be thrown into an undulating motion, more especially as they are checked, each of them, by four bridle stays.

At four o'clock the gates were closed against carriages, and were not opened again until nine, when the storm had completely subsided. As soon as it was over, the platform returned at once to within 10 in. of its horizontal position at the centre, and although the bridge was out of line, carriages could cross it again as usual.

The framework of the roadway did not suffer the slightest injury during the storm, and not a single timber, plank, or bolt was broken or displaced. Moreover, strange as it may seem, not a single wire rope of any kind about the bridge was broken (a fact much to the credit of the makers); it was only the end fastenings that failed. Owing to the bad quality of the iron, some of the ring bolts in the chord above, and some in the rocks below, were broken, while in other cases the rocks moved, or being loosely stratified, treacherously yielded to the strain. Nor did any socket fail. The only instance of a rope giving way in a socket, was in one of the bridle stays, and this, upon examination, proved to be unskilfully made. All repairs were promptly made, with stronger fastenings to the guys, and the bridge was restored to perfect line, in good condition, and, if anything, more secure than ever against accident. During the worst of the storm the towers stood as firm as a rock. The foreman in charge ascended to the top in the afternoon, and could not perceive the slightest vibration.

Altogether, there was every reason to be proud of the manner in which this bridge withstood the trial, and the fact of its having escaped with so little injury has inspired more confidence in those who are in the daily habit of using it. It suffered much less than Telford's Menai Bridge during a similar storm some years since. On that occasion it will be remembered that the platform was broken up, and part of it carried away.

Three features in this bridge may be pointed out, which, in conjunction with the guys, materially contributed to its safety. First, the hollow iron studs (gas-pipe) between the cables and roadway at the centre of the bridge, causing them to move together as one. Secondly, the bridle stays serving to check the vertical vibrations in the cables; and, thirdly, the rolled iron bars fish-plated together under the lower chord of the side truss, forming as it were, a continuous chain from end to end of the platform. Without this iron chain the wooden chord would have been pulled to pieces. In order to check the action of the wind on the centre of the bridge where the guys cannot reach it, a system of horizontal braces was adopted. Two small steel wire ropes are tightly strained from cliff to cliff, crossing each other at nearly right angles under the centre of the bridge. When under strain the bridge was attached to them in such a manner as to give it an initial power of 10 tons to meet the force of the wind, the moment it begins to disturb the condition of repose. Up to that moment the strain is on the rope, not on the bridge, and after that there is a power of 50 tons to keep the bridge from vibrating more than 10 in., while the vertical play of 3 ft. due to changes of temperature, produces no sensible effect upon the braces.