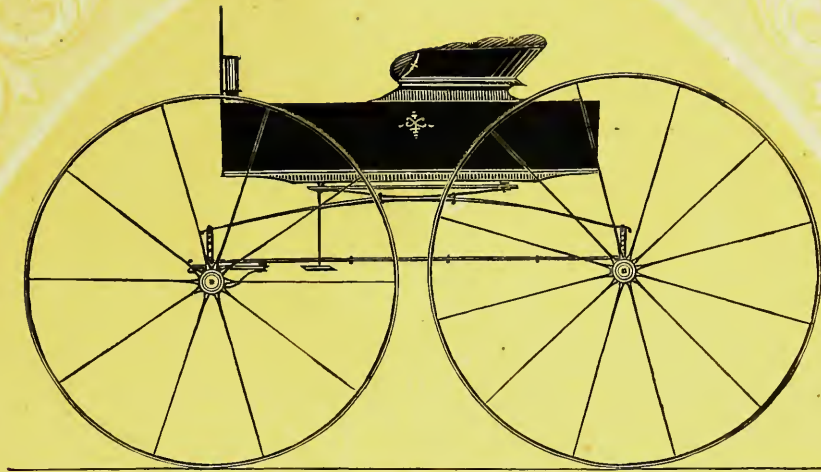


TWO-WHEEL DOG CART. —  $\frac{1}{2}$  IN. SCALE.  
EXHIBITED AT THE AMERICAN INSTITUTE FAIR, BY J. B. BREWSTER & Co.  
*Engraved expressly for the New York Coach-maker's Magazine.*  
*Explained on page 88.*



LIGHT ROAD WAGON. —  $\frac{1}{2}$  IN. SCALE.

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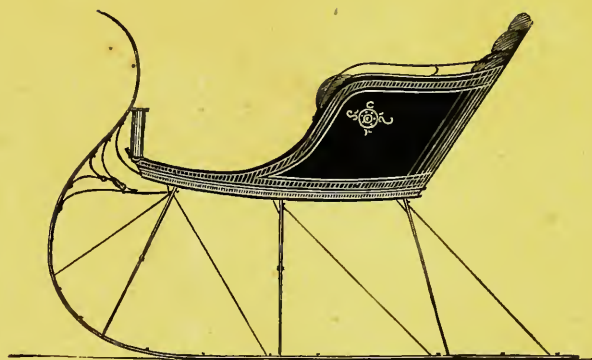


SQUARE-BOX TOP WAGON. —  $\frac{1}{2}$  IN. SCALE.

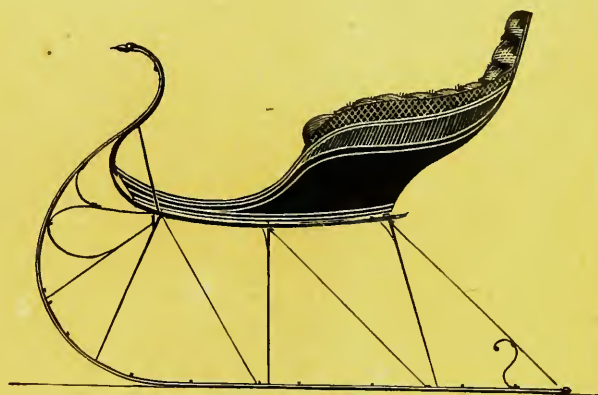
EXHIBITED AT THE AMERICAN INSTITUTE FAIR, BY E. SMITH.

*Engraved expressly for the New York Coach-maker's Magazine.—Explained on page 88.*

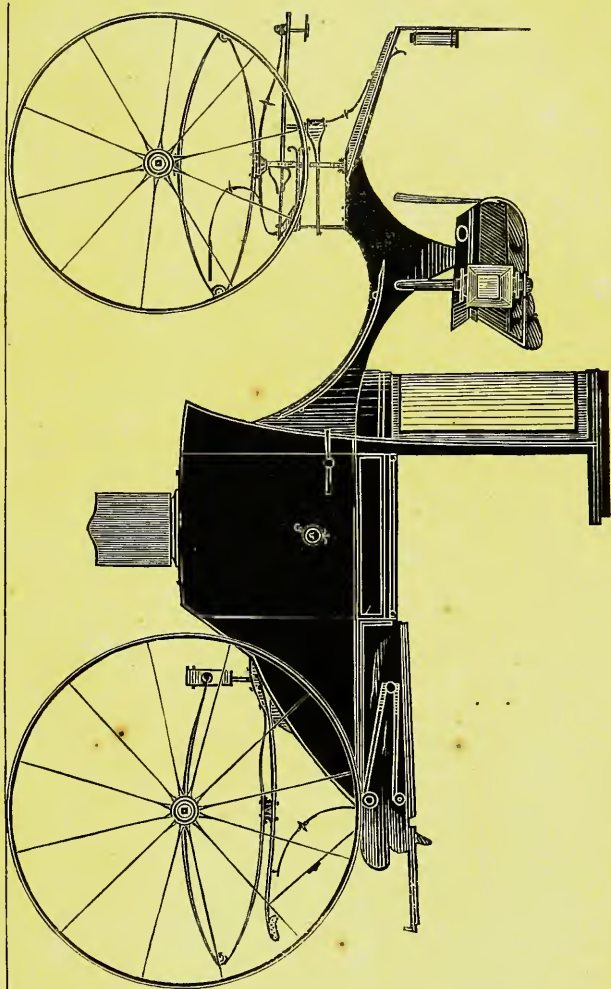




DEXTER CUTTER. —  $\frac{1}{2}$  IN. SCALE.  
EXHIBITED AT THE AMERICAN INSTITUTE FAIR, BY R. M. STIVERS.  
*Engraved expressly for the New York Coach-maker's Magazine.*  
*Explained on page 89.*



EUREKA CUTTER. —  $\frac{1}{2}$  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 89.*



THREE-FOURTHS LANDAULET.— $\frac{1}{2}$  IN. SCALE.

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

*Engraved expressly for the New York Coach-maker's Magazine.*

*Explained on page 89.*





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

Vol. XII.

NEW YORK, NOVEMBER, 1870.

No. 6

### THE SEA-SHORE.

On Maine's rough coast-land lies a little port  
 Called York—an olden place, in which old Time  
 Seems to have stayed a moment from his race,  
 And, crouched among these deep-protected haunts,  
 Here stilled his poor old heart with retrospect  
 Of other days, when modern tumults were not.  
 A very quiet place, in which the air  
 Seems listening, as o'er a sleeping babe,  
 Its only song a gentle lullaby—  
 Save in a storm, and then all things are changed,  
 And York is not York, but a roaring surge.  
 To-night is peace, and the only sound that's heard  
 Is the monotonous splash—plash—plash  
 Of distant waves, as they wash the sandy beach  
 With murmurings of plaintive monody,  
 And sweep away the prints I lately left  
 While gathering their mossy gift and shells.  
 'Tis passing sweet to make a truce with Time,  
 And, leaving those mad haunts where he is but  
 The slave, the teller of the hoarded gold,  
 To nestle thus with him in solitude,  
 And learn from out his lips, which never tell  
 Their secrets to the dizzy whirl of din.  
 I have a summer love to loiter here  
 In lone reserve, where reservation reigns  
 Supreme—where even the straggling town  
 That skirts the grass-grown road, and as it skirts,  
 Cons each most tasty spot, and wanders on  
 Toward the beach, like wayward child from home—  
 The very village dreams in placid calm  
 Of solitude, and just without its bounds  
 It slumbers by the quiet of the way,  
 And leaves the outer world a wilderness.

We have thought that a brief account of an editor's trip to the sea-shore might be of interest to some of our readers. It will serve as an introduction to the more practical articles which follow.

We left the extreme heat of New York about the middle of August, and took steamer direct for Portland, which we reached after a pleasant voyage of sixty-two hours. We know of nothing better than an ocean trip for resting and invigorating one who is completely wearied out, and certainly in this case it worked a marked change in our feelings. We forgot *The Hub*, and the many plans which we had in view for its future aggrandisement. We forgot the *Magazine* which was soon to come under our control. We forgot the carriage-makers, and the various subjects which they had proposed for our solution. We forgot to think connectedly, and simply gave ourselves up

to the present, and enjoyed heartily the conversation and amusements of our fellow voyagers, wanderers like ourselves, seeking a quiet nook among the Maine woods. The result was, that when we reached Portland on Saturday morning, we were ourselves again. In this beautiful city we spent the greater part of the day, and we took occasion to call upon Mr. C. P. Kimball and his brother, Mr. J. M. Kimball, and we looked in at several other carriage-shops. We had the pleasure also of meeting "The Fisherman," who has been describing such pleasant trout experiences for *The Hub*, under the signature of "Sanez." Mr. C. P. Kimball was one of the twelve leaders in the plan of holding the Coach-Builders' Convention, and we inquired particularly of him as to how matters were progressing. At that time every thing was promising, but since, as we announce in another place, the subject has been abandoned for the present.

In the afternoon we took the cars for York, Maine, which is situated about ten miles northeast of Portsmouth. This was to be our final destination, but we did not reach it immediately, for, being left at Kittery, we missed the stage-coach, which lumbers along between York and Portsmouth once a day, and in so deserted a place we were unable to hire a carriage. Here was a predicament. Night was coming on; the roads were in bad condition and very dusty, and we were nine miles from the farm house where our friends were awaiting us. A pretty situation for the editor of a carriage-maker's paper! There was no alternative, so we trudged along, hoping to catch a ride. But no chance presented. We walked two miles, and then came a rattle of wheels, and a cloud of dust, and a lank man, whom we addressed: "Will you be so kind, sir, as to give us a lift?" "Wal," said he, "I'd be glad ter, but this team of mine is 'bout broke down, and I'll have to say *no*. Sorry to do it." We were disappointed, but as we took a nearer inspection of his vehicle, and from behind, we were impressed with the fact that any addition might result seriously, for such a tumble-down old affair was seldom inflicted on this century. As it wriggled slowly away, the wheels presented a complicity of movement and a variety of track which was truly astonishing. The plan of *uniform track* is untenable, it would seem, for the country districts.

We walked two miles further, and then came another rattle and another rickety team. We again addressed our petition: "Will you be so kind, sir, as to give us a lift?"



"Yes," said the hearty down-east farmer; "jump in, young feller. How far you come! From Poachmuth? Kittery, eh? Wal, yer look mighty tired with thet ere big carpet bag ov yours."

This was the man we wanted.

"How fur yer goin? Ter the Pint down ter York? By snum! That's awful. Guess yer aint much used to sich kind of doin's, either, be yer? Wal, I'm mighty glad to give you a lift, but it'll be a short one, fur I turn out soon."

We thanked him heartily, and he talked on.

"Yes, sir, mighty glad. But this ere old kerridge of mine aint so fine as some of your yaller wheeled city kerridges. The wheels are out of joint this hot weather—tarnal hot weather this—warps the wheels—makes the fellies loose. I have to pour water on the wheels this 'tarnal hot weather to keep them together."

