

they are illustrated by experiment the more students attend. For a full course of lectures in Physics and Chemistry it has cost me about \$5,000, in apparatus. I prefer a small annual sum for outlay in apparatus to large sums expended at long intervals. You can equip a college which does undergraduate work only with all the apparatus necessary for scientific teaching for \$10,000 and a small annual outlay to sustain it. But," added Dr. Chandler, emphatically, "you must have the right man to purchase and use your apparatus. You must have the right man."

Dr. Harris, of Amherst, in reply to my question about outlay for apparatus, began as did all others, "Everything depends upon your man." Foolish expenditure, he said in substance, has been the order of the day. Thrée dollars out of every four expended for scientific apparatus has been money thrown away. Many professors do not know what they want, and they buy for the purpose of making a display. They get expensive pieces of apparatus which they do not know how to use, and which, therefore, soon get out of order. But they put the price in the papers, and people think the college must be a great institution, because the apparatus cost so much. Other professors have scientific hobbies, and expend money for apparatus which can be of no benefit to the students. The public pay the bill, and imaginé that they are making provision for the higher education of their sons, when they are only paying fancy prices for scientific

hobb  
fessc  
\$1,0  
you  
Ot  
state  
instr  
unde  
and  
to-ni  
come  
a sav  
cepti  
char  
by m  
state  
to do  
selve  
of th  
If  
inter  
has  
wou  
the  
duty  
Uni  
relin  
dest  
unt  
beg  
tha  
ma