In ascertaining the facts in the greatest feat in iron founding yet achieved, it is seen that 80 tons of molten metal were required. The gun was cast hollow, and the core was kept cool by a constant stream of cold water passing through it. In the finished state it weighed 56 tons, being 20 feet long over all, (the bore being 18 feet long.) The maximum diameter was 64 inches, minimum, 34 inches. (36) It fired a 1000 pound ball from a 750 pound shell, charged with 100 pounds of powder.

This gun was also at its time the largest gun in the world; with the exception of the stone throwing bronze gun at the Dardanelles. (36)

This gun had a great moral effect upon the enemy. It seemed, however, that those firing the gun were in greater danger than those fired upon. This was due no doubt to the imperfect and somewhat primitive method of casting. That this is true can be inferred from the fact that very few such guns were cast.

The first order for shells purchased in this district by the government also came from Fort Pitt, and consisted of 440-8 inch shot and 812-8 inch columbiad shells. (37) The first contract for projectiles was also made with the Fort Pitt Foundry on April 25, 1866, for one thousand 8 inch columbiad shells and five hundred 8 inch balls of reduced caliber. (28)

From April 9, 1861, to the end of the fiscal year June 30, 1863, the Fort Pitt Foundry furnished 33,071 cannon balls, shells and other projectiles valued at something like $100,000. But the record for the production of the greatest number for the period belongs to Smith, Park & Co., who furnished 196,320 projectiles valued at $92,000. Among the firms which furnished projectiles were Anderson & Phillips, Pennock, Hart & Co., and J. C. Bidwell of the Pittsburgh Plow Works. These collectively furnished 29,537 projectiles valued at $103,085. (39) These figures, large as they are, however, do not mean much to us until we discover that they represent 10% of all projectiles purchased by the
Government during the period from the beginning of the Rebellion to June 30, 1863. (40)

From June 30, 1863, to June 30, 1865, the Fort Pitt Foundry has the record for the largest number of projectiles. For this period it sold to the Government 161,000 projectiles at a cost of $104,719. Smith, Park & Co., sold during the same period 110,645 projectiles at a price of $88.-721. Pennock & Totten furnished 5,527 projectiles at a cost of $7,636. Joseph Pennock furnished 28,260 projectiles at a cost of $61,526. (41) On consulting the House Executive Documents it is seen that during this final two year period the Pittsburgh firms again furnished 10% of all projectiles purchased by the Government. (42)

The Fort Pitt Foundry is a subject of both pride and value to Pittsburgh. As has been stated before in this paper, it contributed greatly to our Government in surmounting the difficulties of the various wars, and its last service was in helping to save the Union.

Further enlargement is necessary before the full force of this view is realized. From available records it has been found that the Fort Pitt Foundry furnished more ordnance than any other firm with the exception of the Colt Patent Firearms Co., Hartford, Conn., and Robert P. Parrott, Cold Spring, N. Y. Among the strong competitors were E. Remington & Son of Ilion, N. Y., Savage Arms Co., of Middleton, Conn., and Sharps Rifle Arms Co., of Hartford, Conn. (43) The sad part connected with this is that the Fort Pitt Foundry left no successors in the firearms field while its competitors are to-day internationally known.

Pittsburgh did its part in providing comfort for the Union boys by furnishing 19,778 blankets and 37,893 articles of clothing as well as 675 tents for the first of the war. (44)

From the Pittsburgh Evening Chronicle of September 11, 1861, we glean this item, “Four thousand sets of harness have been contracted here. Each set will harness a four mule team. About two thousand sets are now ready for delivery and the balance will be put through with the least possible delay.”
It is to be regretted and lamented that records on this subject are sadly inadequate and have for the most part been destroyed as "useless documents." (45)

However, in the Rebellion Record of Allegheny County for 1861 and 1862, we find that "No provision having been made either in this city or Harrisburg, by the authorities, in 1861, for uniforming the three month volunteers, the men demurred from going until they were suitably clothed. B. F. Jones, Esq., assumed the task of equipping one company and depositing his check for $3000 ordered the clothing to be furnished, and set about collecting the amount to reimburse himself. Over $13,000 were collected in a day or two, and with this ten companies were uniformed." (45) The material furnished consisted of uniforms, undergarments, overcoats, caps and blankets, and was furnished by the following firms: Morganstern and Brother, Louis Kiehnieson, J. M. Little, J. C. Watt, A Frowenfield and Brother, and C. H. Paulson. Of the companies outfitted, the Duquesne Greys and the Washington Infantry still survive as active military organizations.

In addition to this local contribution, Pittsburgh firms supplied the Government with 871 wagons furnished for the most part by Phelps, Parke & Co., and Mr. Aeschelman, (46) and the Gazette of September 12, 1861, says, "We learn that Mr. J. C. Bidwell, proprietor of the Pittsburgh Plow Works has received a contract from the government for the construction of fifty-four heavy gun-carriages."

Pittsburgh's splendid relief work, which unfortunately is not in the province of this paper, was aided indirectly, by the manufacture of 35 ambulances which were supplied to the government.

To keep the fires of industry burning, something like 5,500,000 tons of the famous Pittsburgh coal were mined during the Civil War. This was 423,000 tons more than for any preceding period of similar duration. (47) To transport the Civil War tonnage of coal in this district would require 75 miles of barges.

Though only a dim perspective of the industrial contribution of Pittsburgh has been obtained, still this is enough
to show that Pittsburgh with a population of only about 50,000 (48) contributed largely to the success of the Northern cause and further that there was great sincerity and unity of purpose among its citizens in their enthusiastic support of this cause.

Louis Vaira.

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