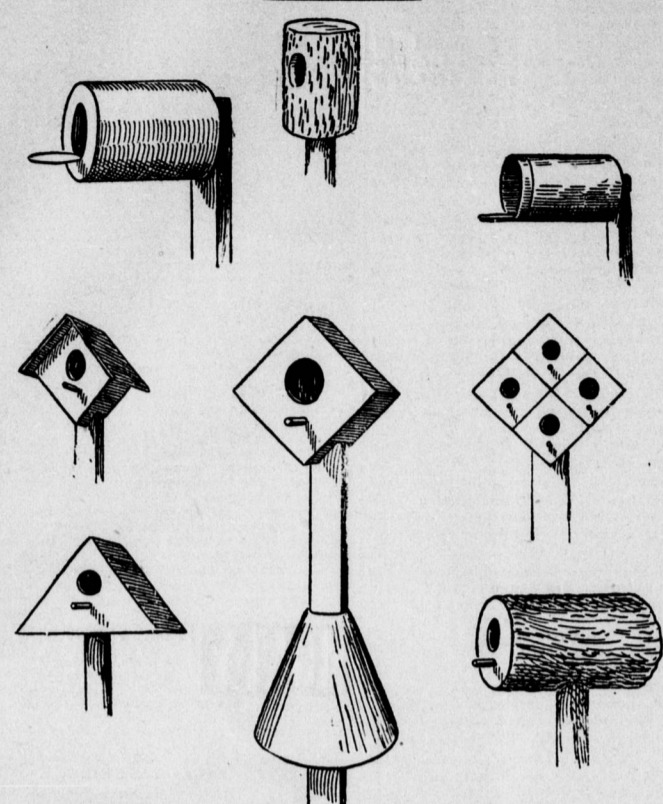


IMPROVED BIRD HOUSES.



One of the most delightful and suggestive of the teachers' leaflets issued by the College of Agriculture, Cornell University, for use in the public schools, is one entitled "The Birds and I," by L. H. Bailey. This is illustrated by a number of suggestions for bird houses, which may be copied by all the boys and girls who are always wanting to use hammer and nails and "make something useful." Some of the many forms which can be used are shown in the picture. Any ingenious boy can suggest a dozen other patterns. The floor space in each compartment should not be less than 5x6 inches, and 6x6 inches or 6x8 inches may be better. By cutting the boards in multiples of these numbers, one can easily make a house with several compartments; for there are some birds, as martins, tree swallows and pigeons, that like to live in families or colonies. The size of the doorway is important. It should be just large enough to admit the bird. A larger opening not only looks bad, but it exposes the inhabitants to dangers of cats and other enemies. Birds which build in houses, aside from doves and pigeons, are bluebirds, wrens, tree swallows, martins, and sometimes the chickadee. For the wren and chickadee the opening should be an inch and a half augur hole, and for the others it should be two inches.

The South's "All's Well."

By R. H. EDMONDS.

Ten years ago the South fought its first skirmish in the endless battle that ever rages for the world's commercial supremacy. Its pig-iron entered the markets so long dominated by Pennsylvania furnaces, and, to the dismay of those who had affected to despise its rivalry, won a substantial victory. Alabama iron became a factor in every iron-consuming centre, and from this position it could not be dislodged. About the same time Southern cotton mills were forcing their product into successful competition with the output of New England mills. But as Pennsylvania iron and steel people took refuge in the claim that the South would never advance beyond the iron-making stage, that it could never become a factor in the higher forms of finished goods and in steel-making, so the New England mills lulled themselves into a sense of security on the claim that though Southern mills might make coarse goods, they could never acquire the skill and the capital needed for the finer goods. In the light of what has been accomplished within ten years, it seems very strange that such arguments as these should have done duty in so many newspapers and in so many gatherings.

A Prophecy.
Judge Kelley—"Pig-Iron Kelley," as he was familiarly known—had been wiser than his people. Nearly twenty

WAGES PAID TO FACTORY HANDS.	
1880.	1890.
\$75,000,000.	\$350,000,000.

years ago he proclaimed the coming power of the South in all industrial pursuits, and heralded it not as a disaster to Pennsylvania and to New England, but as an added strength to the industrial power of the country. "The development of the South," said he, "means the enrichment of the nation." In this light the progress of the South should be watched, for while its industrial upbuilding may mean the changing of some forms of industry in other sections, there is versatility enough in our people and in our country to find a new avenue for the employment of brains and energy and capital for every one that may be closed by changing business conditions. New England may yield the sceptre of cotton-manufacturing to the South, to the vast enrichment of the South, but New England will find new openings for its tireless energy and its accumulated capital.

