

practical working conditions, of eighty-five to ninety, or even ninety-five, per cent.

The question that now immediately confronts the physicist and engineer, in the great problem of supplying the world with a new ultimate source of power adequate to the present and future demands, is to put this free, universal, unlimited supply of energy, *without any transformation of it*, to directly actuating our magneto-electric machinery already made.

The present methods of obtaining electrical energy from mechanical energy through heat from chemical energy cannot meet the requirements of the present condition, and needs, and intelligence, of the world.

The direct application, without any transformation, of the magneto-electric energy of solar radiation will mark the next epoch of man's history and create and minister a new age of the world.

Two classes of perhaps possible methods of making this direct application of radiant solar energy, and some experiments begun under one of them, were briefly mentioned.

THE POPULAR YOUNG MAN.

Yes, Charles Dolasfund was a good sort of fellow, and though it might be said that he had not a close friend to his name yet it is none the less true that he had no one to wish him the least misfortune. A jovial fellow who gave the hardest grind as warm a welcome as the more frequent caller. His room was generally open all hours of the day and night, and call when you would, a crowd of fellows might always be found there.

One evening last week I dropped in to have my usual evening chat with him, and luckily found him alone. He was leaning back on his chair, his feet on the window sill, a "Descriptive" upside down on his knees, leisurely puffing at a pipe and watching the smoke curling and floating out the open window. A far away look was in his eyes, and occasionally a smile flitted across his

handsome features, so pale and wan from late hours of writing ponies and cramming for the ordeals so rapidly approaching.

He turned as I approached and I noted a troubled expression on his face. Flinging myself into the nearest chair, I soon had him drawn into a conversation. "Chum," said he, "I'm going to let you into the whole affair. I'm in a pretty box now and need your help to get out. You know last Easter vacation I was down home and met a daisy girl, all smiles and dimples, and all that you know. Had a big time with her. Well, before I left I gave her an invite to come over for commencement, and now I just got a letter saying that she will be over to-morrow."

"Well, you ought to be joyful, I'm thinking," I put in.

"Joyful! Do you know that my paternal ancestor has shut down on the cash and I had to borrow some to see me through the term? How's a fellow to have any fun if he has no cash? She must go to the hop of course, must have a few drives too, and then theres the bakery and flowers for the exercises and other items ad-infinitum. I'll be busted before I begin man. Then where am I to get time to get ready for my examinations? It will be my duty to flunk in Descriptive and History, I suppose, and that means more money," and he throws his book into the corner of the room as other fellows come in, and cards and cigarettes are the order of the evening.

Well, by hard labor before the rest are up, Charles manages to pass his examinations by the skin of his teeth, and is genuinely surprised on being told so by his professors. Now, as his father has sent him some money, he must celebrate. Then the young lady appears on the scene his visits to the cottage are suddenly discontinued.

What pleasant moonlight walks they did enjoy that week, and what pleasure those long drives afforded. Then, who but they knew of the pleasant little secrets which were exchanged upon these occasions, when for the time, all thoughts of ex-