

AND RECREATION.

VOL. XIII.—No. 18.]

NEW YORK, JANUARY 27, 1888.

[WHOLE NUMBER, 330.

WHEN we are compelled to use racing machines to make records, we

SHALL SAY SO,

but so far our ordinary road machines seem to be

SPEEDIER,

and to run more easily than the frail and specially light-built racing wheels of our English and American competitors, which latter, in our opinion, furnish no basis for honest comparison.

Our latest acquisition was Frank Dingley's wonderful performance in the

Minneapolis Rink, when he ran

350 1-2 MILES IN 24 HOURS

on a 36-pound Light Champion. This is about 33 miles ahead of Morgan's indoor world record, which was made on the same track.

Then there's Whittaker's unapproachable run on the fifty-mile course at

Crawfordsville (his mount a 40-pound Light Champion) of

323 MILES IN 24 HOURS.

Not to be forgotten is the 20 miles within the hour on the Ordinary Champion by the same rider and on the public highway.

Add to this Dingley's track record of

100 Miles in 5 Hours 38m. 441-5s.,

still with the Ordinary American Light Champion.

And thus, gentlemen, the "American Cycles," though road machines, hold every important road and long distance record, and it is only fair to give some credit to the

G. & J. BALL BEARINGS.

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Prospect Park Plaza, Brooklyn.

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New Rapid, Champion, Star and other Bi-

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on easy payments, without extra
charge except for interest. Prices
from \$8 up. Second-hand wheels
taken in trade and bought and sold.
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wheels and novelties in sundries with
full particulars of our terms of easy
payments—of interest to every actual or prospective
wheelman. Geo. W. ROUSE & Son, 13 G St., Peoria, Ill.

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DADWAY'S ---READY RELIEF.

Is a cure for every pain, Toothache, Headache, Sciatica, Neuralgia, Rheumatism, Sprains, Bruises.
Try it to-night for your Cold; with a sharp dose of Radway's Pills, you will sleep well and be better in the morning. 50 cents per bottle. Sold by Druggists.

DR. RADWAY'S PILLS.

Purely vegetable, mild and reliable. Regulate the Liver, and Digestive organs. 25 cents per box.

THE STAR

This is the way they finished in the great New York and New Jersey Team Road Race, May 30, 1887:

NAME 25 MILES. TIME. H. J. Hall, Jr., K. C. W., C. A. Stenken, H. C. W., E. Valentine, K. C. W., H. L. Bradley, Ild. B. C., STAR, 1.33.53 STAR 1.33.57 Columbia, 1.34.34 Columbia, 1.34.49 W. F. Caldwell, E. W., Columbia, ROSEVILLE, N. J., JULY 4TH. STAR first and second in 1-mile Novice. " second and third in 1-mile STATE CHAMPIONSHIP " " 2-mile ". New Castle Pa., July 4, 1887. STAR WON Hill-Climbing Contest.

1-mile Open. 2-mile Open. 46 3-mile Lap Race.

DETROIT, MICH., JULY 10, 1887.

STAR WON 3-mile L. A. W. Championship.

NAME 25 MILES. TIME. 6. J. H. Knox, K. C. W., 7. E. P. Baggot, H. C. W., 8. S. B. Bowman, E. W., 9. H. Greenman, I. B. C., STAR, 1.38.17 Columbia, 1.40.02 STAR, 1.40.20 STAR 1.43.36

WILKESBARRE, PA., JULY 4, 1887.

STAR WON FIVE FIRSTS: 1-mile Novice. 2-mile 6.45 Class. 1/2-mile Boys' Race.

1-mile STATE CHAMPIONSHIP. TERRE-HAUTE, IND., JULY 13, 1887.

STAR FIRST in 1-mile Open. in 1-mile Class.

in 2-mile STATE CHAMPIONSHIP.

St. Louis, July 10, 1887.

The Great 92-mile Road Race, from St. Louis to DeSoto and return, between Hal Greenwood, on the STAR, and PERCY STONE, on a Victor, settles the question as to which is best machine for such roads. Greenwood won easily. Stone "dropped out" at 46 miles.

Above are few of the most important events so far this season won on Star. For particulars, and Catalogue of best all-around Bicycle made, address

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Environs of N. Y. City.

Scale, I-4 Miles to 1 inch.

Compiled from the New Jersey State Geological Survey, the U.S. Coast and Geodetic Survey, Local Surveys and other authentic sources.

Size 3 2-3 ft. x 4 1-2 ft.

Mounted on Rollers, or Dissected to fold up in smaller compass.

**4.00.

This Map shows the Railways, Wagon Roads, Cities, Towns, R. R. Stations. Villages, Lakes, Ponds, Rivers, Streams, Mountains, Valleys, etc., in a style unequaled for distinctness, legibility and correctness. The Index is complete and renders it an easy matter to find any desired locality.

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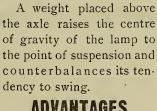
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USE.

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It prevents lamp from going out on rough roads.

It prevents spilling of oil from the cup.

It is ornamental to either nickel or black wheel, weighs less than half-apound, and can be attached to any lamp in fifteen seconds.

Ask your dealer for it, or send name of your lamp to

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1406 New York Avenue, WASHINGTON, D. C. who will mail a sample, postpaid, for one week's trial, upon receipt of price.

Price \$1.50.

EUREKA HOME TRAINER and Bicycle Stand, adjustible, well made; improved; will keep muscles and cycle in good condition through the winter; price \$7.50. M. A. Woodbury, Bradford, Pa.

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TANDEMS.

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FINISH .- "1" Full nickeled. "2" All nickeled "3" Wheels enameled, balance nickeled. except rims. "4" Enameled with nickel trimmings. "5" Enameled with polished parts. "6" Half bright and enameled or painted.

BEARINGS .- "1" Balls to both wheels and pedals. "2" Balls to both wheels and plain pedals. "3" Balls to front, cone to rear, plain pedals. "4" Plain to front, cone to rear, plain pedals.

CONDITION .- "1" Slightly used, good as brand new. "2" Tires show but slight wear, finish excellent.
"3" Tires brand new, finish excellent. "4" Tires show a little wear, finish first class. "5" Tires some worn, finish somewhat marred. "6" Tires badly worn or cut, and new ones required, finish good.

						Finish.	Bearin	Condit
	No.	Siz	e. Name.	Cost.	Price.	FF.	Be	Ş
	146	56		§132.50	\$85.00	4	1	4
	149	51	"Special Star,"	135.00	93.00	ŝ	bâll	2
	179		Sp'kb'k Cripper Tri.	180.00	85.00	4	2	2
	180		" Hhr Tandem	260 00 -	220.00	4	2	1
	213	52	British Challenge	135.00	65.00	3	1	4
	217	48	Special Star,	120.00	110 00	4	ball	1
	220 234	53 52	Royal Mail,	140.00	95.00	4	1	2
	235	55	Rudge Lt. Rdstr., Col. Lt. Roadster,	135.00 150.00	90.00 100.00	4	1	1
	236	56	Columbia Expert	132.50	70.00	3	$\frac{1}{1}$	4
	237	48	Columbia Expert, Columbia Expert,	122.50	70.00	4	2	4
	238	46	Special Facile.	123.00	80.00	4	$\frac{\bar{2}}{1}$	î
	244	45	Special Pony Star, Royal Mail,	107.00	100.00	4		ī
	245	54	Royal Mail,	140.00	95.00	4	$\frac{1}{1}$	1
	246	52	Columbia Expert,	137.50	90.00	1	1	1
	247	54	New Rapid,	150.00	110.00	3	1	1
	248	50	Ideal,	80.00	55.00	4	4	1
	252 258	$\frac{56}{48}$	British Challenge, Spl. Star,	150.00 129.00	55.00 95.00	1	1	5
	260	48	Columbia Standard,	100.00	40.00	5	4	5
	263	$\widetilde{55}$	Rudge Lt. Rdstr.,	138.75	73.00	4	ī	4
	264	54	Columbia Expert,	130.00	75.00	4	2	4
	265	52	Royal Mail"	137.50	95.00	$\bar{3}$	ĩ	2
	266	55	Spldg, Semi-Racer,	140.00	40.00	4	ī	4
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	277	52	Specl. Club,	160.00	105.00	î	Î	ì
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ı	282	38	Rudge Safety,	135.00	60.00	$\overline{4}$	1	3
	283	51	Spel. Star.	130.00	90.00	4	3	1
	285	51	Spel. Star,	120.00	80.00	4	3	-1
	286	44	Spcl. Facile,	130.00	70.00	4	1	4
ı	287	52	Columbia Expert,	127.50	80.00	4	1	2
ł	288 289	56	Columbia Standard,	107.00	40.00	4	4	4
ı	290	52 52	k'b'k Cr'p'r Tricycle, Victor Lt. Roadster,	132.50	$130.00 \\ 90.00$	4	$\frac{1}{1}$	2 1
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1	294	54	Columbia Expert,	130.00	80.00	3	1	1
	295	54	Victor.	130.00	100.00	4	- 1	1
ı	296	52	Columbia Expert,	137.50	90.00	1	1	1
ı	297	46	Columbia Expert,	120.00	70.00	3	1	1
Ī	298 293	39 50	Boys,	$70.00 \\ 135.00$	25.00	5	4 1	1
	300	50 50	Columbia Expert, Victor,	125.00	80.00 80.00	4	1	2
	301	90	Quadrant trike No. 8,		165.00	4	1	1
ı			Qualitation of	100.00	100.00			_

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Baltimore, Md.

Owing to the increased business of the above firm in the past two Seasons, during which time **THE NEW RAPID BICYCLES AND QUADRANT TRICYCLES** have become so thoroughly and favorably known to riders throughout the country, it has been found necessary to increase our facilities for handling this growing trade, and for this purpose the above corporation has been formed.

And in making this announcment to the Cycling public, we consider it an opportune moment to ask them to

REMEMBER that we were the first to introduce on the American Market, our now famous method of wheel construction, with TRUE TANCENT SPOKES, and that while every American Manufacturer of note has been forced to copy it, we still have, in all our NEW RAPID CYCLES, the BEST and STRONCEST cycle WHEELS ever made.

REMEMBER too, that the QUADRANT STEERING, as applied to all our QUADRANT TRICYCLES, remains unequaled as a perfect steering device and anti-vibrator without the use of springs to the front wheel.

