PROBLEMS OF LOGISTICS IN THE CONFEDERACY*

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For reasons which would be difficult to explain, agricultural societies have always displayed a greater marital spirit than communities whose economy rests upon a commercial-industrial basis. The ancient Assyrians, the Spartans, and the Romans of the Republican period are notable examples of ancient agricultural people having unusual militaristic traditions. To this list we might add the Prussian Junkers of the late 19th and early 20th centuries.

About the same time that Prussia became a military power under the leadership of her great Junker landlords, there appeared in the Old South a class of plantation masters whose penchance for the life of the soldier was somewhat unique in the American tradition. These plantation masters sent their sons off to battle with a reckless abandon not generally encountered in other sections of America.

But the key to victory in modern warfare is to be found not in the martial spirit, but in the successful management of logistics, transportation, supply, and finance. Competencies in these require unique skills not easily available in rural societies. Many of the South's rash leaders had proudly boasted that "one Southerner could lick a dozen Yankees," and Georgia's Senator Robert Toombs had stated that "we could whip them with cotton stalks." These statements not only ignored such simple facts that the North refused to fight with cotton stalks but the more important fact that the agricultural South suffered an irreparable disadvantage in providing those economic and industrial skills which were necessary for victory in any prolonged war.

Despite the South's industrial lag, the individual Confederate soldier was as well armed as his Northern opponent, except at the end of the war when Spencer repeating rifles were being issued to special groups in the Union Army. In fact, the Confederate Ordinance Bureau was one of the most successful of all the auxilliary enterprises connected with the army. It is significant to note however, that the Confederacy owed its ability to keep an army in the field to an ex-patriated Northerner. Its Chief of Ordinance was General Josiah Gorgas, a native of Pennsylvania who graduated from West Point as 6th in his class. Gorgas resigned his federal post in April, 1861, as commander of Frankford Arsenal in Philadelphia when he accepted a commission as major in the Confederate army. This decision, which proved to be the most significant in the South's ability to wage a long war, was motivated by three factors. One was Gorgas' intense hatred of the abolitionists who he believed were responsible for the war, and his dislike for the Republican party, an attitude not unusual among a great number of conservative Northerners. Another reason for his defection was the hostile attitude shown toward him by the Federal Chief of Ordinance, who had assigned him at a critical time to an insignificant and disagreeable post. Finally, while serving at Mobile, he had married a Southern girl, the daughter of John Gayle, former Governor of Alabama.

This quiet, masterful and dignified soldier developed the most successful bureau perhaps in either the Union or the Confederate government. He had a peculiar ability to anticipate the movements of the Confederate armies and to provide in advance for supplying munitions. He acquired the assistance of Major Caleb Huse, another transplanted Northerner who had come to Alabama to teach in the university. Huse very early in the war was dispatched to Europe where he was able to purchase necessary materials for the Ordinance Bureau before the full effects of the blockade were felt. By the end of the war a total of 600,000 stand of small arms, mostly English Enfield rifles, had been brought through the blockade. In additon to these activities, a number of armories were established throughout the South for the manufacture of rifles, revolvers, and munitions. Gorgas found the manufacture of these items extremely difficult in the agricultural South where there was scarcely any skilled labor and little suitable machinery. Also the War Department had conscripted such skilled workmen as existed, and stupidly refused to detail these men to ordinance work. Yet Gorgas persisted, and at times his efficiency succeeded in arming the Confederates better than their opponents. Such was the

*An address given at the annual meeting of the American Association of Arms Collectors, Atlanta, Georgia, October 1, 1966.

Reprinted from the American Society of Arms Collectors Bulletin 15:2-8

case at the battle of Vicksburg, where artillery however, rather than small arms, was the deciding factor.

It is significant to note that Gorgas assigned the responsibility of producing chemicals for munitions to Col. John W. Mallet, a former British subject who was educated at Trinity College in Dublin and at Göttingen in Germany. Mallet located his central laboratory at Macon, Georgia, where he made chemicals for munitions, devised substitutes for rare compounds, and invented the polyhedral shell which exploded into fragments and which might be called the ancestor of the modern rifle grenade.

