

THE CAPTAIN

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FOR BOYS & "OLD BOYS".



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ON CLIMBING HILLS.

Illustrated with Specimens of some reliable Cycle Chains.

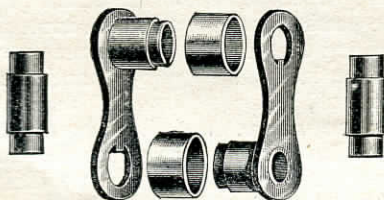
THERE was once a professor of theology who, when he had students who could not preach, sent them out preaching till they could. If I were a teacher of cycling, and had pupils who could not ride up hills, I should follow precisely upon the very practical principles of that professor. In a word — although it sounds like a paradox—the art of hill climbing is best learnt by climbing hills. At the same time there is, of course, a right way and a wrong way to set about it, and the very fact that most novices have an inordinate dread of encountering a hill shows that their way of tackling it is a way that is usually far from being the best. The underlying secret of all good riding is summed up in the expression “ankle action,” and it is because so few have mastered the happy knack of “ankling” properly that hills present the difficulties which a large number of riders experience in dealing with them. Speaking generally, cycling is an exceedingly easy form of exercise. You can see that by considering how the very weakest fellows take to it and enjoy it. Roughly speaking, there is only about two-sevenths the effort required to cycle a given distance, as compared with the walking effort over the same distance. Therefore you will see at once that cycling is properly

described as an easy pastime. If, for example, by bad ankling as much as three-sevenths of the walking effort is put forth, that is still so little as compared with walking that there is no fatigue to call the attention of the rider to the fact that his mode of action is wasteful and wrong. I speak, as regards the foregoing, of ordinary pottering along the level. There is very little friction, very little air resistance in ordinary circumstances, to tell against the rider, and his machine will respond to a very gentle effort indeed. But let any

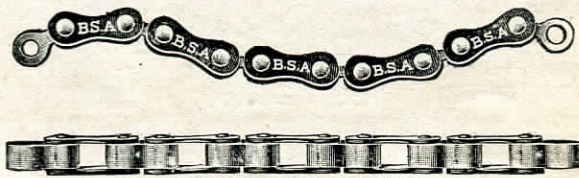
difficulty arise, such as a strong head-wind or a steep hill, and the required effort is at once considerably multiplied. The unskilled rider under such circumstances not only multiplies his effective effort but his waste effort as well, and the latter then becomes large enough to seriously inconvenience him. It is for this reason that hills find out the bad pedaller, and, as the saying is, “give him gruel.”

Let me briefly describe in what proper pedalling consists, although I frankly premise that it is more easily learnt from imitation of a rider who has completely mastered

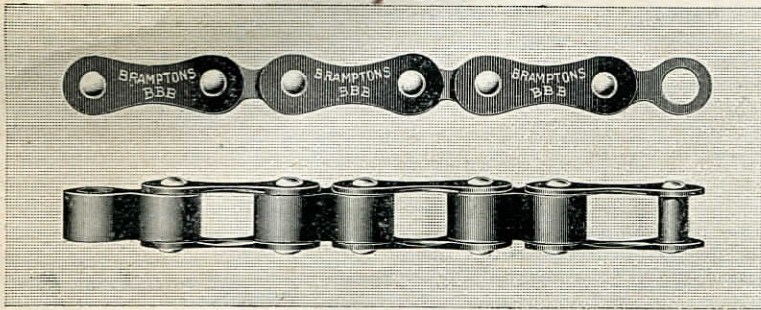
the art than it can possibly be from perusal of any words of mine, however clearly written. First of all, let no one ride in boots, for they make proper ankling impossible. The whole theory of ankle action



LINK OF ABINGDON CHAIN DISSECTED.



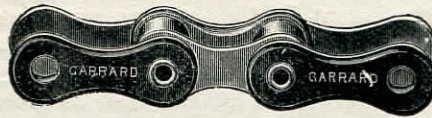
BIRMINGHAM SMALL ARMS CO.



BRAMPTON'S B.B.B.

rests upon the division of labour between all the muscles available for the task in hand, instead of uselessly tiring one set of muscles while other sets are left idle. The principle is no new one, but was known long before cycling was thought of. Many of my readers, I know, are girls, although possibly only a few of them will remember the time when the sewing machine was a novelty. In those days it was generally worked by hand, and there were people who gave instruction as to how best to work it. The gist of such instruction always was to "work from the wrist"—that is to say, do as much with the wrist as was reasonably possible, instead of working from the elbow or shoulder solely, as machinists were inclined to do, owing to the fact that the muscles of the upper arm were the strongest available. The wrist action, difficult as it might seem at first, was the least fatiguing in the end, because it distributed the work among all the available muscles, and so postponed the time of fatigue as long as possible.

