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THE REORGANIZED SCHOOL PLAYGROUND

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CONTENTS.

THE REORGANIZED SCHOOL PLAYGROUND.

"Fifty dollars fine for anyone found trespassing on this yard after school hours." The foregoing sign was on the side of a school building in a middle-sized city of southern Arkansas, but the sign is not unique in that locality and it represents an attitude of mind that has been very nearly universal. The school yard has been one of the least utilized of our educational resources. Surfaced with a view to his convenience and used mostly in accordance with his desires, it has practically belonged to the janitor. I do not know that there are any cases where he has used it to raise potatoes and the family vegetables, but he might nearly as well have done so for any advantage that has come to the school or the children.

It must be said also that the school hours that have frequently kept the pupils in the classroom from 9 to 12 and 1 to 3, with little if any intermission, have been more for the convenience of the teacher than the good of the children. Often the pupils have not been allowed to come to school until 15 or 20 minutes before 9 and have been required to leave the yard immediately after dismissal. The gates have been closed and locked during the summer time. Under the circumstances there is little wonder that school yards have been generally inadequate in size and often atrocious in condition.

In the past 10 years the great play movement has burst upon us and has brought with it an illumination as to the educational value of play. The old-time school yard, with its limited space and its restrictive traditions, is entirely unsuited to the new uses demanded by the new ideals, and there is going on everywhere a reconstruction of theory and practice to meet the new needs. As in all reconstruction periods, however, the facilities and uses are out of harmony; and many cities, with an imperfect understanding of the problems involved, are attempting to improve conditions according to their lights.

The new activities for the school require in the first place a larger yard; secondly, a yard which is in condition to be used—which is not often the case at present; and thirdly, a yard with a certain amount of equipment for play. Some of the new uses are a space for gardening or at least raising the nature-study material, physical

training out of doors, which should be required everywhere in pleasant weather, the open-air kindergarten, the fresh-air school, and organized play at recesses and in the summer time. In Germany and England certain periods of play have long been a part of the school curriculum, and more or less of organized play is being generally introduced into the curriculums of progressive cities throughout the United States. When we add to this the after-school and Saturday and summer use of the school yard, we have altogether a new condition, which warrants far greater expenditures and care than the old-time school yard has ever received. Besides, in order to light a school building according to modern standards much open space is required. The new buildings, which are palaces beside the old, also require far more ground to give them architectural setting.

It is unfortunate that any school needs to be built in the city, because it is usually impossible to get enough land for baseball, football, and the other games that the children should play; and with the increasing congestion of cities the school yard is ofttimes the only ground that is available. The past 10 years, however, have seen the invention or introduction of several new games, such as volley ball, basket ball, indoor baseball, and tether ball, which are more economical of space than any games that we have formerly had and which help to relieve the almost impossible condition of a few years ago. It is possible now on a block of ground, if the block is of fair size and the school is not too large, to have a good deal of play that is worth while.

It is impossible to set any arbitrary standard for the size of a school ground in the country. It certainly should be large enough for baseball, as it ought not to be necessary to do most of the school play in the neighbors' fields, as is so often the case at present. Very often a neighborhood park and picnic ground should be made at the school also. This should always be done, I am inclined to believe, if the site offers the facilities, and there is no better place in the neighborhood. The minimum size for the ground of a country school should be 2 acres. Nothing less than this will do for baseball, and if the tract is to be used by the older people evenings and Saturdays, as it ought to be, nothing less than 3 acres will be adequate. Ten acres will not be too much for the general athletic field and picnic place for the district.

The city high school will require at least as much ground. Nearly all the games played by high-school students require a good deal of room. Every high school should have a number of baseball and football fields and a place for field and track events. The girls should have a place that is separated from the boys and surrounded with a hedge or tight fence to give it exclusiveness. Ten acres ought

to be the minimum for a city high school, but unfortunately 10 acres can not often be obtained in the central part of any city.

Various standards have been proposed for the city elementary school. The city of London requires 30 square feet for each child for its new schools. This would place a child every 5 feet over the school yard. A year ago the State of Washington passed a bill requiring 100 square feet, but this was vetoed by the governor. This would give each child 5 feet of free room on each side, but even this is inadequate. In a good many of the old schools of New York there is not room enough in the external playground for half of the children to stand in the closest possible order. Where the land on which a school building is erected costs two or three hundred thousands of dollars, it is not to be expected that much more ground will be secured than the bare need of light and fire protection demand. But for most of our new schools in the smaller cities at least we have at present a workable standard, namely, one block for each school. This is being quite generally adopted in the Middle West and the South at present. In the city of Little Rock, Ark., there is not a school for white children in the city that has not a full block to itself. There are not more than one or two schools that have not a full block in Pueblo, Colo. However, blocks are not of equal area in all cities. In some cities, as in Houston, Tex., a block covers only about 1½ acres, while in others, as in Salt Lake City, it covers 10 acres. In the center of each block in Salt Lake City there is a plot of 2½ acres that is often separate from the surrounding lots and may be secured for the school playground.