The most spectacular success of the Ordinance Bureau was in the manufacture of gunpowder. When the war began the Confederacy had only one powder factory, which was on the Cumberland River near Nashville. It had a capacity of only 500 pounds of powder a day provided it could secure saltpetre. But it had no saltpetre. Besides saltpetre, essential ingredients of gunpowder were sulphur and charcoal. But it was saltpetre which always was in precious supply. Fortunately for the Confederacy, Georgia's Governor Joseph E. Brown had ordered 850 tons from Philadelphia before the port of Savannah was closed. This bonanza gave the Confederacy a desperately needed respite, and Gorgas was able to close the munitions gap just in time. Saltpetre was finally secured from new mines at the limestone caves of East Tennessee, Western North Carolina and North Alabama. Gorgas also devised and implemented a plan for niter beds in which human urine was the essential active agent. One of the officials in charge of collecting the products of these niter beds in Georgia was Henry P. Farrow. After the war Farrow became a scalawag politician identified with the removal of the Georgia capital from Milledgeville to Atlanta. Because of the surreptitious nature of his war-time activities in connection with niter beds, he became the brunt of some extremely humorous but vulgar doggerel on the part of Milledgeville's citizens.

The real pinch in the Ordinance Bureau came after 1868 when the scarce items were lead, copper and mercury. The percussion caps which fired the powder in the rifles contained fulminate of mercury and the supply came from Mexico. This supply was stopped after July 1863, when Vicksburg fell and the Mississippi River was blockaded.

The favorite gun of the field artillery was the bronze Napoleon cannon which required copper in its manufacture. Ninety percent of the copper mined in the Confederacy came from the Ducktown-Copperhill area on the Georgia-Tennessee boundary. After Bragg's defeat at Chattanooga in the fall of 1863, the Federal army took control of the Copperhill mine. It was after this time that the Confederacy resorted to salvaging copper from roofing, distilleries, and sugar kettles. Only a trickle of this material came through the blockade. This is the principle reason why Confederate authorities were forced to quit the manufacture of Napoleon cannons after 1863.

Lead for the moulding of bullets was always in precarious supply. The only mine in the South producing any quantity of lead was at Wyethville, Virginia, which yielded only 60,000 pounds a month. Transportation from this source was difficult, and skilled lead miners were scarce. Thus the principal supply of lead had to come through the blockade. The Ordinance Bureau secured additional lead from window weights, unused water mains and similar items. Also battlefields were gleaned for spent lead bullets.

The scarcity of lead was probably a deciding factor in the failure of either army to adopt the Spencer breech-loading repeater rifle. The federal army had an excellent opportunity to do so in 1861. Objections centered on the fact that soldiers were prone to fire too rapidly even with the old muzzle-loading Springfield, and thus wasted valuable ammunition. The new rifle, it was argued, would only increase this extravagance. The repeating rifle was not being mass-produced at that time either in America or in Europe, but this obstacle could have been overcome in the industrial-minded North but not in the agricultural South. It was demonstrated that the new breech-loaders could be manipulated while lying down and thus not reveal the soldier's position to the enemy. This argument was discarded when it was pointed out that smoke from black powder would reveal the soldier's position anyway. It was smokeless powder which later was to revolutionize infantry tactics. It has been suggested that, had the breech-loader been adopted, the war would have ended the first year.

The failure to adopt the repeating rifle is an excellent illustration of the conservatism of military officialdom. If either army had possessed the repeating rifle, it could have won almost any battle of the war during the time required to load the old rifle after the first volley was fired. To fire the old Springfield or Enfield muzzleloader the soldier had to reach into his pouch and take out a waxed or paraffined paper cartridge containing a powder charge and a bullet. He then tore the paper open with his teeth and emptied the powder into the barrel, and then inserted the ball with his thumb and forefinger. Next he drew the ramrod from its holder which took two different motions of the arm and then rammed the ball home, also taking two different movements. He then withdrew the ramrod and returned it to its holder, this taking four additional movements. Next he primed the gun by half-cocking it, took off the old cap, then took a new one out of the pouch and pressed it down on the nipple. Finally he cocked the gun, aimed and fired it. And if he fired it at any particular target, he probably missed it clean. It has been estimated that it took 900 pounds of lead and 240 pounds of powder to kill one enemy soldier during the Civil War. This estimate reflects the poor marksmanship of the soldier and helps to explain the importance which military officials assigned to the conservation of ammunition. Incidentally, 110,000 Yankee soldiers were killed by Confederate bullets while 94,000 Confederates were killed by Yankee bullets.