GRAIN PRODUCED—BUSHELS.	
1880.	1898-99.
431,000,000.	736,500,000.

The South will become enormously wealthy through the change, but New England will not be the poorer.

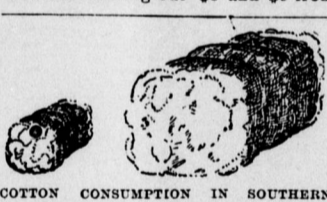
The First Skirmishes.
Just about the time when the South

was winning these first skirmishes, and when its people were dazzled by the new opportunities of employment and wealth creation which were open-



RAILROAD MILEAGE.	
1880.	1899.
20,600.	50,000.

ing before them after the darkness of thirty years of war and reconstruction trials, there came the world-wide financial panic following the Baring failure. The South, suddenly brought down from its dizzy speculative height, had to face new conditions. The business world recognized that the supreme test of the South's inherent advantages and possibilities had come. It faced the situation—its iron-masters steadily reduced the cost of iron-making until furnaces which had been turning out \$8 and \$9 iron



COTTON CONSUMPTION IN SOUTHERN MILLS—BALES.	
1880.	1898-99.
238,898.	1,399,000.

were able to produce \$6 iron; its cotton-mill owners wisely abandoned old machinery, and, equipping their mills with every modern improvement, drove them to their utmost capacity night and day, in order to double the output on their invested capital and proportionately reduce the cost of goods; its cotton-planters, who had kept their corn-cribs and smoke-houses in the West, buying in the aggregate about \$100,000,000 worth a year of Western corn and bacon, commenced to raise their own food supplies, and in this way, returning to the old ante-bellum system, reduced the cost of raising cotton. While these changes, all revolutionary in their character, were in progress, the small bankrupt railroad lines were brought into compact systems, new and heavier rails laid, rolling-stock increased and necessary extensions made.

Iron and Coal.
Thus the South passed through the long period of depression, standing the great test, which came so unexpectedly, in a way that strengthened the world's confidence. It not only

SPINDLES IN COTTON-MILLS.	
1880.	1899.
667,000.	5,000,000.

held its own during this period, but its iron-makers entered foreign markets, and demonstrated that the South could dictate the price of iron for the world. Alabama iron set the price in England and on the Continent, as well as in Japan, and even from Jerusalem came an order for it. This marked a revolution in the world's iron and steel interests. Henceforth the world was the market for Southern iron. When this point had been reached, the next step was to build steel-works commensurate with what has been accomplished in iron-making; and to-day two gigantic plants—one to make steel billets, and the other to make finished

steel products—are nearing completion at Birmingham. They have cost about \$2,500,000. They have

PHOSPHATE MINED—TONS.	
1880.	1899.
750,000.	2,000,000.

already booked heavy orders for steel billets for shipment to Pittsburgh. A number of furnaces built during the boom of 1889-90, and which have been idle ever since, have lately been bought by strong companies, and are now being put into blast. With every furnace crowded to its utmost capac-

CAPITAL INVESTED IN MANUFACTURING.	
1880.	1899.
\$257,000,900.	\$1,000,000,000.

ity, which will soon be the case, the output of Southern iron in 1900 promises to be nearly fifty per cent. larger than ever before. The demand for coal exceeds the production, though that is now at the rate of 40,000,000 tons a year. There is almost feverish activity in enlarging the output of old mines, in opening new ones, and

CAPITAL IN COTTON-SEED-OIL MANUFACTURE.	
1880.	1899.
\$3,500,000.	\$40,000,000.

in building coke-ovens; for a ready demand meets every ton produced, with a profit that makes glad the stockholders.

The Phosphate Industry.
Turning from iron and coal, with the almost fabulous profits which they are yielding, to other industries, phosphate-mining looms into prominence. Up to ten years ago South Carolina was the only American source of phosphate rock, and our fertilizer factories, as well as those of Europe, had to depend upon the few hundred thousand tons which that State annually produced. Then it was discovered that Florida had vast phosphate beds, and soon that State surpassed South Carolina in this industry. Two or three years later similar discoveries were made in Tennessee, and the mining activity which has followed reminds one of the tales of de-

COAL MINED—TONS.	
1880.	1899.
6,000,000.	40,000,000.

velopment in new gold regions. Ten years ago the South's output of phosphate rock was not more than 750,000 tons; this year it will be 2,000,000 tons. What this means in the diversification and improvement of agricultural conditions is too broad a subject for treatment here.