REMEMBER first, last, and all the time, that we shall be in the field for

THE SEASON OF 1888

with a line of Cycles, all kinds, that cannot be surpassed in any respect.

✓ WRITE FOR CATALOGUE.

THE CLARK CYCLE CO.,

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--AND-

REGREATION

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F. P. PRIAL, Editor and Publisher, 23 Park Row,

P. O. Box 444.

New York.

REORGANIZING THE LEAGUE.

The Reorganization Committee of the L. A. W. will meet in Buffalo on Friday, January 27, at 10 A. M. The Buffalo Club have offered the com-

To A. M. The Buffalo Club have offered the committee the use of their club-house.

The committee are fully prepared to intelligently consider the question of reorganization. They have not only studied out the question, but a large number of letters have been received, many of which contain good ideas.

MANHATTAN CLUB'S RECEPTION.

The Manhattan Bicycle Club will hold its first reception at the Lexington Avenue Opera House, 58th street, near Third avenue, on Friday evening, February 3d.

An entertainment, of music, recitation and trick riding, by an expert, will precede the dancing,

commencing at 8:30.

The Manhattan members have worked hard to make their first event a successful one. The club was but recently organized, and its remarkable was but recently organized, and its remarkable growth is the result of untiring energy and enthusiasm. We hope our established clubs will all send delegations to the Manhattan's reception. Tickets, which may be obtained of Mr. Charles A. Sheehan, 5 Vanderbilt avenue, New York, are sold at \$1.

SNOWED UNDER,

EDITOR OF THE WHEEL: For just four weeks now, I've been hidden under the snows of this country place, trying to bring order out of confusion in respect to the avalanche of favorable press notices that has fallen upon "X. M. Miles on a

I include a classified summary of the notices in a pamphlet of sixty four pages, which I am now compiling and seeing through the press, and of which I print a first edition of 5,000 copies, for gratuitious distribution in all parts of the habitable globe.

I put 'January 25" on the date of the pamphlet, in honor of the fact that my 'impossible" canvass for 3,000 subscribers was set in motion by vass for 3,000 subscribers was set in motion by THE WHEEL's free advertisement of January 25, 1384; but I fear I shall not get back to my city chambers and begin my twenty years' task as a bookseller, until at least a fortnight from now.

If praises can do anything in opening bicyclers' pocket books, there are certainly enough of them printed to sell the 30,000 books for me in fewer years than I have named as probably necessary.

years than I have named as probably necessary for the success of the scheme. Anyhow, there is a good deal of amusing stuff in the pamphlet (including nearly all the abuse and ridicule of myself cluding nearly all the abuse and ridicule of myself which f have been able to rake together), and I think that no one who expends a postal card in securing it of me will regret the outlay.

Requests of this sort will be filed in the order received. They may preferably be addressed to me here until the end of the month; though my mail matter is daily forwarded from New York.

West Springfield, Mass. Karl Kron.

January 21, 1888.

BALTIMORE.

There is hardly anything new to give you this week, in regard to League Meet matters, except that things are being gotten into shape for good solid work, as soon as the Board is heard from. C. C. Mealy has about made all his selections for the committee of fifteen, and they will be ready to go at work at once. Although there has been no regular subscription committee appointed as yet, the promises of aid are already coming in very lively, and everything now points to a very successful

As several of our clubs here are League clubs, the question has been brought up lately whether to continue as such or not. Although I am a great believer in the League and its principles, I must say that I am not a believer in the League Club idea. It is only human nature to object to being coerced into joining any organization, and this is practically what it amounts to. It can hardly be expected that a man who is compelled to join the League, so as to become a member of a club, will be of much service to the former body. In many cases, if the same party were left to his own inclinations, he would join as it is the idea of being forced into it that brings forth the objection. Of this I have lately had several instances come to my notice in my own club where it was decided to discontinue as a League club, on account of the objection made by a great or the members and where nearly every one of them has or will renew. What there is to be derived from being a League club I myself fail to see. The League should be considered as entirely different and distinct from clubs, and the divisions should be the only League club.

As the secretary asks for suggestions in the re-

As the secretary asks for suggestions in the re-organization of the League, allow me to offer one here, which I think is quite necessary. Instead of the division secretaries remitting him the full amount of dues or renewals as is now done, let them retain such portion as belongs to the division and send the balance to him. This would certainly save time and postage, and avoid those long de-lays in remittances from the secretary to the div-isions, which have often caused complaint. As it now stands a portion of the money is sent on to the secretary and is eventually returned to the division, for which there is no necessity.

Yourr truly, "RALPH."

PITTSBURG.

"Hendee and the Springfield Roadster are at the riding-school," was the way it was put to the writer, so of course to see the combination we went, as much to see the man as the wheel. Hendee made a very favorable impression on all who talked with him and seems to believe fully in who taked with him and sentents to betwee fully in the merits of his wheel, both for good value for the money, and, in the language of a competitor, "safety, speed and hill-climbing." An agency was established.

So the five-mile race for "big money" did not come off, and the affair seems to have been one of the "biter bitten," with a general bamboozling of the public. Who are these riders? "Professionals" some one remarks, men who would no doubt be an honor to the League. Why is not the Amateur Rule done away with and such gentlemen (?) as these admitted to membership, that we may have a revival of spirited racing? What are So the five-mile race for "big money" did not men (?) as these admitted to membership, that we may have a revival of spirited racing? What are the League officials thinking of, that for so small an affair as the changing of a constitution, these men should be kept out of the ranks even if one-half of the membership don't care a whit for racing, and believe in the League because of the good it can do in a general way. By all means let's have the "professionals." I wonder if our representatives will attend the officers' meeting at Buffalo; the place isn't far away and Messrs. Bidwell, Murray and Ewing would make a capable team for the work in view. A small company of whee'the work in view. A small company of whee's men occupied a box at the Gillette show Saturday evening last. Mr. Gillette, in a letter to these gentlemen thanking them for the fraternal feeling which prompted the attendance, said: "He knew the bond of sympathy would be strengthened when he stated that he was still lame from a glorious header taken whilst racing with a train on the Denver & Rio Grande R. R. at Denver."

KEYSTONE.

The Holyoke Bicycle Club have decided to attempt to build a path from Holyoke to Binghampton, nine and a half miles. The Holyoke Club was inspired by the action of the Binghampton Club, whose success in the matter of road construction was recently made public through the columns of The Wheel.

CAMBRIDGE CLUB'S BALL.

A more successful party never occurred than that at Union Hall, Cambridge, last Friday evening, when the fifth annual ball of the Cambridge Bicycle Club took place. The ball was well attended, the attendance being just about adapted to the capacity of the hall, a very select company being present, representing the youth, beauty, fashion and wealth of Cambridge and the adjacent cities and towns. Most of the guests arrived at an early hour in the evening, in time to enjoy the promenade concert, which began at 8 o'clock and lasted until 9, when the grand march was announced. About one hundred couples participated in the grand march, which was led by President H. W. Hayes and Miss Alice Dorr of Cambridge.

The ushers, who admirably performed the duties

of floor managers, were President H. W. Hayes, E. C. Stevens, E. T. Rider and E. R. Ellis. Their badges consisted of sashes of orange ribbon worn across the breast, and the sashes combined with the black of the conventional evening dress suits, served to represent the club colors, orange and black.

The committee of arrangements consisted of Messrs. H. W. Hayes and Frederick Dorr, while the special guests of the occasion were Capt. A. D. Peck, Jr., of the Massachusetts Bicycle Club, President A. W. Robinson, of the Rovers' Cycle Club of Charlestown, and Dr. W. G. Kendall, captain of the Boston Bicycle Club.

The ball orders were very dainty and pleasing souvenirs of the happy occasion, and were formed of heavy, unglazed bristol board, with gilt beveled edges, and the letters "C. B. C." in embossed gilt letters upon the front cover. Narrow orange and black satin ribbons bound the pleasing little

There was a cessation of dancing shortly before midnight, the company moving into the supper room to the music of the orchestra. At 12:30 dancing was again in progress, the final waltz being danced at a comparatively early hour. The ball was one of the most successful ever given by the organization.

The club has 150 members, and is officered as follows; President, H. W. Hayes; Treasurer, George B. Adams; Secretary; J. H. Grimes; Captain, G. A. Perkins; Executive Committee, the officers, exofficers and Messrs. Otis S. Brown, John Ames

and E. B. Coleman.

AVONDALE, OHIO.

The "New Coons," which was the name under which the minstrel troupe was known, gave a very creditable entertainment last Friday evening at Avon Hall. The hall was filled from top to bot-

tom, not even standing room being left. All the seats on the ground floor were reserved.

The curtain rose at 8:15, disclosing to view the "New Coons," twenty-five in number, in full dress. The fun was continuous from that time till the close. Most of the hits and jokes were of a local character, and therefore immensely pleasing to the character, and therefore immensely pleasing to the audience. Everybody was much pleased, and many persons have requested a repetition of the show.

It is estimated that the club's profit will be bout \$250. This will help along the club-house about \$250.

fund very materially.

The Avondale Bicycle Club House is situated on one of the cross streets of the village, about one hundred feet from the main avenue. The club owns the lot on which the house stands and also the building. The building is 30x50, covered outside with red shingles, and has stained glass windows with red shingles, and has stained glass windows in the second story, which is one large room, intended for a gymnasium. It is twenty feet high in the center and ten feet high at the sides. The money raised from this entertainment is to be used to finish the gymnasium.

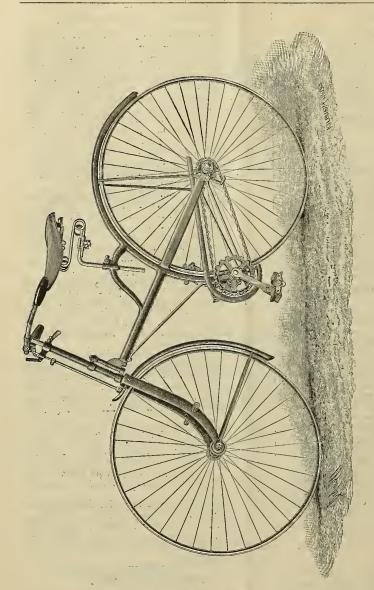
The lower floor contains a reading room, billiard group, and a large wheel and dressing room, with

room, and a large wheel and dressing room, with bath, shower, washstand, etc., complete. The whole is to be fitted up in the best manner, and we have hopes of some day being one of the bicycle

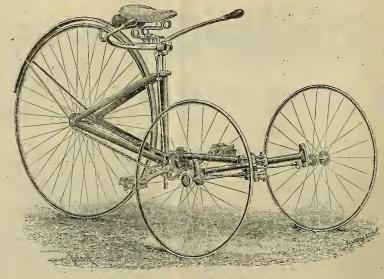
clubs of this section.

