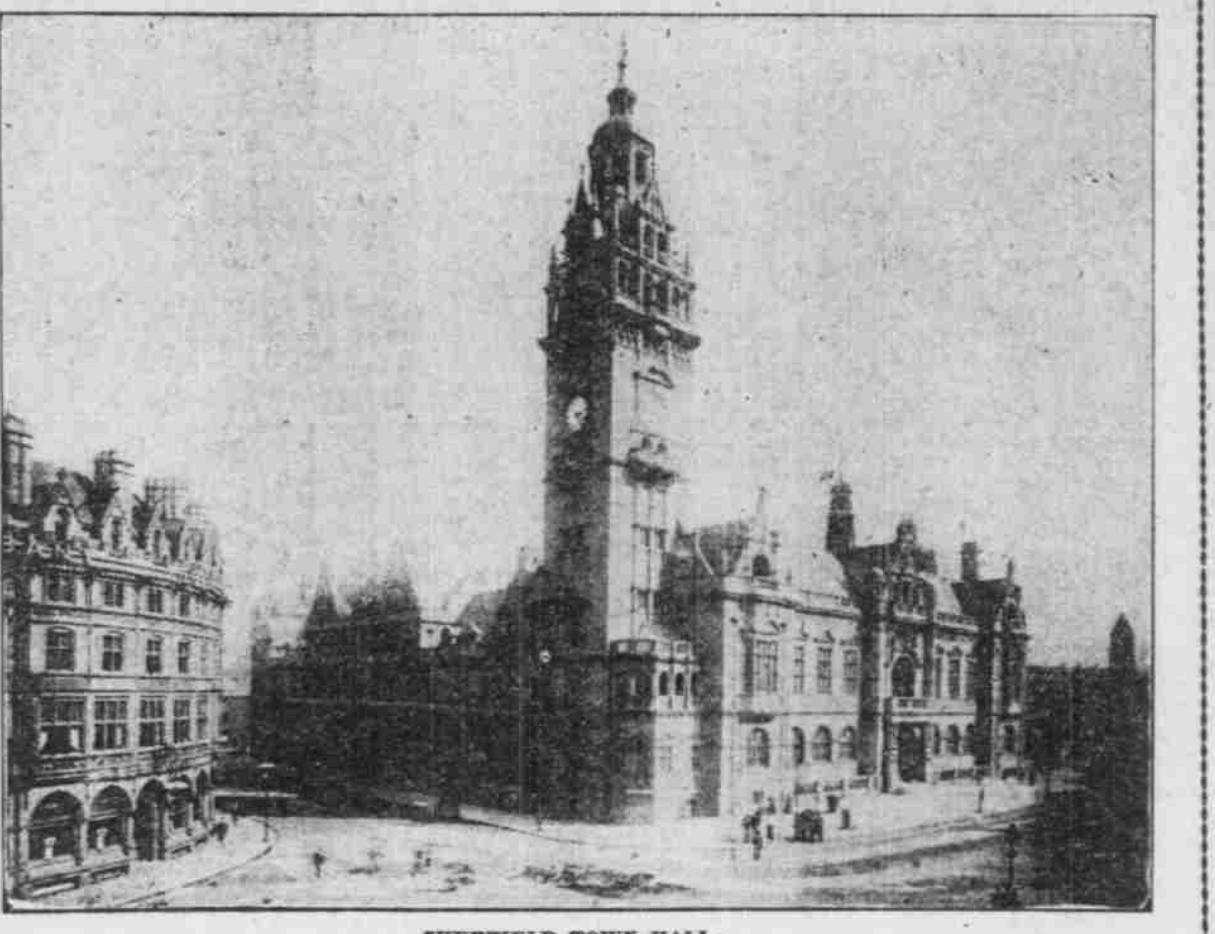


AMERICAN INVASION AND BRITISH WORKSHOPS

JOHN BULL'S BIGGEST
FACTORIES BEING REMODELED
AFTER YANKEE PLANS.



SHEFFIELD TOWN HALL.

SHEFFIELD, England, Aug. 1.—(Special Correspondence.)—I find that the American invasion has made its way into this, the very heart of industrial England. Our big steel trust has frightened the factories of Sheffield, and the world, not only to England, but all the world over, is being affected by it. The English railroads have begun importing American locomotives and American steel rails, and the people here are wondering whether they will not soon be sending their knives and razors as well. The letting of the contracts for the enormous bridges in Africa and Borneo to American firms astounded them, and they are worried as to their foreign orders. Sheffield produces agricultural machinery, but our American tools are sold side by side with those of English make, and our biggest machine companies have their agents at every country fair to drum the trade. Much of the business is done at the fairs, and our men sell direct to the farmers.

