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WHO BEGAN THE WAR

A few of our readers at the South are blaming us for supporting the United States government in what they characterize "its unholy war upon the South." If we know our own hearts, we wish to do justice to all concerned, and we will simply ask those of our Southern readers who feel aggrieved because we support the government, "Who began the war?" This is an important question, and should not be answered except by reference to stubborn facts. We will state a few, which cannot be denied. During the administration of James Buchanan, the Secretary of War, John B. Floyd, of Virginia, began the work of depleting United States arsenals in the Northern States, and transferred from a single arsenal 114,000 muskets to Southern arsenals. We have this on the authority of a Richmond paper. These United States arsenals were seized by the State authorities, and the guns put into the hands of the State militia, in many instances while those States were unquestionably in the Union. Large sums of money were appropriated to arm those States—and for what purpose? Will any sane man deny that the object was to use them against the Federal government? If so, let the facts speak for themselves.

In reference to the forts, Joseph Holt, of Kentucky, Acting Secretary of War, in his letter to Mr. Hayne, of South Carolina, who came to demand the retrocession of Fort Sumter to that State, says on behalf of the Federal government, "We are equally opposed to the coercive policy practised by South Carolina, and, after reducing the pretensions of the Federal government to the lowest standard, we are constrained to hold that the United States have at least as much right to be left in the undisturbed occupation of the property which they lawfully hold, as South Carolina enjoys in the undisturbed occupation of that which she holds in contravention of the legal title vested in the Federal government."

We believe all will acknowledge that, so far as the legal title to that fort was concerned, it was vested in the Federal government. The next fact which brings us to the immediate point of war is found in the correspondence of Gen. Beauregard and Major Anderson. At 11 o'clock, p. m., April 11, the former addressed the latter, inquiring "the time at which you will evacuate Fort Sumter, and agree that in the meantime you will not use your guns against us unless ours shall be employed against you." Major Anderson replied at 2½ o'clock on the morning of April 12th, that "I will, if provided with the necessary means of transportation, evacuate Fort Sumter by noon on the 15th inst., should I not receive, prior to that time, controlling instructions from my government, or additional supplies, and that I will not in the meantime open my fire upon your forces, unless compelled to do so by some hostile act against this fort or the flag of my government." Who began the attack? Is it not a fact that General Beauregard opened fire on the batteries of Fort Sumter in two hours after the date of Major Anderson's reply? Who can deny this fact? Certainly no man in his senses. How was this attack received by the government at Montgomery? Mr. Davis was not able to answer the call of the multitude; but his Secretary of War, L. Pope Walker, used the following language:—"No man," he said, "could tell where the war this day commenced would end;

but he would prophesy that the flag which now flaunts the breeze here, would float over the dome of the old Capitol at Washington before the first of May. Let them try Southern chivalry, and test the extent of Southern resources, and it might float eventually over Faneuil Hall itself."

Secretary Walker says the war was commenced that day, April 12th, and, of course, had reference to the attack on Fort Sumter. He furthermore says, and as a high officer at the head of the War Department, the intimation had a marked official significance, that he would prophesy the capture of Washington, for certainly no sane man could ever suppose that he expected to have the Confederate flag float over the Capitol at Washington without first driving out the Federal government, and this could not be done without carrying the war to that city. Furthermore, if it should ever float over Faneuil Hall, it could only be by the subjugation of the city of Boston, to say nothing of any other portion of the North. The Proclamation of the President of the United States was not issued until three days after the attack upon Fort Sumter, and yet in the face of such facts as these, our Southern friends say we are making unholy and wanton warfare upon them. We ask them in all candor, if it would not appear upon the page of history one of the most cowardly things in the world to see a free people tamely allowing their government to be driven from place and power without an effort to sustain it?

ARMSTRONG GUNS DENOUNCED.—BREECH-LOADING CANNON.

In the London *Mechanics' Magazine* of April 26th, a brief report is published of a lecture lately delivered before the United Service Institution, by Commander Scott, R. N., in which he expressed the opinion that the Armstrong gun will not do for the navy. He corroborated the reports respecting the shot of this gun being defective by the lead bands stripping off. He had seen targets cut to ribbons, not in round holes, but by fragments of the lead from the bands. This occurred in experiments where a screen, placed within 20 yards of the gun, had to be replaced several times. At Devonport he had seen a 100-pound shot fired from the Cambridge gunnery ship with an Armstrong gun, and the lead band went one way while the shot went another. He also stated that in China, the breech screws of the Armstrong guns could scarcely be moved after being out one night in the damp atmosphere. He also asserted that, for short distances, the old smooth bored guns were superior, as the initial velocity of the round shot was about double that of the Armstrong shot.