The Forests.
Possessing one-half of the standing timber of the United States, the South is building up immense lumber and wood-working interests, and throughout the entire lumber region business is as prosperous as in the iron districts.

Cotton is Still King.
Though the value of the grain now raised in that section exceeds on the farm the value of the cotton crop, cotton is still the dominant power in the business life of the South. No other country has such a monopoly of any agricultural staple of such world-wide influence as the South has of cotton. Cotton and cotton-seed bring to Southern farmers an average of \$300,000,000 a year. The comparatively new industry of cotton-seed oil making now employs over \$40,000,000 of capital, and yields an annual product of upwards of \$50,000,000. From Galveston alone the foreign exports of cotton oil and cotton-seed meal are averaging nearly 1000 tons a day. Of this industry the South has almost as much of a monopoly as it has of cotton-growing, but in the manufacture of cotton goods this section, though making marvelous progress, is still only getting well started. There are about 100,000,000 cotton-spindles in the world. The South furnishes the cotton for about three-fourths of these, or 75,000,000 spindles, but has only 5,000,000 spindles. To consume in its own mills its crop of 10,000,000 to 11,000,000 bales would require the investment of over \$1,500,000 in new mills, and long before that point could be reached, even at the present rapid growth, the world will annually require of this section from 25,000,000

COTTON CROP—BALES.	
1880.	1898-99.
5,750,000.	11,274,840.

to 30,000,000 bales. In 1880 the South started on its cotton-mill development with a basis of 667,000 spindles, representing a capital of \$21,000,000. By 1899 it had \$61,000,000 capital in this industry and 1,700,000 spindles. To-day it has

5,000,000 spindles and about \$125,000,000 of capital invested in cotton mills, while mills under construction represent about \$25,000,000 more. The most significant sign of the times in this industry is that New England mill-owners, recognizing that the South is bound to win, are transferring large capital to Southern mills. A

VALUE OF MANUFACTURED PRODUCTS.	
1880.	1899.
\$437,400,000.	\$1,500,000,000.

number of the leading mill companies of the former section have, during the last few years, built branch mills, costing from \$500,000 to \$1,000,000 each, in the South; and now one of New England's greatest corporations is spending \$2,500,000 in building in Alabama what will be the largest cotton-mill ever constructed as a single enterprise. The recent advance in the price of cotton is bringing prosperity to the farmer, and if it holds for the balance of the season, will

PIG-IRON PRODUCED—TONS.	
1880.	1899.
397,000.	2,500,000.

mean \$75,000,000 more to them than they received for last year's crop. In diversified interests the same story of progress and prosperity runs. The Newport News Ship Yard, with over \$10,000,000 of work under contract, including two steamers of about 12,000 tons each for the Pacific trade, the largest ever built in America, is said to be employing more hands than even the Cramps; the Richmond Locomotive Works are competing with the Baldwin in exporting locomotives; the Maryland Steel Company has been furnishing steel rails for Russia's Siberian Railroad; for Australia and other distant regions; Ala-

CAPITAL INVESTED IN COTTON MILLS.	
1880.	1899.
\$21,900,000.	\$125,000,000.

bama coke has gone to Japan, and the export of both coke and iron is only limited by the fact that the home demand now exceeds the supply.

The South's Story in Statistics.
Statistics are often uninteresting, but the story of the South's progress cannot be told more clearly than in the comparative illustrations scattered through this article, in which reliable estimates are given where exact figures are not obtainable. Surveying the whole Southern situation, what has been done and what is under way, it can be truly said that—"all's well."—Harper's Weekly.

Cassava, the New Crop.

The Spanish war seems to have given promise of benefit in a direction entirely unexpected in stimulating the study of tropical products. A plant has been "discovered" that promises to become to the Gulf states what wheat is to the North. For years this plant, which resembles a gigantic beet, has been a staple product of



SEVEN CASSAVA-ROOTS.

Brazil and other South American countries, and has recently been grown in Jamaica with remarkable results. In Eastern tropical countries it is known as "manioc," in Brazil it is called "mandioca," in Colombia it is known as "yuca," and in the West Indies the name "cassava" or "cassada" prevails. The gigantic roots produce a flour that rivals the best of wheat. They give a juice that makes an excellent table preserve. They yield an abundance of starch of a superior quality. They also make a remarkable showing in fattening cattle. If one-half of what is claimed by the United States Department of Agriculture and the Jamaica Agriculture Society be realized, the problem of what to do with the vast areas of almost arid lands of the Gulf states is to be solved by "cassava."