The paper cartridge described above was used in armies throughout the western world at this time. This cartridge was issued by the British to native Sepoy soldiers in India in the 1850's. These Mohammedan soldiers had a religious taboo against the use of any form of pork. Because the cartridge paper was water-proofed with lard, the Sepoys defied regulations and refused to bite off the end with their teeth. This is said to have been the issue which touched off the famous Sepoy Revolt in 1854.

That the soldier should have teeth strong enough to bite through the tough cartridge paper was one of the main physical requirements of the soldier in the 1860's. The army recruit was examined closely on this point. He might be allowed to enlist if he had a weak heart, but not if he possessed bad foreteeth. Long after the breech-loader and the metal cartridge had rendered the paper cartridge obsolete, this requirement remained as another symbol of military conservatism. In fact, the requirement stood through the Spanish-American War and the two world wars in which Americans fought. A story is told of a volunteer who came down from the upper part of the state to enlist, and was told that he was rejected because of poor teeth. "But I just wanted to kill the damn Yankees," he told the enrolling officer, "I do not intend to eat them."

Since the days of the ancient Hittites iron has been the most essential metal in the manufacture of war materials. The principle iron-producing region of the Confederacy was the Upper South. As the Federal army sliced off the ore-bearing areas in Kentucky, Tennessee, Maryland and Virginia, it became necessary to open new sources in northern Georgia and Alabama. This is what stimulated the pioneer development of the iron resources of the Birmingham district. Next to the Tredegar Iron Works at Richmond, Selma, Alabama became the greatest iron manufacturing center in the Confederacy. At the peak of production the Selma plant employed three thousand workmen. In addition to casting heavy cannon it made the machinery and hull of the Tennessee as well as gunboats for the navy. On April 3, 1865, Wilson's raid reached Selma and this great ordinance center was destroyed. While this event has received very little attention by historians, it was a catastrophe which would have sealed the fate of the Confederacy even if Richmond had not fallen a few days later.

While Georgia in 1860 was far from being an industrial state, she led all other Southern states - with the exception of Tennessee and Virginia - in the amount of capital invested in manufacturing and in the annual value of industrial products. However, her industries, like those of other Southern states, were relatively insignificant in comparison to those of the North. Also her industries were of the primary type. Grain milling for example took first rank, with lumber processing second, and cotton textiles third. Only in a small degree did she produce such things as carriages, wagons, furniture, leather goods, and iron products.

The war generated great industrial activity but it was directed largely toward munitions, uniforms, and other army supplies. In Atlanta was a large arsenal where such munitions were made, in addition to knapsacks, saddles, and field gun supplies. A rolling mill made cannon, armor plate and rails. After 1862 pistols were made there, also buttons, cavalry spurs, bridles, bits, and belt buckles, as well as the celebrated Joe Brown pikes.

Columbus in 1861 was one of the largest manufacturing cities south of Richmond. The Columbus Iron Works in 1862 was busy building engines and machinery for a gunboat, and making cannon shot. The largest sword factory in the South was there, operated by Haiman and Brother. Other Columbus industries made military caps, India rubber cloth, firearms, and uniforms.

Following the capture of Fort Pulaski near Savannah early in the war, the Savannah arsenal was removed to Macon where more than 350 workmen were kept constantly engaged in the manufacture of cannon, shot and shell, harness and other leather products. Other supplies made in the vicinity of Macon were sabers, gun carriages, surgical instruments, camp cots, sword belts, tent cloth and clothing.

Augusta became an important center for the manufacture of shoes, clothing, wagons and other army supplies. Erected on the Augusta Canal was said to have been the largest powder factory in the world, turning out during the war nearly three million pounds of black powder.

