On the 17th of April, Judge Larrabee enlisted as a private in the Horicon Guard, an independent militia company, which had made a tender of its services for the first Wisconsin regiment, just called for by the general government. Judge Larrabee's prompt and energetic action in support of the war, did much to arouse the enthusiasm of the people, and promote the enrollment of volunteers. Before his company arrived in Milwaukee, he was elected a second lieutenant, and acted promptly in that capacity.

Other regiments, however, were soon called into service, and Judge Larrabee was commissioned by Gov. Randall, major of the Fifth Wisconsin, May 28th, 1861; and marched to the front in July, arriving on the Potomac early in August, where he saw much hard service on the lines, participating actively in the exposures, hardships, and dangers incident to war. The Fifth was first assigned to Gen. Rufus King's brigade, and constructed the earthworks on the south side of the Potomac, known as Fort Marcy; but was soon after attached to Hancock's brigade, in Gen. W. F. Smith's division.

The men passed through five drills every day, the monotony of which was sometimes relieved by war's alarms—and which, whether true or false, aided in preparing the men for prompt action when the foe should really appear. A correspondent, writing Oct. 25th, relates this incident: "About noon, in some unaccountable manner, news reached our camp that our gallant Major Larrabee was surrounded by a superior force, and was having a desperate fight, and the rest of the brigade rushed out on a double quick to the rescue. They found the major and his command quietly preparing to return to camp, not having seen Seceshers enough to engage a corporal's guard."

While on a large foraging expedition, Major Larrabee participated in the affair at Lewinsville, Sept. 11th, 1861. Capt. Emerson, of the Fifth Regiment related, that on that occasion, Maj. Larrabee was ordered forward with the five companies composing the left wing of the regiment, to support Griffin's battery. Having disposed his men first behind the crest of a hill, on the right of the battery, he ordered every man of them to lie down, concealed from the enemy's view, so that if he should be bold