The officers of the club are Wm. A. Haven, The oline sold the club are with. A. Haven, president; Chas. A. Stevens, vice-president; Thos. L. Wayne, secretary and treasurer, and C. Tudor Estabrook, captain. The directors are: Haven, Stevens, Wayne, Estabrook and Watts.

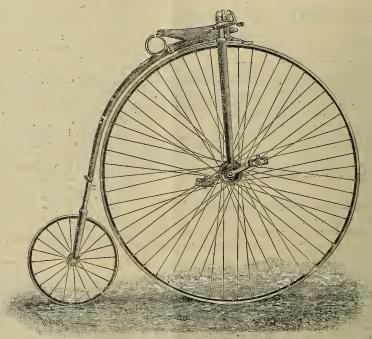
The Overman Wheel Company announces that it will not maintain a team this year. Thanks, awfully. We are certain the racing department of the sport will improve this year, if all the manufacturers refuse to support "teams."



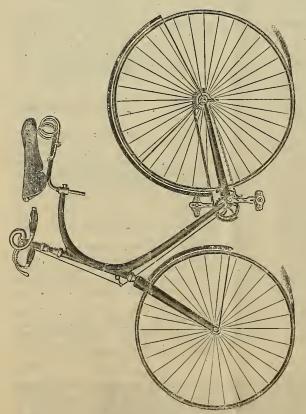
THE VELOCE COLUMBIA.



THE SURPRISE COLUMBIA TRICYCLE.



VICTOR JUNIOR.



THE AMERICAN RAMBIER,



VICTOR SAFETY,

WHEEL GOSSIP.

H. W. Gaskell is at the Rudge Company's London depot.

H. A. Speechley, the London crack, recently

The Royal Machine Co. of Birmingham, manufacturers of the Royal Mail, are winding up their business and will retire.

The Manhattan Athletic Club games will be held at Madison Square Garden, 26th street and 4th avenue, to-morrow evening at eight o'clock. Among the events will be a bicycle handicap.

COLUMBIA AT THE STANLEY SHOW.— Mr. Sydney Lee, on behalf of the Pope Manufacturing company of Boston, Hartford, and New York, U. S. A., whose interests in England he represents, desires to state that for the first time in the history of our sport an American manufacturer will be directly represented at the Stanley Show. On the stand will be specimens of the chief patterns of ordinary American bicycles as manufactured by the Pope Company These machines will not be on sale, the company merely desiring to draw the attention of the British cycling public to the style and workmanship that they are turning out for our American cousins — Wheeling.

The Lynn Cycle Club at a special meeting Friday evening elected the following officers: President, J. H. Young; Vice-President, E. G. Young; Recording Secretary, Charles W. Wilson; Financial Secretary, E. L. Storv; Treasurer, James Travers, Jr.; Captain, Fred M. Barnett; First Lieutenant, Thos. F. Tully; Second Lieutenant, Frank West; Color Bearers. E. Bergholtz, Charles Butterick; Bugler, S. S. Merrill; Club Committee, Fred M. Barnett, E. G. Young, George Collins, Charles Butterick; Auditor, Edward Phelan.

There was a large attendance at the meeting and the club starts off in 1888 with flattering prospects.

There was a large attendance at the meeting and the club starts off in 1888 with flattering prospects. New members are being taken in constantly, and oy May 30 it is calculated that the club will be stronger than ever.

Wanted—A backer, whom a smart professional cyclist might pluck. Must have plenty of ready cash and no brains, to speak of

WANTED—A fake rider. One who will ride to orders. No honest young man need apply.

Wanted—A professional cyclist; one who can lose a race by six inches and could make himself useful to his employer.

It is now the proper caper for immaculate professionals on the lookout for a "job" to carry letters of introduction from immaculate amateurs.

The Volunteer arrived in town on Wednesday, and is now on exhibition at 12 Warren street.

Wallace Ross, on an American Racing tricycle, now being manufactured by D. Rudge & Co., will be a feature of the Stanley Show.

A "Senator's" Wrath —Discussing Dingley's record, W. J. Morgan writes the *Cyclist* as follows: "You and your readers can expect to see a lot of board records manufactured from the same direction the next few weeks, as a well-known 'record manufacturer' has now taken up his abode in the lovely little City of the Plains." The "Senator" is very unwise to write in that strain. There are enough doubting Thomases in England, and this alleged American should not add to the mud-heap of doubt and derision cast upon American records. Morgan himself is particularly able in the matter of setting up record claims. We will admit, however, that the "Senator" fully understands the manufacture of records.

A YEAR'S RIDING.—Mr. S F. Edge informs us that, during the past year, he rode 7,201 miles, or on an average of 35 miles per riding day (203). This is exclusive of any track riding. His longest distance ridden in one day was 227 miles. The total was made up of 5.638 miles on a safety, 723 on a tricycle, 529 on a tandem, and 311 on an ordinary. Altogether this is a capital year's work — Cyclist.

Nineteen young men who "wheel" with the Jamaica Plain Cycle Club, gave a dinner at the Tremont House, Boston, Friday evening, complimentary to E. J. Woodworth, for a long time the Secretary of the club, and who is soon to go Texas to engage in business. The affair was informal. After the dinner the club held its annual election of officers with the following result: Charles A. Underwood, President; Frank P. Walker, Secretary and Treasurer; Edward C. Chase. Captain; George F. Riley, First Lieutenant; Joseph G. Sherman, Second Lieutenant; William D. Eldridge, Bugler.—Lynn Item.

The finest flowers are used in making "Wenck's" Opera Boquet, the popular perfume. It is most lasting for the handkerchief, emitting the most delicate and refreshing odor for a long time.

The Massachusetts Bicycle Club has decided to admit associate members. Such members must be non-wheelmen, and will pay a yearly assessment of \$10. They will have the full use of the clubhouse, except the right of storage for wheels. They cannot vote or hold office. Applications are now being received by Secretary C. C. Ryder, 70 Kilby street.

Stanley Show, January 28 to February 4.

The C. C. and Secretary-Treasurer of the New Orleans Division L. A. W. intend to resign.

"President Kirkpatrick feels discouraged" writes our New Orleans correspondent. He ought to feel discouraged. A year gone and nothing done. Query, whose fault is it!

More Utility.—A New York piano tuner—Mr. Alfred Ing, a one time famous amateur athlete—rides on his wheel all over the country in the pursuit of his vocation. By this method Mr. Ing saves money, reaches out-of-the-way houses, and at the same time improves his health.

Money and Time Saved.—A rider in Chester, Pa, who lives two miles from the office at which he is employed, has for the past four years ridden on his wheel to and from work and to and from lunch. Assuming that this gentleman rides 1,000 times per year, his few years of wheeling represents a car-fare salvage of \$200. The horse-car covers a mile in eight minutes, while the rider covers it in five, which is a time salvage of 200 hours. This rider's wheel is a source of profit as a time-saver, a fiealth restorer, and he is enabled to enjoy a warm dinner with his family every day.

The Hudson County Wheelmen will give a wheel entertainment at the Pavonia Rink, Jersey City, late in February.

Chicago will enjoy another monster road race from Chicago to Pullman, seventeen miles, on Decoration Day.

The Cambridge Bicycle Club held its fifth annual ball at Union Hill, Cambridgeport, Friday evening. Music was furnished for the party by J. Howard Richardson. The attendance was large, although select, there being many guests from out of town. About 100 couples participated in the grand march. It was led by President H. W. Hayes and Miss Alice Dorr, of Cambridge. The Committee of Arrangements consisted of H. W. Hayes and Frederick Dorr, while the special guests of the occasion were Captain A. D. Peck, Jr., of the Massachusetts Bicycle Club, President A. W. Robinson. of the Rovers' Cycle Club, of Charlestown, and Dr. W. G. Kendall, captain of the Boston Bicycle Club.

The Citizens will hold a ladies' reception at their club house on Monday evening, February 6. Amateur and professional talent will entertain the Cit's fair guests.

The Citizens will hold their annual dinner at Mazetti's on the 14th of February. Mazetti seems to have the call with the cycling clubs just at this time

Cit's With Big Mileages—Tommy Smith, 2,533; Philip Fontaine, 2,472½; Elliott Mason, 2,409½; W. B. Krug, 2,360.

Though the mercury dipped down near zero on Sunday, and a coating of ice and snow warmed the surface of the planet, a number of wheelmen were out on the roads. Good riding may be had on Fifth and Sixth avenue and up Central avenue as far as Fleetwood.

Parker and Halstead convoyed a party of wheelmen to a "bobby" party in East Orange, on Saturday last.

Dr. Marshall, of the Harlems, and three lady friends were out on tricycles on Saturday last, the wheels being hung with sleigh-bells. The party attracted considerable attention.

The Brooklyn Club had a unique entertainment at its club house on Wednesday evening last. The entertainment opened with cards, progressive euchre, followed by refreshments, and ended up with a slugging match, the principal set-tos being between Messrs. Kellman and Harrison.

Something New in Springs.—Mr. J. K. Starley, of Starley & Sutton, has just perfected a new spring which bids fair to make a considerable mark in the world, as it introduces an entirely new principle in the construction of springs for cycles, and one which, at the same time, is a very important one, as it takes up vibration in just the direction it is set up by the movement of the machine. It will be on view at the Stanley Show, and readers will no doubt "risk one eye" on it. We hope to personally test it shortly, when we will report upon it in these columns.—Cyclist.

A RAILWAY VELOCIPEDE.—The trial of a velocipede on rails has been made at Pantin with most satisfactory results, a speed of twenty-five miles an hour having been reached. This machine. made for the Engineer Corps, rests on four wheels of a diameter of 30 in. By means of a driving-gear the wheels are made to go round twice, and cover a distance af five yards for every turn of the pedal. The axles are borne on steel balls, the friction of which is so small that an effort of five ounces is enough to set the machine in motion, and when started at full speed it will go over a distance of goo yards on level ground. It only weighs 14 stone. One man can run it off the rails.—Coventry Herald.

The New Haven Club celebrated its anniversary on Tuesday evening. The club has ninety members.