We felt quite lonesome after this kind friend left us, and as we walked on, the twilight deepened gradually and the crickets chirped in the meadows, and the marsh frogs croaked, and it was quite tiresome altogether. Kind fortune then sent us another friend, with a good horse and good wagon, and as we rode along the subject turned as follows:

"How is business in Boston?" we asked.

"Good," he replied; "it has been very good in the carriage business."

"You are in that line, are you?"

"Yes, I am a carriage-maker," mentioning his name.

"Is that so?" we exclaimed; "then you know the paper—*The Hub*—and you know me, its editor."

This meeting was certainly a coincidence in this out-of-the-way place, and it established our friendship at once. We talked of the prospects, and of trade in New York, and of the proposed convention, and it seemed but a short half hour before he left us at the village, having gone some distance out of his course in the order to help us along. The remainder of the walk, and the old farm-house where we passed our two weeks of vacation, so delightfully varied with bathing and boating and musing on the ocean rocks, are best described by the following:

A long mile further on, through narrow path  
That threads its triple ply from out the town,  
Twisting and angling 'mong the stunted growth  
Of fragrant fern and thistled pasture land,  
And oft embargoed by opposing rail  
To mark the sheep's domain, the way extends  
To a far dwelling of the outer world,  
That looks adown upon the land and sea.  
The way is bare and open to the winds,  
Which, shut from out the harbor's close defense,  
Here beat across to join their lawless crew  
That ravage in piratical array  
Upon the outer ocean's vast domain.  
A length of unkempt barrows, lying waste  
In all their native nudity, here gird  
The sea, and rear their thin and ragged gear,  
Through whose precarious substance there appear  
The ribs of rock which bind the sinevy hill,  
And brace it 'gainst the never-ceasing power  
That wallows round, venting its frequent wrath.

And now the narrow path, meandering  
Upon its leisure way, briefly ascends  
By gentle slope to parts more verdant far.  
The grass grows greener, and the show of rocks  
Less frequent, and the trees, supported fast  
By more alluvial soil, here grow more bold,  
And form a hamlet. Louder grow the plaints  
Of the sea, and more distinct they call below,

As we approach, where, on the rocky hill,  
Upon the sea-girt promontory's peak,  
There stands a farmstead, with its clustering clan  
Of farm attendants all, whose cosy mien  
Seems to invite, with open hand and heart  
And beaming face of hospitality,  
Each seldom step that ventures to this bound—  
This lone, remotest bound of homesteadry.  
The quaint old mansion, clad in ruddy hue,  
Looks to the eastward, and with tireless cheer,  
That speaks the cheery tenant with its glow,  
Returns the earliest greetings of the dawn,  
And to the last, from off the mirroring waves,  
It catches all the welcomes of the eve.

Behind the house there rears a barren steep,  
Close-armed with rock, and high above its peak,  
Like worn-out gallows of an ancient day,  
A storm-beat signal lifts its warning sign  
From out its stone-heaped base, and in the wind  
It sighs and creaks in mournful unison.  
Beyond the kitchen windows huddle close,  
Like terror-stricken things, a lilac copse,  
Which flood with rare and aromatic sweets  
The sash first lifted in the early spring;  
But now, bereft of all their youthful bloom,  
They serve the baser but more thankful task  
Of thrusting to the sun the outspread cloths  
That beg the benediction of his rays.  
And just beside them lifts a lofty elm  
That guards the grin'stone's place, and helps  
To sift the fervor from the midday sun,  
When from the hay-field comes the gleaming scythe,  
To cool its brilliance with a watery edge,  
And farmer and the thirsty boy, to ease  
Their throats with draught of autumn stored,  
And tease the ear of the o'erheated day  
With rasp and whet of the far-sounding steel.  
Before the house a weedy garden strives;  
Its baffled weeds seek vainly though to choke  
The hardy poppy and the marigold,  
And fragrant camomile and southern wood.  
Still thrives the four-o'clock, the "bouncing betts,"  
And hollyhock, in whose begolden breast  
The bee swings pendant, drunk with overfeast,  
And dying "pinies" proudly lift their stalks  
And flaunting leaves, while fiery sun-flowers tower  
Above their heads, and stare a gorgeous stare.

Across the broad and grassy lawn in front  
The spacious barns stand yawning wide their doors,  
Behaired with new made hay, and every bird  
That struts the floor or carols on the beam  
Bespeaks the goodly bounty of the place.  
The stables, pens, and sheds of nameless need,  
And well-filled granaries, stand clustered near.  
And further on the lofty well-sweep hangs  
Beneath a stalwart chestnut's generous shade,  
And o'er the well, in whose pellucid depths  
There hangs another sweep in duplicate.

Such is the farmer's home,—or such the view  
Of outward things that cluster round his home  
And speak the soul within,—and all about,  
On every side save one, a narrow neck,  
The hillsides, checked with vary-colored plats  
Of corn and yellow grain and billowy grass,  
Slope fertile downward to the rocky shore.

## ENGLISH COACHES.

### THE MAIL-COACH AND THE STAGE-COACH.

THE pleasure to be had in a mail-coach is not so much at one's command as that in a postchaise. There is generally too little room in it, and too much hurry out of it. The company must not lounge over their breakfast, even if they are all agreed. It is an understood thing that they are to be uncomfortably punctual. They must get



in at seven o'clock, though they are all going upon business they do not like or care about, or they will have to wait till nine before they can do any thing. Some persons know how to manage this haste, and breakfast and dine in the cracking of a whip. They stick with their fork, they joint, they sliver, they bolt. Legs and wings vanish before them, like a dragon's before a knight-errant. But if one is not a clergyman, or a regular jolly fellow, one has no chance this way. To be diffident or polite is fatal. It is a merit eagerly acknowledged, and as quickly set aside. At last you begin upon a leg, and are called off.

A very troublesome degree of science is necessary for being well settled in the coach. We remember traveling, in our youth, upon the north road, with an orthodox elderly gentleman of venerable peruke, who talked much with a grave looking young man about universities, and won our inexperienced heart with a notion that he was deep in Horace and Virgil. He was deeper in his wig. Toward evening, as he seemed restless, we asked, with much diffidence, whether a change, even for the worse, might not relieve him; for we were riding backward, and thought all elderly people disliked that way. He insinuated the very objection, so we recoiled from asking him again. In a minute or two, however, he insisted that we were uneasy ourselves, and that he must relieve us for our own sake. We protested as filially as possible against this; but at last, out of mere shame of disputing the point with so benevolent an elder, we changed seats with him. After an interval of bland meditation, we found the evening sun full in our face. His new comfort set him dozing; and every now and then he jerked his wig in our eyes, till we had the pleasure of seeing him take out a night-cap, and look very ghastly. The same person, and his serious young companion, tricked us out of a good bed we happened to get at the inn.

The greatest peculiarity attending a mail-coach arises from its traveling at night. The gradual decline of talk, the incipient snore, the rustling and shifting of legs and night-caps, the cessation of other noises on the road, the sound of the wind or rain, of the moist circuit of the wheels, and of the time-beating tread of the horses—all dispose the traveler, who cannot sleep, to a double sense of the little that is left him to observe. The coach stops, the door opens, a rush of cold air announces the demands and merits of the guard, who is taking his leave and is anxious to remember us. The door is clapped to again; the sound of every thing outside becomes dim; and voices are heard knocking up the people of the inn, and answered by issuing yawns and excuses. Wooden shoes clog heavily about. The horses' mouths are heard swilling up the water out of tubs. All is still again, and some one in the coach takes a long breath. The driver mounts, and we resume our way. It happens that we can sleep any where except in a mail-coach; so that we hate to see a prudent, warm old fellow, who has been eating our fowls and intercepting our toast, put on his night-cap in order to settle himself till morning. We rejoice in the digs that his neighbor's elbow gives him, and hail the long-legged traveler that sits opposite. A passenger of our wakeful description must try to content himself with listening to the sounds above mentioned, or thinking of his friends, or turning verses, as Sir Richard Blackmore did, "to the rumbling of his coach wheels."

The stage-coach is a great and unpretending accommo-

dation. It is a cheap substitute, notwithstanding all its eighteen-penny and two-and-sixpenny temptations for keeping a carriage or a horse. And we really think, in spite of its gossiping, is no mean help to village liberality; for its passengers are so mixed, so often varied, so little yet so much together, so compelled to accommodate, so willing to pass a short time pleasantly, and so liable to the criticism of strangers, that it is hard if they do not get a habit of speaking, or even thinking, more kindly of one another, than if they mingled less often, or under other circumstances. The old and infirm are treated with reverence; the ailing sympathized with; the healthy congratulated; the rich not distinguished, the poor well met; the young, with their faces conscious of pride, patronized and allowed to be extra. Even the fiery, nay the fat, learn to bear with each other; and if some high-thoughted persons will talk now and then of their great acquaintances, or their preference of a carriage, there is an instinct which tells the rest that they would not make such appeals to their good opinion if they valued it so little as might be supposed. Stoppings and dust are not pleasant, but the latter may be had on grander occasions; and if any one is so unlucky as never to keep another stopping himself, he must be content with the superiority of his virtue.

The mail or stage coachman, upon the whole, is no inhuman mass of great-coat, gruffness, civility, and old boots. The latter is the politer, from the smaller range of acquaintance, and his necessity for preserving them. His face is red, and his voice rough, by the same process of drink and catarrh. He has a silver watch, with a steel chain; and plenty of loose silver in his pockets, mixed with half-pence. He serves the houses he goes by for a clock. He takes a glass at every ale-house—for thirst, when it is dry; and for warmth, when it is wet. He likes to show the judicious reach of his whip by twiggung a dog or a goose on the road, or children that get in the way. His tenderness to descending old ladies is particular. He touches his hat to Mr. Smith. He gives "the young woman" a ride, and lends her his box-coat in the rain.

His liberality in imparting his knowledge to any one who has the good fortune to ride on the box with him is a happy mixture of deference, conscious possession, and familiarity. His information chiefly lies in the occupancy of houses on the road, prize-fighters, Bow-street runners, and accidents. He concludes that you know Dick Sams or Old Joey, and proceeds to relate some of the stories that relish his pot and tobacco in the evening. If any four-in-hand gentlemen go by, he shakes his head, and thinks they might find something better to do. His contempt for them is founded on modesty. He tells you that his off-hand horse is as pretty a goer as ever was, but that Kitty—"Yeah now, Kitty; can't you be still? Kitty's a devil, sir, for all you wouldn't think it." He knows that the boys on the road admire him, and gives the horses an indifferent lash with his whip as they go by. If you wish to know what rain and dust can do, you should look at his old hat. There is an indescribably placid and paternal look in the position of his corduroy knees and old top-boots, on the foot-board, with their pointed toes and never-cleaned soles. His *beau ideal* of appearance is a frock-coat with mother-of-pearl buttons, a striped yellow waistcoat, and a flower in his mouth.

LEIGH LUNT.