American Machine Tools.
One of the greatest specialties of Sheffield is making machine tools, and the American competition is cutting deep into this branch of its business. In a recent article the editor of *Fielden's Magazine*, one of the best of England's industrial authorities, writes that there is hardly a workshop of any importance in the United Kingdom which is not using American tools and labor-saving devices. He says he knows of an establishment which recently bought \$200,000 worth of new machinery, two-thirds of which was American. Since the close of the war numerous articles have been published in the papers here as to how the Americans are fast getting the monopoly of the machinery sales for South Africa. It is reported that our trade in the British colonies is steadily

increasing, and the complaint is made that the Governments of the various British dependencies are giving their most important orders to the United States.

This condition makes it almost impossible for an American to have access to the English mills. The managers look upon every visitor as a spy. They think he is after their trade secrets, and for this reason they will not show him their machinery. I have been refused admission to a number of factories and foundries on various pretexts, although my letters of introduction, some of them from our Government departments, show that my mission is simply that of newsgathering, and that I am interested in no manufacturing business whatsoever.

On the other hand the Britisher does not hesitate to borrow ideas and machines from others, and as a usual thing he borrows without asking. He is quick to take what he can get, not only from foreigners, but from his own people. A notable instance of this occurred here at Sheffield as far back as a generation before the Declaration of our Independence. It was the stealing of the secret of making crucible or cast steel. The originator of this process came from near Sheffield. His name was Huntsman, and he lived at a town called Handsworth. He established a factory at Attercliffe for the working of this process, and his descendants still make steel on the same spot. He carefully guarded his secret for a time, but at last one of his trade rivals stole it in the following underhand way: He disguised himself as a beggar, and one stormy night came to the doors of the factory seeking shelter and rest. He looked so rough that the men in charge did not think there could be any danger from one of his class, and they compassionately admitted him. He was told he could lie down on the cinder heap. He only pretended to be asleep, however, and through his half-closed eyes took a mental photograph of the machinery and the operations. He watched so closely

ly that he was able to reproduce the process, and he used it to rival the work of Huntsman. I understand that descendants of this man still own one of the largest foundries in the world, and that their business was originally based on the work of that night.

Keep the English Out.
If I were at the head of an American manufacturing establishment I would be chary of showing my processes to English visitors, especially to those of the same business who are looking for points. Everywhere I go I learn of Englishmen who are being sent to the United States to study our workshops, machinery and methods. A year ago Mr. Arthur Keen of Guest, Keen & Co. and Mr. E. Windsor Richards, a well-known metallurgist, made a thorough study of the best American steel plants. The works of Guest, Keen & Co. have been long noted as among the best equipped in England, but what Mr. Keen saw led him to change much of his machinery to American patterns.

I know that a vast deal of American shoe-making machinery is now being introduced into the shoe shops of Leicester and other places. English shoes are being made after our patterns, and American leather is imported; that they may be as like American shoes as possible. In a recent copy of the *London Mail* I see that the Wearside Steel, Coal & Coke Company, Limited, another of the biggest firms of England, has decided to remodel its works on American lines at the cost of a million and a quarter dollars. They will adapt our latest details in blast furnace construction and steel manufacture, as they have learned them from America. The *Mail* adds:

"By these and other means the company is confident that it will be able to hold its own against any competition, either at home or abroad."

gineer, and the total cost has been more than two and one-half million dollars. The English railroads are sending their engineers to America to study or railway methods, and I understand that a commission of English factory men will shortly go from Liverpool to the United States to make a careful investigation of our plants along special lines.

In a recent letter to the *London Times* Mr. J. Lawrence, of the House of Commons, writes a long statement as to the causes of England's loss of trade, in which he says that it is largely owing to the use of antiquated machinery. He gives an instance of his own factory, saying that while on a visit to America he discovered that we had more economical machines than his own, and that when he returned he broke and threw upon the scrap heap tools which had originally cost \$18,000. His associates objected at the time, but they had since found he was right, for, owing to that change, the company has paid dividends amounting to over \$5,000,000.

Engineers Who Graduate in America.
Indeed, it is fast becoming quite the thing to send the graduates from the technical schools here to the United States for practical training. This is what the British Westinghouse Company did with 50 young Englishmen whom they are now sending to the Manchester works. They sent them to Pittsburgh to learn Westinghouse methods, and the managers say that when so trained they become more efficient than the Simon Pure Americans.

