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UPON THE ELECTRICAL EXPERIMENTS TO DETERMINE
THE LOCATION OF THE BULLET
IN THE BODY OF THE LATE PRESIDENT GARFIELD;

AND UPON

A SUCCESSFUL FORM OF INDUCTION BALANCE
FOR THE PAINLESS DETECTION OF METALLIC MASSES
IN THE HUMAN BODY.'

BY ALEXANDER GRAHAM BELL.

(A paper read before the American Association for the Advancement of
Science, at the Montreal meeting, August, 1882.)

THE subject of my present paper recalls a time of intense excitement and painful suspense. The long, weary struggle with the untimely death-wound—the prolonged suffering borne so bravely and well by the lamented President Garfield—must still be fresh in every recollection. The whole world watched by his bed-side, and hopes and fears filled every passing hour. No one could venture to predict the end so long as the position of the bullet remained unknown. The bullet might become safely encysted, but, on the other hand, recovery might depend upon its extraction. The search with knife and probe among vital and sensitive tissues could not be otherwise than painful and dangerous; and the thought naturally arose that science should be able to discover some less barbarous method of exploration.

Among other ideas¹ the thought occurred that the bullet might produce some sensible effect in modifying the field of

¹ A preliminary notice relating to this paper was published in the *Comptes Rendus* of the French Academy of Sciences, Oct. 24th, 1881.

² See Appendix, note 1.