There is a growing feeling that the school should be the social center of its neighborhood. If it can provide a park, swimming pool, gymnasium, auditorium, and moving pictures we shall have a neighborhood center that will create a community out of the unorganized and unfamiliar masses of the city. The city of Houston, Tex., is securing from 3 to 5 acres for its new schools. It will have swimming pools and auditoriums and trees. This makes possible the development of a recreation center system similar to that in the parks of Chicago in connection with the schools. It will be exceedingly interesting to see how the project will work out. The school yard should make a definite bid for the play of the working boys and girls after school and at night. All gymnasiums and swimming pools should be utilized then, and the school grounds should be so well lighted that volley ball, basket ball, and indoor baseball could be played there in the evenings, both by the older boys and girls and by business men as well. The school of the future is to be the public Young Men's Christian Association and Young Women's Christian Association of its neighborhood. I do not know that there are any cases where the school yards have been lighted for play at night,

but there are a number of places where municipal playgrounds are so used.

It is ofttimes difficult and sometimes impossible under existing conditions to secure a full block of ground for a school. There are few entire blocks within the city without buildings, but sites should be selected ahead as far as possible, anticipating the city's growth, and no new addition should be allowed to come into the city without setting aside a block for a school. Owners generally ask more than the land is worth for school sites, and it is often difficult for the school board to get enough money to purchase a block. They usually hold that they have no right to condemn land for a playground, and often it can be secured in no other way. In most cases all that school boards really need is a modern interpretation of the school laws. They are usually given the right "to condemn land for school purposes," and the organization of play has become nearly as much a "school purpose" as arithmetic. In some cases it may be necessary to have the school laws changed, but usually that will not be difficult in the light of present interest in play. Where there is a will there is a way, and it surely is possible in most places to get land enough to carry on the activities of a modern school.

In hilly cities school sites are often selected that are very uneven. Such sites are usually cheaper in the beginning, but are nearly always dearer in the end than sites that are nearly level. A rounded hill offers a conspicuous position for a school building. Yet it is much less suitable for the location of a school than a store. No merchant would select such a site, because he knows that his customers will not climb the hill to buy of him. It is just as great an effort to climb a hill to go to school as it is to buy a stick of candy. After you once reach the store it is just as well on the top of the hill as anywhere else. But the hilltop is useless as a school site when you once get there, as there are very few games that can be played on a hillside. A hillside is much more appropriate for a private house than a school. The house does not require very much space, and not much terracing is required to make the yard nearly level. But for a school the whole block has to be put into one or two terraces, as nearly level as may be. The grading required will probably cost as much as the site, or more. A terrace always tends to gully out and is a source of constant expense. The terraces should be sodded at once or covered with honeysuckle or some such vine. The honeysuckle will add greatly to the beauty of the bank, and it will hold it like a stone wall. The New York, New Haven & Hartford Railroad is covering its cuts through Rhode Island and Connecticut with rambler roses, and it may be that these would be serviceable for school terraces in some localities. If it be found that the school occupies a site that can not be leveled without a prohibitive expense, the site should be given up.

LOCATION OF THE SCHOOL BUILDING.

When an appropriate piece of land has been secured and leveled off, the next step should be the location of the building upon it. When a city hall or a courthouse is to be built, it has become the custom to place it in the center of a large block, which is treated as a sort of park, after the fashion of the English country residence. This park gives the needed space, so that one can get a view of the building and observe its architectural features. Where the space around the building is used as a park, there is no lost space and no conflict in the two uses. The central location is justified by the fact that this is a city building that all are to see, and its architecture is an asset to the city. When we consider the location of the school building, however, the decisive question should be the purpose to be subserved. If the school is erected to please the passer-by and to be an ornament to the city, then the architect should be allowed to place it with a view to securing architectural effects, and he will place it in the center of the plot in most cases. The building should be surrounded with grass, and the children should not be allowed to play upon it. If, on the other hand, the school is intended for the welfare of the children, the building should not be located in the center of their playground. The architecture of the building has little, if any, effect upon them, while play is the most fundamental thing in child nature. It would be better to have two sets of school buildings, one intended for show, with the building placed in the center of a ground decorated with grass and flowers, where the children are allowed to come only on festal occasions, as when there is a convention in the city, and a second set of buildings and grounds for actual use. If we would not do this, then we must not allow the architects to destroy the grounds by placing the buildings in the center of them. If the building is placed in the center of the ground and the children are allowed to play on all sides of it, the grass is soon killed off, the surroundings become bare and unattractive, and the location is the worst possible. It may be said, too, of most of the buildings so located that they have few architectural features to exhibit, and a vista only serves to set off their ugliness. But even if all the ground is used, and the grass is not respected, it is impossible in most cases to have play that is vigorous and worth while, when the school building is placed in the center of the site, because this usually leaves only a fringe of ground that is not large enough in any place for play. Instead of having the windows on one side to protect from balls and missiles, the windows on all sides have to be protected. If the school ground is to be used, it is better for the architectural effect as well as for purposes of play to locate the building at one end of the block, within 15 or 20 feet of

the sidewalk. This space in front of the building can be parked, laid out to flowerbeds or ornamental shrubbery, protected with a low hedge or a fence covered with vines, and kept intact for architectural effect.[1]

VINES.

