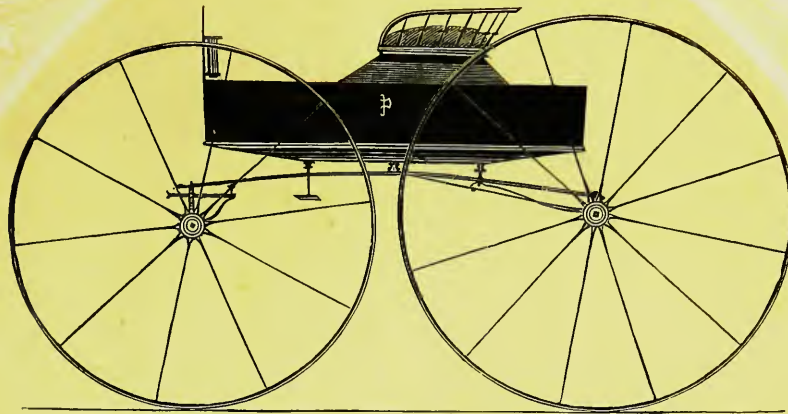


HAM'S PATENT SIX-SEAT CIRCULAR FRONT CLARENCE.— $\frac{1}{2}$ IN. SCALE.

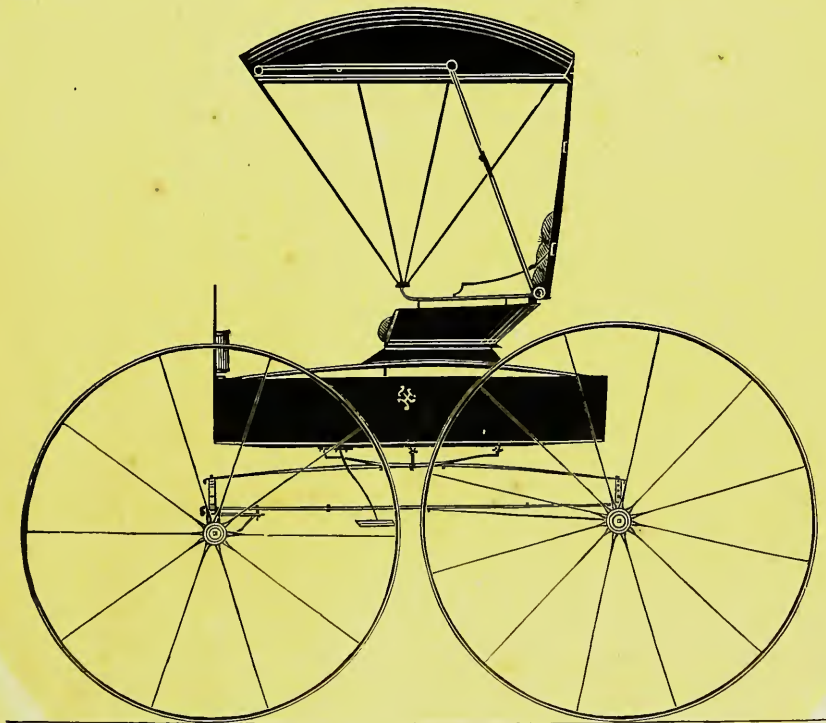
EXHIBITED AT THE AMERICAN INSTITUTE FAIR, BY JOHN C. HAM.

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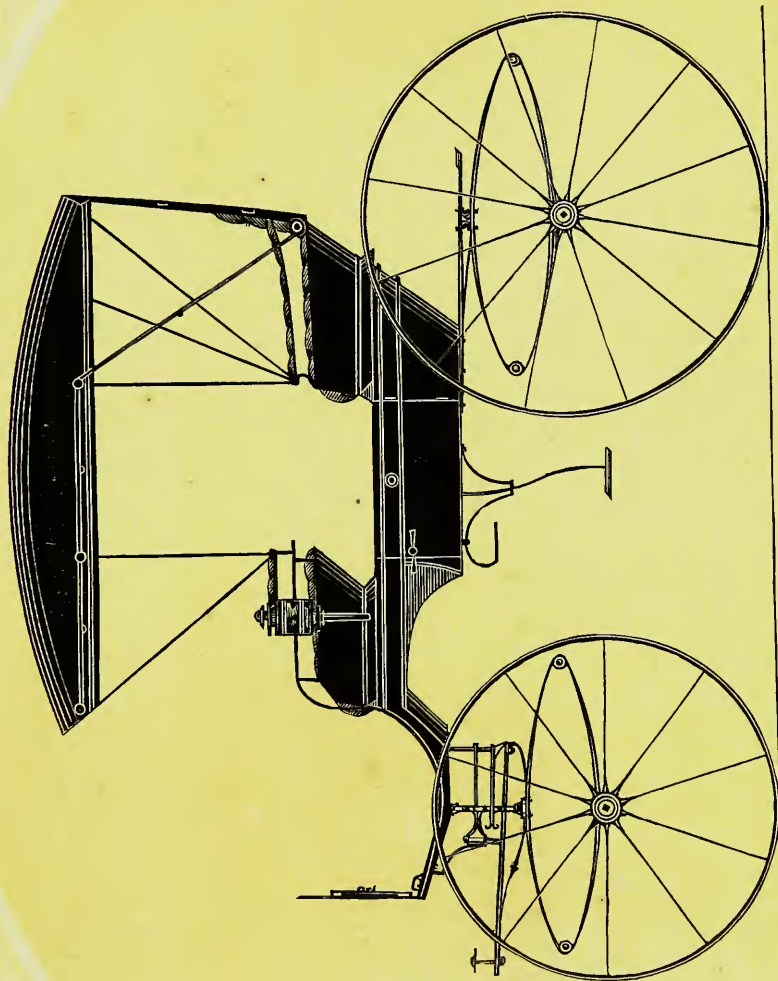
Explained on page 104.



TROTTLING WAGON. — $\frac{1}{2}$ IN. SCALE.
EXHIBITED AT THE AMERICAN INSTITUTE FAIR, BY R. M. STIVERS.
Engraved expressly for the New York Coach-maker's Magazine.—Explained on page 104.



JAGGER TOP WAGON. — $\frac{1}{2}$ IN. SCALE.
EXHIBITED AT THE AMERICAN INSTITUTE FAIR, BY R. M. STIVERS.
Engraved expressly for the New York Coach-maker's Magazine.—Explained on page 105.

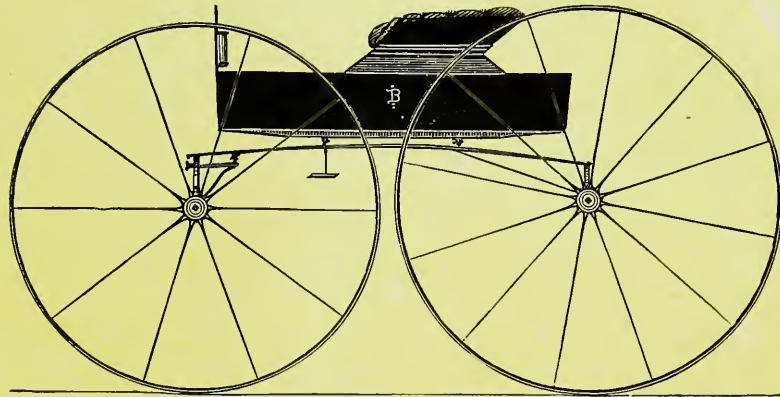


FOUR-SEAT EXTENSION-TOP PHAETON.— $\frac{1}{2}$ IN. SCALE.

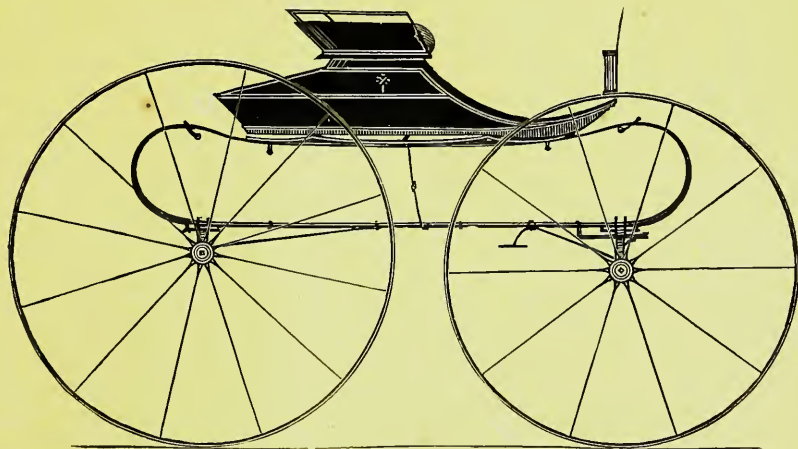
EXHIBITED AT THE AMERICAN INSTITUTE FAIR, BY GEO. J. MOORE.

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Explained on page 106.



THE DEXTER WAGON. — $\frac{1}{2}$ IN. SCALE.
 EXHIBITED AT THE AMERICAN INSTITUTE FAIR, BY J. B. BREWSTER & CO.
Engraved expressly for the New York Coach-maker's Magazine.
Explained on page 105.



CALIFORNIA WOOD-SPRING WAGON. — $\frac{1}{2}$ IN. SCALE.
 EXHIBITED AT THE AMERICAN INSTITUTE FAIR, BY THEO. E. BALDWIN.
Engraved expressly for the New York Coach-maker's Magazine.
Explained on page 105.



DEVOTED TO THE LITERARY, SOCIAL, AND MECHANICAL INTERESTS OF THE CRAFT.

Vol. XII.

NEW YORK, DECEMBER, 1870.

No. 7

ENGLISH CARRIAGES.

It is true, that the carriage, as it is indifferently called, is a more decided thing than a chaise; it may be swifter even than the mail; it leaves the stage at a still greater distance in every respect, and (forgetting what it may come to itself) darts by the poor old lumbering hackney with immeasurable contempt. It rolls with a prouder ease than any other vehicle. It is full of cushions and comfort; elegantly colored inside and out; rich, yet neat; light and rapid, yet substantial. The horses seem proud to draw it. The fat and fair-wigged coachman "lends his sounding lash," his arm only in action, and that but little, his body well set with its own weight. The footman, in the pride of his nonchalance, holding by the straps behind, and glancing down sideway betwixt his cocked-hat and neckcloth, stands swinging from east to west upon his springy toes. The horses rush along amidst their glancing harness. Spotted dogs leap about them, barking with a princely superfluity of noise. The hammercloth trembles through all its fringe. The paint flashes in the sun. We, contemptuous of every thing less convenient, bow backward and forward with a certain indifferent air of gentility, infinitely predominant. Suddenly, with a happy mixture of turbulence and truth, the carriage dashes up by the curb-stone to the very point desired, and stops with a lordly willfulness of decision. The coachman looks as if nothing had happened. The footman is down in an instant; the knocker reverberates into the farthest corner of the house; doors, both carriage and house, are open;—we descend, casting a matter-of-course eye at the bye-standers; and the moment we touch the pavement, the vehicle, as if conscious of what it has carried, and relieved from the weight of our importance, recovers from its sidelong inclination with a jerk, tossing and panting, as it were, for very breath, like the proud heads of the horses.