Now precisely the same line of reasoning applies to the theory of anking. The rider who simply "plugs" along, working solely from the hips, is wasting strength and inviting fatigue. He is trying to do all the work with the powerful muscle that passes down the front of the



LINKS OF THE GARRARD.

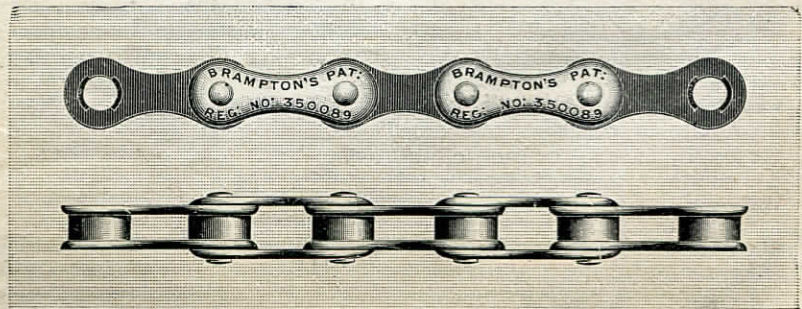
out of himself at the price of the minimum of exhaustion. To put the action into words, as nearly as one may be able to, let us imagine the foot to be at the top of the stroke. At this point the heel should be well down, so that the sole of the foot can exercise a good forward thrust. This thrust over, the heel remains for a moment almost stationary, while the rest of the foot is smartly extended downwards as far as it will go. This gives a powerful down stroke and an amount of efficacy, by no means inconsiderable, available for what is admirably nicknamed "clawing back."

Observe that this clawing back is going on at the same time as the other foot is executing the push forward at the top of the stroke as above described. This

completely abolishes what the engineers call the dead points. If a man is pedalling clumsily with a simple up and down thrust, he might just as well be a wooden-legged rider. His thrust is very inefficient both at the beginning and at the



THE ALFRED APPELEY LINKS.



ANOTHER BRAMPTON CHAIN.

end of each stroke, and whenever a pedal is in the position nearest to him he has virtually no foot control at all. The good rider, anking with the motions I have described, can work each foot not only through half the revolution of the pedal, but through at least two-thirds of it. The pick up, after the down stroke is complete, it is important to perform properly. As the toe rises with the ascending pedal the heel should be dropped, so as to bring the whole foot again into the position first described for the push forward at the top of the stroke. The shoe should rest very lightly on the ascending pedal, so that there shall be no possibility of one foot sensibly retarding the work of the other.

The movements mentioned are not, of course, distinct and separate movements, but each one melts into the one succeeding it in the same smooth way in which the six steps of the waltz glide on. The whole is a continuous light motion, feeding the pedal with force as far round as the foot can feel. In the days when the old tall machine grew very tall indeed, and when men, merely for the sake of fashion, rode beyond their reach, this mode of anking was the only one possible to effectively drive the machine. Many learnt it at that time because they were compelled to. Now there is not the same imperative necessity, but the correct method is none the less desirable, and anyone who has never practised it, and who will now give it his attention, will find that it makes all the difference in the world—especially in hill climbing. Indeed, when this art of correct pedalling has once been mastered, hills that seemed unridable before will be conquered without difficulty.

But a word of warning may not be out of place. There are plenty of long and laborious ascents which, however well ridden, will try the powers of the rider more than they should be tried. An important part of the art of learning hill climbing is that of knowing how long to persevere, and exactly when to stop. If, in the course of a tedious ascent, any symptoms of distress arise, it is



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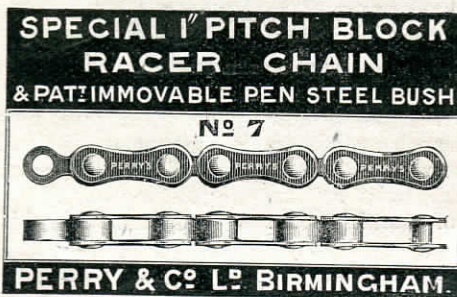
proper to desist at once. *It is the greatest of folly to fag on when the breath is being fast caught or when the heart is thumping against the ribs. The first approach of either symptom should be answered by a leisurely dismount and a quiet push up for the remainder of the distance.*

Anyone who makes a practice of tackling his hills upon these rational lines will find that on each successive attempt upon any given hill he will succeed in getting to a higher point, until the day arrives when the worst acclivity in his district will probably be surmountable without unreasonable effort. He will soon come to know all the hills in his own neighbourhood,

and the best way of attacking each, for, of course, a short, sharp one ought to be "rushed," while in the case of a lengthy climb, the better method is to keep plodding at it. With practice, strange hills, such as one is apt to encounter whilst touring, may often be weighed up at a glance; but if they are crooked, and cannot be well com-

prehended from the approach to the base, the old hill climber still has sound methods of tactics and strategy which very often stand him in good stead. He will make no attempt to rush at a hill of this class, but will approach it at a good round gait, so as to utilise his momentum at the start. After that he will "feed" the machine with perfectly even pedalling and dead straight steering, so as not to waste effort in side strain, and will endeavour to maintain such a pace as will never occasion him an anxious moment in waiting for a descending pedal. He will at the same time manage to keep something in hand to enable him to deal with an unexpectedly steep bit, to be met with, say, just round a bend; and so, taking care to ride well within his powers, he will arrive fresh and fit at the top.