Unless the climate is rainy and cold, it will be an advantage to plant vines over the school building. Vines make the building cooler in the warm parts of the year and the touch of green that they add is generally welcome. Wisteria will make of it a great flower garden in spring. The ivies will furnish a glow of grateful color in the fall.

SURFACING OF SCHOOL GROUNDS.

The school yards of many of our cities are a disgrace to the systems to which they belong. I believe that much less than 50 per cent of the yards of the country are in condition to use. Covered with brickbats and piles of ashes, gullied out by the rains, with the roots of trees projecting in places, they furnish an almost impossible surface over which to run. Not more than one-quarter as large as they should be in most cases, the space that there is should be utilized to the fullest extent. But in actual fact not more than 25 per cent of play efficiency can be secured from the yards of many a school system on account of their condition. There is many a school site that has cost $10,000 or more that has received less than a hundred dollars afterwards to make it available for the play of the children. Even if it does cost a thousand dollars to grade and surface a ten-thousand-dollar yard, it surely is not wisdom to throw away the $10,000 for the lack of the one. In many cases all that is needed is to dismiss the school early one afternoon and set the children with rakes and hoes to filling in gullies, raking up cinders and bricks, digging up projecting stones, and cutting off roots. Probably half the school yards of the country could be improved 50 per cent by this simple expedient.

As in the other features, it is easy to see that the interests of play have been disregarded also in the surfacing of school yards. In the play of men three surfaces have been approved, grass for baseball, football, and games requiring a large space, a sandy loam or sand-covered clay for tennis courts, and cinders for running tracks. Where the school playground has been surfaced at all it has generally been with brick, cement, gravel, or broken stone. The requirements of the case are a surface that is smooth; that does not get muddy after rains or dusty in dry weather; that is springy beneath the feet and soft to

[1] NOTE.—The author overlooks one of the strongest reasons for locating a school building in the center of its lot, namely, the desirability of removing classrooms as far as possible from the noises and distractions of the street. Practically, all such questions must be determined by balancing the advantages against the disadvantages. The advantages of the location favored by the author are well set forth; the weight of the disadvantages in any particular case will necessarily determine the result.—Editor.

fall upon; that does not get overhot in summer or slippery in winter; that does not wear out the play apparatus and the clothes of the children unduly; and, more than all, that does not wear out their nervous systems from its shocks and bruises. It is not easy to find a surface which meets all these requirements. Probably we shall have to manufacture a surface for the playground as we do for the street before we shall get one that is entirely satisfactory.

A GRASS SURFACE.

Wherever a school can have grass on the yard and have play at the same time, grass is a good surface for most games, but this is usually possible only in country schools, where there is a large yard and a small number of children. In the South I have seen Bermuda grass that had a good start stand the intensive play of a city school. Perhaps a wider use of this grass will be a solution of the problem for the smaller cities of the South, but in most cases play and grass are antagonistic, and the school must choose between them. I know not a few cities where the school has chosen the grass rather than the play. A school that chooses grass for decorative purposes instead of play might with equal wisdom choose a wall pattern in place of a blackboard for its classrooms.

BRICK.

Not a few of the school yards in our great cities are surfaced with brick. I judge that this surfacing must have been chosen by the janitor. It is an admirable yard for his purposes. It does not get muddy after rains or track into the school building. It is so hard to run over that the children prefer the street, thus causing the janitor the least possible amount of annoyance. At its best, brick is hard and unyielding, with shocks upon the nervous system at every step or jump. To fall upon it means a bad bruise on the knee and often a hole through the trousers. But most of the bricked yards that I have known have been more or less uneven, or contained soft bricks, where the water would stand after rains. In frosty weather the brick holds the frost, which makes it a very difficult surface to run or walk over. If the members of any school board now providing brick for school yards would go out and play one game of indoor baseball upon it they would take it out the next day if possible.

CEMENT.

Cement is better than brick. It is not so slippery or uneven, and it is easier to run over. In very large schools with very small yards, like those of New York City, cement or asphalt may be the only really practical surface now available, but nearly the same objections apply to cement as to brick.

GRAVEL AND BROKEN STONE.