A. D. Peck, Jr., sometime captain of the Massachusetts Bicycle Club is an enthusiastic tobogganist.

The Somerville, Mass., Club, will hold a "Ladies' Night" January 30, and the committee is arranging a very fine programme for the occasion. The officers write that nearly all the active members will join the League, though the club has withdrawn as a club.

MORE OF THE WHITTAKER-McCURDY FAKE,

McCurdy's Letter of Introduction.

The letter published below was sent us some time since by our Minneapolis correspondent, but was not made public, not only because it might work injury to the sport, but because we wished to be certain of its genuineness. The letter is now common property and we publish it for the moral it contains.

Apropos of recent swindles in bicycle racing, the following letter of introduction to a sporting man named Tanner, of Minneapolis, was given by one Bob Ehrlett, of Chicago, to McCurdy, of Lynn, not long ago, and by McCurdy presented to Tanner:

"This will introduce to you A. A. McCurdy, of Lynn, Mass., undoubtedly the fastest Star rider in the world. He has run several hippodromes with me, and is as square as they make them. He has a backer he wants to 'work,' and I have recommended him to you, and have written McCurdy to call and see you. He is training at the rink in your city."



KIMBALL'S SATIN STRAIGHT-CUT CIGARETTES.

People of refined tastes who desire exceptionally fine Cigarettes should use only our Straight Cut, put up in satin packets and boxes of 10s, 20s, 50s, and 100s.

14 PRIZE MEDALS.

NEW ORLEANS.

Editor A. Jonas has been elected Secretary-Treasurer of the Louisiana Cycling Club, vice J. P. Phelan.

The meeting of the Louisiana Division L. A.

W., which was called for the 9th inst. failed to attract a quorum, consequently nothing was done.

Chief Consul Hodgson has returned from his New York trip. Dropped into his office a day or two since and found him up to his eyes in business. Forty-leven people were waiting their chance at him, so only had an opportunity to shake his hand and get in a few words edgeways. On his way home he met President Kirkpatrick aboard the train, en route to Florida. Hodgson says that President Kirk feels discouraged, and thinks the rank and file unappreciative of the League official's efforts. Mr. Hodgson also says that his resignation as Chief Consul will probably be tendered sometime next month, and it would not be surprising if the Secretary-Treasurer should go and

The League is gradually losing its grip in this neighborhood, and while the renewals so far have been exceedingly satisfactory, it has been owing to individual effort than to spontaneous generosity or sense of duty on the part of those who have renewed. This is but the natural sequel to the League's shortcomings in the very few instances in which it has been appealed to for assistance. The Mobile case has had much to do in shaping the cycling mind of this section, and is a fair example of the League's methods, and though now, seven months after the matter was first brought to official notice, and only after vigorous prodding from the outside press, the crank of the official organ is given a couple of turns, and another staving-off tune is ground out and smites the ear so gently, yet so sweetly, that we are inclined to once more hope for something. May it not prove a false hope! The South is but really just beginning to command respect in the cycling world, and the next two years will surely see our numbers tripled, and the L. A. W. should not lose sight of this in considering our claims to recognization.

There were some hard words muttered against the Boston office last week. The Bulletin's issue of January 6th failed (and has yet) to materialize to few, if any, of its subscribers in this city, and as it should have contained a couple of official notices upon this Division, and, as we learned from other sources, considerable space was also devoted to the Mobile matter, there was lots of talk indulged regarding the why and wherefores of talk indulged regarding the why and wherefores of it all. It was interesting to hear the several ideas regarding this, the Bulletin's first failure to turn up. Some thought the League was in trouble with the printers, others that there might be another Aaron-like squall a blowing, and some few were of the opinion that the issue contained matter not intended for our eyes and had been held back purposely. Doubtless it was accidental, but that didn't keep the tongues from wagging.

A Spring race meet is being talked of. The Louisiana Club boys are at the bottom of it. E. C. Fenner, Southern agent for the Gormully

& Jeffery Co., has just received a sample of that firm's Challenge tandem—probably the first of the make in the South. It is a handsome, of the make in the South. It is a handsome, stanch looking machine, and though it seems a trifle elongated and, when one jumps into the rear seat, has a not over agreeable way of "re-ring" the price more than contact to up," the price more than counterbalances this effect. I can't see why this Challenge should not serve every whit as well as the \$250 and \$300 tandems of which there are two or three in town, —since they scarcely, if ever, venture off the asphalt. I think I'll not renew in the League any longer, but instead will lay aside the dollars saved from this source, and, as soon as I get 140 of them, and can find a "lovey-dovey" to ride on the front seat, I'll buy a Challenge tandem and not foolishly wait a hundred years longer to save enough for a

And now I lay me down to sleep, I hope the League its word will keep; And help the Mobileians in their trouble For then its Southern roll will double; But if it don't, its stock will drop, And once begun, will never stop. January 20, 1888. Br.

EARL & WIESON . MEN'S LINEN COLLARS AND CUFFS. "ARE THE BEST"
FOR SALE EVERYWHERE.

CONNECTICUTTINGS.

Such a cool wave as that of last week was for once a stopper even of the winter-going Facile rider of the Solitary Club, whose record of missed days has now reached a total of seven to date.

It is pretty certain that cycles do not crowd the horsey people, on the roads and streets. Now the sleighors complain of the "hoss-car tracks" spoiling their sport of racing through the main street. Serves them about right, for they race against by-laws and time, and run over some one every winter. They would not let a cycler go through at such a hot pace, for fear his bearings

It is now stated that our Mr. Gaylor's Eagle Bicycle will be on the market and road in the

We believe the wheel to be a very safe one, but one must do the pedal mount to get on it. for there is no step. Yet a side fall from a fifty-four inch wheel always seemed to us too much like an earthquake. It will just suit many who are weary of headers, and we wish the maker success.

We are to loose one good cycler, or one who was a good one in the early days of the pastime here, in Lieutenant Hendric, who will go to the land of the Golden Gate, in the spring.

He it was who introduced the writer to the best of all sports, partly taught him to ride, and sold him that old Standard Columbia, so he could get the '83 Expert that turned all our heads [few headers, though, mind you] at that time, as

we did in our turn, next season.

Good old times? You better believe they were!

More solid joy to the mile than any of us ever knew before, and we made the most of it.

Then a call for a club run meant something, not the half dozen of 1886-7, but a general turn out, and a jolly outing. Some of the best men of the town were along, too, men whom the Scribe might never have known but for the good-fellowship-feeling engendered by those road rides of days gone by.

We feel like wearing weeds [no, thank you, we do not smoke,] over the fact that so many of the good and as we supposed, true, of the old 'uns have done so little wheeling during the last two years; but hasten to say, as we have before, that it is chiefly owing to the deluge of sewers, street cars, water pipes, and the beastly mud and stones

over all, that came upon us, and is here yet

But that word "joy," with the accompanying one
of "comfort" never came to us as it has on the of comfort never came to us as it has on the safer wheel, in the later years, for with us the risk of riding was not its chief charm, as some pretend; but we do not all think alike, and believe in each one's sticking to the mount of his choice.

We are glad to hear of the cycle paths from place to place, of late, and think that the move is a good one for the cause, if they can be protected from the wheels of the "swine," who, having horses to drag them about, seem to take little interest in improving the roads. Whenever possible they will drive on such a path out of "undulterated kussedness."

Will some one in this paper give us an account in detail of the construction and cost of such a path, and how best to secure the funds for it? This and general road improvement is of vastly more importance than anything else pertaining to cycling, and should be pushed earnestly every-where, for the benefit of cyclers in general.

ART.

ROXBURY BOYS DANCING.

The Roxbury Bicycle Club gave its first annual Wednesday evening at Oriental Hall, and the affair proved successful beyond the expectations of the most sanguine. There were about two hundred couples present, and a very merry time they all had. Bicyclists representing clubs from Boston and many surrounding towns were present as ton and many surrounding towns were present as guests of the Roxbury boys, and all expressed themselves as having enjoyed a very pleasant evening. The club is about three years old, and is composed of half a hundred well known young men of the highlands. They are enthusiastic wheelmen, and many are the famous records that they have won on the road. Dr. W. G. Emery is the president, and a worthy one he is, too. He is full of enterprise, and the success of the affair last evening was due in a large degree to his personal efforts combined with the able assistance of Capof Capefforts, combined with the able assistance tain Lowell and the other officers of the club.

CHICAGO.

The Chicago branch of the Pope M'f'g Co. is thronged daily by a crowd of eager and speedy riders

Manager Garden has decided to get up another road race for Decoration Day. It will undoubtedly be run over the same course as the last one, viz: From Chicago to Pullman, a distance of about seventeen miles. I think that at least fifty of our fleetest cyclers will bend their backs when the pistol is fired. The winner will cover the distance within an hour, providing the roads are in good shape.

It is too bad we cannot have a square race amongst the professionals. So used are we to their rank hippodromes that no one can convince us that they can run an honest race—unless Sam Hollingsworth was in it. You can gamble on

Hollingsworth was in it. You can gamble on Sammy's honesty.

The Il'inois Cycling Club gave a very select party at Martine's Dancing Academy on Friday evening. Some seventy of our "best' fellows with their "best" girls, glided over the mirror-like floors. There were Owls, Chicagos, Lincolns and Æoli to be entertained by the Illinois boys, and right well did they do it. This affair, as is usual with the western events, was a grand success.

When R. H. Ehlert departs for South America

When R. H. Ehlert departs for South America the title of Champion of Illinois falls on the stalwart shoulders of N. H. VanSicklen, who, from what I have seen, is well able to defend it during the coming season. When Ehlert challenged Van Sicklen last summer to run him a series of races, viz: five, ten and twenty miles, to be run one on each of the three following Saturdays—many thought Ehlert's head a trifle swelled. Van promptly accepted, but not dreaming that a foeman worthy of his wheel had at last turned up, he did not take the trouble to get himself into proper con-On the other hand Enlert appreciated the fact that he was to race a very fast man and accordingly was in the pink of condition. They met and after two hard struggles Van was defeated. Van has been training all winter and intended to give

leaves for a foreign land and Van is heart-broken.

Young Winship will, I predict, prove a very formidable flyer—this young gentleman furnished abundant evidence of that last season.

When it is the season of the season of the season.