In a speech at Wolverhampton, Lord Rosebery recently mentioned how a certain factory had selected from the public schools a number of young men having some knowledge of electricity and engineering, and, at its own expense, had sent them to America for a two years' apprenticeship in our workshops to qualify them to be superintendents or foremen of its shops in England.

In short, the English factors are now doing what the Japanese Government has been doing for 20 years with hundreds of its promising young men—that is, sending them abroad to learn how to do business. The German manufacturers have long been doing the same thing. You find Germans everywhere studying trade and technical methods. Indeed, it has come to a pass that many of the English shops refuse to employ Germans, even though they can get them for nothing.

As to sending men to the United States, up to the present time the English shops have been the most enterprising firms. The average British manufacturer is still in his Rip Van Winkle sleep, although he is beginning to stretch himself and dream of making his money in the States. He is slow to their old machinery and old methods. They insist on doing business their own way and appear to think that they can prosper with the old machinery that their grandfathers used because their grandfathers prospered. This is one of the chief causes of the decline of British industry.

Some Troubles of British Labor.
In a previous letter I referred to the difficulty which Mr. Stewart, the American who built the Westinghouse works, had in getting his bricklayers to lay more than 400 bricks a day. The same difficulty exists as to all classes of English labor. The factory men complain that every workman tries to do as little, instead of as much, as possible, and also the numerous holidays. The week end is the Saturday half-holiday, which is common all over this country. No one works after 1 o'clock on that day, and a large portion of the men, and of the women as well, celebrate the time by going on a holiday. The holidays of the English workmen amount to very nearly a month every year. I speak of those taken voluntarily, as well as those allowed by the state. There is but little work done during Easter week, and in this region especially little during the week following Ascension day. Then there is a holiday time about midsummer, and also at Christmas and New Year's. The American would celebrate such days in a rational manner, but in a majority of cases the English laborer celebrates them by getting drunk.

English Strikes and Their Cost.
Strikes and lockouts are common, and hundreds of thousands of people are affected by them every year. I have before me the figures of such strikes for the year 1901. They numbered 648 and 138,000 people



THE CUTLERS' HALL AT SHEFFIELD.

were involved in them. The total loss of work amounted to more than 3,000,000 days, or, in round numbers, cutting out the Sundays, to the work of one man for about 10,000 years. Reckoning the days at eight hours and the wages at only sixpence, or 12 cents, an hour, the loss in money amounted to more than \$5,000,000. The principal causes of strikes were against the reduction of or for the advancement of wages; 53 of them arose from the employment of people outside the unions, or contrary to the rules of the unions, and only six were for a reduction of hours.

All of these strikes were connected with the trades unions, which are very strong in Great Britain. There are 23 unions here, which have altogether a membership of \$2,000,000, and in addition, 517 others, the members of which make a total of almost 1,400,000 trades unionists. The men contribute liberally to the unions, and the union funds on hand in 1900 amounted, it is estimated, to about \$18,000,000, or to the income of the members of the union for almost two years.

Weeks Ends and Holidays.
One thing that tends to the injury of the English manufacturing industries is what is known as the week end, and also the numerous holidays. The week end is the Saturday half-holiday, which is common all over this country. No one works after 1 o'clock on that day, and a large portion of the men, and of the women as well, celebrate the time by going on a holiday. The holidays of the English workmen amount to very nearly a month every year. I speak of those taken voluntarily, as well as those allowed by the state. There is but little work done during Easter week, and in this region especially little during the week following Ascension day. Then there is a holiday time about midsummer, and also at Christmas and New Year's. The American would celebrate such days in a rational manner, but in a majority of cases the English laborer celebrates them by getting drunk.

Our people who have not visited the

factory centers of England can have no idea of the terrible condition of the working classes as regards the use of intoxicating liquors. Women and girls patronize the saloons almost as much as the men, and you cannot go into a public house without finding from one to a dozen women drinking. There are saloons near all the factories, and at the most hours the hundreds of factory girls rush for them and sit down with the men and have their beer, gin or whisky with their meals. They drink at noon and at night, and many drink too much.

The average man when he receives his wages lays aside a certain amount for his drink over Sunday. If he makes \$10 a week he may give his wife \$5 for the household expenses and reserve the other \$5 for the public house where he sits and gazes. In many cases he prolongs his spree till Monday, and the factory then looks for him in vain. This fact makes English labor very unreliable. The companies dare not contract to finish their jobs in a fixed time, and as a result much of their business is going out of the country.