All this, it must be owned, is very pretty; but it is also gouty and superfluous. It is too convenient,—too exacting,—too exclusive. We must get too much for it, and lose too much by it. It's plenty, as Ovid says, makes us poor. We neither have it in the republic of letters, nor would desire it in any less jacobinical state. Horses, as many as you please, provided men have enough to eat;—hired coaches, a reasonable number;—but health and good humor at all events.

Gigs and curricles are things less objectionable, because they cannot be so relied upon as substitutes for exercise. Our taste in them, we must confess, is not genuine. How shall we own it? We like to be driven, instead of drive;—to read or look about us, instead of keeping watch on a horse's head. We have no relish for vehicles even of this description, that are not safe. Danger is a good thing for giving a fillip to a man's ideas; but even danger, to us, must come recommended by something useful. We have no ambition to have *tandem* written on our tombstone.

The prettiest of these vehicles is the curricule, which is also the safest. There is something worth looking at in the pair of horses, with that sparkling pole of steel laid across them. It is like a bar of music, comprising their harmonious course. But to us, even gigs are but a sort of unsuccessful run at gentility. The driver, to all intents and purposes, had better be on the horse. Horse-back is the noblest way of being carried in the world. It is cheaper than any other mode of riding; it is common to all ranks; and it is manly, graceful, and healthy. The handsomest mixture of danger with dignity, in the shape of a carriage, was the tall phaeton with its yellow wings. We remember looking up to it with respect in our childhood, partly for its loftiness, partly for its name, and partly for the show it makes in the prints to novels of that period. The most gallant figure which modern driving ever cut, was in the person of a late Duke of Hamilton; of whom we have read or heard somewhere, that he used to dash round the streets of Rome, with his horses panting, and his hounds barking about his phaeton, to the equal fright and admiration of the masters of the world, who were accustomed to witness nothing higher than a lumbering old coach, or a cardinal on a mule.

A post-chaise involves the idea of traveling which, in the company of those we love, is home in motion. The smooth running along the road, the fresh air, the variety of scene, the leafy roads, the bursting prospects, the clatter through a town, the gaping gaze of a village, the hearty appetite, the leisure (your chaise waiting only upon your own movements), even the little contradictions to home-comfort, and the expedients upon which they set us, all put the animal spirits at work, and throw a novelty over the road of life. If any thing could grind us young again, it would be the wheels of a post-chaise; the only monotonous sight is the perpetual up-and-

down movement of the postillion, who, we wish exceedingly, could take a chair. His occasional retreat to the bar, which occupies the place of a box, and his affecting to sit upon it, only remind us of its exquisite want of accommodation. But some have given the bar, lately, a surreptitious squeeze in the middle, and flattened it a little into something obliquely resembling an inconvenient seat. If we are to believe the merry Columbus of Down-Hall, calashes, now almost obsolete for any purpose, used to be hired for traveling occasions a hundred years back, but he preferred a chariot, and neither was good. Yet see how pleasantly good-humor rides over its inconveniences :

Then answered 'Squire Morley, "Pray get a calash,
That in summer may burn, and in winter may splash ;
I love dirt and dust, and 'tis always my pleasure
To take with me much of the soil that I measure."

But Matthew thought better ; for Matthew thought right,
And hired a chariot so trim and so light,
That extremes both of winter and summer might pass ;
For one window was canvas, the other was glass.

"Draw up," quoth friend Matthew, "Pull down," quoth friend John,
"We shall be both hotter and colder anon."
Thus talking and scolding, they forward did speed,
And Ralpho paced by under Newman the Swede.

Into an old inn did this equipage roll,
At a town they call Hodson, the sign of the Bull ;
Near a nymph with an urn that divides the highway,
And into a puddle throws mother of tea.

If Prior had been living now, he would have found the greatest want of traveling accommodation in a country, for whose more serious wants we have to answer, without having her wit to help us to an excuse. There is a story told of an Irish post-chaise, the occupier of which, without quitting it, had to take to his heels. It was going down hill as fast as wind and the impossibility of stopping could make it, when the foot passengers observed a couple of legs underneath, emulating, with all their might, the rapidity of the wheels. The bottom had come out, and the gentleman was obliged to run for his life.

We must relate another anecdote of an Irish post-chaise, merely to show the natural tendencies of the people to be lawless in self-defense. A friend of ours, who was traveling among them, used to have this proposition put to him by the postillion, whenever he approached a turnpike, "Please, your honor, will I drive at the pike?" The pike hung loosely across the road. Luckily, the rider happened to be of as lawless a turn for justice as the driver, so the answer was always a cordial one, "Oh, yes—drive at the pike." The pike made way accordingly, and in a minute or two the gate people were heard and seen, screaming in voice after the illegal charioteers.

Fertur equis auriga, neque audit currus.—VIRGIL.

The driver's borne beyond their swearing,
And the post-chaise is hard of hearing.

As to following them, nobody in Ireland thinks of moving too much, legal or illegal. LEIGH HUNT.

EARLY PORTLAND SLEIGHS.—Sleighs were first made in Portland about 1819. First came what were called the "Tub" or "Half Moon" sleighs, then the "Square sleigh," and about 1837 they began to be made with dashes.

Wood Shop.

STYLE AND TASTE IN CARRIAGE BUILDING.

WHAT MAKES A CARRIAGE IN THE LATEST STYLE.

The construction of carriages in that perfection of detail, which is demanded by the advancement of taste in general, and the practical requirements of our day, renders carriage-making one of the most difficult mechanical trades. It is not intended by us to follow here into the details of the various branches represented in the carriage factory, with their many mutual relations, but in the present article we shall treat on style and taste from a general standpoint, and shall endeavor especially to show *what makes a carriage in the latest style.*

After utility, style is the first great point in a carriage. This is true with nearly all trades ; but there is a vast difference between carriage-making and some others. Styles in dress and articles of wear change from one period to another so completely that they have almost no resemblance ; the bonnet of to-day is different from that of yesterday ; the originators of these fashions have an unlimited field for the development of their ingenuity, but not so with carriages. The lines are changed very slowly, and sometimes the changes are hardly perceptible to even the accustomed eye ; indeed, so minute are the variations in form, that carriage-makers themselves will often at the first glance overlook them as trifles, but of such trifles combined is constituted the carriage of the latest style. The reasons for this slowness of change is easily explained. It is not only the cost and long wear of a vehicle, and the time it takes to build it, or the risk of finding a buyer, but mainly the fact that we have to work inside of given and standing rules, binding us to dimensions of height, width, and length, and exacting the observation of other important points, such as hanging up, draught, weight, and convenience under given circumstances.

But, nevertheless, many carriage-makers living outside of the centers of fashion, which are the larger cities, and New York especially, are often mistaken in this question. They come from East and West to New York with the laudable desire to improve themselves by inspecting the styles. They go to the Repositories, and visit the fashionable drives in Central Park, Harlem Lane, and others, but frequently they are surprised to see so few new styles. Here is a coal-box wagon, there an extension-top phaeton. They say they made *nearly* the same patterns three or four years ago, and no doubt they did. But to any one who is posted, there are, perhaps, many striking novelties in these two vehicles. The square cut-under on a dicky seat, with the other lines as usual, may be the new thing ; or the leaving off of a body moulding, a different shape of a light in the quarters, a new shade of painting with appropriate striping, or perhaps an additional trimming with new laces, will, to an expert eye, show quite new styles.

There is some change always, little as it may be, and whether good or bad. It was about three years ago when the principle of straight lines was brought over from France to the United States. It commenced with straight joints, and, by and by, extended to the lines of the body ; yet, to this day, straight lines on carriages are fashionable, and they certainly will continue to be for a long time to come ; but this is not slow progress. We found the change from

the old-fashioned sweeps and curves was universally approved; and, therefore, we hold to straight lines as expressing shortness and simplicity, and we still have ample room for the working of our taste inside of these limits.

The question will now arise, why do carriages made in the larger cities bring so much higher prices, comparatively, than those manufactured in smaller places, their styles have apparently very little difference. Country makers can procure just as good, and sometimes even better, timber than city makers, and they may also use other materials of the best quality. Still, purchasers prefer going to the larger cities, and paying often what is considered exorbitant prices.

The answer simply is, they pay for the taste, and for these trifles, sometimes hardly visible, but which have built up for the respective maker a reputation worth to him thirty or more per cent. on every sale. Of course not all have the same class of customers, but that such buyers are to be found almost everywhere is demonstrated by the fact, that in every locality where some carriage-makers exist, one or the other of them will command high prices, and not only make what is called a better class of work on account of his custom, but has his custom on account of his work. Therefore, besides the outlines of the body, which in no instance need be at great variance from the ruling styles, it is the general taste applied in the completion of a job, down to the smallest items, which makes a *new and stylish* vehicle; a shape of body whose difference is almost imperceptible; a tasteful painting; a perfect matching of striping with ground color; a trimming of corresponding color; close attention to minor parts and a display of good judgment in every particular. These are the requirements of a vehicle of the newest style; and to attain perfection in the art of producing this class of work, we can never see, read, or hear too much of the experience and doing of others, from which to select for our own use such points as our own trade requires.

A. MULLER.

THE GROWTH OF TREES.

I HAVE something to say about trees. I have brought down this slice of hemlock to show you. Tree blew down in my woods (that were) in 1852. Twelve feet and a half round, fair girth; nine feet, where I got my section, higher up. This is a wedge, going to the center, of the general shape of a slice of apple-pie in a large and not opulent family. Length, about eighteen inches. I have studied the growth of this tree by its rings, and it is curious. Three hundred and forty-two rings. Started, therefore, about 1510. The thickness of the rings tells the rate at which it grew. For five or six years the rate was slow, then rapid for twenty years. A little before the year 1550 it began to grow very slowly, and so continued for about seventy years. In 1620 it took a new start and grew fast until 1714; then for the most part slowly until 1786, when it started again and grew pretty well and uniformly until within the last dozen years, when it seems to have got on sluggishly.

Look here. Here are some human lives laid down against the periods of its growth, to which they corresponded. This is Shakspeare's. The tree was seven inches in diameter when he was born; ten inches when he died. A little less than ten inches when Milton was

born; seventeen when he died. Then comes a long interval, and this thread marks out Johnson's life, during which the tree increased from twenty-two to twenty-nine inches in diameter. Here is the space of Napoleon's career; the tree doesn't seem to have minded it.

I never saw the man yet who was not startled at looking on this section. I have seen many wooden preachers, --never one like this. How much more striking would be the calendar counted on the rings of one of these awful trees which were standing when Christ was on earth, and where that brief mortal life is chronicled with the stolid apathy of vegetable being, which remembers all human history as a thing of yesterday in its own dateless existence.

O. W. HOLMES.

Smith Shop.

THE JOURNEYMAN SMITH.

What is a journeyman smith?

