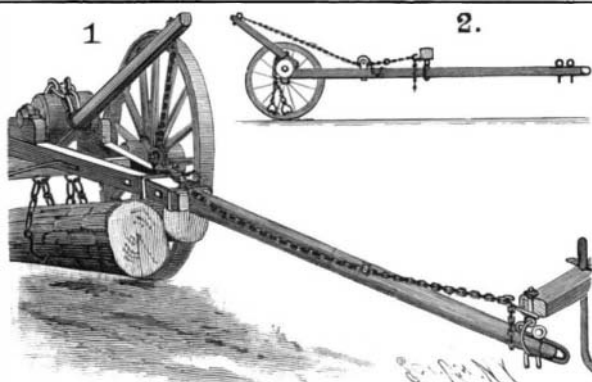


**A NEW LOG LOADER.**

The illustrations herewith refer to a new contrivance for loading logs on high-wheeled trucks, which is intended to do away with the use of hand windlasses and similar machinery. The device has been invented and patented by Mr. William Brough, Jr., of Warren, Tyler County, Texas. The general plan of the device may be readily understood from the illustrations. In the cut presenting the two views, Fig. 1 shows the position of the device with the log raised in position for hauling and Fig. 2 gives the side elevation of the truck, showing the position before loading. The truck is provided with high wheels and a common form of wagon tongue. Directly over the axis of the wheels is a roller or support which serves as a fulcrum for the sweep. At the lower end of this sweep is attached the chain and grapple used in hoisting. At its upper end another chain is attached and this passes around a revolving wheel fastened to the top of the tongue, as shown in the illustration. The end of this chain is attached to a ring which slides along the tongue and may be fastened to a clip at the end of the tongue or yoke. When the device is to be used, the sweep is turned back and the grapple is made fast to the log to be raised. The team is then hitched to the end of the chain and driven forward, thus pulling the chain and moving the sweep, which in turn moves the roller, winds up the chain on the fulcrum and raises the log into position for hauling. When the team has drawn the chain far enough to raise the log to the desired height, a pin is slipped through a link of the chain just in front of the wheel, which prevents it from slipping back. A rod may be used to operate the sweep in place of the chain, though the chain is generally found preferable. It will be seen that the contrivance is exceedingly simple and durable.



DETAILS OF BROUGH'S LOGGING TRUCK.



IMPROVED LOGGING TRUCK.

**THE BATTLE OF THE YALU RIVER.**

The greatest naval battle of modern times was fought between the fleets of China and Japan on September 17, 1894, while Chinese transports were attempting to land troops at the mouth of the Yalu River. When the Chinese fleet sighted the Japanese fleet it steamed out to meet it. The formation of the Chinese fleet when in the open water was that of an accentuated crescent, while the Japanese were in a single line, with the Matsushima in the center. Admiral Ito, after the first few rounds had been exchanged, signaled the Japanese ships to bring their guns to bear first upon one flank, then upon the other of the enemy. The Chinese fleet then formed in a single line, the distances varying from 7,000 to 12,000 feet. The Chinese

aim was bad. The Chinese admiral soon saw that his position was desperate and ordered the formation of the line broken. He sent three ships against the