We have just heard from Dr. Cooley that the Phil. Hammel petition for re-instatement has been sat down on. Poor Phil.—the Racing Board will admit him, providing he will not race either on bior tricycle. Mr. Hammel would certainly not agree to that,—and there you are.

E. W. Pope, of the Pope M'f'g Co., was in Chicago last week. Mr. Pope was in high spirits and

evidently anticipates a big season. He left for the

East on Monday.

The Lincoln Cycling Club will give their first hop on the evening of January 26. The boys assure me that it will be a grand affair, and that

knickabockers will be at a premium.

I presume that before this, THE WHEEL has been favored with a visit from our popular Chicago wheelman, Mr. Edwin Oliver. Ned has a great collection of photographs—all of prominent knights of the wheel. Get yours ready for him, Mr. Editor; he is sure to ask for it. CLAW HAMMER.

PASSAIC COUNTY WHEELMEN.

At the annual meeting of the Passaic County Wheelmen held in their rooms at Passaic County
Wheelmen held in their rooms at Passaic (N. J.)
Tuesday evening, January 17, they decided, after
the transaction of their regular routine business to
enlarge their field of activity by including general
athletics in their club, and with that object in view
they disbanded the Passaic County Wheelmen and
reorganized under the name of the Passaic County
Wheeling and Athletic Association. They adopted Wheeling and Athletic Association. They adopted a new Constitution and By-Laws which provide for the building of a club house with a gymnasium and other conveniences of a modern club house.

The new organization starts out with a charter membership of 40, and since its organization it has had no less than twenty five applications for mem-bership, including all of the most prominent men of the town.

The temporary officers of the association are as follows: J. D. Pugh, Jr., President; W. B. Banker, Vice-President; A. E. Sengstack, Secretary; B. Crouse, Assistant Secretary; C. Blizard, M. P. Slade, F. Shuet, H. L. Simpson; F. C. Wellington, M. D. M. Marsellus, Trustees.

ARE THE MOST

GILLOTT'S STEEL PENS

THE AMERICAN RAMBLER.

THE LIGHTEST, MOST ORIGINAL AND EASY RUNNING, REAR DRIVING SAFETY YET PRODUCED.

Price Standard Finish.... \$120 Half Nickeled... Full

If desired with nickel spokes in the standard finish or half-nickeled machines, additional \$2 DESCRIPTION: This machine was designed with a view of meeting the rapidly increasing demand

for a bicycle which, while retaining and even increasing the elements of safety in our other pattern, is at the same time capable of being propelled at a high speed over every kind of road, night or

day.

We have carefully examined and studied every known make of rear driving cycles, both of domestic and foreign manufacture, to ascertain and improve upon their advantages and to eliminate their defects, that we might produce a wheel characteristic of our former productions, and we have succeeded beyond our expectations, perfecting in the Rambler a rigid steerer without any complicated parts, and one which gives also greater elasticity to the front wheel in surmounting obstacles than machines having a spring front fork. It is very light in weight, with enduring qualities possessed by no other.

The American Rambler is made with a rear wheel of 30 in hes diameter, having a 1/8 semi hollow

rim, and lightest grade Para rubber tire firmly cemented in by our newly patented process, which admits of its being removed and replaced readily.

It has direct spokes, which, in our judgment derived from long experience in the cycle industry, are much better adapted to withstand continuous rough usage and be readily repaired when

The front wheel is of the same construction, but carrying very much less of the rider's weight than the rear wheel; it is four inches smaller in diameter, and has a one-eighth inch smaller tire, thus reduc-

ing both length and weight of the structure,

Each wheel runs on our Smith Patent Ball Bearings of ample size for strength, and yet small enough to produce the least amount of friction. The entire frame is made of the best quality of imported and weldless steel tubing, carefully formed and shaped so as to combine lightness and strength. The front fork turns in a socket head of very great length, and has an original arrangement or device, which, while allowing it to turn with great freedom, assists very much in preserving the position given it by the rider in guiding it over rutty surfaces. The rear fork is connected to the main frame at the crank axle, and here also is located a yielding or elastic joint which absorbs nearly all the without account of the position given it by the rider could be stored as yielding or elastic joint which absorbs nearly all the vibration caused by car-tracks, cobble-stones or curbs, and prevents it being communicated to the

rider.

The forward portion of the frame is also a departure from the stereotyped forms, which not only diminishes the weight and increases the stability of the frame both vertically and latterly, but adds

much to the-general beauty and symmetry of the entire design.

The seat is adjustable, backward and forward, and also in height, making it suitable to the requirements of all ordinary riders, so that only one size is needed. If, however, a rider with much shorter or longer limbs than the average should desire a greater vertical adjustment than is provided, we will furnish it without additional charge.

The handle-bar is adjustable in height and of our standard rams horn pattern, which we have found to be particularly well adapted to this machine, as it gives the hands and arms a more natural position and a better opportunity to exert power than any other bar we know of, but is interchangeable with any other type at the desire of the purchaser.

The six-inch Champion cranks and the regular Champion ball pedals are used. The crank shaft turns in ball-bearing cases, as also do both wheels, the machine therefore having balls to every

bearing.

A powerful brake is provided at the rear wheel.

The standard finish is the same as on all our bicycles, nickel and enamel of the best quality procurable covering the steel.

THE VELOCE COLUMBIA.

PRICE, WITH "DOUBLE-GRIP" BALL PEDALS, \$135.

BRIEF.—31-inch rear (driving) wheel, 30-inch front wheel. Endless moulded 7-8-inch rubber tires. Crescent felloes. 40 and 36 direct spokes, No. 11½ gauge, with both ends enlarged. Columbia adjustable ball-bearings, all around. Seamumbia adjustable ball-bearings, an around perch. less steel, tubular front and rear forks and perch. Ewart less steel, tubular front and rear forks and perch. Adjustable crank-and-chain driving gear. Ewart forged steel, detachable link chain. Detachable Knous crank, 5, 5½, and 6 inch throw. Columbia "double-grip" rubber ball pedals. 4½-inch cone steering-centres. 28-inch hollow, continuous steel curved handle-bar, adjustable for height. Vulcanite handles. Adjustable plunger brake. Adjustable [L seat-rod. Harrington cradle-spring. Knous adjustable saddle. Lantern bracket. Footrests. Steering wheel shield. Tool-bag, with B & S. monkey-wrench, screw-driver, and oil-can. Gear 52. Weight 51 lbs.

Guiding ourselves by both the good features and the evident faults of the various patterns of reardriving Safeties on the market last season, we have perfected our Veloce under our own ideas, and though, as a matter of course, originality in all

though, as a matter of course, originality in all parts cannot be claimed for it, the improvements devised by us, and the quality and style of the material and work, stamp it as a well developed mem-ber of the Columbia family; and we confidently claim for it superiority in many features, and the

highest practical excellence in all.

FRAME.—An economy of weight is had, together with an increase of strength and rigidity of frame, by making what is practically the perch of the machine of one continuous piece of seamless steel

saving of space and strength and neatness of appearance.

STEERING.—The steering spindle and centers are so proportioned and placed as to afford the rider as ready control of the machine as possible, and by using rigid forks of tubular steel without sensitive springs the steering is made much more positive than in any other machines of this class; and their erratic tendencies, noticeable particularly in striking stones or ruts in the road, are for the most part overcome, though, of course, the true and even steering of the ordinary bicycle, where the steering-head is so nearly over the center of the wheel, cannot be entirely retained in any Safety.

The wheels are constructed with direct spokes, butt-ended for strength, headed at the felloe, and screwing into the forged-steel hub-flange. We have shown the desirability of this construction too often to make a repetition of it necessary, particularly in the case of a small-wheeled machine, for use at all times and places. It is a matter of satisfaction to us to observe a growing recognition of our arguments on this point, even in England, where, if in any part of the world, the roads are

columbia Ball-Bearings are used for both wheels and the driving gear, the steering wheel having a bearing similar in construction and method of adjustment to the rear wheel of the Expert, or the Tandem steering wheel, while the driver is fitted with regular Expert front bearings, with cases bolted into the fork ends, affording strength and

ready adjustment at an important point.

The driving gear is a modification of our regular crank and chain arrangement, with a neat adjusting device for taking up any slack of the chain. The crank-shaft bracket is hinged to the lower end of the perch, and may be moved backward or forward of the perch, and may be moved backward or forward to store the course of the perch. machine of one continuous piece of seamless steel tubing of heavy gauge, carrying the crank-shaft bracket at its lower end, the center tube and tubular driving wheel forks, and the various braces, and extending well over the wheel, to act as a shield pr tecting the rider from dust and mud. It is rolled into concave section throughout its length, and under our own method and patent, for the

of the upper sprocket wheel within the left bearing, and made as a part of the hub, affords the greatest strength, and as even action upon the bearings, as possible. The chain is our regular Ewart forged-steel chain, the only perfectly adjustable one in use, and freer from troublesome breakage than

THE SURPRISE COLUMBIA TRICYCLE.

PRICE, WITH "DOUBLE-GRIP" BALL-PEDALS. . \$150 PRICE, WITH "DOUBLE-GRIP" PARALLEL PEDALS. \$145

BRIEF —32-inch driving wheel, 26-inch front steering wheels. Endless moulded rubber tires. I inch to driver, 3/4-inch to steerers. Crescent felloes. 44 and 24 direct spokes, No. 11 1/2 wire, felloes. 44 and 24 direct spokes, No. 11½ wire, with both ends enlarged. Copeland folding frame of seamless tubular steel. Tubular driving-wheel forks. Wallace dwarf steering heads. Adjustable handle-bar steering. Hollow curved handle-bars, adjustable for height. Vulcanite handles. Adjustable plunger brake. Adjustable crank-and-chain driving-gear. Wallace sprocket wheels. Ewart forged-steel, detachable-link chain. D. tachable Knous cranks. Columbia "double-grip" rubber ball-pedals. Columbia adjustable ball-bearings all around. Adjustable L seat-rod. Harrington cradle-spring, Knous adjustable saddle. Dust-shield, Tool-bag with B & S. monkeywrench, screw-driver, and oil-can. Width over all, open, 39 inches; folded, 29 inches. Gear 48. Weight, 73 lbs. Finish, enamel, and nickel tips. FOLDING ARRANGEMENT.—An important feature of the machine, is the folding arrangement by means of which the running track may be varied in width from 34 inches down to about 30, without a material change in its efficiency, and then folding to a width over all of 29 inches, enabling it to go through almost any door, and to be

folding to a width over all of 29 inches, enabling it to go through almost any door, and to be conveniently stored in less space than other tricycles. The tubular steering-wheel arms are pivoted at their inner ends to a strong bracket at the end of the center tube and held in the desired position by oinding bolts on a semi-circular section of it. At their outer ends are neat spindles, upon which turn the dwarf steering heads, carry-

ing the wheel shafts.

