NOTE ON THE ORIGIN OF THE TERM "barn"

by

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Some time in December of 1942, the authors, being hungry and deprived temporarily of domestic cooking, were eating dinner in the cafeteria of the Union Building of Purdue University. With cigarette and coffee the conversation turned to the topic uppermost in their minds, namely cross sections. In the course of the conversation, it was lamented that there was no name for the unit of cross sections of $10^{-24}$ cm$^2$. It was natural to try to remedy this situation.

The tradition of naming a unit after some great man closely associated with the field ran into difficulties since no such person could be brought to mind. Failing in this, the names Oppenheimer and Bethe were tried, since these men had suggested and made possible the work on the problem with which the Purdue project was concerned. The "Oppenheimer" was discarded because of its length, although in retrospect an "Oppy" or "Oppie" would seem to be short enough. The "Bethe" was thought to lend itself to confusion because of the widespread use of the Greek letter. Since John Manley was directing the work at Purdue, his name was tried, but the "Manley" was thought to be too long. The "John" was considered, but was discarded because of the use of the term for purposes other than as the name of a person. The rural background of one of the authors then led to the bridging of the gap between the "John" and a "barn". This immediately seemed good, and further it was pointed out that a cross section of $10^{-24}$ cm$^2$ for nuclear processes was really as big as a barn. Such was the birth of the "barn".
To the best knowledge of the authors, the first public (if it may be called that) use of the barn was in Report LAMS-2 (June 28, 1943) in which the barn was defined as a cross section of $1 \times 10^{-24}$ cm$^2$.

The authors would like to insist that the "barn" is spelled just that way, that no capital letter "b" is needed, and that the plural is "barns" with no letter "e" involved, and that the symbol be a small "b". The meanings of "millibarn" and "kilobarn" are obvious.