Both of these surfaces, especially the former, have been much used in surfacing school yards and are generally unsuitable, not so much from the necessity of the case as from the materials selected. Anyone who has attempted to run over a heap of macadam or a surface covered with loose pebbles knows how difficult it is. The loose stones turn the ankle and cause constant slight sprains that weary the runner. To fall upon these sharpened pebbles means a serious bruise. For the children all these conditions are ten times worse, because so many of them go barefooted in the spring and summer, and these pebbles mean constant bruises on the feet and toes. A yard of this kind will wear out a pair of shoes in a few weeks; baseballs and volley balls will get ragged with a day's wear. The yard probably destroys enough clothing and apparatus every year to pay for surfacing it properly. There should be no gravel or broken stone on a school yard larger than a small pea or, better, a No. 4 shot. The small round gravel that is used in the Chicago playgrounds, known as torpedo gravel, makes a fairly satisfactory surface for play. The dust macadam, such as is used for the finest top dressing of drives and tennis courts, also makes a satisfactory surface. This is used to a considerable extent in surfacing the school yards of Oakland, Cal., and, I presume, other California cities. The torpedo gravel costs about $1.50 per cubic yard. One yard will cover about 100 square yards of surface. It may be obtained of building contractors.

CINDERS.

Cinders that are well ground and rolled and leveled make a satisfactory surface to run over, but not a very comfortable surface to fall on. They have been used in the past almost altogether in making running tracks. Many of the London board schools have yards surfaced with cinders. I am of the opinion, though I have never seen it demonstrated, that cinders dig up too easily to be entirely satisfactory, that they will track into the building more or less, that they will be hot in the summer time, and that they wear out play equipment rapidly. They certainly do not present an attractive appearance.

SATISFACTORY SURFACING.

Thus far our consideration of surfacing has been mainly a matter of elimination. Some surfaces are more unsatisfactory than others, but there is no surface that is wholly satisfactory. Doubtless we shall have to manufacture the surface for our playgrounds in time, much as we do the asphalt for our streets. However, there are now better surfaces than are generally used. Mr. Leland recommends a

mixture of clay, loam, and cinders as satisfactory. In the Chicago municipal playgrounds the torpedo gravel works fairly well, but the managers are now experimenting with a manufactured surface which is made by mixing together sand, asphalt, and cork in the following proportions: Cork (pieces one-eighth to one-fourth inch in diameter), 16⅔ per cent by weight; sand, 33⅓ per cent; stone (pieces one-sixth to one-eighth inch in diameter), 16⅔ per cent; asphalt, 33⅓ per cent. This surface costs from 60 cents to $1 per yard, but it is said to be smooth, yielding, permanent, and in every way satisfactory. On the whole a sandy loam that is well underdrained makes a very satisfactory surface. Almost any sort of a tennis-court surface, but especially sand-covered clay, is a good play surface.

KEEPING IN CONDITION.

In the past the school yard has been expected to keep itself in condition. It has been no one's duty to look after it. It may be taken for granted that it will not do this. There are not many enterprises that can be launched and left to run themselves. Every school yard with anything but a grass or brick or cement surface ought to be leveled and rolled down at least once a year. Often this can be done by the children themselves. Most grounds need much more care than this, but an overhauling once a year is an absolutely minimum requirement. Generally the school yard needs to be sprinkled at certain times to keep down the dust. In California it is not unusual to sprinkle with a heavy asphaltum oil and then spread sand on top as in putting Tarvia on a road. In Philadelphia glutrin is used on the school playgrounds. This is a by-product of paper making and is said to be "all of the spruce tree but the fiber," and greatly to improve the surface for play purposes.

FENCING.

There is no uniform practice in regard to fencing school yards. In the eastern sections of this country they are generally fenced; in the middle and southern sections they generally are not. There has been a tendency during the past few years to remove fences. The fences around parks and public buildings have generally been taken down. Houses and house lots are usually unfenced. This is one expression of the socialistic tendency of our times. We are moving away from the cloister and its exclusiveness. Undoubtedly the removal of fences from most of the large public parks has been an advantage. There never was any reason for fencing them. The same may be said of the fences in front of houses. The strip of parking and grass is often more attractive than the strip broken by fences, as was formerly the case. It is hard to see that the fence ever served any purpose except exclusiveness, and the question in

this regard is naturally one of individual preference. However, the tendency everywhere is toward fencing playgrounds and fencing parks used as playgrounds. Sherman Park, Chicago, which is both a park and a playground and contains 60 acres, is fenced, while Washington and Jackson Parks are not. The fence used is a high steel picket fence, costing about $1.50 per running foot, and it is there in order that the park may be closed at a certain time at night, and the public kept out after that hour.