The first time that I remember hearing the term *journeyman* applied to any particular trade was about twenty-nine years ago, at which time I was quite a youth. The word was employed at the end of every verse of a somewhat lengthy song, called the "Journeyman Tailor."

The real meaning of the word, or why it was applied to trades, became to me a vast and not over lucid problem.

Feeling anxious to learn its exact meaning, I applied to my maternal author for a definition of the term. After receiving the answer, that it applied to all tradesmen or mechanics that had finished their apprenticeship, I felt as much enlightened as before.

The word journey, I knew, related to travel; the combination only, was the puzzle. How a carpenter, or smith, or tailor, with steady employment and a permanent domicil, should be styled or called a traveling mechanic, was more than my comprehension could fathom. To arrive at the solution of this problem was ever my great aim. Numberless times have I asked of master mechanics its true meaning, and in the end invariably found myself no wiser than before.

In 1852, after having entered upon the third year of my apprenticeship, it became my duty to help a German smith, an excellent mechanic, but unable to utter a word of English, or to comprehend anything mentioned to him in the same language.

In order to be able to understand each other, we commenced the task of teaching each other our native languages, and in a measure we succeeded.

While conversing with him in German, upon the German method of constructing vehicles, the German apprenticeship system, and other matters relating to the trade, I was successful in finding a clue which I felt quite certain would lead me to the proper solution of the great apprenticeship problem.

He mentioned that, while he was a "*Handwerks-Bursch*," of having stopped a certain length of time in Berlin. *Handwerks-Bursch* was to me as so much Greek. After giving my friend to understand that I would like to know the literal meaning of the term, he told me that it meant a *traveling mechanic*. Following up my clue, I finally came to the solution of the problem that had

troubled my brain for the preceding eleven years, which is about as follows:

Until within the last few years, it was imperative, in all German countries, and in a majority of other European countries, upon every person, after he had finished his apprenticeship and before entering into business on his own account, to spend a certain number of years in traveling in other countries, or in the different sections of his own country, that he might become acquainted with the different methods of working, and thereby perfect himself and become competent to enter into business on his own account.

The term applies to single men only, working for other persons. As soon as he enters into business he is termed (in German parlance) "*Meister*," or "*Werke-Meister*." If he becomes married and does not establish himself in business, but works for another person, the term "*Handwerks-Bursch*," or traveling mechanic, does not apply to his calling any longer. He is looked upon as an inferior workman, and is termed a "*Sack-Reise*" [the literal translation of "*sack*" in this case applies to household effects], or in English, "a botch," a man that is encumbered, etc. The meaning of the term may be measurably altered by emphasizing or taking from.

The foregoing system, once in vogue throughout all European countries, is fast dying out, and at present exists in but one or two German Provinces. The old terms are falling into disuse, and in some of the German States have become obsolete—the terms used at present signifying a learned smith, carpenter, or tailor, having a greater amount of significance, and are in the ascendancy. In conclusion, your humble servant would say, that until the term "journeyman" becomes obsolete (that is, so far as relates to the mechanic of this enlightened country), and the proper term, **MASTER MECHANIC**, supersedes it, that the writer will remain as equally dissatisfied as he was prior to his learning the exact or literal meaning of the word journeyman in its present application.

J. L. H. M.

NEW YORK, Oct. 31, 1870.

We were glad to receive this article, because it contains some interesting remarks about the life of European mechanics, and we wish that our contributor would tell us something more about it. But we cannot agree with him in his explanations of the origin of the word *journeyman*. According to Webster, *journeyman* signifies a man hired to work by the day, a day-laborer, and this is, no doubt, the correct meaning. The common word *journey*, from the French word *jour*, a day, signified, originally, not travel, but the travel of a day, or all that was done in one day, and thus *journeyman* has nothing to do with the the modern signification of *journey*, travel, but only with the primitive one, *day-work*. Originally, therefore, a journeyman smith was one who labored, and was paid, by the day.

Ed.

THE BLACKSMITH'S CAPITAL.

In an old ballad a mother asks her daughter whom she would like best to marry—a barber, a shoemaker, a tailor, a painter, a carpenter, or a blacksmith? The

daughter flatly rejects the barber. She does not fancy the shoemaker or the tailor; and though she thinks the painter or the carpenter might make a very good match, yet she selects the blacksmith as the best.

This ballad gives, in its own way, the general opinion of the value and consequence of the different professions. It prefers the painter, the carpenter, and the blacksmith, to the barber, the shoemaker, and the tailor, and most people do so. There is, indeed, a close connection between science and the three former professions, which ennobles them in the eyes of mankind. The painter, the wood-worker, and the blacksmith have every day new questions for science to answer, and all results of scientific speculation have to be tested by the practical man before being acknowledged as true. The shoemaker and the tailor, on the contrary, have nothing to do with science. What they need beside manual skill, and some knowledge of material, is merely a small bit of taste. They must not have too much. A tailor who has more taste than fashion is most likely to get very few customers. And as for the barber—neither science nor art, neither philosophy nor taste, has ever heard his name.

The reasons why the blacksmith is generally preferred to the painter and the wood-worker, seem to be, first, his art is the oldest and most indispensable of trades; and second, it requires and imparts a high degree of physical strength, which always makes a good impression upon people. A young blacksmith lately crossed the ocean from Hamburg to New York, with only half a dollar in his pocket. He knew nobody in America, and understood neither English nor German. A friend asked him if he were not afraid of starving to death in New York, destitute as he seemed of any resource; but he smiled, quickly drew up his sleeve, showing his naked right arm, and answered, "Do you think, sir, that a man with an arm like this is likely to die of starvation?" Indeed, he had something more reliable than his rich friend had.

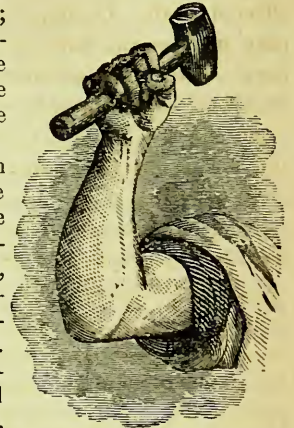
O ho! ye stalwart arms and hearts,
Ye nerves of well-skilled might,
Our country's honor still is safe
While ye protect the right.

In peace or war we see with joy
Thy smoke and belching light;
Our pillared cloud by day they seem,
Our pillar of fire by night.

Paint Shop.

ANTIDOTE FOR LEAD POISONING.

MR. DIDIERJEAN, a litharge and red lead manufacturer of France, having taken all possible precautions to keep his workmen in a healthy state, could not succeed in entirely preventing lead colic and paralysis, until, by a mere



accident, it was discovered that two of the men were never affected at all. On inquiry being made, it was found that they were in the habit of drinking milk with their dinners. After some satisfactory trials of this harmless preventive, a supply of milk was provided for the factory, and each man was obliged to drink a quart every day. By this means all symptoms of lead disease have disappeared, and the health of the workmen has been perfect for the past eighteen months. We have great confidence in this remedy. The action of the milk is due to the 3 per cent. of caseine it contains, which unites with the oxide of lead, forming an insoluble and harmless compound. Let some of our readers who are troubled by the affects of lead try this and give us their experience. We are aware of the popular delusion that the milk of cities is a dangerous mixture of pulverized calves' brains, chalk, and linseed meal, and that whiskey is the only pure and wholesome drink, but Dr. Chandler, chemist of the N. Y. Board of Health, says that although a systematic fraud is perpetrated in the dilution of milk with an average of one third of water, the milk of New York is generally free from injurious adulterations and untainted by disease.

Since writing the above, we learn that in some parts of Germany, workmen in lead factories are in the habit of drinking water acidulated with a few drops of oil of vitriol, as a prevention of cholera and with good results. This, certainly, is a well grounded scientific theory, as the sulphate of lead which would be formed is not injurious, and if the human viscera were composed of cast iron, we would pronounce in favor of this beverage; but its effect is to congest the bowels, and a slight excess of it may give rise to dangerous complications.

PRESENT STATE OF VARNISH MANUFACTURE IN THE UNITED STATES.

THE manufacture of varnish has grown to be a business of such magnitude and importance that a few notes concerning it may perhaps prove to be not uninteresting. Before the late war, it was comparatively an insignificant branch of industry, but the many different manufactories springing up since that time, especially in the Western States, has given it a prominent position. The number of articles upon which it is used would astonish one not in the business. Almost every article of furniture—the different kinds of carriages, coaches, and wagons, agricultural implements, pianos, iron-work, safes, refrigerators, brooms, pictures, and a thousand other articles require to have varnish applied before they are completed and ready for sale.

The largest quantity is probably applied on furniture, and Cincinnati is the head depot, being the largest furniture mart in the world. Being used upon so many articles, there are, of course, many varieties and grades of varnish, the principal kinds being called copal, Damar, shellac, asphaltum, Japan, and coach.

Copal, or furniture varnish, derives its name from the

gum used in its manufacture. This gum is an African product, and the leading grades are known by the names of Zanzibar, Benguela, and Angola. Zanzibar is a port on the eastern coast of Africa, and from this place the best quality of gum is obtained. Benguela and Angola are on the western coast, opposite Zanzibar, about six degrees below the equator, in the latitude of Central Brazil, and distant about 3,300 miles. The gum is found imbedded in the sand, the tree from which it exuded being now extinct, and, consequently, there being no new supply and a constantly increasing demand, the time will come when varnish makers will have to look for a substitute for gum copal. The natives are sent from the larger ports up the smaller streams to pick this gum, and carrying a basket upon their backs, go inland sometimes as far as twenty miles, fill the smaller boats, and so continue until the larger vessels are laden. The gum, when found, is quite dirty and sandy. It is sometimes cleaned on the coast, but oftener in this country, in a solution of potash. After the gums are well cleaned, they are assorted and graded according to size and color, and then packed in cases, weighing from two to three hundred pounds.

The furniture varnish is made by taking a certain amount of gum, which is carefully selected, placed in a copper kettle over the furnace, and when thoroughly melted, is incorporated with linseed oil, previously prepared with dryers. It is then taken from the fire and turned out into a "cooler," and when at a low enough temperature, is reduced to a proper consistency with spirits of turpentine. Then comes the straining process, to render it perfectly free from all impurities, and lastly, it is run into large tanks, where it is allowed to settle and get age. Age improves varnish greatly, and, in fact, is almost indispensable—old varnish becomes more brilliant and transparent in color, keeps its gloss longer, is more durable and elastic, and works freer under the brush. The melting is an important part of the business, and requires a person of much experience to successfully accomplish it.

Gum kowie, or New Zealand gum, is found in large quantities in Australia, and is a substitute for the copal, on account of its price, and at the present time it is used largely in furniture varnishes. It has not the hardness nor brilliancy of the copal, but nevertheless, makes an excellent varnish. The amount of gum daily melted is surprising; we know of one firm in Chicago who fuse two thousand pounds of kowie daily, besides making Japan, Damar, asphaltum, and the other kinds of varnish requisite for their trade.