## Wood Shop.

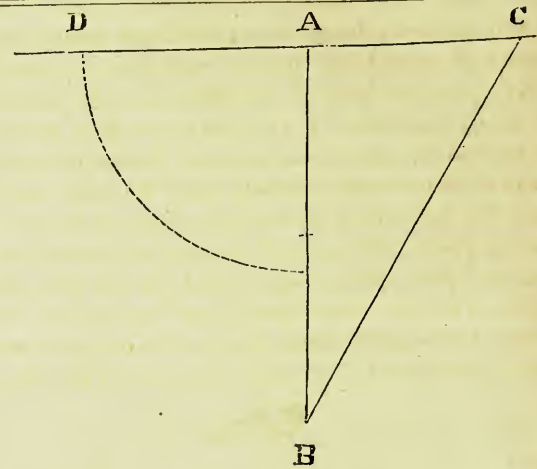
### THE GOLDEN RULE OF PROPORTION.

It has been said very often that consummate proportion is the work of genius, and it is true. It is the greatest masters only who have carved a statue, or raised a building of perfect proportions. But generally the remark is added that proportionality has no intelligible principle, but is a mere matter of taste to which no general rule is applicable, and this is a mistake. On the contrary, when, in every-day life, a house, a room, a door, or anything else looks unpleasant on account of its lack of due proportion, it is possible, in most cases, to demonstrate the disproportion in accurate figures, and with mathematical exactness.

There is, indeed, a plain yet fundamental rule on which all proportionality must be built, and both nature and art prove to have followed this rule whenever they have succeeded in producing delicate and beautiful proportions. The more happily anything strikes us with its finished proportions, the more apparent becomes the rule, sweeping over the entire shape, and regulating every combination between the several parts. The crystal forms, the oak tree increases, the boy grows in accordance with this rule; and if the tree is sheltered from the winds, and has air and light distributed freely and equally around it, it will accomplish the rule with the utmost exactness. On the Parthenon or on Titus' triumphal arch, on the cathedrals in Cologne and Strasbourg, on every architectural building which charms us with the harmony of its proportions, the rule can be demonstrated by help of the yardstick, and the same can be done with Apollo from Belvedere, or Thorwaldsen's Jason, or any eminent statue. Indeed, the rule may be shown to control even the flying passages of a melody of Mozart, or the dancing feet of one of Pope's verses.

This rule, so universal in its application, and so essential in its consequences, demands this condition: *Of two lines of unequal lengths, the longer one must be the mean proportion between the shorter line and the sum of both of them; then the combination of them will appear well proportioned.* When speaking of lengths of time, as well as of lengths of space, about notes and thoughts and their rhythmical arrangement in music and poetry, as well as about lines and surfaces and their plastic arrangement in sculpture and architecture, the rule is still the same, only differently worded. In this place, however, it is our purpose to speak particularly of the rule *as applied to lines and surfaces.*

Geometry teaches us how to divide the given line A B medially, or in extreme and mean ratio, that is, to divide it so, that the whole line is to the greater segment as the greater segment is to the other segment.



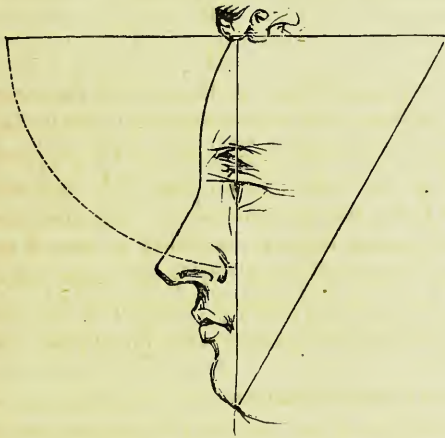
Draw a perpendicular at the end of the given line A B, and produce it on both sides of A; bisect the given line and set off the half, thus found, on the perpendicular from A to C; take the hypotenuse B C and set it off from C to D in the perpendicular. The distance A D will be the greater segment, and may be set off from A or B along the given line, and thus the mean proportion is found; that is to say, such a division of the line A B that will make the two parts of this line appear well proportioned.

If now we should examine, for instance, one of the two front steeples of the cathedral in Cologne, we should find that the tapering of the spire begins exactly at that point where the Golden Rule divides the whole line, extending from the foot of the tower to the top of the spire, in its extreme and mean ratio, so that the height of the tower exactly denotes the mean proportion between the height of the whole steeple and that of the spire. And if then we would continue the investigation through all the subdivisions of each of these two lines, we should find that *every two adjacent parts, even of the smallest ornaments, together produce a line divided medially by the Golden Rule.* Indeed, it is this rule which causes the huge pile of dead, heavy stone in these steeples to rise light and airy toward the sky as if it were growing upward by an inner, individual impulse. And in our opinion, the reason why most of the steeples in Boston and New York—we will make a special exception of Trinity Church, in the latter city—look so heavy and depressed, may be found in the fact that they are not formed in accordance with the golden rule. All architectural proportion rests on this rule. The length and the height of a villa should be determined by the mean and extreme ratio of the sum of them. The height of the furniture in a room, or the position of a picture on a wall, ought to be determined by one of the two points which the Golden Rule will advise as the greater and shorter segment of the wall, and so on.

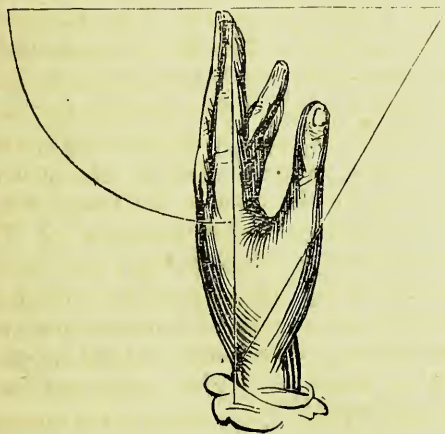
If next we should look on Apollo from Belvedere,



or on Thorwaldsen's Jason, two of the 'most conspicuous specimens of ancient and modern sculpture, we should find every minutest detail of their forms moulded according to the Golden Rule. If a line be drawn from the top of the head to the soles of the feet, and divided medially, the point of division will precisely reach the navel, and if this line be subdivided further, according to the same rule, every point of division will coincide with the natural intersection of the human body. Thus the line from the beginning of the hair to the root of the nose is the mean proportion between the whole length of the feature and the line from the root of the nose to the end of the chin.



The forearm is the mean proportion between the whole arm and the upper part of the arm. The outside line of the thigh is the mean proportion between the whole limb and the leg proper, while the inside line is the extreme ratio of the same proportion. Even the foot, the hand, and the finger, are, as illustrated by the diagram, formed after this rule.



One might think, however, that the rule itself was only an invention of some artist, and its general use only an inveterate custom, as it is a custom to divide a tragedy into five acts, and not into six. Yet, nature it-

self, when minutely investigated, is found to proportion its workmanship by this very rule. Not only the statue is formed in any part according to the golden rule, but so is the living man too. Whenever a man looks well—we do not speak of the expression of character, which is quite another thing—it will be found that the trunk of his body is cast, and the limbs cut, according to this rule, and whenever they are not so molded, we perceive the deviations, even though very small, and pronounce them unpleasing. How unsightly would a man look if the knees were placed exactly at the middle of his legs! I surmise even that he would not be able to walk. The rule seems to be not only a rule of beauty, but one of utility. At all events, we find it is a natural law enforced in the arrangement of the stars, and in the shape of the leaf even. Take, for instance, a pine tree which has grown up on a free place, yet protected from all disturbing influences. Each year it has shot forth a new set of branches. You can estimate its age from the number of its branchings. Yet, look at the distance between every two set of branches. They are different, becoming larger and larger as you reach the top, because the tree year after year has gained additional strength by which to grow; but the difference between every two distances adjacent is exactly that between the mean and extreme ratio, as denoted by the golden rule. Look at the distance from one leaf to another on the oak twig, or the distance from one leaflet to another on the compound leaf of the lance wood, or the distance from one vein in a rose leaf to another—in all cases you will find the rule is observed. It is, indeed, the all-governing law of proportioning.

If, then, a man is not born a genius, that is to say, if the natural law is not inborn in him as a living instinct of his soul, he has to learn the law from the outside world, to study its manifestations, and scrutinize its applications, and he may thereby acquire to a certain degree a lively and accurate sense of proportion which will enable him to avoid breaking the law, even if he is not able to apply it. There are cases in which the rule does not seem to be of any great consequence. How, for instance, does it apply to the building of a wind-mill or a coach?

At first there does not appear to be any application of it in carriage building, but we feel sure that if the subject were looked into with care and precision, many applications would be found. At least, a perfect understanding of the rule would prevent the designer or workman from disobeying it grossly, and would often assist him in determining questions of proportion where his taste was doubtful. We have taken pains to look over several back volumes of this magazine with a view to discovering some point or points on which the rule had a bearing. We selected a score or more of the most grace-



ful patterns, and examined them very carefully, seeking for some manifestation of the truth of the principle. The result was as follows:

*First*, in the heavy class of carriages, including clarances, coaches, and landaus, we found in those of pleasing pattern this common point was observed: *the height of the vehicle was the greater segment of the length of the vehicle, measuring from the foremost part of the rim of the front wheel to the most distant part of the hind wheel.* It will be found by calculation that this ratio is observed exactly in Mr. Ham's landaulet, which appears on Plate 24 in this copy of the Magazine. Thus its height in the draft is  $3\frac{1}{4}$  inches, and its length  $5\frac{1}{4}$  inches, which resolves itself into the following proportion:

The length is to the height as the height is to the difference.

$$5\frac{1}{4} : 3\frac{1}{4} :: 3\frac{1}{4} : 2$$

We test the proof of this proportion by multiplying the extreme ratios, and then multiplying the mean ratios, and the results must be equal.

$$\frac{21}{4} \times \frac{8}{4} = \frac{168}{16} = 10\frac{8}{16}$$

$$\frac{13}{4} \times \frac{13}{4} = \frac{169}{16} = 10\frac{9}{16}$$

It will be observed that there is a difference of  $\frac{1}{16}$ . This slight variation is due to the fact that the mean proportion can never be expressed rationally. They are always surd.

*Secondly*. In the same class of carriages we find that in pleasing patterns this rule was observed: *the height of the hind wheel was the greater segment of the height of the whole vehicle.* Mr. Ham's Landaulet answers this condition also.

*Thirdly*. We next chose a number of heavy carriages which were ungraceful (we were glad to find that the Magazine contained a few such), and examined them, *seeking for some infringement of the foregoing rules, and such were manifest in nearly every instance.*

Before our next issue we will try to discover some further applications of this valuable principle as relating to carriage building. We are confident that there are many such, and we wish our friends would help us to show them.

In conclusion, we will mention that among those vehicles which do not seem to come under the requirements of the Golden Rule of Proportion, are the Broadway omnibusses. Is it not the opinion of our readers that they are too short for their height?