There are certain advantages in having the school yard unfenced; the play space is considerably increased, as the ground is used to the sidewalk, and frequently the sidewalk and neighboring street itself become a part of the school playground at recesses and noon intermissions. Some school yards even in small cities are so small that there is literally not room for the children upon them. If they were fenced, there not only could be no play on the school premises, but often the children could not be crowded inside. The fence not only limits the size of the school ground to a space several feet inside the sidewalk, but the fence space and the land next to it is also unavailable for play. When a game of ball is going on and the ball is batted outside it requires a long detour and interferes with the rapidity of the game.

These disadvantages of the fence seem serious, and they are serious for some schools with inadequate yards, but the disadvantages of the unfenced yard are yet more serious. If the school ground is not fenced the children use the sidewalk and the street for their playground, but the sidewalk and streets were not intended for this purpose. The school, having failed to make provision for the children on its own premises, is plainly trespassing on the rights of the community. No school board has a right to build a school without providing a place for the children on the school premises. If the grounds that have been secured are not sufficient they should either be enlarged or abandoned. Street play is becoming increasingly dangerous to children, because of the rapidly increasing number of automobiles. Children who are playing in groups are always heedless, and the child who dashes from the school yard in a game of tag is more likely to run into danger than the child who is really playing in the street. There are occasional mad dogs and runaway horses in the cities. If the children are in a fenced yard they are safe, while there is always danger otherwise. However, the urgent reasons for fencing the modern school yard are much more fundamental. It is becoming the custom to put into school yards a considerable apparatus, and to keep them open as directed playgrounds during the summer. It is difficult to protect the apparatus if the playground is not fenced, and it is still more difficult to protect the neighborhood from annoyance. There is frequent complaint in reference to the use of the school

yard as a playground, but the complaint nearly always comes from the use of it by rowdies at night after the play director has gone, for then they are apt to come in and greatly annoy the surrounding residents by their yells and boisterous laughter. If a school ground is fenced, the children can also be prevented from running by dangerous pieces of apparatus where they are likely to be struck. Discipline becomes much easier. The fence also makes of the school yard an institution and helps to create loyalties.

In many school yards there is a fence dividing the girls from the boys. It is the practice in municipal playgrounds to have separate playgrounds for boys and girls. The reasons for it are obvious and sufficient; there are often loose girls and always loose boys coming to the playgrounds, and it is better not to have them together, or where they can corrupt other children. The same is true of the school playgrounds. If the school yards are to be unsupervised loafing places, as they have so often been in the past, it is certainly better that the girls and boys should loaf separately; but if the school yard is to be a playground and under supervision, it is probably better not to have a division fence in most cases, because the ground is generally not large enough to be divided and because in case of division there must be two play directors, an expense not always justified by the attendance. It is socially dangerous for older boys and girls to loaf together, but they can usually play together with safety.

School fences thus far have not been very satisfactory, as a rule. Undoubtedly, in most cities the school yard has been the most neglected and unsightly place in the whole city. If it has been unfenced, it has generally revealed to the passer-by a stretch of untidy bare ground. If fenced, it has usually been with rough boards, painted on the outside and unpainted on the inside. The steel picket fence is more satisfactory. It is permanent, difficult to climb over, and reasonably good looking. It is, however, very expensive and less beautiful than hedge or wire. I am inclined to think that, except in the extreme northern part of this country, a hedge fence of evergreen privet is one of the best fences. It is cheap, beautiful, difficult to climb, and gives privacy to play and shuts off the ugliness of the bare ground within. It is a protection from storms in winter, and its grateful green is always restful. It will have to be planted in good soil and protected by a wire fence in the beginning. The prettiest fence, and also one of the cheapest, that can be put around a school ground is a woven-wire fence covered with flowering vines. The wire should be close enough, at the bottom at least, so that indoor baseballs will not go through. If rambler roses or clematis or honeysuckle be planted over this, it will be a flower garden set on edge during a considerable part of the year, and often the prettiest thing in the whole neighborhood. The fence at

the Jamestown Exposition was 8 feet high and completely covered with honeysuckle and clematis. The fragrance could be perceived for several rods, and it was admired by all. It grew within a year or two.

TREES.

If a school ground is to be much used in the late spring and summer, in most parts of this country it must have shade. In some parts this is true for nearly the entire year. Trees also add greatly to the attractiveness, if they are well selected and properly placed; but it is also possible to destroy a school playground by planting in it half a dozen trees in the wrong places. If you will plant the first tree on the home plate, the second tree in the pitcher's box, and the third tree on first base, and so on around, it will not take very many trees to spoil the available space in most school yards. A large part of the trees that have been planted thus far should be cut out. I have known a small yard to be ruined by planting three trees. In most grounds all trees within the play space should be eliminated. The playground needs shade, but it also needs space. The trees should be planted around the playground at the edge and not within the ground itself. In larger grounds there may also be trees around special features, such as the baseball diamond or the basket-ball or volley-ball court, but trees should never be planted at random, without a definite plan for the yard and a definite purpose for the trees.