In the manufacture of coach varnish, nothing but the hardest gums should be used, such as Zanzibar, Benguela, or Angola. The preparation of the oil for this varnish is quite a science, and varnish makers are very careful not to let their *modus operandi* be exposed to the public. The oil, which should be old and well settled before using, is then bleached, and layers of different kinds put into it before it is incorporated with the gum. Oil is best bleached in the sun, but oftener with the aid of chemicals or acids; the latter, however, are hurtful, destroying the oil.

The finishing or varnishing of a piece of furniture is quite an art, and few workmen who handle a brush understand it theoretically or practically. The grain or pores of the wood are first filled with a heavy-bodied, quick-drying varnish, or shellac, then sand papered, or scraped, to a level with the wood; two or three additional coats of rubbing varnish are then applied, which is rubbed down

smoothly with pulverized pumice-stone and water, afterward nicely cleaned and washed, then dried with a chamomile skin. A finishing coat of varnish is given, rendering the surface of the wood as smooth and bright as a piece of polished marble. Each coat must have time to dry hard before the application of another.

Damar varnish is perfectly white, and transparent as spring water, and is used in white paint for glossing on painted and papered walls, and on pictures and maps. The best Damar gum comes from Batavia, in the island of Java, and an inferior grade from Singapore.

Asphaltum varnish is black, and applied on all kinds of iron-work. The asphaltum is found in great quantities in Cuba, Mexico, and on the Pacific coast, but the finest quality is the Egyptian. In appearance it resembles a piece of ordinary coal, having a strong, pungent odor, and is soluble in turpentine. The varnish is a quick and hard dryer, with a brilliant gloss.

Shellac varnish is used on furniture for the first coating, in the finishing of canes and umbrella handles, on patterns for casting, and by painters to varnish over knots in the wood, so as to form a coating through which the sap in the knot can not penetrate, and by the trade is known by the name of "knotting." Gum shellac is found in the East Indies, and is soluble in alcohol.

Japan is used as a dryer for paints, and is made from gum shellac, red lead, litharge, linseed oil, and turpentine. English coach varnish, until recently, has had a decided preference over the American on account of its durability and elasticity, but at the present time the American wearing body varnish is made so perfectly that it is used in our best carriage and railroad shops, and the time is near at hand when the foreign article will be entirely superseded. A very laudable strife among our varnish makers has been to see who shall make the most durable varnish for coach work, and to produce a better article than that made abroad. Yankee ingenuity and perseverance is obtaining its reward, and consumers feel that it is their duty, as well as their interest, to use home products in place of foreign, and this cordial and hearty support has given increased incentive to American manufacturers to bring the article up to the required standard.

Our manufacturers labor under certain disadvantages in respect to price, in competition with English manufacturers. In the first place, there is the extra freight on the gums, and, in giving varnish requisite age, the interest on their money is more than double, notwithstanding varnish is produced here at less price than abroad. Probably no business is carried on with more competition than this one. In the city of New York there are fully forty varnish factories, while a dozen are found in Boston, and half a dozen in Philadelphia. Newark, N. J., seems filled with them, Cincinnati has four, Chicago four, St. Louis three, Indianapolis one, Dayton, O., four, Baltimore three, Pittsburgh three, and, in fact, every city of any importance has its varnish factory. Every concern thinks it necessary to have its representative in the shape of a commercial traveler, and the country is covered from Maine to California, from Minnesota to Louisiana. To such an extent has the trade been solicited, that it is no uncommon sight to see, in a furniture or coach factory a placard, reading, "No Varnish Wanted," and in many railroad shops varnish agents are politely notified, by a card conspicuously displayed, that they will not be admitted into the premises. No class of men, however, are more persistent and inde-

fatigable in search for customers. Knowing the opposition they have to encounter, they brace themselves for the contest, and their pleasant and agreeable manner, soft and oily speeches, tempting inducements, and unanswerable arguments, generally bring them off the victors, with an order in their pockets. The business has fallen into the credit system, unfortunately, and six months, and even more, is now granted to any party worthy of credit. The profits were formerly large, but competition has so reduced them that at the present time no manufacturing business pays a less percentage, and it is only by the volume of sales that a manufacturer can now realize any thing beyond his expenses.

Varnish, during the war, was much adulterated with rosin and benzine, but now the demand is for quality, not quantity, and it is to be hoped the trade will support those manufacturers who have uniformly made trustworthy goods, even though they could have no other reward than the sustaining of their reputation.—*Technologist.*

TREATMENT OF ZINC WHITE.

The practice of mixing zinc white with any preparation of lead as a paint is condemned by a recent author as inadvisable. He recommends the preparation of zinc-white paint with an oil treated in the following manner: Instead of mixing it with the ordinary boiled linseed oil, two hundred pounds of linseed oil are to be boiled moderately, first for five or six hours alone, and then for at least twelve hours with twenty-four pounds of coarsely broken peroxide of manganese. By this method an oil is obtained which dries very quickly, and is especially adapted to mixing with zinc colors. This oil is to be kept excluded from the air, to prevent its becoming too thick. When used, from three to five per cent. of it is to be added to paint prepared in the ordinary manner with raw linseed oil.

PAINTING, HUMAN AND DIVINE.

HERE, morning is a season far too rare
To waste in sleep, and with a lover's eye
I rise and watch the coming of each day,
That launches daily in the eastern sky
And rides with majesty the sea of mist;
More glorious are the trappings of his state
Than any canvas ever glowed withal.
God's pictures are the masterpiece of light,
Before which pigmy man displays his chalk
And strives with trembling hand to imitate.
God is creative, and in that great thought—
So high above man's vision, that he looks
And sees a cloud alone, when seeking it—
In that great ideality, is fixed
The crown of his divinity and power.
The man is weak in all his base estate,
And ne'er so strong or wise as when with eyes
Unsealed, and he perceives his nothingness.
Here looms, 'twixt human means and God's, the gulf,
The great impenetrable wall of cloud,
That dark and terror-pregnant lifts its veil,
As the green ocean lifts its armed wall
Against the sceptre of the red-lit West.
The human mind discerns, and when the wild
And fire-fed iron horse goes pulsing by,
A mighty emblem of his sovereignty,
He slings his cap and shouts a note of pride;
But when the engines of the Lord ride by
With thunder tread and dripping lightning breath,
He bows, like a smitten reed, prone in the dust.

In one he sees the power of his kind,
 And feels the hot blood course his swelling veins,
 For he is also man. But in the storm
 He sees the gulf, and through the rended veil
 Perceives the contrast of those thoughts most vast,
 Creator and created, and in awe
 And reverence bows before the great unknown,
 The more displayed, the more intense involved.
 Man delves and mixes all his brightest tints
 From of the dust, and with a wisp of hair
 He paints, upon stray remnants of the past,
 The slough of some thing beautiful that was.
 But all God's colors are the natural birth
 Of living sunlight and his radiant smile,
 And when he makes a picture to refresh
 The weary eyes of us who watch and wait,
 He makes its beauties all so beautiful
 They tell us only of our other home.
 His easel is the vaulted sky, his cloth,
 The drifting clouds, the great and mighty hills
 That mock the clouds in grandeur, rocks and fields,
 And tiny flowers, the microcosm of all.

Trimming Shop.

COLORS IN TRIMMING.

The Rule of Bright Colors on Dark.—Color in Trimming.—Luster in Trimming.—Ground with Colors.—Leather Cushions.—Their Objectionable Features.—Silks and Satins.—Second Proposition; the Ground-work should be Lusterless and Dark.—The Reasons Illuminated.—Conclusion.

IN an article about trimming, which appeared in the October number of *The Magazine*, we gave as a good rule for the guidance of the trimmer, the following: *the minor trimmings, such as the ribbons, laces, welts, and buttons, used inside a carriage, should always be of a brighter color or a lighter shade than the groundwork.* As this rule was inferred by us from merely theoretical premises, we have been puzzled not a little, as we find by further examination that quite the opposite rule has been established by practice. We have since visited quite a number of the most prominent carriage-repositories in this city, giving particular attention to the styles of the trimmings, and have found, that in most cases, if not in all, the rule is reversed, and darker colors and deeper shades are used in the ribbons, laces, welts, buttons, etc., than in the ground-work. We are unable, however, to find any good reasons, why practice is right and our rule wrong. On the contrary, however ready we are to learn from practice and custom, in this case we feel it our duty to oppose them, and we have made up our minds to fight the dark laces.

In most cases it is necessary for the trimmer to use some lusterless and relatively dark color as a ground-work. We observe, however, that at present, leather and silk are becoming very fashionable in trimming, and both of them are often possessed of a brilliant luster. Yet we feel sure that this fashion will be of short duration. Leather possesses several serious objections. Many persons cannot sit on a seat covered with it. After sitting for an hour or so on such a cushion, they feel ill, and the seat becomes damp. It is, indeed, the first rule of a good hygiene to keep up a steady and live communication between the skin and the surrounding air. Through the pores of the skin a process is continually carried on, whose effect on the blood is similar to that of breathing,

and when this process is stopped, one is likely to become feverish. With many persons, however, the process is concentrated on some particular part, which is indicated by a ready perspiration, and to stop this perspiration is often very dangerous. Thus many people are affected with headache when using rubber shoes; others have a cough after wearing a rubber coat; others are affected in some other way when sitting on a leather seat, and to nobody who has to sit for hours in the same position is a leather seat wholesome. It ought, at all events, to be avoided in railroad cars and stage-coaches.

It may not be known to our readers that this matter has already been made the subject of discussion in Europe between some of the railway companies and the medical authorities. It is contended by the latter that it is very deleterious, and that its use in public conveyances of all kinds should be strictly prohibited by law as a sanitary precaution.

There is still another annoyance connected with these leather seats, and of a kind more likely to affect people generally. One is always sliding on them, and even if the trimmer, with special regard to this point, has moulded the seat in such a way that the passenger does not slip down to the bottom of the coach, it is often impossible for one to get a firm hold of the seat, and make one's self quite comfortable. How many pleasant dreams have been spoiled, by the dreamer suddenly sliding down from the seat. And if he succeeds in mooring himself solidly thereon, what a singular sound when he rises. One is often afraid that his pants will retain the leather covering, or still worse, that the leather-covering will elope with his pants, such a cracking and chirping accompanies the parting of them.

And even if these inconveniences could be prevented,—and to some degree they certainly can be,—trimming in leather would never become fashionable with first-class carriages, even with open ones. It looks too penurious. It is a poor household, says an ancient poet, in which nothing can be stolen. And in the same way an article of luxury is a poor thing when made to last for eternity. It is a charm with a ball-dress, that it will last only one night and never be used any more, as it is a charm with the butterfly, that it lives only for one month. Luxury is a short-lived race. Momentary splendor is its nature and its charm, and we consider it questionable taste to trim the seats of a pleasure-carriage with everlasting leather.