#### JAPANESE CARPENTERS.

The Japanese wood-workers are ingenious workmen, and their work is done with marvelous neatness. A curious feature of their houses is, that they do not con-

tain a nail, all of the joints and timbers being dovetailed together by many ingenious devices; and the whole work, even to the rafters, is as smooth as if it had been polished down with sand paper. And the Japanese are a neat people; for they use no paint to hide any blemishes of construction or ornamentation—no filagree work or plaster-of-Paris gew-gaws, but every stick in the building is exposed. Every night, as regularly as she cooks the supper or sweeps the floor, the Japanese housewife takes a wet cloth and scours the whole interior of the dwelling, leaving no part untouched, and no stain or dirt spot to mar its cleanly appearance. Then the Japanese do not come into the house with muddy boots, after the style of the American sovereign; but, having covered the floor with neat matting, always remove the dirty sandals before stepping upon it. The Japanese carpenters have some peculiarity of movements. The Japanese works toward him—that is, instead of shoving a plane from him, he reaches out, sets the plane upon the board at arm's length, and pulls it toward him; and he cuts, saws, and chops in the same way. His saws are fixed in handles, like a butcher's cleaver, and the teeth slant or rake toward the handle. The planes are constructed like ours, but the wooden portion is very thin and wide. The adze is fastened to the end of a hooped stick, like the handle of one of the crooked canes worn on the arm in our streets. And although their tools are different from ours, yet they are not awkward in appearance or awkwardly handled; though they might prove very unhandy in the hands of an American carriage workman. There is every thing in habit.

### Smith Shop.

#### THE DRAFT OF VEHICLES.

EVIDENTLY the draft of vehicles depends upon two distinct things beside the motive power, viz.: the vehicle itself and the road. If an absolutely perfect roadway could be made, the draft of all vehicles would be equal to the power absorbed by the friction of its axles, and rolling friction of its wheels over a smooth surface, and that necessary for the ascent of grades. The Scientific American figures thus: The power absorbed by friction, when axles and boxes are both iron and kept constantly well oiled, would for the axles be a pressure of about four per cent. of the load, multiplied into the ratio of the mean diameter of the axles to the mean diameter of the wheels, overcome through the distance the vehicle travels in a given time. Thus the mean diameter of the wheels being forty inches, the load, including weight of the vehicle, exclusive of wheels being 4,000 lbs., and the mean diameter of the axles being 2.5 inches, the power absorbed by the friction of the axles at three miles per hour would be  $.04 \times 4,000 \text{ lbs.} \times \frac{3}{4} \times 3 \times 5,280 = 158,400$  foot-pounds per hour, or .08 of one horse power. The rolling friction would be much less than this.

Comparing this with what is found by experiment to be the actual power consumed on the average, and on what are thought good, metaled roads, the difference is surprising. The power required in the latter case is, on the average, nearly one-third of one-horse power per ton of load transported three and one half miles per hour.



This wide difference is attributable, in large measure, to the construction of the vehicles used for transportation of loads, partly to defective lubrication, and partly to the imperfect road surface.

The principles upon which the draft of vehicles depends are quite imperfectly understood by most mechanics, although they have been made the subject of elaborate experiment and investigation by Morin, who, in his valuable treatise on mechanics treats this subject exhaustively.

Wheels acting upon road-surfaces may be considered as simple rollers. Coulomb has demonstrated that the resistance of hard rollers rolling over even, hard surfaces, is proportional to the pressure; that it is in the inverse ratio of the diameter of the rollers, and that it is so much the greater as the width of contact is smaller. But as roadways are not even surfaces, and wagon wheels have loose-fitting axles through their hubs, it is evident that the laws demonstrated by Coulomb cannot be expected to apply rigidly to them.

In the years 1837, 1838, 1839, and 1841, Morin, under the direction of the French Government, performed an extensive series of experiments to ascertain the laws which control the draft of vehicles, employing for the purpose all sorts of vehicles, and propelling them over all sorts of roads, muddy, ratty, and stony, as well as those of the smoothest surface.

He found that the draft of wagons over a given roadway is proportional to the load, and that it varies in the inverse ratio of the diameter of the wheels, thus showing that the laws of Coulomb, as applied to hard rollers upon even, hard surfaces, also applies to them upon rough or yielding surfaces in so far as they involve the diameter of the rollers and the load. But on the point of width it was found that the coincidence failed. Upon soft foundations the draft increases as the width of tire decreases, and on solid roads the draft is practically uninfluenced by width. For use on farms or soft earth, Morin maintains that the width of rims should be four inches.

It was further found that resistance increases with inequalities of surface, the stiffness of the wagon, and the speed upon hard roads, while upon soft bottom it does not so increase with speed.

It was further shown that the inclination of the traces has but little influence on the draft, but that it is better for all roads, and for common wagons, to make the inclination approach the horizontal so far as the construction will admit.

Wheels of large diameters and narrow tires injure roads less than those with small diameters and wide tires, and the concentration of load upon two wheels having wide rims is more injurious to roads, than the distribution of the same load upon four narrow-rimmed wheels.

**OIL FOR DRILLING.**—Linseed oil should be employed in drilling carriage work, and no other oil ought ever be used for this purpose. Animal oils are penetrating, and they are so injurious to paint that when work is smeared with them, it will not adhere, and every particle will have to be removed before the carriage can be properly painted. Linseed oil does not have this effect, and can be spilled upon the woodwork without any evil consequences.

## Paint Shop.

### HARD-DRYING PUTTY.

To make hard-drying putty or stopper, mix pure dry lead with Japan Gold Size, and beat thoroughly. Some painters add a little wearing varnish to make it tougher. In preparing it for glazing the grain, a little tub lead may be added to cause it to leave the knife freer. For use on carriage parts, add a little spirits turpentine to make it sandpaper easily. Stopper should be kept under water, or it will quickly harden and become unfit for use.

**ELASTICITY IN PAINTING.**—A carriage painter remarks in *The Hub*: "I do like the permanent wood filling, for it fills the pores of the wood, requires no putty glazing, is a good binder, and is tough and does not flake off. I can best compare it to a good piece of hickory which is tough and elastic, and will not break by bending. We want the same qualities throughout carriage materials; and particularly the rough-stuff should be elastic, and not brittle and spongy. In fact, a perfect man is a very good model for the carriage. He has a stiff back-bone and limb joints; not clumsy, but graceful and active, and with an elastic hide. So the rocker plate should be stiff, and the wheels strong; yet the whole must be graceful and elastic. It is for the reason of elasticity that English varnish has always been so good. It was slow drying, but tough. I want no fast-drying varnishes. *They are too much like fast young men.* They will do for a while, but they don't come out very well."

**ARTIFICIAL GOLD.**—This material is manufactured largely in the United States, and it is scarcely distinguishable from the true gold, when used in jewelry and other articles, except by its specific gravity, which is inferior. It is a fact, and a curious one, that it does not contain a single grain of the precious metal. It is made by taking 100 parts of pure copper, 17 of pure tin, 6 of magnesia, 9 of tartar of commerce, 3.6 of sal ammoniac, and 1.6 of unslacked lime. The copper is first melted, and the other substances (excepting the tin) added, a little at a time, and the whole well stirred for half an hour, so as to produce a perfect mixture, when the tin is thrown in and stirred round until melted. The crucible is then covered, and the fusion kept up for twenty-five minutes, and the scum taken off, when the substance is ready for use. It is malleable and ductile, and can be worked to any form, even into gold leaf.

**VARNISH FOR BURNS.**—Some months ago it was accidentally discovered by a French workman, that varnish was an excellent remedy for burns; and since then some remarkable cures have been performed by its instrumentality. Recently, also, it has been ascertained that petroleum is an excellent pain-relieving application, and it is successfully used for burns and scalds. Experience has shown that crude oil is better than the distilled article; that the heaviest kinds are to be preferred; and that the crude filtered oil, which has not been heated (such as is used for lubricating purposes), is the best of all.



## Trimming Shop.

### REPAIRING BROKEN BOWS.

WHEN a bow is broken in a straight place, it is oftentimes economical to mend it in the following manner, which is very simple and speedy. First, rip the stitching of the leather, and push it back from the broken place. Then measure the circumference of the bow. The easiest and most accurate method of determining this is to wrap a piece of paper around the bow, and with a knife cut the paper through to the wood, when the two side pieces will fall away, and leave the exact measure of the size of the bow. Then make a tin tube exactly corresponding to the size of the bow, as shown by the tube of paper. In this tin tube run the two ends of the bow firmly until they butt each other, and then restitch the old leather, or put on a new leather, according to the class of work which is required. This obviates the necessity of removing the entire bow, it is much cheaper, of course, and quicker, and the bow will be as strong as ever. If done with care, and the bow is neatly set into the tube, the place cannot be detected. Mr. Johnson, of Henderson, Ky., writes us that he has used this method of repairing bows for many months, and that the idea has been worth a considerable sum of money to him.

### Pen Illustrations of the Drafts.

THE American Institute is holding its 39th Annual Fair at the Rink, on Third avenue and Sixty-fourth street, in New York, its closing day being November 3d. In the department of vehicles are exhibited sixteen carriages, mostly light work, representing seven firms of this city, and two single-seat sleighs, as shown in the table which follows:

T. E. BALDWIN & Co.	{ California Wood-spring Wagon, Circular Front $\frac{3}{4}$ Coupe.
GEO. J. MOORE.....	{ Square-box Top Wagon, Four-seat Extension Top Phaeton.
E. SMITH.....	{ Road Wagon.
JOHN C. HAM.....	{ Ham's Patent Circular Front Six-seat Rockway Clarence, Landaulet.
R. M. STIVERS.....	{ Jagger Top Wagon, Hambletonian Road Wagon, Trotting Wagon, Kimball Patent Jump-seat Wagon, Eureka Cutter, Dexter Cutter.
COE & MERRITT.....	{ Half Spring No-top Wagon.
J. B. BREWSTER & Co.	{ Dog Cart, The Dexter Road Wagon.

Whilst it must be admitted that the majority of these vehicles are well constructed and finely finished, as would naturally be expected when the character and reputation of the exhibitors are considered, it must be confessed that the Carriage Department, as a whole, is incomplete, and would impart to a stranger a very imperfect idea of the extent and importance of the carriage business in New York. A few weeks ago Paris led the world in the fashions of dress. To-day New York is the leader of

carriage fashions in this country; but she has been modest about displaying this in the present exhibition. In addition to the fact that some of the leading firms of this city are never represented in these fairs, we attribute the absence of others to the increased activity of trade in some departments, which has tended to detract from their usual interest in the fair, and prevented them from making the usual preparations. Indeed, some of the work exhibited has been brought over from last year, and was evidently not built for the purpose of competition. We consider the styles of sufficient importance, however, to give cuts of several of them in the present *Magazine*, and we give below a brief description of the painting, trimming, and general construction of the six we have illustrated. In the December *Magazine* we shall give others.

#### TWO-WHEEL DOG CART.

*Illustrated on Plate XXI.*

THIS makes a stylish turnout, especially for tandem driving, and many of them are seen in Central Park now-a-days. This one is provided with apparatus for moving the body; and a correct balance may easily be obtained by moving the crank or lever, seen just above the cushions on the front seat.

*Painting.*—Gears are carmine, striped with a broad line of black, centered by two fine lines of canary yellow. The body is deep lake, striped with carmine and fine lines of canary yellow. The center panel of the body is made to represent slat-work; but the upper part of each slat being black, and the lower part carmine, the effect from a side view is that of a plain striped panel.

*Trimming.*—Drab corduroy.