Again, when the American capitalist has a big job his workmen will turn in and work nights to help him. Here, I am told, the average man works rather against than for his employer, and the more skillful a man is the slower he works.

For fear what I have said about English drunkenness may be disputed I have looked up the national drink bill for one year and I find that it exceeds that of any other nation. It amounts to more than \$800,000,000 annually, or almost a hundred dollars per year for each family of five. The amount spent for liquors in 1901 was more than the Government revenue of that year and more than the rents of all the houses and farms of the country. Taking out the people who it is estimated abstain from the use of intoxicants, it amounted to about \$5 per head, and two-thirds of the whole was drunk by the working classes. These figures are taken from the *London Mail* Year Book, which also adds that of all the nations of the world the English

drink the most and the Americans the least.

But let me tell you something about this city of Sheffield in which I am now writing. It is the typical English steel manufacturing town, and is the chief cutlery town of the whole world. It is a city of the rich and poor, of many capitalists and tens of thousands of workmen. Its workmen have been doing the same class of work for generations, and they are among the most skilled of their kind. A vast amount of the work is done by hand. I went through one of the largest cutlery establishments and found in it hundreds of blacksmiths pounding out knife blades and razor blades upon anvils, fashioning them just as the country blacksmith does his work at home. I saw the grinding done by hand, and in other little shops the handles were made and the knives and razors put together in the same way. Much of the work, it seemed to me could have been equally well and more rapidly done by machinery.

Sheffield makes me think of Pittsburgh. It is about as big as Pittsburgh, and it lies in a nest in the hills at the junction of two rivers. It has hundreds of foundries and factories, and the foundry chimneys rise through the smoke which hangs over it like the smoke of a dead forest lying in height with the spires of the churches. The city has good streets, some of which have been recently widened at the cost of the corporation. It has an excellent car system, which will give you rides for one or two cents a trip. It has a magnificent town hall, which cost \$200,000, and other fine buildings.

The business blocks would do credit to Pittsburgh itself, and in one of the best of them is the American Consulate, with the good old American flag flying from the windows. The United States Consul, by the way, is Major Church Howe, a business man from Nebraska. He has brought the consulate out of the chaos into which it formerly was and is now pushing American ideas in a most respectable way. FRANK G. CARPENTER. (Copyright, 1902.)

HOMES AND HAUNTS OF FAMOUS AUTHORS

VIII CARLYLE BY PROFESSOR PATRICK GEDDES

FOR the studious youth of 5-and-20 years ago there were, despite many obvious disadvantages as compared with the conditions of the present generation, more great teachers than there are now. Ruskin's, Emerson's and Tennyson's influence were, of course, widely spread, and of the two contrasted poles of literature, that of clearest, keenest, scientific writing on the one hand, that of deepest moral passion on the other, there stood out Huxley and Carlyle—the "Lay Sermons" of the first, the "Sartor Resartus" of the second, each in its way opening up a vivid outlook for adolescence into maturity.

About this time of highest appreciation of these two writers my own wise and sympathetic father, who had hitherto largely guided and freely encouraged my earlier education, gave it fully henceforward into my own hands; and so allowed me to give up previous plans of a Scottish university education for a wandering one, to begin in London with the first of these two teachers; yet the selection was not without attraction from the second. And so I settled down to work at Kensington in Huxley's laboratory, and to live in lodgings in Chelsea, as near as possible to Carlyle, as it happened a stone's throw from his door.

Carlyle's Chelsea Home.
Never can I forget my disappointment on finding it; the house itself, indeed plain, comfortable-looking, red, old-fashioned, free from that dreary West End success respectability which is even more depressing than the gloom and grime of poorer London; but alas, in a dull, narrow street, with only a dead wall in front, scarcely relieved by a row of weak and struggling little trees. One could not see, of course, from the street the fairly spacious back garden, still less the goodly vicarage park; and so, from the street, Carlyle's house seemed but a poor, dull cage, a prison rather than a home of genius. But in a moment one came out upon the Chelsea embankment. This was already practically in its present form, thanks to the Metropolitan Board of Works, though then without most of its new red houses, and with older and more irregular, simpler, quieter ones, leading up to and centering round one really picturesque group, that dominated by Chelsea Church, with its undignified old tower.