Luxury does not demand durability. It scorns it, and however well suited for the cheaper class of open carriages, where leather presents a partial protection from the inconvenience of dust, it is entirely unsuited for the Beau Brummel style of carriage which the Frenchman calls the "*equipage de Jean de Paris.*"

Silk and satin have the virtue of short duration, if such it may be called. They are not likely to last too long. Yet, as leather looks too hard and too durable, so silk and satin often look too soft and too unsubstantial. We have seen only a few carriages trimmed with satin, and they always appear to us as if they were a peculiar kind of vehicles fitted alone for sick folks. Satin, moreover, does not appear well when connected with wood. It always has a somewhat metallic glitter, which adapts it admirably for combinations with glass and metals, but it does not harmonize with wood, unless this is gilded. Even when wood is painted and varnished with the ut-

most splendor, its appearance remains soft and plastic, and shows best when juxtaposed to cloth or velvet. We do not doubt, therefore, that in this country cloth will always be applied in carriage-trimming more than any other material, and in Europe velvet trimmings are quite common. But both of them are lusterless. Furthermore, we doubt not that the trimmer will most often have to use the deep shades for groundwork, even if he prefers a light color, because a carriage is always liable to much exposure, and this does not allow of very delicate tints. And thus we have reached our first proposition, which is this: *the groundwork in trimming must generally be a lusterless and deep-toned color.*

It follows from this, that the trimmer will generally find it necessary to enliven and brighten the groundwork, but this he cannot do by using laces, welts, and buttons of a darker color or a deeper shade than that of the groundwork. Dark color on bright gives a soft effect; bright color on dark enlivens the effect. Dark on bright suppresses the glowing colors and tones down the dazzling ones. Bright on dark purifies the mixed colors and strengthens the weak ones. In a word, light makes darkness visible, but darkness quenches light, and this plain and unquestionable relation between light and darkness rules over all relations between dark and bright colors. The trimmer, therefore, who uses a darker shade for the ribbons and laces than for the groundwork spoils the latter. If this groundwork is of a mixed color, he makes it dingy. If it is of a chaste and subdued color, he makes it weak and faded. We will show this by an example:

Let yellow be the main color, which shall be set off by application of other colors or different shades. In this example we do not speak in particular of carriages. We have seen only one coach trimmed with yellow, and as we opened the door and jumped in, we felt as if we were plunging into an egg, and into the very midst of the yolk. Although we hope never to meet again with any trimming in yolk color, we choose yellow for our example, because it is a very striking color, and most likely to furnish us with striking applications. If yellow is very pure and soft and lusterless, it may be given a still more delicate appearance by adding some lustrous white in very small quantities. White silk-buttons, for instance, on yellow muslin will sometimes look very pleasing. Yet, generally, white makes yellow look greyish, and yellow makes white look dead. The reason is this: yellow is so bright a color itself that it is hardly possible to give it any additional brightness, and as white, when juxtaposed to other colors, can do nothing but brighten them, white and yellow are most likely to kill each other. If, moreover, the yellow is not perfectly pure, yet still lusterless, it shows very well when combined according to the laws of complementary contrast with some darker colors, for instance, with red or blue; with the former, when the yellow has a greenish cast; with the blue, when it is grayish. But this combination of yellow with red or blue, and its vigorous effect, prove that it is not the dark color which enlivens and shows off the light one, but quite the opposite; it is the light color which enlivens and shows off the dark one. Namely, if the dark color is applied in so small quantities as to be drowned nearly in the mass of the light one, the red or blue will by no means enliven or set off the yellow. On the contrary, when unable to appear distinct, it throws off an indistinct shade that makes the yellow look gray. As soon, however, as the red or blue

is applied in sufficient quantity, to be distinctly perceived as the red or blue, the combination becomes a pleasing one, because the yellow sets off the blue as the light color always sets off the dark one, and the blue, indicating itself beside the yellow, sets off the contrast and the harmony of complementary colors.

Thus we have reached our second proposition of the rule, namely: *the minor trimmings of a carriage, such as the ribbons, laces, welts, buttons, etc., should be of a brighter color or lighter shade, than the groundwork, in order to enliven the latter and give it its due effect.*

We hope our readers will dwell upon this rule, and study its applications. If they consider it carefully, we believe they will not fail to find that our propositions are not wanting the support of many good and substantial reasons; and there is a general principle that underlies, which cannot but be valuable to the coach builder, the trimmer, and the customer, in determining many questions of taste in the selection and arrangement of colors in trimming. Our confidence in the truth of our theory has been confirmed in a striking manner since our pronouncement of it. We were invited to examine two carriages in a repository in this city, whose style of trimming was represented as being particularly tasteful and elegant. We examined them, and the representation was correct. Both of them were in perfect accordance with our rule. One was lined with black silk, and trimmed with yellow laces and buttons, and the other in bottle-green cloth, with apple-green trimmings. That is to say, in both of them the ribbons, laces, buttons, and welts were of a brighter color or a lighter shade than the groundwork.

Pen Illustrations of the Drafts.

HAM'S PATENT SIX-SEAT CIRCULAR-FRONT CLARENCE.

Illustrated on Plate XXV.

THIS is an excellent family carriage, being substantial, convenient, and fine looking, and Mr. Ham assures us that he finds ready sales for this class of work. Its capacity, moreover, is equal to its name, but we trust it is more manageable. He deserves credit for his efforts in the way of making improvements in the details of carriage building. In the vehicle before us there are two features which are noticeable: the patent inside and the pull-to handles, which combine beauty with durability.

Painting.—Body, deep brown, striped with fine line of carmine. Carriage parts, very deep brown, or black, striped with one broad and two fine lines of umber, and down the center of the broad stripe is drawn a fine line of carmine, which relieves the rest, and gives a very neat and beautiful effect.

Trimming.—Crimson satin. Lamps lined with gold, and hubs trimmed with same.

TROTting WAGON.

Illustrated on Plate XXVI.

THIS vehicle is representative of the quality of R. M. Stivers' road wagons. It has stick seat, and its weight is 110 pounds.

Painting.—Body, black, striped with gold line in lower moulding and seat rail. Carriage parts, black, with simple quarter-inch stripe of gold.

Trimming.—Cushion, leather.

JAGGER TOP WAGON.

Illustrated on Plate XXVI.

ANOTHER specimen of the Stivers wagon, and of a style which is much called for. Its weight is 215 pounds.

Painting.—Body, black; carriage parts, carmine, with line of gold and two fine lines of black. Surface and finish exceedingly good. This is one of the several vehicles in this Exhibition which was finished with Valentine's varnish. It afforded an excellent means for comparing the American article with the imported, and it must be acknowledged in this case, at least, that the comparison is by no means to the disadvantage of the former.

Trimming.—Blue cloth.

FOUR-SEAT EXTENSION-TOP PHETON.

Illustrated on Plate XXVII.

THIS is a handsome pattern, and well proportioned.

Painting.—Body, black, with gold mouldings. Carriage parts, black, lined with gold.

Trimming.—Deep blue cloth.

THE DEXTER WAGON.

Illustrated on Plate XXVIII.

THIS style of vehicle, which has become a standard one with J. B. Brewster, is famous for its lightness. The one on exhibition at the American Institute weighed only 99 pounds, including shafts. He is aided in maintaining this extreme lightness without sacrificing durability by the use of the Brewster patent supporting bars, in which steel is inserted. It is, without doubt, a valuable achievement in modern carriage-building to produce very light work, accompanied with strength and durability, and further efforts will probably be made to still cut under the present light weights. Whether this is compatible with the safety of life and limb ought to be considered carefully by those aiming at lightness. To us it seems that the results already obtained border very close to the limits of possibility.

Dimensions.—The width of the body of this wagon is 1 foot 7½ inches on top, and 1 foot 6¾ inches at bottom.

Painting.—Body, black, with fine line of bronze round edge of seat. Carriage parts of carmine, striped with one-fourth-inch line of black round felloe. No lines on the spokes.

Trimming.—Cushion, green cloth, trimmed with patent leather.

CALIFORNIA WOOD-SPRING WAGON.

Illustrated on Plate XXVIII.

THIS style of vehicle, hung on thorough-braces, and called the wood-spring wagon, is very popular in California and the other Pacific States, for which it is particularly well adapted. The pattern was invented by the Kimball Manufacturing Company of San Francisco, and we understand this firm have sold, within the past two years and a half, not less than 850 vehicles of this style, including many four-seated ones. They are light, and the price is very moderate. The weight of those holding from four to six passengers is only 400 pounds, and they cost from \$400 to \$500. A gentleman of San Francisco, Mr. Read, connected with the Kimball Manufacturing Company, is now engaged in introducing them in the East, and they are seen occasionally in the streets of New York and vicinity, but we are inclined to doubt whether they are destined to become popular in this part of the country. They are attended with some disadvantages, one of which is said to be the jolting of the body on heavy roads, and the liability of the disarrangement of the suspension.

The appearance of the one before us is rather heavy, although the probability is that it weighs only a very little over 100 pounds. We recently examined a two-seated one at R. M. Stivers' factory, which weighed 96 pounds with shafts, and was said to be capable of carrying a man weighing 220 pounds. The body is hung on leather straps, which are made adjustable by screws, by the accustomed method.

Painting.—Body, black, with gilt mouldings. Carriage parts, deep lake, striped with two fine lines of gold.

Trimming.—Brown.

Editor's Work-bench.

THE PROSPECT PARK FAIR.

THE first Annual Fair of the new Agricultural and Horticultural Association was held in October, on the Prospect Park Fair Grounds, in Kings county, Long Island, beginning with October 11th, and closing on the 14th.

We visited the fair on Friday, the last day. Leaving our office at one o'clock, we took the horse cars, and three hours later we reached the grounds. The show was exceedingly interesting, however, and well repaid our long and tiresome journey. We have not space to speak of the races. The exhibition of carriages was, without exception, the finest we have ever seen. It comprised sixty-five vehicles, representing the majority of the leading coach-builders in New York, besides a number of sleighs. A long and spacious building with open sides had been prepared especially for the reception of these

vehicles, which were arranged in three long lines, between which were ample walks by which access was given for the spectator to take a full view of the whole. The facilities were, of course, much more satisfactory than at the American Institute Fair, where the space is so limited. Indeed, those sixty-five vehicles would have occupied nearly the entire floor of the Skating Rink in which the latter is held. In the list following are shown the names of the leading exhibitors, and the carriages by which they were represented :