#### LIGHT ROAD WAGON.

*Illustrated on Plate XXII.*

THIS wagon is exhibited by E. Smith, of White Plains, N. Y. It has a good appearance. Rocker concave; and width of body, 1 foot 9 inches.

*Painting.*—Gears, canary yellow, striped with one broad and two fine lines of black. Body, black.

*Trimming.*—Blue cloth.

#### SQUARE-BOX TOP WAGON.

*Illustrated on Plate XXII.*

THE body is cornered, seats rounded, and rocker concave. Style, plain but neat. Its builder, Mr. Moore, has taken several prizes at former exhibitions of the American Institute; and the two vehicles which he exhibits this year—this wagon and a four-seat top phaeton—are quite creditable. The wagon is finished as follows:

*Painting.*—Gears, vermilion, striped with one broad and two fine lines of black. Body black, and with good surface.

*Trimming.*—Green cloth.



## DEXTER CUTTER.

*Illustrated on Plate XXIII.*

A VERY pretty pattern. It may be said of Mr. Stivers' vehicles in this fair, that they are excellent generally. His carriages are well known for their fine finish and durability, and he has given good samples of his style of work. His business, in which he is assisted by his two sons, is on the increase, and he is enlarging his factory to nearly double its former size.

The weight of this cutter is only 65 pounds, and it has a fine side sweep. The width of the seat is 2 feet 8 inches at front of cushion.

*Painting.*—Body, black, striped with one broad line of gold bronze, set off with a fine line of orange. Running parts vermilion, with gold stripe.

*Trimming.*—Purple velvet. Mountings, gold.

## EUREKA CUTTER.

*Illustrated on Plate XXIII.*

THE style of this sleigh is very rich and highly gilded. Its weight is 85 pounds.

*Painting.*—Body, lake, striped with gold, edged with orange, and fine line of vermilion. On upper part of body is fancy plaid work of crimson, with black diamond center. Running parts striped gold, with fine line of carmine.

*Trimming.*—Crimson plush, with orange plush lace.

## THREE FOURTHS LANDAULET.

*Illustrated on Plate XXIV.*

THIS is a richly finished carriage, and was exhibited in the Fair with its circular front raised, as shown in the cut. It seemed to attract considerable attention, and particularly of the lady visitors, for whose use this style of vehicle is certainly well adapted. Landaulets are very popular now, and we believe their popularity will continue, for they are a standard pattern. They still offer a large field for improvements in the method of removing the top. With the exception of the demi-landau made by J. B. Brewster, we believe all the landaulets yet built have been accompanied by the disadvantage that the top, when removed, cannot be stored away in the carriage, or be taken along with it. In this respect the French are decidedly ahead of our American builders. They construct their landaulet in such manner that the driver can put the top either up or down at will, and without leaving his seat. J. B. Brewster's demi-landau appears to be a partial success, and we hope to see still further improvements in their connection.

The finish of Mr. Ham's landaulet may be described briefly as follows :

*Painting.*—Body, purple lake, striped with a fine line of carmine. Gears, carmine, striped with one broad and two fine lines of black.

*Trimming.*—Maroon leather. Mouldings, gold.

VOL. XII.—12

## Editor's Work-bench.

## PUBLIC PARKS.

THEIR INFLUENCE ON THE CARRIAGE BUSINESS.

WHEN Central Park was laid out in 1858, its 843 acres were of little market value. Even now this is true comparatively, as is illustrated by the desolate appearance of many of the districts near it. But, if in time to come the city increases in population and extent in the same ratio that it has increased during the last fifty years, the situation of the Central Park may become the center of the city, and in such case of course its actual land value would be immense. Moreover, when we compare the Park—rich in its rounding hills and splendid lawns, its winding pathways and excellent carriage roads, its shrubberies and lakes, and that fine architectural structure called the Terrace, with the rough and uncultured grounds outside of it—we perceive at once that it must have cost millions of money to lay out this great fertile inclosure, which smiles out of its stony surroundings like a oasis in a desert. Still further, it will cost millions more to keep it in order. Constant changes and improvements are made. It was only a few weeks ago when a resolution was adopted directing that the Fifth Avenue entrance be improved, and a fountain placed there; and that the circle at the Broadway entrance be completed, and embellished with large candelabra gas lamps, &c. These are unusual expenses, of course, but the regular yearly expenses are very great, as is illustrated by this single fact taken from the report of last year: "The use of the drives and walks is so great as to demand constant attention and reparation of their surface. 10,397 cubic yards of gravel were required for this purpose during the year 1869." Of course these continual outlays become enormous in the aggregate, and many persons on seeing this are ready to ask, "To what purpose is all this outlay? Is it of any practical use? Is it not superfluous, and somewhat of an inducement even to idleness?"

It does not come within our province to answer these questions from a general utilitarian point of view. We write for the carriage builders, and at present it is our purpose only to give an idea of the extended influence exerted upon the carriage business by these great parks which have been laid out in New York, Brooklyn, Philadelphia, and Baltimore, and our other American cities. The question of parks is one of the live issues of the day, and it is well that the coach builder should examine its effects.

In the first place we will freely assert our belief that *Central Park pays nearly one-half the income of the carriage builders of this city, and one-half the salaries of their employes.* And we will go on to explain. Since 1858, when Central Park was opened, the demand for fine car



riages in New York city has about doubled. In the report by the Board of Commissioners of the Park we find facts which have enabled us to make up the following table, showing the number of carriages that have visited the park each month during the springs from 1862 to 1867. By examining this view, and comparing the figures, the reader will see that in those *five years* the number of carriages visiting the Park *was doubled*.

	1862.	1863.	1864.	1865.	1866.
April,	58,567	79,095	87,575	125,864	53,528
May,	77,974	3,618	147,344	126,789	165,363
June,	84,254	110,792	111,263	153,279	163,563

When we see this gain denoted for those five years, and consider the state of trade since 1866, will it not be fair to infer that had there been no Central Park, there would have been only one-half the present demand for fine vehicles, and but half the number of workmen needed, or if the same number of workmen had been employed, their wages would have been but half as great. The carriage-maker cannot complain, therefore, of the costliness of the Park. On the contrary, it is his *silent partner in business*, and on Thanksgiving Day, when he carves the fat turkey, he may well say to his wife, "Thank God, the Park has been very productive this year." Had we time, we could easily prove this further by comparing the number of carriages owned, as shown by the assessment of taxes for vehicles.

Moreover, the parks are not only a support to the coach-maker's trade; *they are a condition of the development of his art*. It is, indeed, easy enough to speak slightly about show and display. Yet, it is difficult to do it with entire sincerity. We owe some of our best virtues and many of our happiest customs to the necessity of having a good appearance, and our innate love for making display is one of the most powerful agents of progress. It is quite natural that a man of refinement and taste should do his utmost to make his social position and his whole outward appearance fully accordant with his refinement and taste. Nay, it is more than natural. It is a moral necessity. If he has no instinct, no impulse toward such an end, all his mental acquirements are of much less value, and may, perhaps, prove to involve something wrong. It is natural, too, that a man if possessed of wealth and power should wish to show to the eyes of his fellow-citizens his abundant means, and it is well that he does it. Wealth and power are dangerous things, if concealed; as dangerous to the owner as to others. Concealment is to wealth and power what fire is to gunpowder, while, on the contrary, free and open display serves to enforce the equilibrium of things, because no display of wealth and power would be tolerated at all, if it did not prove trustworthy and benevolent. When a new man, who became rich yesterday, nobody knows

how, rushes forth in a glowing carriage, we laugh at him as a representative of "shoddy aristocracy," but we are glad and even proud of the old man, who makes a brilliant display of his honestly-accumulated wealth, and we think about making something similar ourselves. A tasteful display of benevolent wealth or trustworthy power is, indeed, one of the noblest and strongest stimuli in the life of a community, and we should be glad whenever an occasion for such a display presents itself.

The coach-maker, at least, ought to be glad of the parks, for if there had been no such places in which the wealthy man could show his wealth and his taste, and do it by excelling others, although there might have been the same demand for useful vehicles as now, there would have been no demand at all for that which makes the coach-maker's work a work of art. There would have been the same demand for that kind of work which the machine can make and is likely to make best, but there would have been no demand for that kind of work which depends upon the workman's brain and its ideas, or upon his hand and its skill.

If it is thought that the influence of these parks does not go any further than to the business of those cities in which they are situated, it is a very great mistake. *The influence is felt far away in the country*. A man who once has seen the carriages which are driven along the Mall of Central Park will, of course, when he can afford a pleasure-carriage, long for one as stylish and elegant as they. And if the country coach-maker cannot supply such a piece of finished workmanship, the customer will be likely to send to New York. But the next day his neighbor will feel tired of his old-fashioned family-chariot. He, too, will have a new, stylish one from New York. In a little while people will learn, moreover, that these city carriages are as strong as they are light, and as solid as elegant, and that they need not half the repairs which are demanded by the country coach-maker's work, and the consequence is apparent. The country coach-maker will have to keep up with the improvements of the trade in the large cities, where the display in the parks enforces new wants and calls forth new ideas, and if he close his eyes and fail to keep well up with the times, he will very likely be compelled to close up his shop as well. Thus the parks work as a lever to the whole carriage business.

#### CARRIAGE LIBRARY.

A LIBRARY is a powerful educator, and we believe it would be of great value to both employer and employes if a well-selected one, consisting mostly of mechanical books, were established in each large carriage factory.

In order to illustrate how good and practical a library for carriage-makers could be made up, and to render more available the suggestion we had made, we presented



in the September Magazine a list of about twenty-five books and publications in English which related directly or indirectly to carriage-making, and in the October Magazine we continued the subject by enumerating five books in French. We do not think the lists are complete, but they show how a good beginning can be made, and we invite the co-operation of all our friends in suggesting to us all other publications of a similar nature with which they are acquainted. With their assistance we hope in a few months to present a full list of coach-making works, and we trust the show of titles will make so favorable impression on some of our readers that they will be induced to carry out our suggestion and establish a shop library.

In the present number we carry on our plan by enumerating such other foreign works as are known to us.

#### GERMAN.

*Die Wagen und Fahrwerke der Grechen und Romer;* (Wagons and Carriages of Greece and Rome). Edited by Johann Christien Ginzrot, and published in Munich in 1817. 2 volumes. Very rare.

*Wagenbau-Zeitung* (Carriage Building Journal). Edited by George Meitinger in Munchen (Munich) and Berlin. First number issued January 1, 1864.

#### ITALIAN.

*Designs of Carriages.* Collected and published by Van Westerhout, in Rome, in 1687, and dedicated to his Serene Highness. Very rare. This is one of the oldest books treating on carriage-making. It contains many interesting designs.

#### LATIN.

*Vehiculus Antiquorum* (The Vehicle of the Ancients). Edited by Pyrrhus Ligorius Neapolitanus, and published in Frankfort in 1700. A rare and valuable book.

*De Re Vehiculari Veterum* (Concerning Ancient Vehicles). Edited by Johannis Schefferi, and published in Frankfort in 1671 (sixteen hundred and seventy-one). Exceedingly rare. We should not know where to look for a second copy. It is a literary curiosity.