STEERING.—A lever arm at the bottom of each steering-head is connected by a light rod to a lever pivoted below the main frame bracket, and taking its motion through a connecting rod, with balland-socket joints, attached to the lower and of the handle-bar upright. The steering is positive and very steady, and the adjustments are such as to keep it snug in all parts without slack or rattling. This steering arrangement is unique and is of special value in the Surprise, in that it does away with the balance-gear, which, unless made with great accuracy and under costly methods, as it is in all cases where we use it, is likely to be a source of trouble and expense for repairs. Its absence is activable as well in the offert reason. is noticeable as well in the effect upon price of the machine as in its mechanical construction.

THE FRAME of the tricycle is simple, but strong

and comparatively light; made of seamless inbular steel of such gauges as are best adapted to the various parts and forms, and firmly brazed and

jointed together.

WHEELS.—The driving wheel is made as small as it can be with good practical results for strength and saving of weight, and the steering-wheels maintain a good relative proportion; the sizes and positions of all afford as low a center of gravity as is desirable, and a good wheel base for stability. They are made with solid crescent felloes, of good proportion, and pure subber tires securely cemented in, and direct spokes headed at the felloe and screwing into the forged-steel hub-flanges. They will be found strong and durable; all in all,

the best wheels that can be made for the purpose.

Bearings —The wheels, crank-shaft, and pedals are fitted with our Columbia adjustable ball-bearings, ensuring even and easy running, and exact

adjustment.

DRIVING GEAR.—The power is applied through our regular crank-and-chain driving-gear, which stands second to none for effectiveness of working, for strength, and readiness of adjustment. upper sprocket wheel is a fixed one, being made as a part of the rear hub-flange, and so within the fork and bearing, an arrangement affording strength and durability, and steadiness of action. The lower one is a Wallace interchangeable wheel, admiting of a change of gear to 54 it desired, bolted to the crank-shaft, which takes its bearings in the brealtst carried when the screen when

VICTORS, 1888.

A. G. SPALDING & BROS., NEW YORK OVERMAN WHEEL CO., BOSTON.

THE VICTOR IUNIOR.

Brief of 50 inch.-Metal parts all steel; O. W. Co.'s compressed rubber tires: 1/8 inch to front, 3/4 inch to rear wheel; patent cold-drawn and rolled crescent steel felloes; 64 tangent spokes to front wheel, and 20 to rear wheel; wired and soldered all adjustable at felloe; Victor square rubber, par-allel; edals; 18 inch rear wheel; forged steel hub flanges and axle similar to the light roadster; detachable cranks, 5, 51/2 to six inches throw; Victor adjustable ball bearings to front wheel, and cone bearings to rear wheel; 1½ inch cylindrical back-bone, made of imported cold-drawn seamless steel tubing 17 gnage; forged steel neck, cylindrical head with dust shield and hardened conical steel steering centers; imported cold-drawn seamless steel tubular front 'orks; solid steel rear forks; 28 inch continuous steel handle bar, easily detached by a new and simple device; spade handles; one piece leg guard; grip lever; spoon brake; adjustable step; Victor saddle; tool bag with wrench, screw driver and oil

The Victor Junior is a high grade youth's machine of moderate cost, made in sizes from 38 to 50 inch, having all the beauty of outline found in the Victor Light Roadster, and containing many points of excellence that have never before been attempted in wheels of this class, as will appear and mon inspection. Price of 50 inch \$75.00. Difference of \$5 00 for each size under. The material and workmanship throughout are the very best, many of the parts being the same in design and material as the Light Roadster. All parts are interchangeable.

THE VICTOR SAFETY BICYCLE.

Wheels 30 inches in diameter, 40 spokes each, true tangent tied and soldered; new pattern deep secti n; hollow rim; 3/4 inch to front, 7/8 to rear wheel; very rigid and strong; sufficient to bear without spokes 500 lbs. weight without injury; Victor compressed rubber tires; patent spring forks; adjustable handle bars; victor swing saddle; foot rests. All parts adjustable and interchangeable, ball bearings to rocker frame; ball bearing head ball pedals; ball bearings to cranks; and front and rear wheels; new shape frame, giving great rigidity and strength, and easy steering.

The experience with machines known as safeties during the past three years has proven that a bicycle which is safe in fact as well as in name, which can be used for night riding and rough and which can be used for night riding and rough roads, and by elderly and heavy-weight riders is a most valuable acquisition to cycling. The difficulty with safety bicycles in the past has been that they were *shaking machines*, shaking both rider and machine to pieces with vibration. The Victor Safety has overcome this difficulty, and complies with the less points of exist no models the bines with the best points of existing models, the new spring fork and many other features peculiar to its own manufacture. With regard to its safety to its own manufacture. With regard to its safety, its construction renders a fall backward or forward impossible; while in the event of a side fall, as the foot is but five inches from the ground, it will be apparent that the rider can save himself with perfect ease. In general lines, except the fork, it is of the "Rover

the "Rover" type. We very much doubt if any road machine is better calculated for speed than the Victor Safety, while at the same time it will be found to run as easily as the ordinary bicycle. The new spring fork revolutionizes the safety bicycle. It is the only device ever applied to cycles which gives an abundance of vetrical spring to absorb vibration, while preserving perfect rigidity in every other direction. Although very simple in appearance, it is the result of a long series of experiments and inventions in search of a device to absorb the vibration of the steering wheel in safeties and tricycles. The spring, so that no one of them is subjected to undue pressure. The construction at the axle is strong; and provides fully for the very little wear at that point. The greatest proportion of wear will be at the top, where the stays are hinged to the fork. Here each joint is a ball bearing so constructed as to be adjustable for wear.

Heretofore so fety driving wheels have been too

weak and unequal to the great strain placed upon them. By the use of regular bicycle bearings have insured against the hub being pulled apart and ruined by the side strain of the chain. We believe it is the first safety in which the power is applied between the bearings of the driving wheel. This adds much, not only to the wearing qualities

of the machine, but also to its steadiness in action. of the machine, but also to its steadiness in action. Tires, rims, spokes, bearings, cranks and pedals are exactly the same as those used in Light Roadster. The steering head is entirely new. It runs upon forty four 3 16 balls The ension is automatic, applied by a spring which can be regulated as desired. The machine can be ridden with hands off. In this head balls are used because the motion is almost a complete revolution and the parts are so made that a large number. tion and the parts are so made that a large number of balls can be used, thus dividing the strain.

A common objection to safeties in the past has een their ungainly appearance. This objection been their ungainly appearance. This objection cannot be made to the Victor Safety, as it is certainly a very graceful and attractive machine. It is made in one size only, adapted by adjustment of handle bar and saddle to riders with leg measure from thirty-two to thirty-eight inches Geared to fifty-four inclusive. inches unless otherwise ordered.

The finish of this machine is, spokes, rims, backbone, front and rear forks, and seat rod, in Harrington's black enamel, and all other parts nickel plated in best manner. Price \$135.

Heretofore all Safeties have had the objection of being sensitive in the steering. This has been overcome in the new Victor, which will be found to be the least sensitive, easiest running and easiest riding of all safeties.

A more complete description of these wheels will be found in the new Victor catalogue, which will be ready in about two weeks, and can be obtained by addressing A. G. Spalding & Bros., Special Agents, 241 Broadway, New York.

SAMUEL T. CLARK & CO., 1888.

BALTIMORE, Jan. 1888.

DEAR SIR:-In reply to your request for catalogue, we beg to say that we have deferred issuing our spring catalogue until after the Stanley Show, in order to list any novelties in sundries and accessories which may then appear, and which may be approved by our agent, who will be in attendance.

The truly grand records for durability and ease of running on the road, as well as hill-climbing and on the path, made by our New Rapids and Quadrants during 1887, have convinced us that to change them in any radical essential would be simply running the risk of injuring their good qualities; and, as every manufacturer of straight wheels in the United States finds it necessary to imitate the incomparable true tangent wheels, which were first introduced in the New Rapids, we consider this the most flattering testimonial to their worth and excellence. Only, therefore, in slight details, have improvements been made; and we send you copy of catalogue which was issued late in the Autumn of 1887, and which fully describes each machine, and the following will be the few changes we have made:

NEW RAPID ROADSTER. Improvements in slight details and finish. Humber coil spring and L.D. saddle discarded, and machines will be fitted with either Lillibridge, Cobblestone, Victor, or any of the other hammock saddles, and with spade, pear or T handles (T recommended), without extra charge. Re duction of \$5 in price . 50 in \$130; 52-in. \$132.50; 54-in. \$135; 56-in. \$137.50; 58-in. \$140.

NEW RAPID LIGHT ROADSTER. Changes made are the same as on the full roadster, with reference

are the same as on the full roadster, with reference to details, saddles and prices—no other changes.

NEW RAPID SAFETY. Improvements in slight details and finish. Both wheels 30 inches in di ameter: nickeled stay rods, adjustable, connecting with crank bearing, one on each side of driving wheel. Fish adjustable hammock saddle and round tool hor.

round tool bag. Price. complete. \$140.

QUADRAN TRICYCLE No. 8. Price, complete,
\$175—a reduction of \$10. No other changes. QUADRANT TRICYCLE No. 14. Price, complete,

\$175-a reduction of 10. No other changes.

OUADRANT TANDEM No. 15. Fish adjustable hammock saddles, fore and aft. Foot brake for rear rider, in addition to hand brake. Price \$250

—a reduction of \$15.

We are now receiving large shipments of 1888 pattern Rapids and Quadrants and can supply advance orders promptly.

SAMUEL T. CLARK & Co.

KINCS COUNTY WHEELMEN'S HOUSE WARMS.

The Kings County Wheelmen's new house is rapidly approaching completion, and a series of receptions, or house warms, have been arranged as

February 8th, club opening to club members and city officials. February 21st, wheelmen's opening to be followed later on by a ladies' reception.

Messrs. Merwin, Hulbert & Collarge galleries in their wheel room date boys and second-hand wheels.

HARLEM WHEELMEN.

NEW YORK, January 25, 1888.