- | | | |
|---|---|--|
| DEMAREST & WOODRUFF, 628 Broadway, New York... | { | Clarence.
Landulet.
Extension-top Carryall.
C. Spring Brett.
Brett.
2 Landaus.
Coupe.
Coupe Carryall.
6 seat Phaeton.
6 seat Rockaway. |
| A. S. FLANDREAU, 18 E. 18th St., New York | { | The Coming Carriage.
The Carriage of the Period.
Turn-out-seat Phaeton.
Jump-seat.
Wagonnette.
Rockaway. |
| H. B. WITTY & Co. | { | Piano-box Buggy.
Half-top Cut-under.
Extension-top Carryall.
Rockaway.
Open-seated Pony Wagon.
6 seat Rockaway.
Extension-top Phaeton.
2 Road Wagons. |
| R. M. STIVERS, 138 E. 31st St., New York..... | { | Coupe Rockaway.
Jump-seat Carryall.
Phaeton.
Road Wagon. |
| BREWSTER & Co., of Broome St., New York..... | { | Trotting Wagon.
Unfinished Road Wagon, weighing 65 pounds, and calculated to weigh only 81 pounds when completed. |
| THEO. E. BALDWIN, 786 B'dway, New York..... | { | Box Buggy.
Phaeton, with front seat and on platform springs. |
| DUSENBURY & VAN DUSER..... | { | Road Wagon.
Open Phaeton. |
| CORBETT & Co., 125 W. 25th St., New York..... | { | 2 Road Wagons. |
| JOHN C. HAM, 20 E. 4th St., New York. | { | Trotting Wagon.
Clarence.
Landulet.
Trotting Wagon, weighing 67 pounds, with pole and shafts. |
| MINER, STEVENS & Co., 656 B'dway, New York. | { | Road Wagon, weighing 185 pounds. |
| DAY & SON, 148 Elridge St., New York..... | { | Road Wagon. |
| FRANK CORSA & Co., 1147 Atlantic Ave., Brooklyn.. | { | Top Wagon, weighing 260 pounds.
Road Wagon, " 110 "
Trotting Sulky. |

- | | | |
|--------------------------------------|---|---|
| TITUS & SHEPARD, Brooklyn, E. D. . . | { | Open Wagon.
Top Wagon. |
| H. BOWEN, 35 Boerum St., Brooklyn. | { | Trotting Wagon. |
| S. B. CROSSMAN, Jamaica..... | { | Pony Phaeton. |
| H. G. POWERS & Co., Brooklyn .. | { | Road Wagon, two-seated.
Road Wagon, single-seated. |
| COE & MERRIT... . | { | Road Wagon. |

On the day we visited, there was considerable misunderstanding and ill-feeling in regard to the disposal of the premiums, and in accordance with the many urgent expressions the matter was reconsidered, and after a more careful examination of the claims of the contestants, a number of changes were made. It was on account of this misunderstanding, probably, that the "Philadelphia Coachmaker" was led into the many errors which occur in its report of the fair, and the distribution of the prizes.

The following is the official record of the premiums as finally awarded in the Department of Carriages :

PREMIUMS.

Class No. 1.—Best display of carriages, gold medal or \$50, to Demarest & Woodruff, New York. Second best display, silver medal or \$20, to A. S. Flandreau, New York. Best carriage for general use, silver medal or \$20, to Demarest & Woodruff, New York.

Class No. 3.—Best top-wagon for road use, silver medal or \$20, to Miner & Stevens, New York. Best open-wagon for road use, silver medal or \$15, to H. B. Witty & Co., of Brooklyn.

Class No. 4.—Best two sleighs, single and double, silver medal or \$10, to R. M. Stivers, New York.

Class No. 5.—Best sulky for track use, diploma or \$5, to Frank Corsa, Brooklyn.

In addition to the foregoing, several special premiums were given, as follows :

SPECIAL PREMIUMS.

1. To Brewster & Co., of Broome St., New York, for unfinished Road Wagon.
2. To J. C. Ham & Co., of New York, for Clarence.
3. To S. B. Crossman, of Jamaica, for Pony Phaeton.
4. To Brewster & Co., of Broome St., New York, for Double-team Skeleton Wagon.
5. To Corbett & Co., of New York, for Jagger Wagon.
6. To Dusenbury & Van Duser, of New York, for Dog Cart.
7. To Theo. E. Baldwin, of New York, for Victoria.
8. To R. M. Stivers, of New York, for Coupe Rockaway.

Among the other similar fairs, which have been held during the past two months, are the Cincinnati Industrial Exposition, the Burlington County Fair, held at Mount Holly, N. J., and the State Fairs held in Milwaukee, Wis., Cleveland, O., Decatur, Ill., Henderson, Ky., and Indianapolis, Ind. We have received full reports of several of them, but are obliged to omit them to give room for matters of more general interest.

THE AMERICAN INSTITUTE FAIR.

THE distribution of prizes and "honorable mentions" to exhibitors in the American Institute Fair, was made shortly after the issue of our last Magazine. The names of the carriage-makers to whom awards were given are as follows:

For a Eureka Cutter, a Dexter Cutter, an Adjustable-Seat Wagon, a Jagger Top Wagon, a Hambletonian Road Wagon, and a Side-Bar Road Wagon—Rufus M. Stivers, Nos. 144 to 152 East Thirty-first street, first premium.

For a Road Wagon—J. B. Brewster & Co., No. 65 East Twenty-fifth street, second premium.

For a Dog Cart—J. B. Brewster & Co., No. 65 East Twenty-fifth street, honorable mention.

For a Six-Seat, Circular, Clarence-Front, Rockaway Carriage, and an Improved Pattern Landaulette—John C. Ham, No. 20 East Fourth street, honorable mention.

For a Carriage (Coupé)—Theodore E. Baldwin & Co., No. 786 Broadway, honorable mention.

For a light Road Wagon—Edward Smith, White Plains, N. Y. (Joseph L. Smith, Agent, No. 28 East Twenty-ninth street), honorable mention.

Much has been said by the press about this great exhibition. Indeed, during the past two months, New York has had no other attraction which has drawn so large and steady a throng of spectators.

The great success of this exhibition suggests that the metropolis has now arrived at a point of growth where a permanent "Palace of Industry" becomes a manifest need of the times. If the Fairs of the American Institute are so continuously thronged, year after year, it is certain that an exhibition of larger scope, and in more spacious and suitable quarters, would prove a permanent and paying attraction. A movement to secure such an exhibition as one of the features of New York is already so well under way that its realization within a year or two seems very probable. A large capital has been subscribed already; the enterprise is in the hands of enterprising men, and before long the public will be made acquainted with the details of the exhibition of the future which bids fair to rival in interest, and far surpass as a business investment, the famous Crystal Palace Exhibition at Sydenham.

THE HAND AND THE BRAIN.

WITH some people we find an electric sympathy between their hands and their brains, which enables them to execute their every design with the utmost exactness, and yet without any painstaking. When drawing, they hit the most minute niceties of proportion, and sweep the most graceful curves, and all they do is done with ease and even with carelessness, as if it were quite impossible for them to do any thing not accurate and beautiful. When handling an instrument, they elicit from it tones so sweet and fairy-like that the music seems like a dream rather than actual sounds. When sharpening a lead pencil, folding a paper, wrapping up a package, or placing books on a shelf, even in such trifles, they make an im-

pression upon us of having the rules of fitness and beauty inborn in their fingers. We say of these people that they have *talent*.

With other people we find quite a ridiculous contrast between their designs, which may be ingenious and beautiful, and the execution, which is awkward and clumsy. Many a lady, who has a very delicate taste for dress, and understands perfectly how to criticise her friends, dresses herself as no human being ought to be dressed. Many a gentleman, who in social intercourse has a keen eye for what is becoming or unbecoming in others, cannot see for himself the line which separates shyness from obtrusiveness. Many people, who are not hot-blooded at all, cannot lower the gas without putting it out, nor shut a door without making an unusual slam, nor raise a glass without spilling its contents, nor do any thing without doing it wrong. We say of these that they are *ill-trained*.

With no people, however, have the questions of talent and of training so many applications as with the mechanics, and nowhere, perhaps, are these questions so often misunderstood. The mechanic's skill is admired as a natural talent in many cases in which it is actually the product of long and very careful training, and, in other cases, lack of skill is lamented by the mechanic himself as lack of natural talent, though it is in reality the direct result of bad or insufficient training. Nay, often a mechanic will tell you that his few and unimportant acquirements and his poor social position are due partly to lack of natural talent for that trade in which he was set to work, and partly to an improper training given him when an apprentice, while, as a matter of fact, the fault is due to some moral deficiency.

It may sound somewhat singular to say that the blacksmith needs a good morality to forge a horse-shoe, and that the trimmer needs the same to stuff a cushion, yet it is true. As a man may be born with hands wonderfully adapted to play the piano, so another may be given by nature a hand peculiarly adapted to the nice work of striping a panel, and this adaptation, if established by nature itself, between the work to be done and the organ by which it is done, is a part of what we term talent. Lack of talent, however, can be made up in part by training. Nature is flexible. It can be moulded for very special purposes. As after the lapse of two or three years the Danish horse, when carried to Iceland, is covered with wool instead of hair, thereby obtaining a much better protection from the intense cold of the country, so man can acquire, at least to some degree, adaptation to circumstances by due exercise and good training. But neither exercise nor training, if only mechanical, will ever give a satisfactory result. If the hand would be adapted perfectly to its work, it must be commanded every moment by the brain. It is not enough that it be guided by

habit. An electric sympathy between hand and brain is the condition not only of all good workmanship, but of all good training, too. The establishment of this sympathy is a moral action.

It is impossible to plane wood when sleeping. It is not less impossible to plane wood well when sleepy. The plane will run down in the wood, or go astray otherwise, and the fault is not that of the hand but of the brain. It is impossible to forge a bolt, to stripe a panel, to varnish a body, when all the attention is distracted by remembrances of a night of dissipation. The brain will give no commands, and the hand without a brain is not worth much more than the brush without a hand. But this electric sympathy between the hand and the brain is not attainable without keeping the brain itself clear and energetic. And as it is a question of health and neatness to keep the hands pure, it is a question of morality to keep the brain pure,—pure from all clouds of drowsiness, pure from all winds of dissipation, pure as a sunbeam.



THE CELEBRATED A. V. MONOGRAM.

His name was Axel; Valborg was hers. They were brought up together at the Norwegian court, she among the Queen's maidens, and he as a playmate to the young King. Early they learned to love each other, and in after years they never forgot this youthful love. But husband and wife they could not be, because they were second cousins, and the Catholic Church did not allow marriage between relatives so closely allied. There were, however, two ways to escape from this law. One was to elope and get married in a foreign country, but neither of them would do this. Their love was the bliss of their lives; yet, as as good and true Christians, they would give up all the happiness the world could bestow rather than obtain it and oppose the law. The second way was to go to the Pope and implore a dispensation from the law. So Axel went to Rome.

The distance to Rome from Axel's homestead in Trondhjem, the old metropolis of Norway, is almost the entire length of Europe. In our time, a young man traveling by steamboat and rail, and burdened only with a satchel and an umbrella and box of cigars, can make the trip in a week; but in the twelfth century, when the knight and his steed were clad cap-a-pie in steel and iron, and he was

obliged to make his way through dense forests where there were no roads, and across deep rivers with neither bridges nor ferries, the journey could not be accomplished in less than a year or two. All Europe was at that time one vast camping ground, and every man was in warfare with every other man. A traveling knight had to fight a duel once a day, and lie on the shelf once a month with some serious wound. All life was adventure, and every adventure a danger. The traveling knight had for guides on the road only the swineherds and the hermits, and he often had to give a large compensation in order to obtain knowledge of the road. He must deliver some other knight who was held a prisoner in the dungeon of his neighbor's castle. He must accompany merchants, Jews, or other persons traveling on business, often two or three days out of his way, in order to protect them from plunder and death. He must fight dragons in order to save princesses, and make crusades in order to do penance. Axel was absent seven years.