At either end of this mile or so of regular embankment stood a bridge, of Chelsea and Battersea, respectively; the lower, a commonplace piece of modern engineering, but vulgarly pretentious; the upper, a quaint old wooden structure, with its many piers, simple, practical, homely, yet picturesque, with its waving reflections, indeed often at evening almost sublime; the red sun-glow on sky and river burning through its black ribs as through the phantom ship of the Ancient Mariner. Here, I soon found, was Carlyle's walk. There was no mistaking the figure already familiar from photograph and engraving, with its still vigorous and steady stride, the shoulders only slightly bowed, the long overcoat, the broad-brimmed hat, the hair and beard only grizzled, not white. A vigorous, well-preserved, healthy old man, a good touch of color still on each cheekbone, the teeth (apparently genuine) white and well-

served; in short, by no means the worn decrepit I had expected from his own and other accounts, and not by any means looking his years—then 53 or thereabouts.

The Great Teacher.
Here, then, at length was the great teacher before me, my then hero as man of letters. To give him more than ample space to pass, yet to take off one's hat reverently as becomes the student to his most venerated teacher, was instinctive; one did not think of never having been introduced. The salutation was courteously yet absent-mindedly returned, with eyes that only looked half into mine, beyond my own; and so this liberty of salutation was never repeated, and though meetings in the body frequently took place, I never dared to seek in any way for the introduction for which I notwithstanding longed.

His other favorite walk seemed to be on the border of Hyde Park. Here one sometimes met him, or more frequently returning on the omnibus, in which one could sit right opposite and look into the deep meditative eyes without his ever noticing it. On his walks he was generally alone; one might meet him in the afternoon or late at night under the stars; and it is on this favorite haunt of the embankment that I still see him, and that he seems most in place, his portrait, as it were, most vividly framed, upon his beat between the two bridges. He is having been guided, by his sham ornament and garish guiding, like a tourist, to the gray, gleaming river, or upon the upper wooden bridge; its old-world simple, honest, rugged craftsmanship lending itself to effects of color and shadow now as strong, now as unexpected and lurid, as those of his own style.

Chelsea in the Old Time.
Here too in the scene was that contrast of the open world of nature in the sky and stream, each a presence of the eternal, with our hurrying and thronging human evanescence, which makes a city and peculiarly a bridge sublime. On land also the same contrast was not wanting, in appropriateness to our philosopher's favorite walk. Near the lower end of the embankment stood the railway bridge, the Chelsea waterworks, too, with their huge engine pumping day and night, the beam of each swinging solemnly up and down, "like a melancholy mad elephant," as my studious landlady was wont to call it, perhaps quoting consciously or unconsciously from Dickens. Beyond this, the coal wharves and clothing factories of Pimlico, its mostly mean and monotonous streets; beyond these again the squalid labyrinth of Westminster crowding up to its very towers. Up the stream, however, from the waterworks, the view went on improving, even beyond Chelsea Church, with its memories of a gentler and yet greater social thinker—Sir Thomas More, of the Utopia. For beyond this, where the embankment stood unfinished, began the real Chelsea, as Carlyle saw it, when he had settled there nearly half a century before; and his own description, still the best, shows that despite all his meditative inwardness and hermit-like moods he was by no means insensible either to the human aspect or the landscape influences of his environment.

To one who knew so well the life of interior reflection this whole environment could not but largely pass out of sight,

leaving only for a background "the industries, the immensities, the eternal stars of his great monologues; yet he was also an observer. One of the greatest of all men in a scene with a flash, or reproduce a battle upon the spot or from the map with patient constructiveness, he could not but have "sketched" scenes in words as carefully in his way as Stevenson or Tennyson in theirs.

Carlyle's Companions.
He was generally alone, as Old Age and Thought must ever be. Only two or three times have I seen him in company; once with a taller, thinner man with close-shaved, deep-lined face, whom I take to have been Froude; another time with a man somewhat resembling the portrait of Ruskin, but whom I imagine was



CARLYLE'S BIRTHPLACE—ECCLEFECHAN.

not he. The third time was near midnight, with a companion not to be forgotten; a scene startling then, curious to recall even now; for here in the moonless dark, and but faintly shown by the poor street lamps, were to be seen—indeed, yet it seemed at first assuredly—two Carlyles! Carlyle, for one, sure enough, with another old gentleman, almost his double, but overcast, broad hat, grizzled hair and all; and without supererogation one felt startled by these two old wizards: one looked with a perplexed awe not felt before or since. What it was I never knew, doubtless some old friend, who may have put on one of Carlyle's own characteristic overcoats before saluting us with him for a final talk before going to bed. But never before or since have I seen two such figures

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OF INTEREST TO WOMEN

RECIPES FOR DISHES THAT ARE UNIVERSALLY POPULAR. Continued From Page 23.

night, and in the morning pour off syrup, boil for five minutes, and add the pour over fruit. Repeat this for three successive mornings, then seal tight in jars and store.

