The first duties Mr. Weston had to perform on entering the Geological Survey consisted in testing (by cutting and polishing) the characters and adaptability of ornamental and semi-precious stones, of which Canada has a great variety, and it was important to ascertain their uses and values. The non-metallic economic rocks and minerals which he thus brought into notice have added much to our knowledge of the latent wealth of Canada. Another branch of his duties at this period consisted in "developing" fossils, or preparing them for more ready description and illustration. This he did by skillfully filling up breaks, repairing accidents, and by removing rocky matter which covered or obscured them. His delicacy of manipulation allowed him to do this work accurately and artistically.

Mr. Weston's training in England was under his father, and while it gave him a good insight into the art of the jeweler and lapidary, it did not include much of a scientific character. His opportunities on the Geological Survey, however, enabled him to acquire a considerable knowledge of geology, lithology, and microscopy, and he soon showed that he was just the man required to fill the place which he occupied until his retirement, 35 years later.

By going on trips to the field with the more experienced members of the staff, he learned by degrees to do good original work in several branches of geology. The first of these excursions was made with Mr. James Richardson and myself, in 1863, to the Saint Francis River. This was the precursor of many independent journeys occupying from a few weeks to whole seasons, and extending from the coast of Labrador to the Rocky Mountains. In these days the more distant parts of the country were inaccessible except by one's own primitive outfit, until the white man gradually spread into large sections of the regions which were uninhabited when Mr. Weston first set out.

He was particularly expert in collecting fossils, and did much good work in this line in various formations and in widely separated parts of the Dominion. He had a kind of intuitive knowledge as to what beds or what particular spots were likely to yield organic remains, and his quick eye immediately detected anything like a fossil. He thus discovered them in numbers of cases where the rocks had been given up as hopeless from the paleontologists' point of view. He directed his attention to finding new forms or those parts which might be lacking in order to complete a specimen for specific description or illustration. Thus his collections were made judiciously, and they were not burdened with great numbers of duplicates, especially where transportation was expensive or difficult.