The morning he set out for Rome, he met with Valborg in the cathedral of Trondhjem to take his farewell. On a wooden pillar he carved with his dagger the initial of her name and that of his own, interwoven in a plain yet mysterious monogram, which was not likely to be understood by any stranger, although it shone out brightly from the pillar as the pledge of their covenant and the symbol of their love. Seven years passed away. When Axel then returned with the dispensation, he went early in the morning to the cathedral, where he knew that Valborg would go with the other girls and the Queen to the morning prayer in the chapel. From behind the pillar he saw her, and when the prayer was over, and the girls with the Queen went away, she approached the pillar, took down from the monogram the wreath of yesterday, and replaced it with a new, fresh one.

"Hail thee, my love! I bid thee good morning."

Home Department.

PIC-NICS IN COPENHAGEN.

WE promised in the last Magazine to tell the coach-makers something about how the merry-makings are carried on by the mechanics in Denmark.

In Denmark the winter is much longer than in New York, and during winter the days are much shorter. The sun sets at four o'clock, and lamps are lighted in the shops sometimes before three o'clock.

In September all work stops at dusk, but later in the fall it is carried on by lamp light till eight, or even nine o'clock. The day on which the lamps are lighted for the first time in the season is celebrated as a feast-day. The work of the long winter evenings is initiated by merry-making and amusements, and the employer, or master,

who does not give his employes or servants a feast on this occasion, is considered a mean fellow.

At noon all work ceases in the factory, and the mechanics go home to dress for the feast. In the afternoon they return with wives and children, sisters and sweet-hearts, and meet with the employer and his family and his friends. The ladies hang wreaths on the lamps before which their husbands and brothers and sweet-hearts will work during the long winter; the band plays the national hymn; the mechanics light the lamps; the employer makes a speech and is cheered, and then the whole crowd, consisting of some three or four hundred persons, walk in a procession from the factory to the place in which the ball is to be held.

It rains. Of course; it rains every day in Denmark. A Dane is born with a segar in his mouth to keep his throat dry, and an umbrella in his hand to keep his segar dry. A procession of Danes is a procession of open umbrellas. It is dark, too, and the elderly ladies carry small lanterns to examine the pits into which they have stepped. It is still a comfort, they think, to see that one has not fallen without proper cause. Such a procession looks, of course, somewhat singular when seen at a distance. Yet, when going along with it, one is most likely to forget both the rain and the pits, so merry and jolly are the people. The people, indeed, are the best part of the feast, better than the music, the dancing-hall, or even the supper.

An American mechanic, when entering the dancing-room, would perhaps not think much of the amusement. The hall is large but low. To dance immediately below the chandelier may be dangerous. A tall man would run the risk of setting his hair on fire. A foreigner would feel strange, moreover, at the strong smell of pine-trees. The hall is decorated all over with wreaths of pine twigs interwoven with the scarce flowers of the fall, and these wreaths fill the whole atmosphere with fragrance, which, to the nose of a foreigner, may be very strange; yet, to the heart of a Dane, it is a promise of joy and amusement. From earliest childhood he is accustomed to connect this smell with ideas of music and dance, many lights and fine dresses, excellent meals and funny enjoyment, and whenever he meets with it, it comes home to his heart as a feast of his youth.

At one end of the hall is the orchestra, and above it on the wall is placed the employer's monogram, worked in evergreen and asters. The opposite wall is decorated with flags and a bust of the King; that is to say, of King Frederick the Seventh, who died in the year 1864. The Danes are not proud of him; for, indeed, there was nothing connected with him to exalt; yet, they liked him very much while he lived, and since his death they still hold him dear in their remembrance. When he became king, in the year 1848, the best citizens in Copenhagen marched in a solemn procession to his palace and asked for a new and more liberal constitution. "Well, boys," he answered, "if you want it, you shall have it." And then he gave the first monarchical constitution ever made. After reigning for some ten years, he once uttered: "I don't see any reason why the Danes should have a king. I often think it would be better if I went down in the streets and declared a republic." The bust of this king is seen at every feast, and at every large meeting, and over it wave the Danish colors, together with the Norwegian and the Swedish. The Danes know very well that they

are too small a nation to maintain themselves forever as a separate and independent people. Even if Prussia, or any other judge of the European "balance of powers," should feel no appetite for robbing a province of Denmark every ten years, a people like the Danish kingdom, which numbers only two millions, cannot stand the competition of modern industry. There needs a greater and stronger association to keep up with this age. A people of two millions who cannot adapt themselves to some greater corporation will surely drop out of history. It is, therefore, a cherished idea with all Danes to form a confederate republic with Norway and Sweden, and this is shown by always placing the colors of the three nations together.

But to the feast. Before supper it is only the young folks who dance. The elderly ladies sit gravely about, like wall flowers, watching the dance, and making small studies of mental philosophy, while their husbands enjoy a little smoke and some good anecdotes in the ante-rooms. It is generally said that such a company of elderly Danish ladies bears a certain resemblance to Goldsmith's "School for Scandal," and it is true that oftentimes their talk is well stored with what wrong other people have done, or are doing.

"Have you observed," one whispers, "that Mary Ann dances all the time with Thin-Peter's Jens?"

"Yes, I have."

"Well, I tell you, there is something between them two which I do not like. Some time ago Mad'm Housen told me something which must be true, since her maid-servant saw it with her own eyes. Mary Ann sat one Saturday noon on the door-steps and knit. Well! what do you think about that? To sit out-doors and knit a Saturday noon when all people are busy in-doors with cleaning the rooms—such things are likely to have some reasons of their own. And it had, indeed; for just in the same moment came Thin-Peter's Jens walking home from the shop. He was eating cherries, and when passing her, he put one cherry with the stem between his teeth and the fruit on his lips, and told her that she could have the cherry if she would take it with her mouth."

"Gracious! and she took it?"

"Beware! no. Her mother is a Christian woman, and has brought up her daughter in modesty. She did not take it. But he dropped all the fruit down in her lap and on the door-steps, and when she moved to gather them, he kissed her."

"Yes, I imagined it would turn out so. But I tell you, I would not allow my daughters to dance with him."

"Neither would I, if I had any. And it is still worse, for I saw, when he came to the factory to-day, he went straight to her, and, in the very midst of the crowd, she dressed his neck-cloth."

"Well, if so, I guess they are betrothed."

"Of course they are. Yet I myself should never consent to dress anybody's neck-cloth, if not married to him."

Meantime, Thin-Peter is telling the story of the battle of Fridercia to his friends in the ante-room.

"It was the sixth of July, in the year 1850. It was nearly midnight, and it was so dark that we could not see a hand's breadth before us. Neither could we hear any thing, for the streets were strewed thickly with hay; and the colonel told us to be quiet. 'Be silent, boys,' he said; 'no noise, children; not a word, my babies.' We stood arrayed in a gap of the wall, and it is so, when one

is not allowed to talk, one will always think. I thought of my wife and our children, and singularly enough, I felt as if it were they who were in danger, and not I. Suddenly came a dragoon galloping into the gap, with linen and rags tied around the hoofs of his horse. He came like a ghost; he only waved his hand and disappeared in the darkness. Then the colonel turned upon us and made the following speech: 'My boys, we shall go out now and take the enemies' intrenchments. We *shall* take them; and we shall take them *now*. But as they are twenty-one thousand and we only twelve thousand, it is best for us to make no noise. Well, then, boys, you understand me. When I advance, follow me; when I retreat, shoot me. March!' And on we went. As we marched through the streets, they were silent and dark as graves. The townfolk slept, and when now and then a slow 'God bless you' dropped down among us, nobody could tell from whence it came. And still more dark and more silent it was outside the walls, on the meadows between our fortifications and the intrenchments of the enemy. I could hear the sea roar afar off, and I became very glad. The sea is a holy thing. It may be that the ocean would not suffice to wash away the sins of mankind, but I think it would do away with a good deal of them if properly used. The sea is a good thing. It speaks so well about things to come. I like better to hear it than to hear the bells from the steeple of the Holy Ghost. Yet I was mistaken then. It was not the sea I heard. It was our folks who marched over the meadows. We halted for a moment. The colonel bent his ear to the ground. 'All right, boys,' he whispered, 'go on.' We proceeded again for half an hour. The meadow became every moment more alive. Though I could not see anything, it seemed to my ears as if the whole region was crowded with ghosts. Suddenly boomed a cannon, and a moment after a crash of musketry rattled along the whole line. I do not know exactly if it was in this moment we first got sight of the enemy's ramparts, but I know that we all at once saw his colors and the mouths of his guns. Neither can I remember what the colonel said as the bullet pierced his heart, and he turned his face to the ground, but I remember that we all understood him very well. Twice we stood on the parapet, and twice were driven back, but the colonel had said that we *should* take it, and take it *now*; and consequently we took it. The Germans said we were drunk or had run mad. Well, none of us had tasted brandy for twenty-four hours, and as to madness—if that was madness, I am sorry that I have not remained mad my whole life. For I tell you, never before and never since knew I my duty so well, or was so able to do it, as in that very moment; and when morning came and showed our colors along the whole line, what do you think we saw afar off?"

"Supper!" "Supper!" says the host.

The young men place a long table in the dancing hall; the young ladies spread it, then the old ladies bring forth large plates with huge piles of sandwiches and cakes, and the old gentlemen bring big bowls with flaming punch. For an hour or two eating and drinking ensues, alternated with toasting and pleasant speeches. First, the employer toasts his employes. The speech is long, and there is a singular mixture of the throne-speech, opening a parliament, and the gossip at the fireside. It contains some sober facts and lessons to be spoken of when at home, and some humorous puns and delicate criticism. The speaker

confesses that he is very much pleased with the mechanics as far as the increase of business and prices, but he must confess that he is not so pleased with them for drinking beer when they grow warm, and for swearing when they grow hot. Nevertheless, he wishes them a good winter, and begs them to drink to the bottom of their glasses, which they do. Next comes the blacksmith. He is a famous fellow. Some people tell of him that he once drank "a fan;" that is to say, twenty-one small glasses filled with strong liquor and arranged in the form of a fan, first one glass, next two, next three, and so on, and that after drinking the fan he swept a public dancing room in Sea street swarming with Russian sailors. Other people tell that, when only eighteen years old, he happened to fall in love with twenty-one young ladies at once, and thereafter married the twenty-second. People, however, often tell more than the wind can carry, and the blacksmith stands his fame very well. He is considered the finest fellow in the whole company, and was unanimously elected to make the speech to the employer, and also to direct the song, which was composed in honor of the employer and his family, by some unknown poet among the mechanics. A feast without a new song is a thing never heard of in Denmark. Often there happen to be two or three songs, and whenever a song has a good idea, strikingly worded and well put, the whole assemblage applauds. Among the toasts, therefore, is always one for the unknown poet, at which some young fellow may be blushing all over.