Had It in Various Assortments.
It was in one of the big department stores. "What do you wish to-day, madam?" asked the courteous floor-walker. "Nothing, I—" "Sixteenth floor. Take the elevator. We have nothing there in large and varied assortments. James, ring the bell for the lady."—Harper's Bazar.

Remains of an Old-Timer.
The skeleton of a prehistoric sea monster resembling a shark was unearthed recently at the quarry of J. H. Davis, who lives ten miles south of Bonham, Texas. Its jaws were about four feet in length, and, though buried several feet in solid limestone, were in a good state of preservation, the enamel being plainly visible on the teeth.

FOR WOMAN'S BENEFIT.

Royalty Practices Calisthenics.
Fencing and calisthenics have always been a regular part of the daily physical exercises of the Princess of Wales' daughters. Even when on the royal yacht they never omit the exercise that has contributed to their graceful carriage and excellent health. The rapid, gliding walk, the erect carriage without stiffness and the well poised head of the Princess of Wales are attributed to her thorough practice of calisthenics.

Fur Hats for Winter Wear.
Fur hats are to be worn to a considerable extent. There are many mink turbans, and the all-over grebe skin hats, in small, round shapes, are just coming out. A particularly striking Spanish turban has the roll of white grebe skin and the crown of white velvet, on which bunches of violets are hand-painted. A bunch of violets is at the side of the turban, and a rhinestone buckle runs through violet velvet ornaments the front of the brim. With this is worn a collar of white silk bordered with swansdown. The front of the collar depends in long stole like ends, on which are applied purple orchids. The same flowers are used in the high silk and swansdown ruff at the neck.

A Widow's Mourning Veil.
A widow has a never-to-be mistaken badge in the tiny white ruche which she alone wears in her bonnet. This important adjunct fits closely to the head, is made of crepe, with a fold or two on the edge, while a flat bow in front makes it more generally becoming. The strings should be of black gros-grain ribbon. A widow may also have overstrings of white lawn, which are hemmed and tucked, when she dons the linen collar and cuffs, but for three months not a particle of white shows on a thoroughly correct deep mourning garb. A widow's crepe veil is at least two yards long, with a three inch hem at the back and from five to seven in front, the latter hanging one-third longer from the top of the head, and confined by folds a cross the bonnet, held by small dull jet pins on each side. At the end of six months the veil is worn with the longer end hanging in the back and the shorter one over it, with folds over the top of the bonnet; a face veil of net is then worn with or without a fold of crepe trimming.—Ladies' Home Journal.

About Women's Feet.
Just at the age when women are particularly fond of dainty feet, Nature comes gallantly to the rescue and shapes their feet smaller than they were as growing girls. It is a fact noted by observing shoemakers, who do not at all regret a circumstance that helps to make business brisk. "Yes," said one of Boston's swiftest bootmakers, to an inquiring newspaper man, "girls about seventeen or eighteen years old give us no end of trouble. Their feet are then large and shapeless. They often take sizes as large as full grown women. When they get older, however, and the foot becomes settled, new boots on the old last will be found too large, and it is only when the young ladies complain that their new shoes are too big that we know the foot has undergone the change just described. Then explanations have to be given, but the bootmaker doesn't mind this so much, for a woman, as she grows older, likes to be told that her foot is getting smaller.

"After forty the feet of a woman go back to the fat and flabby state, and herein grows trouble for the bootmaker, who has to state, in explanation why the last pair of shoes do not fit, that the cause lies in the fact that her feet are getting bigger."

The Newest Waists.
The white satin and white taffeta silk waists will be fashionable again. There is a little fullness directly in the front, but this is supposed to be gathered in under the belt. Almost all the waists have a yoke effect and a little lace edging around the front of the waist below the yoke. They have elaborate collars of the same material as the waist, but behind the ears in points so that they can be turned over. These are edged with lace, and a lace bow is additional, but on many of the waists there is simply a bow of the same material as the waist, the ends of which are trimmed with lace. All waists are tucked and corded, and there is an infinite variety in the widths of the tucks. Some are minute, others wide. There are even some waists that show the old-fashioned box plaits once again, but these require to be made carefully or they will look bulky and clumsy. They are at all times trying to stout figures. A stout woman will do well, if she has a silk waist made, to have always a boned and fitted lining, and, besides, it is best to have three seams in the back—one in the middle of the back and one on either side. These seams break the width, and, if sufficient curve is given to the wide seams, it really makes the figure much more tapering than might be believed possible.