This concludes the names of those books which are known to us now. Will our friends help us to extend the list. In the December Magazine we will republish the entire list, including English, French, German, Italian, and Latin, with such additions as we shall be able to look up, and such as shall be suggested to us by our correspondents.

### PUBLIC CONVEYANCES IN THE PARK.

EXPERIENCE has proved that the arrangement made by the Board of Commissioners for Central Park, for the efficient, comfortable, and economical carriage service, is an excellent one.

Ten commodious carriages, built with express reference to the accommodation of visitors, have been in use during the past year, and with the best satisfaction. They are fitted up and kept with great neatness and care, and provide for the comfort of passengers, both in sunshine and rain. The drivers are carefully selected, and all are under the control of the Park Commissioners. The rate of fare for going around the park is 25 cents, and during the skating season, when snow is on the ground, the fare from the southerly gates to the Lake is fixed at five cents.

This service was commenced on the first day of June, 1869, and has been regularly continued, affording a great public convenience, and an exemption to strangers and others from the annoyances to which they had been subject in carriages hired outside the Park.

The total number of passengers from June 1 to the close of the year 1869, was 68,557. The total receipts for fares were \$17,139.25. By the terms of the agreement, the Board receives a license-fee on each of these carriages, annually. It is expected that during the coming year, other forms of carriages, suitable for one, two, or four persons, will be placed on the Park under the same management. This is a good movement.

### DECLARATION OF PEACE.

IN times past, this *Magazine* and the *Coach-maker's International Journal*, of Philadelphia, have been on terms which could hardly be called, when speaking with perfect accuracy, an illustration of true brotherly love. For our own part we cannot see any reason for such a course, and we beg to omit from our columns, in the future, this department of humor. We prefer violet ink to black. We offer the right hand of fellowship to our friends in Philadelphia, and invite them to reciprocate the same.

### CARRIAGE BUILDERS' CONVENTION.

DURING a recent call upon our friends, the Valentines, we were much amused at the following circumstance: A clerk had been arranging on the shelf a long line of bottles filled with samples of varnishes, and just as he completed the line, and proceeded to dust the shelf, the head bottle toppled over, fell against the next, and with a succession of click, click, click, clicks, one by one, over went every bottle in the series. The look of amazement with which the boy, duster in hand and opened mouthed, gazed upon this unexpected downfall was very amusing.

We learn that the plan of holding the Convention of Carriage Builders was overthrown in a similar manner. Everything was in working order, and moving along in a satisfactory manner. It was a movement which had long been talked of and hoped for, and every one appeared to favor it; but the countenance and support of



some of the leading and influential members of the trade was necessary. Some of them doubted its practicability; this doubt was seconded, and like the row of bottles the convention was overthrown, and the plan has been abandoned for the present. The failure has been much regretted by those who favored the matter, and had lent their support. There were many such, and there is every reason to believe that if approved by all the leading members of the trade, it would have called together several hundreds of those engaged in carriage building, and helped to establish that feeling of friendliness and co-operation which is lacking now, and the want of which is productive of so many unpleasant consequences. Its time will come however.

## Correspondence.

### THE JAUNTING CAR OF IRELAND.

*The Ocean Trip.—Queenstown.—Cities of Interest.—Cork.—Limerick.—Dublin.—Climate.—Drogheda.—Rostrevor.—The Jaunting Car.—A Full Description of this Singular Vehicle.—The Good Roads.—Landscape, Bretts, and Broughams.—Carriage-Building in Dublin.—Heavy Styles.*

NEWRY, COUNTY DOWN, IRELAND.

MR. HOUGHTON.

*Dear Sir:* Your kind favor was received here in due time. To one who has never been away from his own dear home and country, it is very difficult to realise the pleasurable emotions excited in the mind by the receipt of a letter from friends at home. I simply thank you for the heartfelt pleasure afforded me by your letter, received here in this *old country*, where the people, their manners and customs, the climate, the ancient ruins and memorials of the past—where almost every thing we see and hear is so different from the youthful freshness and progress of *free and happy America*.

Our passage to Queenstown, in eleven days, was rather rough, I might say stormy, but in all other respects pleasant—not that in parting with the good ship *Samaria* I experienced many regrets. The harbor of Queenstown is of easy access from the sea, and almost landlocked by great hills and mountains, with several beautiful islands dotting its surface and serving as natural barriers against the encroachments of the sea. From several points the harbor appears as a great lake, without any apparent outlet. The town is situated on the side of a steep hill, the houses being on terraces, one above the other, giving a picturesque effect; and the River Dee, nine miles to Cork, forms a continuation of the harbor to that point.

We will enumerate briefly the several places of interest through which we have passed.

Cork presents many marks of commercial activity, and some signs of modern progress; but it still has many of the old landmarks indicative of its ancient origin. The next place of interest visited was the Lakes of Killarney. Of them I shall only say that, for sublimity and beauty of natural scenery, they cannot be excelled. Next in order was the city of Limerick, sometimes called by its

inhabitants the "City of the violated Treaty," in commemoration of the treaty made here and violated by William the Third. Its old cathedral, its castle and city wall, built in the eleventh century, together with other memorials of the past, are exceedingly interesting to antiquarians. From Limerick to Dublin, the railway passes through a charming grazing and farming region, with many remains on either hand of abbeys and castles with their ivy-crowned turrets.

A remarkable feature in Irish scenery is that you are seldom, if ever, out of the sight of mountains. Another thing that strikes the visitor who comes from our side of the Atlantic is the length of the days here. In summer, the daylight is clear until after 10 o'clock, and the temperature considerably below that of our American summers, with only an exceptional warm day. The winters, I am informed, are much milder than ours, and the winter days much shorter. Dublin is a fine old city, with many public buildings and institutions worthy of notice, and it contains many things of interest to the student of history and antiquity. The railroad from Dublin to Newry passes north along the coast, through Drogheda, near which was fought the decisive Battle of the Boyne, between the forces of William the Third and James the Second; and farther on toward Newry is Dundalk, where one of the Scottish Bruces was crowned King of Ireland, and where he was killed a few years subsequent in a battle with the English.

Newry is situated at the head of Carlingford Bay, surrounded by beautiful valleys and mountains. About five miles lower down the bay is Rostrevor, a beautiful seaside watering-place, whose natural beauty of mountain and sea landscape cannot be excelled. A monument is erected here to the British General Ross, who, after defeating the American militia at Bladensburg and burning the Capitol, fell, mortally wounded, at the battle of North Point, nine miles from Baltimore, on the 12th of September, 1814. History and local tradition record the fact that two apprentice boys, Wells and McComas, of Baltimore, vowed that General Ross should not enter the city alive, where, it is said, he had sworn to eat his supper or in hell, and, at the sacrifice of their heroic lives, they fulfilled their oaths. What was his resting-place will be revealed hereafter. Baltimore has erected two monuments to its gallant defenders on that day, and with the record of their deeds truly stated, but this British monument records a lie, in asserting that Ross died in a successful attack on Baltimore, and I so informed the polite old veteran having charge of the monument.

The field of carriage literature in this country is very contracted, and not particularly suggestive. The inevitable jaunting car meets you at every turn, and is on hand at every call. To an American, the car and its driver are both novel and peculiar. The short, see-saw, sideways motion is not pleasant, at least to the uninitiated; but the natives, who use them habitually, appear to enjoy it with a hearty satisfaction. The drivers have a peculiar custom of soliciting a gratuity over and above the regular fare or that agreed upon, on the plea that the owner of the car gives them little or no regular wages, and that unless their patrons are generous toward them, they cannot keep soul and body together. Being annoyed on several occasions in this way, I concluded that it was more agreeable to American tastes to make a specific agreement covering all contingencies before starting. The real jaunt-



ing car has no top, and how, in this showery climate, they have become so popular is a mystery to me. The drivers try all expedients of aprons and woolen wrappings to overcome the difficulty, but the people appear to accept the situation as inevitable, and use them on all occasions.

The jaunting car carries four grown persons without crowding, exclusive of the driver, and with space in the center of the body for light parcels or baggage. This part is called the well, and is covered by a movable cushion. The body is 3 ft. 3 in. from front to back, and 4 ft. 5 in. wide. This allows 18 in. on each side for seat room, with a space in the center of 17 in. for baggage. The passengers sit sideways, with their backs toward those on the opposite seat, and facing outward; there is little or no support for the back, but the passengers, by resting their arms and a portion of their bodies on the top of the cushion covering the well, may make themselves reasonably comfortable. The driver's seat is near the front end of the body, and slightly elevated, his feet resting on a footboard attached to the shafts, and occasionally a car of fine finish has a dash. When there is not more than one or two passengers the driver sits on one of the side seats in preference to his regular seat.

Nearly all kinds of vehicles in this country, excepting a limited number of fine carriages, run on two wheels, with no fixed rule regulating the length of the axles, as every axle is made in accordance with the width of body and purpose for which it is to be used—a law in that respect to itself. Jaunting car wheels are 3 ft. 5 in. high, spoke  $1\frac{1}{2}$  in., rim  $2\frac{1}{2}$  in. deep, narrow on tread. The axles are sufficiently long to place the wheels a little inside of the front or outside edge of the seats, and the leg-room for the passengers is obtained by means of a jointed footboard attached to the front edge of the seat, with a joint at point of attachment, so that when not in use it may be turned up out of the way. The back part and sides of this movable footboard are covered either with leather or thin sheet-iron, and this part of the machine is intended to keep off the mud and dust. The traces are attached to hooks screwed permanently on the inner sides of the shafts near the front bar. The shafts rest on two half springs (no cross), and the body is connected with them by means of scroll irons at each of its four corners, allowing sufficient play for the springs, that is, between the bottom of the body and the tire. Many of these vehicles are built in a superior manner and very ornamental. They are used for both private and public purposes. Price, from fifteen to twenty pounds sterling, and harness from five to seven.

A remarkable feature in this country, and one intimately connected with the business of making carriages, is the uniform excellence of its roads. They are macadamized and kept in the best order. Even on mountain roads the grade is so easy that the saving in horse-power is very great. As an illustration, I saw a granite block of 4,000 lbs. hauled into town by a medium-sized horse. It had come from a quarry three miles distant, and was borne on a two-wheeled truck.

I have examined several well-finished, stylish landaus, bretts, broughams, &c., made in Dublin, but there is nowhere to be seen here the light and graceful American models. It is to be hoped that the tendency to copy in America the heavy European models will be kept within reasonable bounds, as they are neither necessary nor suitable for our country. Your friend, JOHN McDERMOTT.

### ENGLISH RUBBING STONE.

MR. EDITOR: I think it worth while to inform the carriage making fraternity that the very useful so-called English rubbing stone, commonly sold at eight cents per pound, is in no respect different from the soft, gray sandstone of Cleveland, Ohio, which is now so extensively used in the West for building purposes, and in many cases the article sold as imported is this identical Ohio sandstone, the value of which is equal only to the trouble of picking it up.

LOUIS MATERN.

BLOOMINGTON, ILL., Oct. 1, 1870.