One row of trees should be set around the school ground just outside the sidewalk, and a second row just inside or just outside the fence, according to the size of the ground and the width of the space between the sidewalk and the fence. The rule of tree experts is that shade trees should be planted from 25 to 40 feet apart. It is a good rule to plant alternately cottonwoods and hard maples, or hard and soft maples. Then the soft maples will grow up rapidly and begin to furnish shade very soon, while the hard maples will come on more slowly. As soon as the hard maples develop enough to give sufficient shade, the cottonwoods or soft maples should be cut out and all the space given to the slower-growing but more beautiful trees. If this method is followed, the trees should be planted from 15 to 20 feet apart, so that they will be 30 or 40 feet apart when the soft trees are cut out. It might be well also to plant a different kind of tree in the inside row from those in the outside row. Paulonia Japonica, common in New York City, looks like a catalpa with the blossoms of wisteria upon it and is very attractive. The catalpa itself is a beautiful tree, both in the spring, when it is in blossom, and in the fall, when it carries its long drooping pods. Some of the streets of Washington that are bordered with horse chestnuts are very beautiful in the spring when the trees are in blossom. Even

our common basswood or linden is fragrant and attractive in April and May. In the South the magnolia can be used effectively, and in California the beautiful pepper trees are very decorative. Any of these trees will make of the school yard a great bouquet in the springtime, worth coming a long way to see. It might be well at times to select nut trees instead of flowering trees. The hickory turns a rich yellow in the fall; and hickory, walnut, or butternut furnish good shade. Such trees offer an opportunity for nutting festivals in the fall, though it might be that the temptations the nuts would offer to climbing might not be good for the trees. In Porto Rico they say that they can not have mango trees in the school yards, because the children break them down in climbing for the fruit. The Japanese ginkgo, a tree much used in the streets of Washington, is a beautiful tree, but it is little known outside of Washington.

Very many trees that are planted in school yards die. The most common cause is probably that the trees are not really planted. A tree is often dug or torn up from somewhere, a hole is cut in the school yard, the tree is stuck in, earth is thrown on the roots, and the tree is considered to be ready to grow. It is needless to say that such methods are without result. Trees should be planted late in the fall or early in the spring. If a good many of the roots have been broken a proportional part of the top should be cut off, for there will not be enough roots to feed a large amount of foliage. A tree can not be planted in the sterile subsoil of a school yard with reasonable expectation that it will live. A space from 4 to 8 feet square and 2 or more feet deep should be excavated and filled in with good, rich earth. The whole should be well packed and watered down, and the tree should be boxed. Our estimate for the planting of trees in Washington was $1 a tree. This price was for the planting and boxing alone, as the trees were furnished to us from the city nursery. This may seem expensive, but it is scarcely 1 per cent of what a well-placed tree is worth to a school yard.

It is a good thing to have benches around a number of the trees in order that the children can sit in the shade when they are tired or when they are eating their luncheons. Wherever it is possible the games and play should be so planned inside the yard as to keep a grass border 8 or 10 feet wide under the trees and along the fence. This adds greatly to the attractiveness of the yard and serves as a pleasant place to sit or lie in the shade when tired.

EQUIPMENT.

A great many cities are now putting equipment into their school yards. They are rarely consulting anyone of experience in this matter, and it must be said that the apparatus so purchased is often

temporary in character, ugly in appearance, and dangerous in use. It is often set in the wrong places and sometimes costs two or three times as much as it should. Very much of this, although of recent installation, should be taken out at once and replaced by equipment that is safe and suited to the needs of the school. It must be remembered always that free play is more important than the best possible use of play equipment, such as swings, and the open spaces must not be destroyed for any kind of apparatus.

THE SAND BIN.

The sand bin is the mother of the playground movement, and out of it have grown the other developments. From the time he is 1 year old until he is 10 or 12 the sand will furnish any child entertainment and delight. As the sand bin is for the little children, it should be placed in the most retired part of the yard, where it will be out of the way of the older children. It must have shade, or the sand will get too hot in the summer time. It is well to place it under or around a tree. It should have a molding board or seat around the edge so that the children can mold the sand upon it. This is often used also as a seat when the teacher wishes to tell a story or to give instruction. The sand should be, if possible, the fine white sand of the seaside, as this is pleasant to work with and does not soil the clothes; but any building sand, such as that used in making plaster, will do. The carpenter of the school board can make the bin. The sand will gradually work out upon the playground, where it will often greatly improve the surface. As it is necessary for the sand to be renewed occasionally to keep it in a sanitary condition, this leakage is a good thing in any case. The sand bin does not require a bottom if the ground is level and hard.

SEESAWS.