The war stimulated many new industries in the South as did World War II in our time. By 1862, thirteen new industries were established in Columbus. In 1864 the first artificial ice was made there and was used to supply Confederate hospitals. An Americus manufacturer made medicines and drugs on an extensive scale. The Marietta Paper Mill turned to making cartridge paper. At Dalton a firm made cedar canteens.

The textile industry of North Carolina owes its beginning to the Civil War. Up to this time that state had been looked upon as the Rip Van Winkle of the South, for the industrial revolution had hardly touched it. Its textile manufacturing was so limited that the state was a heavy importer of all kinds of fabrics. Under the stimulus provided by the war and the leadership of Governor Zebulon Vance, it shot ahead to become in time a leading textile state. By the end of the war North Carolina's troops were better uniformed than any in the army and she was also supplying uniforms for units from other states. In fact, there was considerable black market activities in this commodity carried on by North Carolina soldiers when certain items of military clothing found their way into the hands of civilians and even slaves.

The Confederate soldier might be characterized as a light infantryman. He was never overloaded with clothing. Overcoats were a peculiar problem. They were certain to be discarded and lost if the army had to do any marching or fighting. They were also discarded during periods of mild winter weather. The Confederate

soldier seemed to depend upon captured Yankee overcoats, which he found difficult to dye because of their dark blue color. At the end of the war he was most likely to be equipped only with good underclothing, a common suit and a heavy wool blanket. It mattered not what color he wore so long as it was not blue. Any sort of headgear might be worn. He was inclined to prefer any kind of hat to the regulation military cap.

One of the greatest deficiencies was in shoes, the Confederate soldier being as poorly shod perhaps as any soldier in any modern war. This situation was in great measure a result of poor organization on the part of Confederate authorities. For example, the procurement of shoes was under the Quartermaster Department, while harness, saddles and similar leather goods was under the Ordinance Department. Thus the two departments competed with each other in the buying of leather. Also states were bidding against the central government and against each other in their quest for leather. The supply of cowhides was occasionally supplemented by horse hides, dog hides, and hog skins. In the end almost all available leather was utilized for shoes, while knapsacks, belts and harness were made of heavy cotton.

The great deficiency of shoe-leather in the Confederate army had an important bearing on the final outcome of the war which has never been properly assessed by historians. There is an old proverb about the lack of a nail resulting in the loss of a shoe; the lack of a shoe causing the loss of a horse, and the lack of a horse resulting in the loss of a battle. It may well be that the lack of shoes caused General Lee to suffer a setback at Antietam late in 1862. It was "the Antietam victory" which prompted Lincoln to issue the Emancipation Proclamation early in the following year. This proclamation in turn ended forever the possibility of British recognition of the Davis government. This was one of the Confederacy's great diplomatic defeats. Lee might well have won a great victory at Antietam had it not been for the tremendous amount of straggling which resulted from the lack of shoes. (This straggling was further accentuated by the Confederate soldier's lack of food and his propensity for eating raw corn and green apples plundered from the Maryland countryside. Uncooked food on empty stomachs caused considerable diarrhea.) When Marylanders viewed these ragged, barefooted scare-crows under Lee's command, their pro-Southern enthusiasm was dampened, and Lee's hopes for winning the loyalty of these wavering Marylanders was lost.

Military experts have frequently commented on the advantages which Southern commanders enjoyed by fighting the war on their own territory, with shorter interior lines of communication and their intimate knowledge of the terrain. However, the other side of this question is the terrible destruction which such fighting inflicted upon Southern resources. The South's production and distribution of food supplies were never adequate. As the war progressed the armies of both the invaders and the invaded moved from impressing food supplies to direct seizure without compensation. In addition there was outright pillaging, foraging, vandalism, and destruction. One of the most damaging blows the South received was the pilfering of fence rails by both armies, for making campfires. The open range livestock industry existed throughout the South and only arable land was enclosed against the encroachment of animals. It was often the work of a life-time to get a farm properly fenced against roving livestock. Then overnight a farmer's rails would be burned and his crops exposed to the ravages of animals. By 1865 all fence rails in the vicinity of Richmond were gone and fire wood was so acute that it sold for five dollars a stick. Nothing but green pine was available for warming the soldiers in the trenches. The same situation existed in many other parts of the South, such as Georgia and the Carolinas, along Sherman's line of march.