Commander Scott stated that he preferred plain iron shot in preference to that having lead bands. Nothing, he asserted, could prevent the stripping of the lead casing. He also asserted that, when conical shot was made very long, it was not so accurate as round shot. The long shot do not always fly point foremost, but frequently sideways. In experiments made at Shoeburyness, the target gave evidences of having been struck in this manner. In striking the straight sides of a ship, long conical shot were liable to be deflected at an angle and to glance upwards. It is of great importance, he stated, to obtain a light shell, as the strain upon the gun was in proportion to the inertia of the shot in imparting motion to it. Round shot has the advantage in a rifled cannon at short range. Commander Scott depreciated the use of built-up guns, such as those constructed of several parts, like the Armstrong and Blakely cannon.

The editor of the London *Mechanics' Magazine*, in a leader, refers to this lecture, and asserts that it confirms the position taken by that periodical against the Armstrong gun—that it was defective in construction and inferior to common bronze guns for the purposes of war. It asserts that the British people are being hoodwinked respecting the superiority of this gun, and that Sir William Armstrong has been patronized by government officials, to the great injury of other inventors who had superior guns.

It appears strange to us that artillery and naval officers, who have the most interest in the Armstrong gun, and who have used it, should not have come out and denounced it, if it is so defective as has been represented. They want the best guns which can be obtained, and not such as will be more destructive to themselves in battle than the enemy. If, then, the lead bands of the Armstrong shot are so liable to fly

off and kill friends instead of foes, we would expect the officers of the army and navy who use them to protest against their employment. Thus far this has not been done, which would lead us to infer that the London *Mechanics' Magazine* may be mistaken; but certainly, we believe it has no interest but that of the public to subserve in the position which it has taken, and this gives us some confidence that its editor may be on the right side of the question.

As for the screws of the Armstrong guns being unmanageable, after being exposed one night in a damp atmosphere, this was a very poor argument advanced against them by Commander Scott; a little oil or grease on the screw can prevent all such troubles. And as for the lead bands of the conical shot coming off, this is no fault of the gun but the shot. We believe that lead bands may be cast upon conical iron shot in such a manner that they will not fly off. If we cast the iron base of a conical shot with three narrow deep grooves around it, instead of one broad thin groove, and cast the bands in these, no danger need be feared of their flying off. The bands will form in this case thick rings, and projections may be cast in the iron to hold them from slipping. Good breech-loading cannon and reliable solid shot would certainly be the most effective artillery.

EXPERIMENTS WITH CANNON AND SHOT.

On Saturday, the 18th ult., by special invitation, we witnessed experiments with a rifled cannon and the expanding shot of Messrs. Hotchkiss, illustrated on page 293 of the present volume of the SCIENTIFIC AMERICAN; also some trials with the breech-loading cannon of Mr. G. W. Bishop, of Brooklyn, the foreign patents for which were secured through this office. The place for conducting the trials was a level plot of ground on the shore of Jamaica Bay, L. I.; it was very favorable for the purpose, but the wind was high and gusty. The cannon used for the expanding shot was a bronze 6-pounder, rifled with a regular twist; but with shallow grooves somewhat broader than the lands, to prevent stripping of the lead. The conical expanding shot weighed 14½ lbs.—8½ more than spherical shot for the same gun; the charge of powder was only 11 ounces, and the distance from the target was 1,300 paces. The firing commenced about 2 p. m., and was continued throughout the whole afternoon. The firing was wide and irregular. This was owing in a great measure to bad powder, strong gusts of wind, and the want of a perfectly level platform for the gun carriage. The shot being so heavy for such a light gun, the recoil was very great; this tended to give unsteadiness to the carriage. A large number of military men and others interested in war implements were present. The great range of the expanding shot with such a small charge of powder, excited the surprise of all present. This is due to the complete absence of windage. The perfect security of the lead bands gave great satisfaction to those who witnessed the trials.

Bishop's breech-loading cannon is a smooth bore iron 12-pounder field piece, similar in form to the Dahlgren guns. The breech piece consists of a conical moveable iron plug, fitting into an opening in the rear of the cylinder. It swings on a vertical axis situated at one side, and it is moved in and out with ease and rapidity by a lever. It is immeasurably superior to the screw and loose plug of the Armstrong gun in being more easily operated. One very ingenious feature in the construction of the breech are a set of expanding dogs, moved by a small screw on the outside of the plug. These dogs are expanded when the breech is closed, and the discharge tends to make them fit more tightly, and completely prevent leakage. On the other hand, they are drawn together when the breech has to be opened, and this permits of its easy withdrawal. Very few shots were fired with this gun, but these were sufficient to show the facility and rapidity with which it could be loaded; it created a very favorable impression.

In Belgium, the government has ordered the construction of some railway carriages for the especial conveyance of sick persons, which contain a suitably-furnished bed chamber, provided with special conveniences for those who may be suffering from broken limbs.