We have written to Mr. Matern, asking him to send us samples of this sandstone, that we may compare it with the imported. If equally valuable for the purpose for which we recommend it, we shall strongly advise the substitution of the American product in place of the English, which is opening a market. We Americans have an inborn love of imported articles. The feeling is natural in a young country, which so very lately had to depend upon its mother country for all its necessaries. But the United States has arrived at the dignity of trowersers, and ought, therefore, to begin to support himself.

### TARGET EXCURSIONS.

THE target excursions held during the past month by the employes of Brewster & Co., and J. B. Brewster & Co., of this city, were very pleasurable. The former was held at Lion Park, on Sept. 18th, and was attended by nearly four hundred persons. Mr. J. B. Brewster's men held their festival at Grove Hill Park, in Morrisania, and were favored with good weather and a good time generally. As "the Guard" (as the Twenty-fifth street employes have been called) marched up Lexington Avenue on the morning of Sept. 25th, headed by a band, they certainly made a fine appearance. We were in company with Mr. Stratton at the time, and watched them as they passed his office. They made a mistake in not calling for a speech, as we guess Mr. Stratton had one ready. We do not make speeches.

We have received the following remarks on the subject of excursions generally, from a friend who was present on the two occasions:

To the Editor.

Dear Sir: As you handed me the card of invitation, you told me to enjoy myself and make you a good report. The former I have done with all my heart, and as for the latter—well, sir, it is not my fault if my report does not contain what it properly should contain. The card read: "Second annual shooting festival at Lion Park," and "Second annual excursion and target practice at Grove Hill Park." And there was, indeed, shooting at both places, heavy shooting, all the day. But I cannot tell you any thing about this part of the feast. At Lion Park, I could not reach the shooting gallery on account of a very heavy rain—not that well educated English rain which keeps dripping modestly for some six or seven weeks, but that rough American rain which pours down by steam-power in half a day. The sky "meant business" on that



afternoon, and I had to remain in the dancing hall. At Grove Hill Park the case was still worse. Between the shooting gallery and the dancing hall, a space of some thirty paces was parched by the dazzling sunshine. I looked at it and thought of Sahara. I looked once more and thought of purgatory. Then I gave up the idea of crossing it, and again I was confined to the dancing hall.

The only thing, therefore, I can tell you about the shooting is, that there were too many prizes. With both parties there were about half as many as there were shooters. A prize should be a thing seldom won, and won by few only. A prize should be a thing of honor; and if it be any thing more or any thing less, it ceases to be a prize at all. Properly speaking, there ought to be but one prize, for but one can be the first; and when speaking of honor, only the first has a value. But as it is impossible to find out, with absolute certainty, who is the first—and as it would be hardly fair if some slight accident should thrust back into the crowd him who really was the first—it has become the general practice, and may be considered right, to place two more prizes beside the first—one on the right hand, and one on the left. But more than three are not justifiable. And when a party offers *fifty prizes to a hundred shooters*, they smell like those won in an English boarding school. If the school has fifty boarders, the professor will boast that from his school fifty boys carried home prizes for eminent progress. Indeed, a good rifle-shooter might earn a nice livelihood here in New York by being a member of a hundred shooting clubs, and winning the fourth prize at each place.

If this is all I can report from the *shooting gallery*, you will ask, of course, for so much the more copious information from the *dancing hall*. I can make only two remarks, and these I dare not set forth until ushered by a few circumlocutions.

Every thing has its proper place in which it must be seen in order to be rightly understood. If you would be impressed with the popular character of the Neapolitan, you must see the lazaroni as he lies more than half naked on some marble porch, idle and fully unconscious of every thing in the world except the sunshine and the macaroni. He looks like an ancient statue just dug from the soil, where it lay buried for several thousand years, so expressive is he, so beautiful, and so exceedingly unwashed. When you pass him, he will stretch out his hand, and with a very insinuating glance, and a still more insinuating smile, he will beg: "Excellence, give me a penny." If you pass on without giving him any thing, the hand will remain resting in the same posture perhaps for hours; but if you give him a penny, you will see and hear a gratitude more passionately expressed than you ever witnessed before. Still better if you talk with him. Tell him there is somebody you hate, somebody you should like to send whence nobody returns, and ask him—"Has he a knife?" He will raise his foot, place a piece of wood between the toes, make a careless cast with the hand, and in the wood so held you will see the sparkle and shiver of a fine steel poinard. He *has* a knife. The price will soon be settled; for if you will not give him half a dollar, he will be pleased with a quarter. The bargain is all right, there lacks but the name. Tell him—Garibaldi; and if you do not feel the poinard in your own heart, you will at least see before you a man whose ancestors were citizens of the Roman republic, and you will feel that the instincts and principles of this same

Roman republic are still burning under the ashes of the Roman popery.

If you would have an impression of the Hungarian, you must see him when drinking wine and dancing *Czardas* under the oak trees. Young and old cluster together around a band of gypsies, who with instruments unknown to the civilized world make a very singular music, consisting of two or three wild, dreary melodies singularly interwoven. And still more singular, yet expressive, is the dance. You remember these men rescued the European culture twice or thrice, aye, even the Christian religion from Mohammed's barbarous hordes. Through centuries they watched, sword in hand, over the dearest and noblest that the history of mankind ever contained, and such a duty, when performed with devotion and enthusiasm, ennobles a man. You can see that the Hungarian, who dances *Czardas* under the oak tree, is a soldier, and has been so through a dozen of generations, and you can see, moreover, that this soldier was defeated yesterday at Sadowa.

The German you must see at night in a public place, smoking and drinking beer, singing, making fun, and talking politics or philosophy. Every nation must be viewed in some peculiar situation as well as in some particular place, in order to reveal its true character; but the dancing-hall is not the proper show-room for American genius and American character. The American is a business man, and must be seen in his office. There he feels at home, and appears with that noble dignity and benevolent ease which suits a man so well. Outside the office, on the pleasure-ground, he seems to be a little bewildered, as if he did not know what to do. Horace Greeley, a keen, yet kind-hearted observer, says in his "Recollections of a Busy Life": "The low-born, rudely bred Englishman has but one natural fashion of enjoying himself—by getting drunk. We have modified this somewhat; but, as a rule, our thrifty, self-respecting people have hitherto allowed themselves too few holidays, and failed to make the best use of those they actually took," and he is right. To the American even his pleasure is a business.

And now, having hinted that I do not think the ball-room is the peculiar situation in which the American shows off to the best advantage, I will venture to set forth my two remarks. First, *The American mechanics cannot dance*. It was obvious that the old folks, who were Europeans, or at least stood nearer Europe by a generation, did much better than the youngsters. There were, indeed, some old spokes who whirled around and waltzed along so nicely, that I wondered what power put them in motion. The young ones, on the contrary, seemed to feel some difficulty in moving their limbs according to the tyrannical time of the music. They danced as if they were made of wood, and most of them could not dance at all. I asked one if his mother had not taught him how to dance. She had not, and he said it would be a singular business for a mother to teach her sons dancing. I thought not. There are four things which a mother must teach her son, viz.: "to pray, keep himself clean, to tell the truth, and dance." So said Martin Luther. If she teach these well, she has prepared him for many good things in the world; she has prepared him for being a happy man.

The other remark refers to the bar. *At a p'c-nic, with shooting and bowling and dancing, there ought not to be a bar*. Do not misunderstand me. A good dinner and a



liberal supply of wine seem to belong to a pic-nic. But no bar. As the prize means honor, so the wine means feast; and if so, should be served at the culminating point of the feast, at the banquet, when the gentlemen toast the ladies, the employes the employers, and the whole assemblage their country.

In your next issue I may make a few remarks on how holidays and pleasure excursions and shooting festivals are managed in different parts of Europe.

AN OLD DAUBER.

EDITORIAL CHIPS AND SHAVINGS.

TRADE NEWS.—The New York *Tribune* gives daily a brief report of the carriage business in this city, under the head of the "Horse and Carriage Market."

This is a new and valuable department, which was but recently opened in the *Tribune*, and it presents a good advertising medium for the carriage-builders. It is under the management of Mr. De Wardener, who is already known to many of the trade.

SLEIGHS.—The manufacture of sleighs and carriages was begun at Biddeford, Me., in 1861 by Hanson Bros., who then employed two hands. They now employ twelve men, and have recently built a new factory sixty feet by sixty, three stories in height, with an L. They are building light trotting sleighs, weighing when finished but sixty pounds, besides round and convex back double sleighs. Carriages and sleighs made by this firm are sold in Boston by Wm. P. Sargent & Co., Sudbury street.

BOSTON has a population of 250,701, as shown by the late census, and within a radius of ten miles from the State House, there are fully half a million of inhabitants.

SHREWD FLATTERY.—In Washington every shrewd cab driver divides all well dressed people into generals and senators. Only let a middle-aged man of military appearance come out of a hotel, and he is greeted with "A carriage, general?" but if he be on the shady side of fifty, and of dignified mien, it is "A carriage, senator—to the Capitol, sir?" Now, it is not at all singular that these brevet titles, although imposed by hack drivers, secure customers, because all men of a certain grade of

intellect, after they reach forty, think they either ought to be generals or senators, and are not unwilling to reward even a cabman, who is more deserving than the non-appreciative mass of their fellow citizens. The joke is told of a well known Virginian, as a case in point, that in consequence of being addressed everywhere he went as "senator," he actually spent an entire day last winter, while at Washington, in cab riding, and to the neglect of important business.

NEW FIRMS.—Since the dissolution of the firm of Corbett & Scharch, Mr. Corbett has continued business at the former factory, and Mr. Scharch has associated with Mr. Schweizen, in the firm of Scharch & Schweizen, and has opened a shop at 147 West 25th street.

HOW SMITH RODE.—

It seems that Mr. Jones loaned Mr. Smith a horse, which died while in his (Smith's) possession. Mr. Jones brought suit to recover the value of the horse, attributing his death to bad treatment. During the course of the trial a witness (Mr. Brown) was called to the stand to testify as to how Mr. Smith treated horses.

Lawyer (with a bland and confidence-invoking smile)—"Well, sir, how does Mr. Smith generally ride a horse?"

Witness (with a merry twinkle in his eye, otherwise imperturbable)—"A-straddle, I believe, sir."

Lawyer (with a scarcely perceptible flush of vexation upon his cheek, but still speaking in his smoothest tones)—"But, sir, what gait does he ride?"

Witness—"He never rides any gate, sir. His boy rides all the gates."

Lawyer—(his bland smile gone and his voice slightly husky)—"But how does he ride when in company with



SCENE IN THE KAATSKILLS.

Fine view of the Hudson on the immediate right—wholly unobstructed.  
 Nervous portly passenger.—"I say hold up, you driver! If you're going down here at this rate, I tell you I'll get out."  
 Hilarious driver.—"Can't spare yur ballast now, sir; them brakes aint no dependence."

others?"

Witness—"Keeps up, if his horse is able; if not, he goes behind."

Lawyer (triumphantly, and in perfect fury)—"How does he ride when he is alone, sir?"

Witness—"Don't know—never was with him when he was alone."

Lawyer—"I have done with you, sir."

TUNNELS.—Between Omaha and Sacramento there are nineteen tunnels.