One of General Sherman's objectives was to bring the South to its knees by striking at its food supplies. These supplies were far more meagre than one might expect in an agricultural region. Cotton had always been the principal crop and it was not easy to shift suddenly to food production. Perhaps the principal item in the diet of Southerners, both white and Negro, was pork. Before the war much of the South's pork had to be imported from the Middlewest or the Ohio Valley. This source was now gone. The South's attempt to grow its own pork was unsuccessful largely because of hog cholera. With the exception of yellow fever no disease hurt the Confederacy more than cholera. It first appeared in 1857 in Kentucky, Tennessee, and Arkansas. By 1861 it had spread to the Lower South. It caused so much damage in Mississippi that some farmers there ceased to raise hogs altogether. The summer of 1862 was marked by a three-months' drought in most of the South. Not only did thousands of hogs die from the ravages of cholera, but the corn crop was ruined as well. By 1863 cholera had skirted the lower edge of the Appalachians and was causing heavy losses in North Carolina and Virginia. The disease continued to rage throughout the war, taking a heavy toll almost everywhere. In addition, an estimated 400,000 hogs were driven from areas threatened by the Federal army.

Only a little less serious than hog cholera was a disease called anthrax which brought death to a large number of horses and mules, particularly in Alabama and Mississippi. It also attacked cattle. By the end of the war the very fine Confederate cavalry regiments which had begun the conflict were greatly reduced in the number and quality of effective mounts. The loss of Kentucky and Tennessee early in the war contributed greatly to the dimunition of available cavalry horses. Also the growing popularity of mules for plantation work had greatly diminished horse-breeding. On the other hand the Federal cavalry increased in size and effectiveness as the war progressed. The end of the conflict found many Confederate cavalrymen mounted on mules. In contrast to this situation, Lincoln's Secretary of War Stanton reported a few weeks before Appamattox that the Federal army was acquiring five hundred horses daily, which was the average number being destroyed.

It would seem that one great advantage which the South might enjoy would be its greater capacity to feed and clothe its people and its armies. This was by no means true. As the war progressed the North greatly increased its agricultural production and improved its facilities for transportation and supply. At the same

time the South's production lagged and its transportation system almost collapsed. The ironic situation developed wherein Northern agriculture far outstripped that of the South. Two or three factors are responsible for this. The war had a peculiar impact upon agriculture in the North, an area of small farms and diversified production. Without slaves, Yankee and Middlewestern farmers had already begun to solve their problem of labor scarcity through the introduction of labor-saving farm machinery. Mowers, reapers, and threshing machines had already begun to increase dramatically the production of grain and hay. As the war took more manpower from the farms, there was a marked and rapid increase in the manufacture and use of farm machinery. In fact, during the war there was a 360 percent increase in the value of farm machinery produced. At the end of the conflict Northern farms were well stocked with cattle, hogs, horses, and sheep, despite the heavy drain which the war had made upon these animals.

In the North there was a bumper crop of wheat in 1860, 1861, and 1862 at a time when poor crops were being produced in Europe. As a result, the North became a great exporter of wheat and flour after 1861. The same situation existed in regard to pork. Where in 1861 large quantities of this item went South by way of the Mississippi Valley, pork now was finding a lucrative market on the European continent. In the corn yield there was only one short year- 1863 - when a late August frost hit the corn belt. However, this resulted in only a 30 percent loss of the crop.

Sheep and wool production in the Northern and Middle states actually doubled during the war. Even in New England where the cost of maintaining sheep was double that in the West, there was an 81 percent increase in the sheep industry. While the South was desperately in need of wool for winter clothing and blankets, even Texas wool after July, 1863, was being exported abroad.

One of the best illustrations of the manner by which the war brought increased efficiency and production to Northern agriculture is seen in the story of the condensed milk industry. This enterprise was begun by Gail Borden in 1859, when he established milk condensing plants in New York and Connecticut. The war brought unparalleled demand for condensed milk, including government orders for use in hospitals, and even as army rations. This in turn created a sure and steady market for the products of dairy farmers and thus was born a new and thriving industry. In contrast, butter, cheese and milk were practically unknown in the Confederacy and remained so for several years after the war.