Admonishing Children.
"The universal frailty of our human nature, which dislikes to be told of faults must be taken into consideration when we converse with our grown-up children," writes Kate Upson Clark in the Woman's Home Companion. "After they pass the age of 14 or 15 they usually betray a greater sensitiveness than before to even reasonable fact finding. By the time they reach 18 or 20 this tendency has become a marked trait. They have

then become substantially like the rest of us. Even from the lips of loving fathers and mothers and in strict privacy they want nothing but the same sort of honey on which our own souls love to feed. They wish no allusion made to the fact that they are acquiring nasal tones; that their gait is awkward; that their taste in dress is unformed and even bad; that they have not good judgment in choosing associates, and so on. Private discourses upon the wiles of the world and the weakness of youth and its proneness to wander they wish none of. Whatever medicine of that sort is to be given must be administered in small doses, interjected with skill into conversations upon ordinary matters, and sugar coated, if possible, with artful compliment, though it should be always deserved. Even the best and dearest of our carefully brought up young people are likely to have their year or more of obstinacy and 'ignominiousness,' or their permanent streaks of unreasonableness and contumacy. Therefore they would better receive most of the telling strokes that mold into shape before they reach the age of 14. From that time up to the age of what is called 'discretion,' which does not arrive with most of us before 25 (if then), the youth, in judgment and sense, is really not much superior to what he was at from seven to fifteen, but he has no suspicion of this fact."

Fashions in Slippers.
Pretty low slippers and low shoes that have been worn the past summer and fall, and will be worn in the case and in the south this winter, are unique, being made of yellow Russia leather, with a dull finish, giving them the appearance of calf. Being made of a leather soft in itself, but having an appearance of heavy material, they are particularly attractive in fancy shoes. Some of these slippers have a tongue going up on the instep, with one broad strap clasping over it and fastening with a bow, a little or a very large buckle. Large and elaborate buckles are to be seen on many slippers. Many varieties of pretty strapped slippers have one, two, three and four straps. The big buckles necessitate big bows under them or they are across the straps of a three or four strap slipper. Rhinestone and cut steel buckles are the prettiest of all, though a tiny gold buckle on the toe of a slipper with several straps has a business like appearance that is attractive. Most of the cut steel, as well as the rhinestone buckles are imported and consequently expensive. A pretty buckle is of gun metal and rhinestones.

Popular slippers are of patent leather, which always look well. Many slippers have different colored heels, and many people like them. The high heel the woman with the pretty foot affects, and some prominent women of the stage always wear extra high heels. One well known actress never wears a heel less than two and three-fourths inches high. The ordinary heel will measure two inches; half an inch in a heel is considerable. The other week several pairs of shoes and slippers with heels four inches high were made in New York for a Buffalo woman. No one knows how she will be able to walk on them.

Slippers made to match gowns are pretty, but they are not economical, for the material, unless it happens to be one of the standard satins, blue, pink, red and yellow, or black or white, cannot be relied upon to wear. When you measure your own foot for a shoe—a dangerous practice usually—the shoemaker says, stand on a piece of paper and draw a line around the foot, but while sitting, not while standing.—New York Times.

Fashion's Fancies.
Bolero effects of every kind and shape are a special feature of fashion.

Both large shoes and large gloves are worn by the smartest maids and matrons.

Some of the black velvet bows for the hair have pipings of white satin stitched on one edge with very good effect. Very shiny are the black gauze butterflies, spotted with chenille and spangles, which can be purchased in the shops for reworking last year's evening bonnets.

Mario Antoinette hats have not gone out any more than Gainsboroughs, Ruens and Toreadors. The Wagner is a hat with rather a wide spreading crown and the side tilted brims are seen. The most beautiful ribbons are those that are embroidered. The butterfly is to be found here as everywhere and is beautiful, whether it appears in brilliant colors or in full tones on a dull ribbon.

Muff chains are very elegant this season and are made of alternate links of gold and enamel in varied flower forms, with a jeweled charm hanging at one side. Another novelty is a ribbon with jeweled bugs set at intervals.

A dainty necktie that can be made at home is of a three-inch wide length of colored or black taffeta, hemmed by machine on both edges, cut in points at both ends. The newest four-in-hand is made of raw silk, the portion about the collar is tucked or corded into stiffness, the ends hemmed and stitched.

The long-continued reports that earrings are coming into fashion again have become more convincing as they have increased in number and volume, probably because constant repetition gives the appearance of unimpeachable fact, but now they have bobbed up again with many more evidences of truth. Anyway, earrings are seen oftener than they were a year ago, but most of them are of the kind which crept into the ear.