EDITOR OF THE WHEEL:

Herewith, I send you the Harlem Wheelmen's mileage for 1887. It is to be regretted that more of the members did not send in reports of their monthly mileage, which would have greatly increased the already creditable club record.

The medals for best mileage were won by E. I. Halsted and E. C Parker, who have records of 4,601 and 3,024 miles respectively. A Century Medal was also won by E. I. Halsted, who rode 100 miles inside of the ten hours' limit (actual elapsed time, 9 hours and 10 minutes). Over sixty daily "runs" of fifty miles or over have been rethe country, such as to Babylon and various points on L ng Island; frequent trips up the Hudson River, and along the Connecticut shore, and to forget the many rides through "Jersey," and the "Fourth of July" run to Philadelphia, in which a party of nine participated.

Of the lady members, Mrs Elliott Mason is the

only one who has ridden over 1,000 miles, and she now wears one of the medals, such as the Club presents to all members who ride that distance, a bar being added upon the completion of each suc-

cessive thousand miles.

The following mileage report represents twentytwo members, of whom five have sent reports of five rides only, although they have ridden many times more, but failed to report.

HARLEM WHEELMEN MILEAGE, 1887.

		Aver-	Long'st Ride n 1 Day.		Total 1886.
Halsted, E. I Parker. E. C Steiner, A. T De Graaf, W. H Braden, W. W Mason, Mrs. E Griffith, C. W Quin, B. A Josephs, H. S Lord, F. N Hoffman, W. H. S. Sundry Members	170 157 119 52 72 46 59 46 60 45	3117 1768 507 1719 507 2011 709 1519 168 2 1519 168 2 1519 168 2 1709 168 2 1	101 \$\frac{3}{8} \ 87 \frac{1}{2} \ 50 \ 80 \ 75 \ 45 \ 50 \ 53 \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \	4,601 3,024 2,799 2,450 1,360 1,102 1,089 1,060 1,043 1,033 1,001 2,865	3,602 937 1,882 2,521 1,131 1,340
Total	<u> </u>				4,866

E. IRVING HALSTED, Captain.

M. A. Woodbury, Bradford, Pa., writes: "I have just returned from a trip to Cleveland and other cities in Northern Ohio, and find all pleased with the Eureka home-trainer and bicycle stand. Have booked a large number of orders.

Send postal card to Howard A. Smith & Co., Newark, N. J. for their new 1888 catalogue; its completeness will surprise you.

Bicycle agents and dealers can get their supply of sundries of Howard A. Smith & Co., Newark, N. J, at better figures than anywhere else.

Howard A Smith & Co., Newark, N. J., and with their branch store in Orange, offer a good stopping place for all tourists contemplating taking in the sand papered roads of New Jersey.

The Maryland Sportsmen's Supply Co., Baltimore, Md., handle Victors for 1888. The comcarries a complete line of sporting goods, and deals in all makes of new and second-hand wheels.

Mr E. D. Loane, of the Ramblers Club, of Baltimore, was in town on Wednesday.

THE CLARK CYCLE Co.—The firm of S. T. Clark & Co. has been reorganized as the Clark Cycle Co. Mr. Samuel T. Clark sailed for Europe on the Ems on Wednesday afternoon.

A NEW COMPANY.—The Smith National Cycle Manufacturing Co., of Washington, D. C., are the latest comers in the manufacturing held. The firm will manufacture the Dart Safety. Vertical Dart and Dart Tandem bicycle, and besides will do a general cycle trade.

Messrs, Seigrist Bros., Canal and Centre streets, New York, announce that they will manufacture fine bicycle, tennis and athletic shoes this season.

Messrs, F. Grote & Co., 114 East Fourteenth street, supply clubs with billiard sundries, fine ivory cards, chips, chess and other club accessories.

Messrs. Merwin, Hulbert & Co., are building large galleries in their wheel rooms to accommo-

OUR COUNTRY ROADS.

THEIR TERRIBLE CONDITION DEMANDS ACTION BY THE POWERS THAT BE.

To The Editor of The Herald:

In your issue of December 18, there appeared an editorial headed "Better Country Roads Demanded," one of the best articles that has ever appeared in your excellent paper. As a very small atom in the conglomeration known as suffering humanity, I do most earnestly appeal to you to keep hammering away at this subject until something is done to improve the present condition of our country roads. As matters stand now our miserable roads are a disgrace to the community. We of the new South naturally take great pride in the wonderful growth of this section, and we delight in telling how many furnaces and rolling mills and coal mines and dummy lines we have, but with all our boasted enterprise we cannot point to a single country road good enough to be called even second class. We are each individually willing to go into any enterprise where we are certain of making a good profit for each individually, but when it comes to anything like public enter-prise for the mutual good of all we "can't see it."

In your article referred to, you point out that the last legislature of Alabama enacted a law " author izing and requiring the Commissioners' court of Jefferson county to issue and sell \$200,000 of thirty-six year six per cent bonds, to be devoted to putting the roads of the country in good condition." What is the matter with the Commissioners' court that it does not do what the legislature required it to do? That is a question that the

public have a right to answer.

The friends of the *Herald* speak of its progressive ideas and of how it has made the other papers here "hustle" and "git up and git," If you will keep this matter of better roads before the public, and stir up the public parties at fault with a long stick, and keep pegging away at it until something is accomplished, you will make more friends than you already have, and cause considerable more hustling.

Phi KAPPA PSI.

BIRMINGHAM, Jan. 8.

A DETECTIVE CAMERA.

The Tisdell and Whittelsey detective camera is one of the most complete instruments now on the market. Its form is that of a satchel with nickel trimmings. It is substantially made and handsomely finished, having a covering of waterproof leather. It is so well disguised that its use would never be suspected; the exterior being free from all the mechanism that usually accompanies other detective cameras. Its machinery is exceedingly simple and complete, its action being very smooth. The camera can be operated without opening, and it is adapted to either time or instantaneous expos-

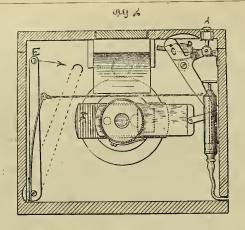


The above cut represents the camera ready to be

Previous to making an exposure the camera is focused for a distance of ten feet or over with a medium diaphragm. The focusing is done with a rack and pinion from the interior; when the desired focus has been secured further movement is checked by setting up a jam nut on the bed of the camera. Its lenses are achromatic, rectilinear, and are made especially for the camera by the Gundlach Optical Company of Rochester, N. Y. They are exceedingly quick, and entirely free from retigmatism.

The camera is operated for instantaneous exposures by touching a concealed spring, or it can be set for time exposures and is operated by a pneumatic piston, to which is attached a small rubber tube and bulb.

The twelve plate holders which accompany each camera, having been filled and placed in the box, one of which has been placed in the camera and the slide withdrawn and left in the box, everything is now ready for the exposure.



When the object to be photographed is wet, adjust the shutter and expose the lens by pushing its cover B as shown in the first cut upward, until it is stopped by the small projection on its back. Now direct the camera toward the object; this will be reflected on a small ground glass ingenously concealed under one end of the handle. Touch the spring marked A, and the exposure is completed. There is nothing on the outside of the box that will indicate to others than the operator where this spring is located.

Now replace the slide in the holder and reverse it, placing the unexposed plate in position for a second exposure. While the box is open set the shutter by moving the lever marked C in figure 2 toward the finder until it stops in the last notch of the detent bar marked I); or it can be set after closing the box by using the piston and bulb and nap-ped by the spring; or it can be operated by the pis-

When a time exposure is to be made, a small lever which is attached to the detent D is used in connection with the pneumatic piston. By moving this lever down, a small stop will raise near its middle. Now by pressing on the bulb which operates the piston, and which is attached to it through an aperture in the side of the box, the lever moves up and remains in this position until the pressure is taken off; this movement opens the shutter, which closes immediately when the pressure is removed. The speed of the shutter is reg-ulated by the lever E; the nearer the lens it is placed the greater the speed.

This camera is made in three sizes, $3\frac{1}{4}x4\frac{1}{4}$; 4x5 and $6\frac{1}{2}x4\frac{1}{4}$. It is a very complete instrument; its mechanism is exceedingly simple. It will recommend itself to all practical persons as an instrument of the highest grade.

The holders which accompany the outfit are exceedingly light, and are so constructed that the entire plate is exposed, there being no cut off on the edges.

PHOTOGRAPHING WITH A FLASH LIGHT.

It is a well known fact that almost all the important discoveries in photographic science have been made by amateurs, as experiments in any new direction are more readily taken up by them, than by the professional artist, who has to consider the quality of his work. Formerly it was considered impossible to take a picture in the evening except with an arrangement of lights which occasioned an immense amount of trouble and a great expense. The experiments at the Lynn Camera Club, on Tuesday evening, demonstrated that family groups, interiors, etc., can now be taken in the evening with no more trouble than in the day time and with no more expense. About thirty were present, amongst whom were a number of ladies who have become interested in photography.

photography.

There were six "cranks" to operate the cameras, the rest of the company forming a very interesting group of well known Lynn faces. When "all ready" was announced, the gas was turned down and the "flash" (consisting of a mixture of gun cotton and magnesium powder) was touched off by a spark from a match. The result was an instantaneous flash (without poise) of the was an instantaneous flash (without noise) of the most brilliant light. Its intensity may be judged by the fact that, although calculated to last but one-tenth part of a second, it was sufficient to take a good photograph of the large group present. After the flash all adjourned to the large dark room, where the several plates were developed, and the processes explained to those amateurs not sufficiently advanced to understand the same. The experiment was a great success.

AMATEUR PHOTOGRAPHY.

No. VIII.

To intensify a negative made on a gelatine dry plate: Make a saturated solution of bichloride of mercury in cold water. Having washed the negative well, place it in an alum bath for a short time to harden it. After the negative has been taken from the alum bath, it should be washed again, after which pour on the mercury solution; unless the negative is very thin remove it from this bath in a short time and wash it well; then immerse it in a bath of one ounce of sulphite of soda and ten ounces of water. Leave the negative in this solution until the black color penetrates through the film, then wash well and dry the plate.

If the mercury solution makes the negative too dense, dilute it with a little cold water.

The following formulæ have been selected as being among the best for toning.

1.—Dissolve in seven and one half ounces of

water fifteen grains of pure chloride of gold. In another bottle make a saturated solution of bicarbonate of soda.