One of the greatest miracles of the Civil War - indeed one of the miracles of modern history - was the war financing of the Confederacy. The Confederate government operated for four years of war on about 27 million dollars of hard cash. This was the amazing phenomenon of a nation waging a long and costly war chiefly on fiat money. With this money the Confederacy paid, fed and clothed possibly 800,000 soldiers, bought supplies of war and naval vessels in Europe and carried on a civil government for nine million people. Yet despite the fact that these transactions were largely in paper, involving bonds and treasury notes, the Confederacy at the beginning of the war could procure neither paper for printing bank notes nor an engraver for making the plates. They were forced to smuggle bank note paper from New York with the assistance of Maryland sympathizers. A New York firm also furnished the first engravings, but later issues of notes were lithographed and signed by clerks. Confederate money was easy to counterfeit and immense quantities were printed in the North and circulated in the Confederacy to help debase and confuse the South's currency system. This debasement was further complicated by the fact that cities, states, towns, and even railroad and insurance companies were permitted to issue their own currency. The dizzy inflation of the Confederacy fell heaviest, as it always does, on the white-collar class, such as government officials, clerks and civilian wage-earners. J. B. Jones, the famous rebel war clerk, was so diminished by inflation that he and his family were forced to wear shabby clothing and to eat liver which was then considered as offal throughout the South. Whiskey was $5.00 a drink, butter $25.00 a pound, bacon $9.00, and shoes $125.00. A Georgia colonel paid $2,000 for a new uniform in Richmond in 1865.

One careful student of Civil War finance has estimated that the total debt of the Confederacy amounted to two and a third billion dollars in Confederate currency, which amounted to $572,000,000 in gold value. This sum represents a financial sacrifice by the Southern people amounting, on a per capita basis, to more than twice that of the Northern expenditure. Another difference should be noted: While Southerners lost every penny they spent on the war, Northerners were compensated. If they held their bonds until maturity, they actually might receive twice what they paid for them in terms of gold content. This point will be considered in more detail later.

The first issue of Confederate bonds was for $15,000,000. These were paid for in specie, after which the Confederacy found it exceedingly difficult to dispose of later issues, even at the high interest rate of eight percent. The government therefore had to sell bonds for agricultural produce instead of money. In this way the Confederacy secured vast stores of cotton, rice, sugar, tobacco, meat, and grain, only a small amount of which could be shipped to Europe and exchanged for cash. Since the government lacked proper warehousing for these products, much of it rotted on the railroad sidings where it was subject to moisture, rodents, and pillage. The lack of salt in the Confederacy was an additional cause of the spoilage of meat. All of this food waste occurred when soldiers in the field were on limited rations.

The chief relaince of the Confederate government was upon treasury notes without metallic backing and which bore no interest. These notes were never made legal tender. They promised repayment in dollars two years after a treaty of peace, which of course never came. Perhaps a billion and a half dollars in treasury

notes or Confederate paper money poured off the presses at Richmond and later at Columbia, South Carolina.

The Confederate government made the grave error in its first two years of war in failing to tax the people drastically, which would have alleviated this ruinous inflation. Heavy inflation finally brought a strong demand that the people be taxed more heavily to remove the redundant paper currency. There is a somewhat similar situation in the U. S. today in regard to creeping inflation, the unexpected high cost of the Viet Nam war, and the reluctance of the administration to increase taxes in an election year. As every economist knows, higher taxes are less costly than inflation, and taxes also provide for a more equitable distribution of government expenditures.

Finally, at about the middle of the war period, the Confederacy began a realistic policy of taxation. These taxes include commodity taxes, a sales tax, and a graduated income tax. The most irksome of these taxes was the ten percent tax-in-kind on agricultural products. Yet despite these later taxes, it has been estimated that the Confederacy raised only about one percent of its total income through taxation.

Shrinking away from unpopular taxation, the Confederate Congress was forced to finance through borrowing. This borrowing took three forms. In addition to domestic loans through floating bonds and the issuing of treasury notes already discussed, there was a small amount of foreign loans.