# CURRENT PRICES FOR CARRIAGE MATERIALS.

CORRECTED MONTHLY FOR THE NEW YORK COACH-MAKERS' MAGAZINE.

New York, October 20, 1870.

- Apron hooks and rings, per gross, \$1 a \$1.50.  
 Axle-clips, according to length, per dozen, 50c. to 80c.  
 Axles, common (long stock), per lb. 7 c.  
 Axles, plain taper, 1 in. and under, \$5.00; 1½, \$6.00; 1¾, \$7.00; 1⅞, \$9.00; 2, \$10.00.  
 Do. Swelled taper, 1 in. and under, \$6.50; 1½, \$7.00; 1¾, \$8.00; 1⅞, \$10.00; 2, \$13.00.  
 Do. Half pat., 1 in. \$9; 1½, \$10; 1¾, \$12; 1⅞, \$15.00; 2, \$18.00.  
 Do. do. Homogeneous steel, ½ in., \$10.00; ¾, \$10; 1, \$11.00; long drafts, \$2.50 extra.  
 These are prices for first-class axles. Inferior class sold from \$1 to \$3 less.
- Bands, plated rim, 3 in., \$1.75; 3 in., \$2; larger sizes proportionate.  
 Do. Mail patent, \$3.00 a \$5.00.  
 Do. galvanized, 3¼ in. and under, \$1; larger, \$1 a \$2.  
 Bent poles, each \$1.00 to \$1.50.  
 Do. rims, extra hickory, \$2.75 to \$3.50.  
 Do. seat rails, 50c. each, or \$5.50 per doz.  
 Do. shafts, \$6 to \$9 per bundle of 6 pairs.  
 Benzine, per gall., 35c.  
 Bolts, Philadelphia, list. 45 off.  
 Do. T, per 100, \$3 a \$3.50.  
 Borax, English, refined, per lb., 33c.  
 Bows, per set, light, \$1.00; heavy, \$2.00.  
 Buckles, per grs. ½ in., \$1; ¾, \$1.12; 1, \$1.25; 1½, \$1.75; 2, \$2.00.  
 Buckram, per yard, 16 a 20c.  
 Buggy bodies, finished, \$15 to \$20.  
 Burlap, per yard, 10 a 12c.  
 Buttons, japanned, per paper, 20c.; per large gross, \$2.25  
 Carriage-parts, buggy, carved, \$4.50 a \$6.  
 Carpets, Bruss., \$1.75 a \$2; velvet, \$2.50 a \$3.50; oil-cloth, 40 a 70c.  
 Castings, malleable iron, per lb. 15c.  
 Chapman rubber, \$1.25, doz. pr.  
 Clip-kingbolts, each, 40c., or \$4.50 per dozen.  
 Cloths, body, \$3.50 a \$5; lining, \$2.50 a \$3. (See *Enameled*.)  
 Cord, seaming, per lb. 35c.; netting, per yard, 8c.  
 Cotelines, per yard, \$4 a \$8.  
 Curtain frames, per dozen, \$1.25 a \$2.50.  
 Do. rollers, each, \$1.50.  
 Damask, German cotton, double width, per piece, \$12 a \$16.  
 Dashes, buggy, \$1.75.  
 Door-handles, stiff, \$1 a \$3; coach drop, per pair, \$3 a \$4.  
 Drugget, felt, \$1.25.  
 Enameled cloth, muslin, 5-4, 32c.; 6-4, 50c.  
 Enameled Drills, 45 in., 45c.; 5-4, 40c.  
 Do. Ducks, 50 in., 65c.; 5-4, 60c.; 6-4, 80c.  
 No quotations for other enameled goods.
- Felloe plates, wrought, per lb., all sizes, 15 to 18c.  
 Felloes (Rims), \$1.50 a \$3.  
 Fifth-wheels, wrought, \$1.25 a \$1.50.  
 Fringes, festoon, per piece, \$2; narrow, per yard, 18c.  
 For a buggy-top two pieces are required, and sometimes three.  
 Do. silk bullion, per yard, 50c. a \$1.  
 Do. worsted bullion, 4 in., 35c.  
 Do. worsted carpet, per yard, 8c. a 15c.
- Frogs, 50c. a \$1 per pair.  
 Glue, per lb. 25c. a 30c.  
 Hair, picked, per lb. 40c. to 65c.  
 Hubs, light, mortised, \$1.20; unmortised, \$1. Coach, mortised, \$2.  
 Japan, per gal., \$2.00.  
 Japan gold size, \$4.00.  
 Knobs, English, \$1.40 a \$1.50 per gross.  
 Laces, broad, silk, per yard, 60c. a \$1.25; narrow, 10c. to 16c.  
 Do. broad, worsted, per yard, 40c. a 50c.  
 Lamps, coach, \$10 a \$30 per pair.  
 Lazy backs, \$9 per doz.  
 Leather, collar, 23c.; railing do. 20c.; soft dash, No. 1, 14c.; do., No. 2, 10c.; hard dash, 15c.; split do., 15c.; No. 1, top, 23c.; enameled top, No. 1, 23c., do. No. 2, 20c.; enameled trimming, 20c.; harness, per lb., 50c.; flap, per foot, 25c.  
 Moss, per bale, 8c. a 15c.  
 Mouldings, plated, per foot, ¼ in. 12c.; ½, 13c. a 16c.; ¾, lead, door, per piece, 30c.  
 Nails, lining, silver, per paper, 7c.; ivory, per gross, 50c.  
 Name-plates, \$5 for 25, \$8 for 50.  
 Oils, boiled, per gal., \$1.20.
- Paints. White lead, extra, \$12.00, pure, \$13.00 per 100 lbs.; Eng. pat. black, 20 to 25c.  
 Permanent wood-filling, \$5.00 per gallon.  
 Poles, \$1.25 a \$2 each,  
 Pole-crabs, silver, \$5 a \$12; tips, \$1.25 a \$1.50.  
 Pole-eyes, (S) No. 1, \$2.25; No. 2, \$2.40; No. 3, \$2.65; No. 4, \$4.50 per pr.  
 Pumice-stone, selected, per lb., 7 to 8c.  
 Putty, in bbis. and tubs, per lb., 5 to 7c.  
 Putty, in bladders, per lb., 6 to 8c.  
 Rubbing-stone, English, per lb., 9 to 10c.  
 Sand-paper, per ream, under Nos. 2½ and under, \$4.50.  
 Screws, gimlet, manufacturer's, 40 per cent. off printed lists.  
 Do. ivory headed, per dozen, 50c. per gross, \$5.50.  
 Serims (for canvassing), 16c. a 22c.  
 Seats (carriage), \$2 a \$2.75 each.  
 Seat-rails, 75c. per doz.  
 Seat-risers, Linton's Patent, \$2 per pair.  
 Seats, buggy, pieced rails, \$1.75; solid rails, \$2.50.  
 Shafts, \$12 to \$18 per doz.  
 Shafts, finished, per pair, \$3 to \$4.  
 Shaft-jacks (M. S. & S.'s), No. 1, \$2.40; 2, \$2.60; 3, \$3.00.  
 Shaft-jacks, common, \$1 a \$1.35 per pair.  
 Do. tips, extra plated, per pair, 25c. a 50c.  
 Silk, curtain, per yard, \$2 a \$3.50.  
 Slat-irons, wrought, 4 bow, 75c. a 90c.; 5 bow, \$1.00 per set.  
 Slides, ivory, white and black, per doz, \$12; bone, per doz., \$150 a \$2.25; No. 18, \$2.75 per doz.  
 Speaking tubes, each, \$10.  
 Spindles, seat, per 100, \$1.50 a \$2.50.  
 Spring-bars, carved, per pair, \$1.75.  
 Springs, black, 13c.; bright, 15c.; English (tempered), 18c.; Swedes (tempered), 26c.; 1¼ in., 1c. per lb. extra.  
 If under 34 in., 2c. per lb. additional.  
 Two springs for a buggy weigh about 23 lbs. If both 4 plate, 34 to 40 lbs.  
 Spokes (Best Elizabethport), buggy, ¾, 1 and 1½ in. 9½c. each; 1½ and 1¾ in. 9c. each; 1¾ in. 10c. each. 10 off cash.  
 For extra hickory the charges are 10c. a 12½c. each.
- Steel, Farist Steel Co.'s Homogeneous Tire (net prices): 1 x 3-16, and 1 x 1-4, 20 cts.; 7-8 x 1-8 and 7-8 x 3-16, 23 cts.; 3-4 x 1-8, 25 cts.; 3-4 x 1-16, 28 cts.  
 Steel Tire—best Bessemer—net prices: 1-4 x 1 1-8, 12c.; 1-4 x 1, 12c.; 3-16 x 1 1-8, 13c.; 3-16 x 1, 13c.; 3-16 x 7-8, 14c.; 3-16 x 3-4, 17; 1-8 x 7-8, 20; 1-8 x 3-4; 1-16 x 3-4 23c.  
 Stump-joints, per dozen, \$1.40 a \$2.  
 Tacks, 7c. and upwards.  
 Tassels, holder, per pair, \$1 a \$2; inside, per dozen, \$5 a \$12; acorn trigger, per dozen, \$2.25.  
 Thread, linen, No. 25, \$1.75; 30, \$1.85; 35, \$1.80.  
 Do. stitching, No. 10, \$1.00; 3, \$1.20; 12, \$1.35.  
 Do. Marshall's Machine, 432, \$3.25; 532, \$3.75; 632, \$4, gold.  
 Top-props, Thos. Pat, wrought, per set 80c.; capped complete, \$1.50.  
 Do. common, per set, 40c. Do. close-plated nuts and rivets, 75 a 80c.  
 Tufts, common flat, worsted, per gross, 15c.  
 Do. heavy black corded, worsted, per gross, \$1.  
 Do. do. silk, per gross, \$2. Do. ball, \$1.  
 Turned collars, \$1.25 a \$3 per doz.  
 Turpentine, pr gl., 50c.  
 Twine, tufting, pr ball, 50c.; per lb. 35c. a \$1.  
 Varnishes, American, wearing body, \$6.50; elastic gear, \$5.50; hard-drying body, \$5; Quick leveling, \$4.50; black body, \$5; enameled leather, \$4.00.  
 Varnishes, English. Harland & Sons', wearing body, \$8; Carriage, \$7; Noble & Hoar's, body, \$7.50; Carriage, \$6.50.  
 Webbing, per piece, 65c.; per gross of 4 pieces, \$2.40.  
 Wheels, \$12 to \$22.  
 Wheels, coach, \$20 to \$40 per set; buggy, \$12 to \$18.  
 Whiffle-trees, coach, turned, each, 50c.; per dozen, \$4.50.  
 Whiffle-tree spring hooks, \$4.50 per doz.  
 Whip-sockets, flexible rubber, \$4.50 a \$6 per dozen; hard rubber, \$9 to \$10 per doz.; leather imitation English, \$5 per doz. common American, \$3.50 a \$4 per doz.  
 Window lifter plates, per dozen, \$1.50.  
 Yokes, pole, 50c.; per doz, \$5.50.  
 Yoke-tips, ext. plated, \$1.50 pair.