

ROCKFORD'S SUMMER COLLEGE

Philanthropic Movement for Women Started by Jane Addams.

ADJUNCT TO AN OLD INSTITUTION

Modern Facilities for Education Combined with Comfortable Living for a Trifling-Rules and Regulations.

One of the most significant and delightful outgrowths of the Hull house movement is its summer school now held each year at Rockford college, Illinois.

Her alma mater naturally watched with more than ordinary interest the work of this original and brilliant woman from its first inception, and convinced of the power and usefulness of her methods, in 1891 turned over the entire college equipment to her use for the summer months, since which time the summer school has been an annual institution.

Rockford college is beautifully situated on Rock river, its broad and rolling campus, abundantly shaded with oak, maple and evergreen, sloping down to the water's edge.

The conditions for living are absolutely comfortable, and hygienic according to the most modern standards.

Rockford college is a beautiful building, its large, airy and clean, with good beds, commodious closets, ample appointments and conveniences, with no superfluities in the way of drapery, bric-a-brac, rugs or furniture.

There are ample opportunities for rowing, but perhaps nothing so delights the summer school as the announcement that there will be a sail up the river.

Recreation, indeed, is the distinguishing feature of the school. Tennis, croquet and base ball divide the campus. Good, hard country roads, through charming scenery, lead out of Rockford in every direction and bicycle meets are daily affairs.

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MAKING OF MODERN BIG GUNS

Improved Construction Keeping Pace with Steel Development.

SMOKELESS POWDER DECREED BY THE WAR

Instructive Facts About the Manufacture, Mounting, Power, Effectiveness and Care of Modern Artillery.

Captain E. L. Zalinski, inventor of the dynamite gun and a retired army officer, writes about modern artillery in the Independent. He says:

Modern artillery owes its great increase of power to the combination of the improvements in manufacture of steel and methods of gun construction, the powder and the projectiles, without which the energy developed would be useless.

Forged steel has replaced cast metal of iron or bronze. Improved methods of treatment of the steel have secured a higher degree of available strength. The masses required for the heavier guns are so great that even the enormous hammers of 125 tons do not suffice to secure assured homogeneity of structure from end to end.

When face-hardened armor was introduced, the projectile appeared to be defeated for a time. It was found that at 1,700 to 1,900 feet per second velocities the projectiles were broken up on impact with the hardest faced armor.

The gun is made up of a central tube, which is strengthened by having shrunk thereon various so-called "hoops" and "jackets." In order that these may all contribute to the support of the gun tube, it is strained by the internal powder pressures, they are shrunk on the tube and on to each other, by being first expanded by heating, slipped to place and held there firmly by the contraction on cooling.

This is done with a degree of accuracy which the layman can hardly realize when he sees the enormous masses of steel and heavy guns. It is not too much to assert that the accuracy of work required is greater than that of a watch, even of the higher grades.

Guns constructed of large masses of steel, in the manner indicated, are designated as "built up."

Guns are also made by covering an interior steel tube with steel wire, wound at the tension which will secure the necessary support to the interior tube.

Where the gun is very light, the force and velocity of recoil becomes too great. The carriage must be made so that it will be able to absorb the recoil, and to return to its normal position as quickly as possible.

Recent attempts have been made to construct guns of medium sizes of single forgings, treated by cooling with water from the interior, to secure such adjustment of the metal as to contribute to the maximum resistance to internal pressures.

The longest authentic range obtained thus far is about thirteen miles. But the maximum ranges possible cannot be secured from guns as they are now mounted, either on land or sea.

The effective possibility of modern artillery is greatly enhanced by the rapidity of fire which is made possible by the improved power of modern guns.

Two 12-inch guns mounted in a ship's turret have been fired three times each, in 107 seconds, thus delivering an aggregate of energy, in the form of projectiles, of 400,000 tons.

The six-pounder rapid-fire gun can be fired twenty or thirty times per minute. Calibers smaller than this can be fired even more rapidly.

A better realization of the effectiveness of the rapid-fire and automatic gun can be obtained if the weight of metal is estimated which can be thrown from these guns in, say, ten minutes.

Weight of No. fired one in ten Weight of Caliber, projectile, minutes, metal.

4-inch rapid fire .. 50 100 5,000

5-inch rapid fire .. 35 150 5,250

4-inch rapid fire .. 35 150 4,500

3 lbs. automatic .. 9 600 5,400

1 lb. automatic .. 9 3,600 3,600

Mortars play an important part in the scheme of defense. About 1,000 12-inch mortars are embodied in the scheme of defense.