The only important foreign loan was that negotiated with a Jewish banking family of Paris, the Emile Erlanger and Company. The interesting thing about this loan was the fact that the Erlangers proposed it in the first instance, and not the Confederate authorities. It turned out to be a bold cotton speculation which brought profit chiefly to the French bankers. Judah P. Benjamin, the brilliant Jewish member of Jefferson Davis' cabinet, saw through their scheme. Before accepting it he had them to scale down the loan from 25 to 15 million dollars, and to reduce the interest rates.

The contract provided for selling $15,000,000 of Confederate bonds. The Erlangers agreed to underwrite them at 77, on the basis of a par value of 100, and the purchaser could pay in installments. The bonds bore 7 percent interest and were exchangeable for cotton at 6 pence a pound, a price about one fourth less than its price in the European market. In addition, the Erlangers were to receive five percent commission for selling the bonds.

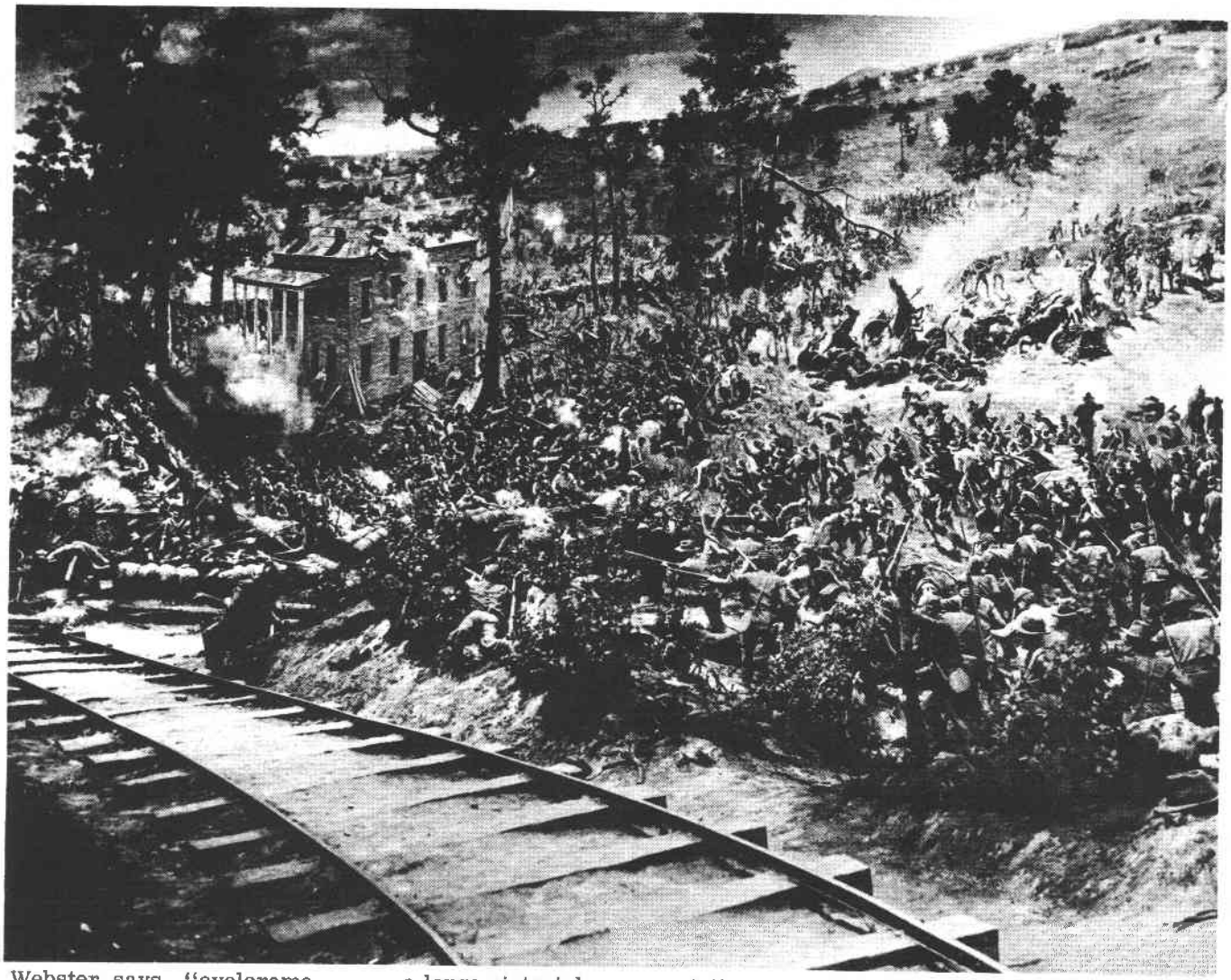
The issue was placed on sale in March, 1863, and was over-subscribed at the price of 90, chiefly by English investors. However, the bonds very soon began to decline alarmingly, due chiefly to Confederate military defeats at Vicksburg and Gettysburg. To bolster the market, Confederate agents bought seven and a half million dollars' worth of their own bonds. At the same time federal agents conducted a campaign to discredit the bonds. In the end the Confederate government realized only about three million dollars in cash. British investors lost everything. A large number of the bonds which the Confederacy repurchased were unloaded on the unsuspecting British firm of Isaac, Campbell and Company, which earlier in the war had cheated the South in furnishing supplies. As already noted, the Erlangers made immense profits on the deal.

