Chicago conferences aim to remove this lack of mutual understanding and appreciation, and to pave the way for a better state of things in that strike-ridden city. The conferences are to take place on successive Sunday evenings, and are seven in number. There are four representatives of the working-men to speak: namely, George A. Schilling, on 'The Aims of the Knights of Labor;' Thomas J. Morgan, on 'The Labor Question from the Standpoint of the Socialist;' Joseph R. Buchanan, on 'A View from the Labor Sanctum;' and A. C. Cameron, on 'An American Trades-Unionist's View of the Social Question.' The business-men are allotted three representatives: Lyman J. Gage speaks on 'Banking and the Social System;' Charles L. Hutchinson, on 'Is the Board of Trade Hostile to the Interests of the Community?' and Franklin MacVeagh, on 'Socialism as a Remedy.' Miscellaneous discussion is not to be allowed at these conferences, because of its obvious dangers; but at the conclusion of each address any one in the audience is to be at liberty to question the speaker on any point, provided the question is stated respectfully. It is hoped that such questions and answers will prove an instructive and profitable feature of each meeting. We shall await with considerable interest some account of these conferences, and their success.

SCHOOL OF MECHANIC ARTS AT THE ALABAMA POLYTECHNIC INSTITUTE.

SINCE manual training as a feature of general education is exciting increased interest, we are gratified to note the advance of this important movement in industrial education in the South, and present as a matter of interest to our readers the plan of the rooms and the scheme of work of the School of Mechanic Arts at the Alabama Polytechnic Institute, Auburn, Ala. This school is under the charge of Mr. George H. Bryant, a graduate of the Massachusetts Institute of Technology.

The department of mechanic arts at the Alabama Polytechnic Institute was organized in 1885, and during the summer of that year the motive plant for the whole department, and the machinery and equipment for the wood-working shop, were purchased and erected. The former consists of a 25-horse power Harris-Corliss engine, steam for which is supplied by a 30-horse power steel, horizontal, tubular boiler, for which a substantial brick boiler-house and chimney were erected.

The wood-shop occupies one half of a room 50 × 90 feet (the lower story of one of the college-buildings), the other half being taken for the machine-shop. The equipment for this shop comprises the following: 20 double wood-working benches, each with complete set of carpenter's tools; 20 turning-lathes, 10 inches swing, each with set of tools; 1 double circular saw; 1 band saw; 1 surface planer; 1 buzz planer; 2 scroll saws (power); 1 large pattern-maker's lathe; 1 36-inch grindstone. In addition to these, the tool-room is supplied with a variety of extra hand-tools for special work.

During the summer of 1886 a substantial brick building, 32 × 72 feet, one story high, with monitor roof, was built for the forge and foundery departments. This is divided into two rooms each 35 × 30 feet, each department occupying one room.

The equipment for the foundery consists of moulding-benches for twelve students, each supplied with a complete set of moulders' tools; a 14-inch cupola with all modern improvements; a brass furnace with a melting capacity of 100 pounds of brass at a heat, with a set of crucibles, tongs, etc.; also a full supply of ladles, large and small moulding-flasks, special tools, etc.

The forge-shop equipment consists of 12 forges of new pattern, each with anvil, set of smith's tools, etc. The blast for all the forges is supplied by a Sturtevant No. 3 steel pressure-blower (which also furnishes blast for the foundery cupola); and a No. 15 Sturtevant exhauster draws the smoke from the fires, and forces it out through the chimney.

In the machine-shop are the following tools: 6 14 inches × 6 feet engine-lathes; 2 16 inches × 6 feet engine-lathes; 1 22 × 22 inches × 5 feet friction-planer; 1 15-inch shaper; 1 20-inch drill-press; 1 Universal milling-machine; 1 post-drill 15 inches; 1 corundum tool-grinder; 1 bench emery-grinder. Chipping and filing benches for twelve students, each with vise, set of files, chisels, hammers, etc., are provided, one-third of the shop being set apart for this work. In the tool-room are found a good variety of cutting and measuring tools, shop appliances, etc. The full course in mechanic arts runs through three years, as follows: —

First Year. — First term, elementary mechanical drawing (one month), carpentry; second term, carpentry, turning begun; third term, carpentry and turning alternating.

Second Year. — First term, pattern-making (six weeks), foundery-work begun, moulding and casting; second term, foundery-work finished, smithing begun in forge-room; third term, smithing.

Third Year. — First term, chipping and filing; second and third terms, machine-work in metals.

During the second year, lectures are given on moulding and casting, and the metallurgy of iron and steel, and in the third year occasional lectures on mechanical subjects connected with the shop-work.

A special course in steam and mill engineering, with practice with the apparatus, is provided for advanced students who wish to take extra or special work in practical mechanics. The average yearly attendance in this department during the past three years has been about ninety.

SOME SOCIAL AND ECONOMIC PARADOXES.[1]

The Artificial is Superior to the Natural. — Reforms are Chiefly advocated and brought about by Those who have no Personal Interest in Them. — Discontent increases with the Improvement of the Social Condition, etc.

THE progress of science has always been jeopardized by two classes of persons, who, though the exact opposite of each other, are both constantly striving to circulate specious errors under its name. One of these classes of persons seeks to induce belief in improbable things, on the ground that most now accepted truth has once been held to be improbable. The other class seeks to shake confidence in established truths on the ground that they have not yet received mathematical demonstration. On the one hand, theories which are still awaiting proof, or which lie on the extreme confines between the known and the unknown, are taught as established truths; and, on the other hand, great principles whose establishment has cost ages of most laborious research are brushed aside as if they were but visionary hypotheses. The first class judges every thing by analogy; the second confronts every thing with a paradox.

The sincere searcher after truth has much more to do than merely to acquire a knowledge of the truth that has been made known: he has to distinguish between real truth and apparent truth; and this when the apparent truth is presented to him under all the outward guise of real truth, and when the real truth is presented to him in the form of error to be shunned. The two classes may therefore be called respectively 'analoguers' and 'paradoxers,' between whom the honest and uninitiated inquirer must run the gauntlet; and strong indeed must be that judgment that comes through unscathed. There will always be Stokeses and Zöllners to offer specious proofs of what seem impossibilities, as there will always be Lobatschewskys and Dr. Deemses to question geometric opinion, and Dukes of Argyll to undo the work of Darwins.

When, therefore, we approach the subject of the paradoxes of nature, we must do so fully aware that we may be placed in the category of paradoxers in general, and fully prepared to have our paradoxes discounted accordingly. And while the physical paradoxes that the universe presents are most of them too well known in our day to admit of being called in question, as they all were when first announced, I fear that in the case of social and economic paradoxes there will be no body of truth to which appeal can be made.

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I propose to point out a few of those propositions in sociology, and especially in political economy, which are now on trial, and to indicate what I regard as the probable verdict of history upon their truth or falsity. But in this latter task I do not arrogate to myself

[1] Paper read before the Anthropological Society of Washington, D.C., March 20, 1888, by Prof. L. F. Ward.