Lay the print in one half ounce of the soda solution and five ounces of water; let it remain in this for ten minutes, after which remove it and wash it. Now mix one ounce of the gold solution with one ounce of the soda solution to which add five ounces of water and place the print in it. This imparts a rich warm tone to the picture, but will not keep

2.-The following must be used soon after preparation. It is splendid for toning and gives a

beautiful deep purple tint.

To eight ounces of water add one grain of pure chloride of gold and twenty grains of phosphate

3.—The following formula is preferred by many as it will keep for a long time and gives good results. Dissolve in five ounces of water fifteen grains of pure chloride of gold, neutralize this with lime water and add water up to fourteen; to this add two and one-half drachms of chlorate of calcium. For toning take one ounce of the mix-ture and add ten ounces of water.

-A solution for toning and fixing in the same bath is sometimes used with good results; to those desiring to do this the following formula will be

found good.

Fifteen grains phosphate of soda to which add twenty-five grains sulphocyanide of ammonium and half an ounce of hyposulphite of soda and add two ounces of water. Dissolve separately one grain of pure chloride of gold and add it to the above mixture. This formula is not generally used as most amateurs prefer to tone and fix their prints in separate solutions believing that the results obtained are more satisfactory. However this may be, there is certainly less trouble and the expense is not as great when this is done.

TRANSPARENCIES ON GLASS.

One of the pleasant features connected with photography is that of making transparencies or positive pictures on glass. This is done in the dark room with the aid of a ruby lantern, and on

plates prepared for this purpose.

Place a negative in the printing frame film side up; on this lay a gelatine plate and fasten the back of the frame; when this is accomplished cover it up with a cloth and take it into a room where a light is burning; uncover the frame and hold it with the negative side turned towards the light, and only a short distance from it. Expose it to this light for fifteen or twenty seconds; then re-cover it and return it to the dark room. The plates are now removed from the frame and the negative laid aside.

The plate which has been exposed must now be developed and fixed. The following will be found

to be a good developer.

Into thirty-two ounces of water dissolve eight ounces of oxalate of potash; when this has become thoroughly dissolved add enough of a strong solution of citric acid to change litmus paper; then add two hundred grains more of the acid; this

Now make a second solution of four ounces of protosulphate of iron and sixteen ounces of water; when dissolved add about fifteen drops of sulphu-

To make black tones, take of the first solution four parts and add one part of the iron solution. For brown tones, add to the above three or four parts of water. The development should be carparts of water. The development should be carried on until the image is very distinct; when this is reached, wash the plate and fix in hyposulphite of soda, after which wash it again and lay in an alum solution to harden. Now the plate must be thoroughly washed, and rapidly dried, after which it can be placed in a frame.

CAMERAS.

In selecting a camera there are several points to be considered, and these being briefly stated we will proceed to examine each of the cameras fulfilling these vital essentials, and see what are the particular merits and what the faults of each, for absolute perfection is not reached by any one, and could only be gained by the combination of patents held by rival companies.

The swing-back is of the utmost importance, especially in the vertical position. But it is evident that in any camera which requires to be bodily shifted on the tripod, bringing the bed upon edge, this valuable feature becomes useless; therefore we shall only discuss those instruments which leave the bed and its attendant niechanism in its fixed horizontal position.

Another desideratum is that the ground glass shall, while readily in place for focusing, be

of the way and yet not an obstruction or bother when the holder is in place. A third requirement is ease and simplicity of manipulation, and by means that will not easily, even in the hands of the inexpert, become disarranged; and a fourth is compactness and port-

It is in one way unfortunate, that, with the one partial exception to be hereafter noted, none of the cheap cameras at all fulfill the requirements, and thus the purchaser of a cheap outfit must al-ways find it lacking in some things, although that need not deter the novice, for it is only under some circumstances that the above requirements are essential, and 75 per cent. of all pictures can be taken nearly or quite as well with cameras lacking them. Yet to those who can afford it, by even some economy in other directions, we would advise the best instruments, regardless, or as much so as may be, of their first cost, and we would here say as an offset that while a cheap camera at second hand is almost valueless on a cash basis, there is always a market, and at good figures, for a second-hand camera of high grade.

To wheelmen it is hardly necessary to say that a wheel can be purchased for \$60 to \$75, while a Mail or Rapid costs twice that, both equally ridable and perhaps equally durable. Yet no one able and perhaps equally durable. Yet no one who could scrape together the cash would take the former in preference. Cameras may be treated in much the same way: these things are the ball-

much the same way: these things are the ball-bearings, but they are worth their extra cost. Perhaps it is as well to begin with Anthony's "Novel," since it is one of the first attempts at solution of this problem and also the lowest in price, \$20. It differs in three particulars from those to be hereafter described; being back-focus instead of front (that is the rear portion carrying the ground glass; the holder moves on the bed instead of the lens board), in having an oblong lens-board wide enough for two lenses and hence lens-board wide enough for two lenses and hence capable of stereoscopic work, and in having no rack and pinion movement (though this is supplied on the "Fairy Novel," a lighter and more elaborately finished camera of the same style and principle). The change to vertical picture is effected by slipping to one side—to release the keyhole shaped slots—and turning the whole rear portion, bellows and all, and resetting on similar slots in the upright place. This camera is a little more bulky and perhaps a trifle heavier than its competitors, and has the very objectionable swinging ground and has the very objectionable swinging ground glass, which is liable to be broken or at least to jar the camera by its movement in a wind; otherwise it is a satisfactory instrument.

Onite in distinction to this is the Blair "Reversible Camera" in two forms, the "improved" and "perfected"; the former being, however, the more compact and possibly the more advisable. This is undoubtedly the lightest camera made, and more compact than any except the English pattern. more compact than any except the English pattern. It is front-focus, with a fairly long bed hinged on, while an additional piece can be attached by thumb-screws for extra long focus lenses or for copying, yet be detached when there is no use for it. The method of applying the holder is one of the best, and is unique, the ground glass being held on swings at the four corners and receding enough to allow the holder to be inserted and held in position by strong springs which hold the glass firmly allow the holder to be inserted and held in position by strong springs which hold the glass firmly against it. This method allows the holder to remain in during transportation if desired. The change to vertical is effected by simply pressing one spring and shifting the extreme rear part only, and it can be done after the plate holder is in. A valuable feature of this camera—or more properly an adjunct, is the extension, which is a conical wooden or wood and bellows portion flaring out. wooden or wood and bellows portion, flaring outward, and having a complete reversible back with ground glass of a size larger than that of the

camera proper. The regular back is removed and this attached, thus allowing a IIXI4 plate to be taken with an 8XIO camera, and other sizes in proportion. Before leaving this camera it also would be well to mention the featherweight plate holder used with it, which, besides being the lightest and thinnest in use, is more easily filled than almost Intermediate between this-which is listed at \$35—and the Novel, both in cost and efficiency, are the cameras made by the Rochester Optical Co., the Ideal and the Excelsion at \$28 and \$32 respectively. They are in form very similar to the Blair, but have a swinging ground class secured by buttons and a slow screw method. glass secured by buttons and a slow screw method of locking the bed, both poor features.

For the Eastman camera three claims are made:
First, a double sliding front allowing great range
with a peculiar kind of pivot-hung swingback, thus
bringing the tallest towers in proper focus.
Second, detachability and interchangeability of

the beds and backs; answering the same purpose as the Blair extension.

Third, a novel style of affixing the ground glass, which by an ingenious hinge either allows it to recede and pass the ordinary plate holder behind it, or it may be opened off and a roll holder attached, the roll holder being the invention of Eastman Walker, and this camera consequently especially designed for its use. It is the product of the latest thought and is an eminently satisfactory instrument.

But the acme of all cameras-unless compactness —the one absolutely indispensable desideratum, is the "Revolving back" made by the Scovill Co., for no other one possesses the ease and simplicity and satisfactoriness of adjustment and correction, that

It is front focus, with long and tapering bed, instantly locked by a side latch. Focusing is by rack and pinion, which, by an ingenious device, stays wherever the hand leaves it without any lock and cannot be jarred forward or back. But the great feature lies in the plate holder carriage, which is attached to a movable brass circle and can with one quick turn of the hand before or after the holder is in, and even with the slide drawn, be turned completely around, thus

reversing in any direction.

It locks automatically at all four positions, but will stay wherever left, so that if it were desired to take a picture diagonally it could be done. This is extremely valuable in correcting the picture for vertical lines, as any inequality in the position of the camera is fully compensated for instantly and perfectly. Another very valuable feature is the perfectly. Another very valuable feature is the adaptability of this carriage to any plate holder, so that the amateur who has but a plate holder or two is limited in his plate carrying capacity only by the number of his acquaintances having cameras of any make who will loan him their holders for a day. Two other cameras, have this feature also, "The St. Louis and "Manifold," but they lack the splendid revolving

For compactness, where that is main requisite, the English Pattern and the Lucidograph of the Blair Co., stand pre-eminent. In the latter, which is extremely ingenious, the bed lensboard &c., all fold back into the camera proper, a door is swung shut and caught, and the instrument becomes its own carrying case. It is provided with rack and pinion, swing front (instead of back) and has the Blair ground glass attachment previously referred to. As it is furnished with a lens provided with a shutter of compact form, it is the best perhaps for one wishing to do principally instantaneous work where no tripod is required. Its chief drawback is the necessity of inverting the whole camera on the tripod for changing the picture from vertical to horizontal. Its price of \$27 includes lens and tripod.

The English cameras made by the Scovill and the English Pattern and the Lucidograph of

The English cameras made by the Scovill and Gregg Companies will be hereafter referred to, as they combine some points which are new, at least

on this side of the water.

The "Expert," made by the Blair Co., is the only cheap camera—\$15, which allows the change to vertical without moving the bed, but as there is no swing back it is not so valuable except to save trouble. In a future paper we will suggest some of the combinations of accessories which have been dictated by experience as going toward. have been dictated by experience as going toward a perfection yet unattained by any one maker.

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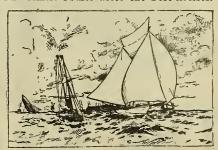
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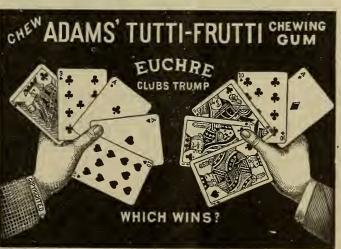
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