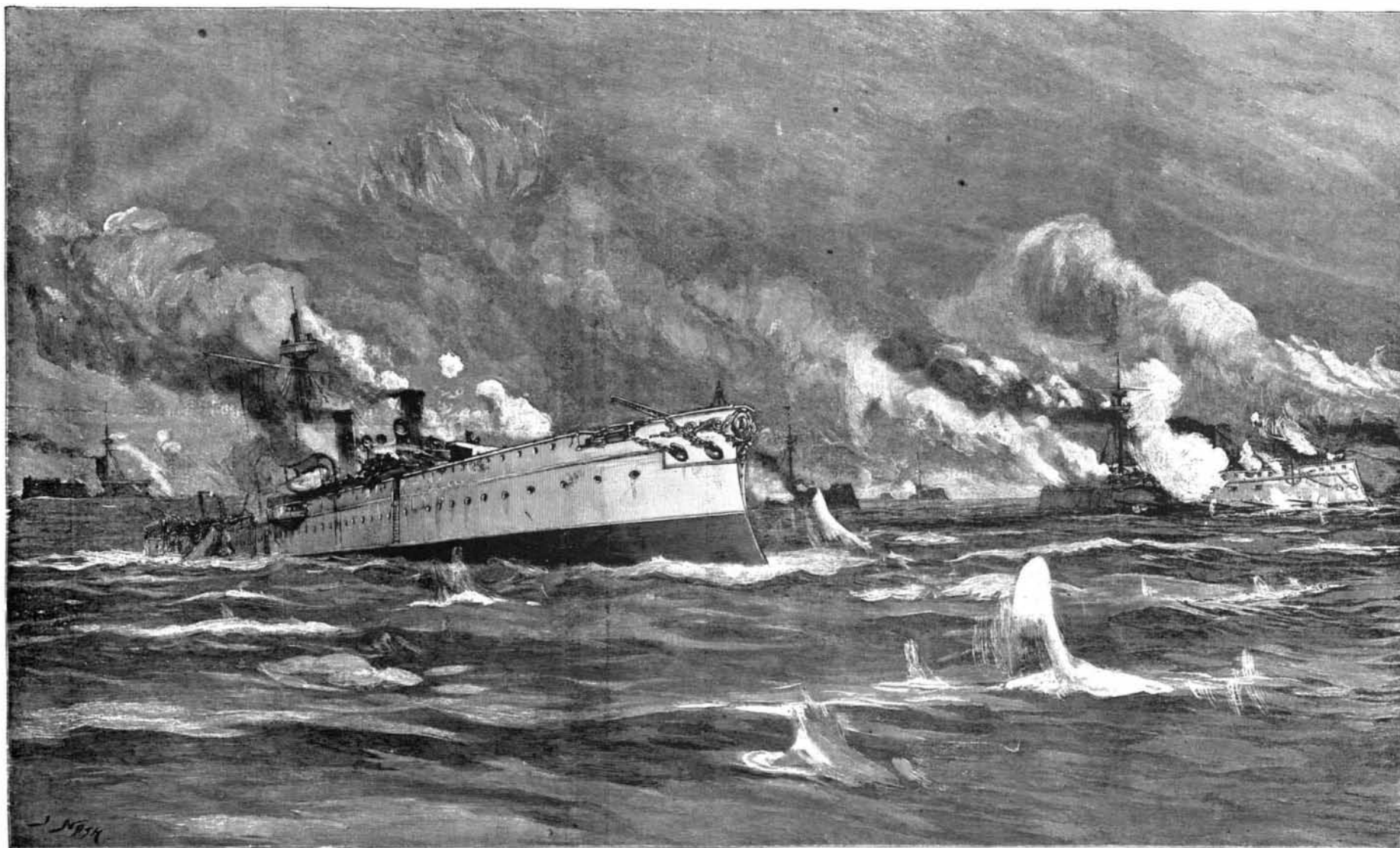
Japanese line at full speed. It was about this time that the Lai-Yuen, the Chih-Yuen and the Chao-Yung were sunk. The Chinese cruiser Chih-Yuen, commanded by Captain Tang, closed with one of the enemy's ships with the intention of ramming, but was herself then attacked by four Japanese ships, which closed around her. The Chih-Yuen, under this combined fire, was ripped up by shots under the water and went down with all on board. This is the feature of the battle we illustrate. The flagship Matsushima had been the object of the Chinese attack throughout the fight. A Chinese shell struck and dismounted a quick-firing gun, and the commander and the first lieutenant were killed, 120 of the crew were also lost. Admiral Ito transferred himself and his staff to the Hoshidote, and in a short time was in the thick of the fight. The total loss of the Chinese, including the cruiser Kwang-Kai, which was blown up while making her escape, was five vessels.

The quick-firing guns gave the Japanese an immense advantage, scattering showers of splinters, occasionally setting the Chinese ships on fire and riddling everything that was not protected by armor. In the course of the action one of the smaller Japanese ships was seen with her propellers out of the water and her bow nearly under. Another was seen to be on fire, enveloped in flames and apparently sinking.

The Yoshino and Matsushima were burning fiercely. The former, after receiving two shots each from the Ting-Yuen and Chen-Yuen, was enveloped in a cloud of white smoke, which lay heavily on the water and completely covered the ships. The Chinese vessels waited for the cloud to clear and got their port guns ready, but before the Yoshino became visible their fire was diverted by a Japanese vessel of the Matsushima type, which came on at a distance of 2,200 yards on the port quarter. The guns laid for the Yoshino were fired at the newcomer, with the result that she began to burn. Whether or not these three Japanese ships received mortal injury was uncertain. In the latter part of the battle the Chinese ironclads ran short of common shell and continued the action with steel shot. This was ineffective, as the Japanese vessels had no armor. The two ironclads fired 197 rounds with 12-inch guns and 268 rounds with 6-inch guns.

About 4 o'clock the Ting-Yuen was badly on fire forward, the smoke impeding the working of the fore turret. Before 5 o'clock the Japanese had ceased firing, and the distance between the fleets was rapidly increasing.

In regard to the conclusions to be drawn from the battle, it may be said that the Chinese battleships



THE GREAT BATTLE OF YALU.