The mortars are placed in sunken emplacements and are directed by data obtained from range and position finding instruments.

How Guns are Mounted. The rapid-fire guns are mounted on carriages so that they may be pointed more easily than a small-arm rifle.

This has been fully exemplified in our recent naval battles at Manila and Santiago. The heavier guns are mounted so that they can be easily handled with a minimum of manual effort.

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For Three Dollars a Week.

A step away from the main building is Hill hall, with its admirably equipped gymnasium and music department.

There is Addams hall, with its scientific library, physical laboratory, apparatus rooms, studio, etc. All this splendid equipment, with free use of gymnasium, pianos, casts, library of 7,000 well-selected volumes and valuable art collections, are turned over to the summer guests unhampered by rules or regulations.

All-including abundant and wholesome board for the sum of \$3 a week.

This affords Miss Addams exactly the opportunity she wants of offering to working women a really delightful vacation at the lowest possible cost.

She has arranged with all the railroads to carry the "students" at half rate; so that the round trip costs Chicago women only \$2.50.

The \$3 a week covers the actual expenses of running the house, with enough left over for picnics, etc., though in the winter the students who find themselves sitting down to three good meals a day.

Of course, it could not be managed except the clearest head for affairs were at the helm, and that the system of work is more or less co-operative.

Four first-class kitchen maids connected with the college are retained for the summer school. These, of course, do the entire work of the kitchen, take care of bath-rooms and closets and the public rooms.

Each guest does her own chamber work and assists in the lighter duties of the house. This is so specialized and systematized that it does not seem work in the least and consumes the smallest possible amount of time, not above three-quarters of an hour a day.

For instance, two girls wash and wipe the glasses every noon. Another two at very low rate do so, as one doesn't feel quite in it unless included in the domestic service.

Besides, those who know Miss Addams feel that this is an exponent of her foundation principles of life. Within certain limits, a follower of William Morris and Tolstoy, the keynote of Miss Addams' faith is that all should labor and no one be overburdened; that work should be a joy, not a weariness; and that there should be no sharply drawn line between pleasure and work, but that the two should ever commingle.

She always does her share of the work, but when a young girl wished to take the broom from her hands she said: "Why, my child, this is not work; it is life."

Summer School Professors. Every one knows Miss Addams' power for attaching to her cause the best trained intellects and artists in the country.

Consequently, when she broached her subject of a summer school, she met with hearty cooperation from specialists in nearly every line of work.

The outcome of which is that classes in a wide range of subjects are conducted, not by the philanthropic dilettante, but by the trained educator, and not to make it too much a work-a-day world, very little preparation is required of the students out of the class room.

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The teacher of American art brings with her rare and costly prints with which to clarify and illustrate her talks.

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Their constant intermingling with older, college-bred and traveled women, to say nothing of the great opportunities offered in class work, is for them a liberal education.

Freedom in Work and Play. The beauty of the whole scheme, however, is that no pressure is brought to bear upon any one.

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"Take it back—I told you 'Battle Ax.'" Every man who has once chewed Battle Ax—who has made up his mind that he will chew it—will not accept any substitute. There is a peculiar excellence in it that can only be understood and appreciated by trying it. No matter what brand you have been chewing, Battle Ax is better, and if you will try it you will say so yourself. Remember the name when you buy again.

MANHOOD RESTORED "CUPIDENE" The Great Vegetable... Before and After... To Be Healthy and Strong Use "Garland" Stoves and Ranges.

Second Series Photogravures of the Exposition Now Ready.

Some day it will be pleasing to remember the simple, classic beauty of the Grand Court, the Plaza with its music, the broad vista of the Bluff Tract and the hubbub and gaiety of the Midway. If you want pictures of the Exposition to bring it all back to you—you want the best. Every building and all the splendor of the Exposition, views of the whole effect and views showing detail, all have been reproduced in The Photogravure.



Thirty-Two Views Now Ready.

The following views have been issued:

- 1-Opening Day, June 1, 1898. 2-Northeast Corner of Court. 3-Government Building. 4-Main Entrance Agricultural building. 5-Scene in Streets of All Nations. 6-Grand Court, Looking West. 7-Hagenback's on Children's day. 8-Grand Court, Looking South-west. 9-Fine Arts Building. 10-Nebraska Building. 11-Grand Court, Looking East. 12-Section of Fine Arts Bldg. 13-Grand Court at Night. 14-Main Entrance Horticultural Building. 15-Scene on North Midway. 16-Mar