After supper the old folks begin to dance, and when at last, Thin-Peter, in a waltz with Mary Ann, whistles through the hall like a musket bullet, and the old, sharp lady, with the yellow ribbons and black silk gloves, elopes in a "gallopade" with the blacksmith, the merriment is culminating. The whole company has become high-spirited, but no one can be pointed out as drunk. All is gladness and mirth, but all is decent and orderly. The worst that is liable to happen is where two young fellows tell each other—"I do not like to see you dance so much with that young lady." "Well, then you will have to go out doors, or shut up your eyes." But though this may become a strife of many years between them, there is no fighting—never.

When, at three o'clock, the feast is over, and the employer and his family have bid good-night and left, all the guests, gentlemen and ladies, young and old, walk together to the city, arm in arm, ten or twelve in every row. And now the procession looks much better. As there is no more rain from the sky, and no more pits in the road, there are no more umbrellas and no more lanterns in the procession. The company can hardly be seen at all. It indicates itself only with some good old songs and some good young laughter, which sounds clearly in the morning air.

Your readers will see by the above description that the feast in Denmark is by no means so splendid as those given in this country. For instance, no Danish mechanic ever sees so elegant and bounteous a supper as was given at Grove Hill Park, or Lion Park, at the recent excursions of the carriage builders. He never partakes of such a feast, not even on his wedding day. But it may be that he has more talent for enjoying what has been given him than the American has, and at any rate these occasions are always distinguished for gayety and good humor, and the exercises are so arranged that they are likely to be more profitable in some respects.

Correspondence.

GOLDEN RULE OF PROPORTION.

SPRINGFIELD, NOV. 3, 1870.

MR. EDITOR.

Dear Sir : I received my Coach-Maker's Magazine last night, just as I was going to take a little smoke after my supper. It came as if it had been called. It was the very thing I wished at the moment, and I determined to read it line for line until—well, the night was not given us for reading only. But great was my astonishment when I opened the magazine and found, instead of some sober rockaways and buggies, a nice face looking out from behind some singular lines and curves, and below it a hand shackled in the same way. I thought at first that it was a copy of some phrenological journal which had been mis-carried, and even after convincing myself that it was my own old Magazine, I doubted if that hand and that face could have any thing to do with my business, unless the article should turn out an introduction to the phrenology of rockaways.

Well, I read the article. It was a little hard to understand, and I must confess that I like reading-matters best when they are easy. Nevertheless, the article was a good one. As I got hold of its ideas I was quite interested with their simplicity and universality, though I wondered how the world had been able to grow and move according to this rule for some thousand years and nobody had told me any thing about it.* I determined to test the rule. I went out in my back yard and cut off the top of a young pine-tree comprising a dozen branchings. I brought them in, much to the astonishment of my wife, and after some deliberation I accomplished the test in the following manner : I fastened a black thread at the top of the tree, drew it tight and straight along the stem, without stretching it, however, and marked the thread with chalk wherever it crossed the branchings. Next I placed the thread on a large sheet of paper, set off a line from the first to the third branching, divided the line into mean and extreme ratio, and the division did coincide exactly with the second branching, just as you said it did. This was very interesting. I continued the examination and still found the rule correct. Only in one instance the interval between two set of branches was a little too short. I counted the intervals and found that it was grown in the year 1864, which was an uncommonly dry summer. The poor tree did not have power that season to accomplish the rule. I almost pitied it. It told so modestly, yet so impressively, of its hardships.†

Of course, I could not stop the examination at this point. I was satisfied as to the correctness of the rule as

* To this we would say that the rule has been known for a long time, though not generally. Plato, the Greek philosopher, speaks of it in his *Timaios*, about 400 before Christ; and in our time A. Zeising, a German, has treated upon it largely and very ingeniously. In the English literature, however, the rule has never been mentioned before.—Ed.

† We give on page 99 another interesting account of what a tree can tell.—Ed.

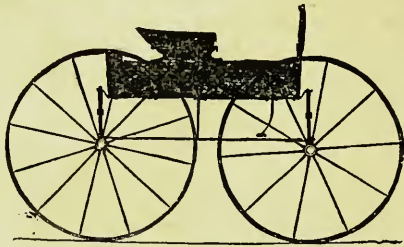
applied to pine trees, but I wished to have some proofs of its universality too. I called for the children. My eldest son, a lad of fifteen years, seems to have no talent as a business-man, but he has worked already for two years very steadily, and to my full gratification, in the wood-shop. I expected, therefore, to find his hand more accordant to the rule than his forehead. In this, however, I was mistaken. His fingers were somewhat too short, especially the extreme parts of them, and when I looked at the two younger boys, who have not yet begun working, and saw their hands and fingers moulded as perfectly as if the golden rule of proportion was growing in their very bones, I could not help thinking of the dry summer of the year 1864, and the small interval between the branchings of the pine-tree. I became, indeed, inclined to believe that this kind of work in so early an age had been a hardship rather than a development to my boy. My eyes had become so impregnated with the rule that they sought after it in all places—in the height and breadth of the windows, in length, breadth, and height of the room, etc. I was, indeed, so delighted with the rule, that I told my wife, what I have had occasion to tell her sometimes before, that God is much wiser in His work than I or she can imagine.

But now, sir, comes another point. There are two kinds of carriages of genuine American style, viz : the six-seat rockaway and the buggy. The laudau, the clarence, the brougham, etc., are imported to us from Europe. The rockaway and the buggy, on the contrary, were invented and planned here in this country, and I was glad to learn from your paper that one of them, the buggy, already has reached Vienna. Of these two kinds of carriages, the rockaway presents many applications of the rule, as the length and the height of the vehicle, the height of the whole vehicle and the height of the wheels, the moulding of the door, etc., but how about the buggy? Well, sir, the buggy does not apply at all to the rule, and here I notice the point.

You tell us : "We" (not I, but you) "next chose a number of heavy carriages which were ungraceful, and examined them, seeking for some infringement of the foregoing rules, and such were manifest in nearly every instance." By these words you insinuate that every "infringement of the rule" will make a carriage "ungraceful." But, I tell you, sir, that no thief, murderer, or traitor has ever made a more gross infringement of the laws than the buggy has infringed on your rule, and I tell you in addition, sir, that the buggy is the nicest and most graceful thing in the world. The buggy not graceful! The buggy, the pride and love of every true American coach-maker! I will speak plainly to you. If I had your rule, which I certainly admire very much, in my one hand, and my last-finished buggy, of which I hereby send you a drawing, in the other hand, and had to make a choice between them, dear sir, I would drop your rule and stick to my buggy. Therefore, I ask you if it is really your idea, that everything which is not governed by this all-governing rule is not graceful?

If you choose to answer the question in your Magazine, you would perhaps like to publish this letter also. I have no objection to that, if you will only dress it a little and omit my name, for, though nobody can say any thing mean of Peter Jones & Co., yet I do not like to

have my name connected with any authorships. You can sign me as
Yours truly,



In reply to this excellent letter, we would make the following statement:

Proportionality is a part of beauty. All disproportionality is, if considered by itself, unpleasing.

But proportionality is not the whole beauty. Beauty contains other elements, and higher ones, which, when powerful and prominent, can overshadow even a high degree of disproportionality.

One of the most essential constituents of beauty is exact correlation between idea and form. If the form is moulded in perfect harmony with the demands of the idea, the appearance is pleasing to every one who understands the idea.

The idea of a carriage is the idea of a thing of utility. If a carriage is built in its minutest details with strict regard to usefulness, it will look pleasing to every one who understands what a carriage is to be used for.

And now for the buggy.

We have a friend, a foreigner, who lives in a perpetual warfare with the buggy. Though he admires very much the eminent skill which the American coach-makers display in building this vehicle, he always calls it "the carriage-insect," or the "much-ado-about-nothing." His argument against it is this: When a man, in order to have a vehicle specially adapted for rapidity, is led to renounce so much comfort of seat as is really renounced in the buggy, it would seem wiser to leave the vehicle and ride on horseback; and it is a sign of a more chivalrous and romantic mind when the European prefers to plant himself on the back of his horse and to gallop along, instead of curling himself up on the poor platform of a buggy, after the fashion of the business-like American. There may be a grain of truth in this, yet in the main point our friend is mistaken. The horse is made to draw, and not to bear. He can carry only a relatively small burden on his back, but he can draw an immense one. The camel and the elephant are made to bear, but not so with the horse. On the contrary, we believe that the American who harnesses the horse to the buggy, instead of mounting him, uses the horse just as he ought to be used, and makes him display his natural strength and beauty in the very best manner.

We have, therefore, no objection to call the buggy "the nicest thing in the world," even if it be in utter op-

position to the golden rule of proportion. It is something intended for special use, and it is useful in this respect. Its appearance shows perfect correlation between its idea, the purpose for which it is intended, and its form, the means by which the purpose is fulfilled, and this is one of the most essential constituents of beauty. We are, however, by no means sure that it defies the golden rule of proportion so utterly as our correspondent thinks.

CHIPS AND SHAVINGS.

MAINE WORK.—Last year the firm of Wingate, Simmons & Co., of Union, Me., turned out at their carriage and sleigh manufactory 100 sleighs, 75 top buggies, and 75 open buggies and wagons. They make carriages of every description, and have a force of 25 workmen. They have been established 20 years, have doubled their capacity the past year, and propose to increase it to 50 hands. The members of the firm are practical manufacturers, the work being all made and sold under the superintendence of Z. Simmons, of the firm.

CHANGES IN PHILADELPHIA.—Gardner & Wright have sold out the business of G. W. Watson, which they have carried on since the death of the latter. D. M. Lane will take the repository, which is on Chestnut street, near Concert Hall, on the first of next year. This will give him greatly increased facilities for the sale of work, for as the city now lies, his factory is rather far up on Market street. W. D. Rogers has bought the Watson factory at 825 North 13th street. We understand that Mr. Wright will continue as superintendent of the shop.

NAPOLEON'S CARRIAGE.—The military carriage of Napoleon, in which he made the campaign to Russia, has been on exhibition in London. It was captured on the evening of the battle of Waterloo. A London paper reports that nearly 100,000 people paid their money to take a look at it.

THE STABLE AND COACH-HOUSE of Wm. M. Tweed, of New York, cost about \$125,000, including fixtures. An exchange enumerates the carriages as follows:

Satin-lined Clarence, which cost.....	\$2,800
Two-horse Caleche.....	1,500
Buggy.....	500
Coupe.....	2,000
Lady's Pony Wagon.....	2,800
Buggy.....	600
Single Road Wagon.....	200

A STEAM OMNIBUS.—A company has been organized in Montreal to introduce a steam omnibus. If we may believe the detailed reports of the excellent workings of the machine in Scotland, it is adapted alike for crowded cities and for country roads, is perpetually under control, and neither frightens horses or endangers human lives. The ease and rapidity with which it draws immense loads have been frequently described. It requires no rails, its wheels having tires of fifteen inches width, covered with four inches of vulcanized rubber.

TAYLOR & BRADLEY, of Decatur, Ill., employ twenty men, and build light buggies mostly. They took a prize for the best display of carriages at the late Illinois State Fair.