This discussion of Confederate finance would be incomplete without a brief reference to the North's Civil War financing. At the end of the war Northern bondholders held about two and a half billion dollars' worth of U. S. Civil War bonds. These bonds had not been sold at par but were placed on the market for whatever they would bring. Consequently they were bought at considerably less than par. Also it was possible for National Banks to purchase bonds and exchange them for greenbacks and draw interest on both. The greenback acquired its name because it had no backing other than the green ink with which it was printed. Greenbacks therefore circulated at a price ranging far below par. At times they were worth only a third of their face value in gold. Generally their gold value varied from this figure to 70 cents.

When the war ended, these bondholders who were not becoming increasingly articulate in the councils of the Republican party, clamored for redemption of their bonds at 100 cents on the dollar. They feared that if the South were readmitted to the Union, Southern congressmen in Washington would oppose these financial highjenks and insist that the bonds be redeemed at their legitimate value, plus interest, of course. It was partly to forestall this outcome that the South was kept out of the Union for a decade after hostilities ended and subjected to the bitter experiences of military reconstruction.

The federal bonds finally were redeemed at 100 percent, and some bondholders made as much as 70 percent above their legitimate profits in interest. Thus one might have paid $300 in gold for a thousand dollar bond, for which he received on redemption a thousand dollars in gold, plus interest on a thousand dollars from the date of purchase.

As late as 1933 Franklin D. Roosevelt was able to refer to the South as the nation's Number One Economic Problem. The Civil War accentuated the section's economic backwardness and left untouched much more than it changed or modified. One of the things which the war and reconstruction failed to do was to make the South spiritually (and therefore genuinely) a part of the Union. This being done perhaps, hopefully, in our time, there lies ahead a great economic future for the region.



Webster says, "cyclorama . . . . . a large pictorial representation encircling the spectator, often having real objects as a foreground." The Atlanta Cyclorama is something to behold and hard to comprehend when you do see it. You enter through an underground passage coming up on a raised center section to view the cyclorama and hear the story narrated with sound effects. It is an odd feeling.

The picture is in a circle, 400 feet in circumference and contains 20,000 square feet. In addition to the picture is the, what might be called a large diorama at floor level which is scaled into the picture in such a manner that you cannot tell where one starts and the other leaves off. The picture is divided into five segments and the above is the left half of the first segment.

The "Battle of Atlanta" was painted by the American Panorama Company, William Wehner, manager, in Milwaukee, Wisconsin. It was done in 1885-1886 by a group of twelve artists mostly German who had been doing such work in Europe. The first big picture was the "Battle of Missionary Ridge" which was destroyed in Nashville of February 12, 1892, by a tornado. The second big picture was the "Battle of Atlanta" and first put on display February 26, 1887 in Detroit, Michigan.

The original field surveys began in the summer of 1885. Data was gathered at the scene of the battle and from soldiers and civilians that had witnessed much of the stirring action during the battle of July 22, 1864.