The seesaw is often placed in the school yard, but not much can be said in its favor. The children who are using the seesaw are not getting either physical, intellectual, or social training. It is the frequent source of accidents and disputes. If a short seesaw board is placed on a high standard, it is very dangerous, because it then makes an acute angle when the child goes down to the ground. The long seesaw is safer than the short one, because the angle of the plank in its descent is not so great, but it must be remembered that there will often be five or six children on each end of the seesaw, and there may be danger of it breaking if it is made long and not well strengthened. The principal danger is that the child who is down on the seesaw may slide off and let the other child down with a bang. I have known of half a dozen broken arms resulting in a

week from a new set of poorly made seesaws. Another danger appears when the children stand up on the seesaw. One end comes down suddenly and the other child is thrown off on his head. The seesaw ought to be about 14 feet long, and it is best for it to have a handle. It should be made so it can be taken in at night and in the winter. It should be placed near the fence in some retired part of the yard. It is best to set it on a steel support anchored in concrete.

THE SLIDE.

The slide is one of the most popular pieces of apparatus, and will be used almost continuously by a large number of children. There are apt to be disputes and quarrels over the swing, but the slide offers a natural rotation in office. Sliding represents a universal interest of children, for they have slid down banisters and cellar doors from time immemorial. Almost every place that offers a natural incline in the cities will be found to be used by them. People generally have the idea that the slide is dangerous on account of its height, but in an experience of 13 years I have never known of a single serious accident from the slide, except from slivers in the early days when slides were made of pine. Railings at the top prevent the children from falling off there, and after they sit down on the slide they can not well fall unless they try to. There is a general feeling also that the slide is very hard on clothes. I doubt if this is so, if the slide is in good condition. The amount of the friction and wear of course depends on the smoothness. Even in the schoolroom the child wriggles around constantly in his seat, and the seat or the cushion is not usually very smooth. The children tend to run up the slide if they are not watched at first, and also to slide down standing up. If a slide is scratched and marked with nails, it is much more destructive of clothes. The crucial thing about it is the condition of the incline itself. In the early days these slides were often made of pine. The pine could be made very smooth and safe, but after a rain the grain was likely to come up, so that child might be impaled on the slivers as he slid down. Most of the machine companies now make a steel slide. This is well galvanized, but the galvanizing is apt to wear through where the children place their feet, causing the metal to rust. A rusty slide both soils and wears the clothes very rapidly. The steel slide is too cold in winter and too hot in summer for much comfort. It is also too expensive to be generally purchased. W. S. Tothill, of Chicago, makes a maple slide that answers all requirements very well. It does not rust or splinter. It is not too hot nor too cold; it sometimes warps, but never seriously. The 9-foot slide is sold by Marshall Field & Co. for $7.50; the 15-foot slide for $25. The slide needs to be waxed occasionally or dressed with raw linseed oil. It is well to have a carpet mat or two to sit on

after rains or after oiling, and it is desirable that the apparatus should be made so that the sliding board is detachable, allowing it to be turned over or taken in so as to protect it from the rain.

SWINGS.

The swing is probably the most common piece of apparatus in the play of small children everywhere. It is also one of the most dangerous, and, as generally made, one of the most unsightly. The swing frame should be of steel gas pipe 3 inches in diameter if threaded, or 2½ inches if made with solid joints. The whole should be well braced and set in concrete about 3½ or 4 feet deep. The swings for a school yard should not be over 8 or 10 feet high. The tall swing takes up too much room, is preempted by the large children, and is too dangerous. The swings should be placed in the most retired corner of the yard and parallel with the fence, where the other children will not be struck. People are apt to fear that the children will be hurt by falling out of the swing. This rarely happens. The real danger is to the child who is running by. If two children are standing up in a swing and swinging hard and another child runs by and is struck in the side of the head, he will certainly be seriously injured and may be killed. In some places the swings are fenced off, so as to prevent this. A piece of rubber hose is sometimes nailed to the side of the swing board, so as to deaden the blow if a child is struck. For the school yard it is best to have as light a swing as possible, because its momentum is not so great in that case, and it is easier to put out and take in. A wooden board and ropes are to be preferred to an iron seat and chains or links. The steel hook that supports the swing is a crucial point, as it is apt to wear through. It should be made of hardened steel and should wear on a steel thimble around which the rope is spliced. Girls should not be allowed to stand up in swings, as their dresses tend to fly up. Boys should not be allowed to swing girls for still more obvious reasons. It is best for children to swing themselves in any case, as that is the only way they can get any exercise out of it. The pipe fittings can be purchased of any of the machine companies. The pipe can be secured of local dealers and all should be erected and painted by local men. The swings can also be made satisfactorily by any ingenious carpenter. The pipe should either be galvanized or painted green. The concrete blocks should be 16 to 18 inches square. There should be about 20 swings in the yard of a good-sized city school.

THE GIANT STRIDE.