HINTS ABOUT SUMMER FOOD.

No responsibility is greater than that which pertains to the food served to the family, particularly during the hot months. Two most important considerations are involved in this, the sanitary and the economic. Warmth and moisture, of which we have had an over-abundance of the latter this season, are great inducers of the growth of those minute organisms known as bacteria, the results being the decay of foods, the souring of milk, the fermentation of fruits, even when canned or preserved, the molding of bread, etc.

The housewife cannot be too careful in Summer to avoid the placing before her family anything which is not fresh and prime. The utmost cleanliness, the constant airing of all food receptacles, the ever watch over the edibles, is required if the health of the family is to be retained. There are various ways by which this can be accomplished, according to circumstances. The housekeeper should have a clean, cool, dry cellar or storehouse; next to this is perhaps the ice chest, which must also be kept scrupulously clean. All cooked foods should be thoroughly cooled before putting away, the better. Here are lines that may be written in fancy letters below the sketch:

Never mix warm food with cold. If you

are going to put away bread, fish or meat, do them first in a current of air, for more quickly a substance is cooled the better it will keep. All green vegetables, except those to be eaten raw, should be cooked as soon as possible after being gathered. Everyone knows how soon green peas or beans or sweet corn lose their flavor and sweetness. The housewife who has a small vegetable garden of her own is fortunate. There she may pluck the vegetables in the early morning, while they are yet wet with dew, and cook them while they retain all the delicacy of their flavors. But, of course, the city woman must do the next best thing she can—try to secure her food as fresh as possible, and take prompt care of it.

There are many little "tricks" in the trade of housekeeping. Meat may be protected from flies by smearing it with pepper or ground ginger, which can be washed off before cooking. These little aids also help to preserve it longer. Powdered charcoal also keeps meat from becoming tainted. If meat has been kept upon ice it should be cooked at once upon being removed. There are some foods that take the place of fresh meat in hot weather, such as good satisfaction, among which are a hard-boiled egg, some cold, scoured salted codfish. This fish may be prepared in various delicious ways, creamed or boiled. Also dried beef is nice creamed, with a good-sized soup-bone may be put into a pot of stock and kept in the ice chest, ready for use on short notice. Pickled tongue, cold ham, plenty of eggs, rice and macaroni, all go to make a capital Summer dinner, added to vegetables and fruit in their season.

THE NEWEST FAD
GUESTS ARE REQUIRED TO DRAW THE FEATURES OF A FRIEND IN THE "FACE BOOK"

QUITE the latest idea is to have a face book. Instead of the old style album, a collection of drawing paper sheets are bound together, and the friends of the bookowner are expected to do the rest. A book is sometimes made of heavy, coarse white linen, and is a desirable and durable style, with the cover of brilliant crimson, deep blue or yellow linen. If a clever sketch drawn in black ink is put on the better. Here are lines that may be written in fancy letters below the sketch:

Next week, "Tennyson," by Canon Rawnsley. (Copyright, 1902.)

book are apt to be the ones in which detached human features are drawn. For instance, there may be a nose done by one friend, and ear by another, just the tip and end of dimpled chin by a third, or the sketch of a hand, and it is a good plan to have the pages with these odds and ends of features sketched in without autographs. A good idea at the head of the page may be "My little pot of stock keep them." There are the guessing leaves of the face book, and many a jolly hour may be passed by visitors who try to guess the names of the artists. Some women insist that musical friends shall express a sentiment by means of a bar of music. The selection of the bar is made from a popular song, and the first word of the line is written over the initial note, while the last one appears above the closing one. This helps out the guesser, who cannot read music, but who is familiar with the songs of the day. Other face book owners, with original minds, insist that only flowers or plants or trees be drawn on the pages. A glance at some of these makes one wonder to see how little form in flowers is appreciated. Color appears to be the chief point that appeals to the average eye, and form to a little or no place at all in it.

The face book need never be complete, for each evening that a woman entertains a fresh leaf may be added.

KATHERINE FRINDVILLE.