The giant stride is often put into school yards. It is always enjoyed by the children and has some value as exercise. It is a rather expensive piece of apparatus, however, and the steel ladders are rather

dangerous. For the school yard I prefer the rope and wood ladder with wooden rungs. This is lighter and does not bruise where it strikes. It is also much easier to take in the ropes when that is desired. The giant stride should be placed in the corner of the yard if possible, so that it may be out of the way of the games and that the children upon the ground may not be struck by those who are flying around upon it.

THE HORIZONTAL BAR.

Every school yard should have a horizontal bar. This will serve for tests in chinning, which is one of the standard tests of the Public School Athletic League, and boys everywhere like to climb upon and over such a piece of apparatus. It is a good thing to have three bars placed at about 5 feet 3 inches, 6 feet, and 6 feet 6. The earth should be excavated under these bars for 3 or 4 feet on each side and sand filled in. No one would think of exercising on a horizontal bar in a gymnasium without a mat underneath. It is just as dangerous to exercise over hard ground in the yard; a plentiful crop of broken arms is sure to result.

All the equipment of the school yard should be so made that it can be locked or taken in at such times as it is not to be used.

CONSTRUCTION OR PURCHASE OF EQUIPMENT.

A school playground may be satisfactorily equipped for $200 if most of the equipment is made and set up by local men. The slide can probably be purchased as cheaply as it can be made. Other pieces of apparatus will cost considerably more from the machine companies.

EQUIPMENT FOR GAMES.

Indoor baseball.—Every school ground of any size should have at least two indoor baseball diamonds, one for the girls and one for the boys. The regulation diamond is 35 feet square, though the 27-foot diamond is better for small children. This should be laid out permanently, and the places for the bases marked. Bases should be made of sacks filled with sand. The 17-inch ball should be used, and the diamond should be so placed that the ball will not be batted over the fence or against the school building.

Volley ball.—Volley ball is the best game for school yards in general, because it takes very little space, and nearly all the chidren can play. It is the natural corrective of nearly all the bad postures of the schoolroom. The equipment costs very little. From two to four teams should be organized from each of the upper classes, and they might well have volley ball as a period of physical training in the regular school time at least once a week.

Tether ball.—Tether ball is another game requiring little space, that is very vigorous and can be played in almost any school yard. Directions for this game and for volley ball can be secured from the Spalding Athletic Library for 10 cents. Both sets of rules are in the same book. The lines around and bisecting the pole are best put in with brick.

Running track and jumping pit.—Along the fence on one side of the school ground there should be a running track about 10 feet wide. This should be made of cinders or loam and kept in good condition. Most running is at present arranged for high-school and college sprinters, but interest in running itself probably reaches its climax about the tenth or eleventh year, and declines after that. Children in the upper elementary grades are intensely interested in all forms of sprints and relay races. The interest in jumping at this period is also well-nigh universal. There should be a jumping pit filled with sand with regular take-off board for the broad jump, and there should be standards for the high jump, which is usually rather more interesting to children.

Skating.—In the northern part of the country it is well to flood a part of the yard in winter for skating. All that is necessary in cold weather is to make a low embankment at the edge, so that the water will not run off, and turn on the school hose.

THE USE OF THE SCHOOL YARD.

In a number of school systems of my acquaintance the school yard is used not more than half an hour to an hour a day. The children are sent home at noon. They are not allowed to come in the morning until just before school, and they are required to go home as soon as school is out. The thought has been apparently to use the school grounds as little as possible. We are getting a new conception of what is desirable, however, and the whole tendency is toward wider use. I am personally inclined to think that the next 10 years will see the use of all suitable school yards quadrupled. This is coming through the rapid extension of the summer playground, through its supervision after school and on Saturdays for the same purpose, and in its continuous use throughout the day for the play of different classes as in such cities as Gary, Ind. I expect the next great extension of its use to be as a playground at night for the adults and the working boys and girls of the community. If the playground is properly lighted, it is possible to make it a delightful place for such games as volley ball, basket ball, tether ball, and even indoor baseball in the evening. If the school furnishes a swimming pool, this will give very nearly the same physical facilities that the Young Men's Christian Association and the Young Women's Christian Association offer.

For the small child the paramount question is not arithmetic or geography, but physical health. For the 6-year-old 2 hours in the classroom is probably enough. He ought to have two or three periods in the playground every day. This time may well grow less from year to year until it gets down to perhaps three periods a week. The child needs at least three periods for physical training. Three periods are required in the common schools of Germany, and when we consider that games mean not only physical training, but social and moral training as well, no thoughtful person can well think three periods too much. These play periods should be so arranged that in the larger schools there would be two or three classes in the yard all the time, as the practice is in Gary, Ind. The regular teachers should play with the children, but there should be a special playground teacher in charge. In the upper classes four baseball and four volley-ball teams might well be formed in each class. The girls play both of these games as well or nearly as well as the boys, and every child should be required to play. This will give a good period of physical training in the open air, and the volley ball will be one of the best possible exercises for correcting the stooped and rounded shoulders and the flat chests of the classroom.

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