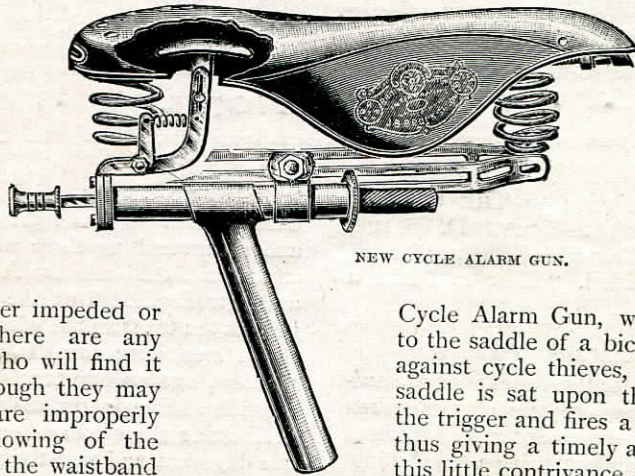
One essential towards achieving this is to know how to breathe properly, which, it may surprise you to be told, very few people truly understand. Anyone who has been taught singing scientifically knows what is



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meant by abdominal breathing. This kind of breathing is natural in infants and in unclothed man, and its value to the cyclist could hardly be exaggerated. The habit of so breathing is to some extent dependent upon dress. A sister of mine, with whom I have been on many jaunts both in England and abroad, once said to me "A girl's a goose who cycles in corsets." I can't help agreeing with that, if only on the ground that the girl who does so will find abdominal breathing either impeded or impossible. But there are any amount of fellows who will find it so too, because, although they may not know it, they are improperly dressed for the following of the pastime we love. If the waistband of the knickers is in the least degree tight proper breathing is out of the question.

How happy, then, is he or she, the happy tourist, for whom no chance-encountered hill has any terrors! A county boundary may consist of a mountain range, but the rider approaches it with complacency. The well-tried tactics will surmount all difficulties, or, if not, what shall deter us from a mile or so of walking amidst fine mountain scenery? As long as we can keep the saddle we will pedal gracefully, keeping the upper strand of the chain quite taut and constantly doing its work. I give some pictures of chains, and the fact of their appearing here is equivalent to a hall mark on every link, for none but the best chains on the market are illustrated. We pedal up and up, or, if we cannot reasonably do so, we walk the latter portion, remembering, as we go, that there is not only the wonder of the hill scenery to reward us, but that we also have a tangible asset in the higher level acquired, and that sooner or later there will be the glorious downrush that it implies. I may speak of the art of descending hills in a subsequent article. The way in which it is best to drop down depends largely upon the fact as to whether you "free wheel" or still ride with "captive" pedals. But in any case it is well to have a finger on the bell and two ready to hand on the brake lever in order to be sure of an extra moment's grace in case of a sudden emergency arising. When all is said and done the fact remains, as any old rider will tell you, that the exploration of hilly country is



NEW CYCLE ALARM GUN.

one of the keenest delights of touring; and I can wish my readers no kindlier wish than that they may, one and all, learn so to master hill work that the appearance on the map of marks that indicate elevated country may prove as much an attraction to them as a deterrent.

We have received from Mr. F. H. Clarke, gun manufacturer, of Birmingham, particulars of the latest novelty—a useful one too—in the cycling world, viz., the

Cycle Alarm Gun, which, when attached to the saddle of a bicycle, acts as a guard against cycle thieves, for the moment the saddle is sat upon the pressure releases the trigger and fires a 380 blank cartridge, thus giving a timely alarm. The price of this little contrivance is 7s. 6d., post free, and it is made to fit any saddle.

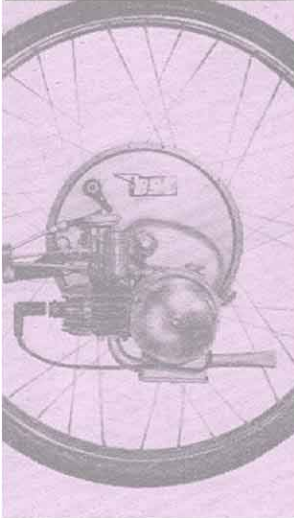
ANSWERS TO CORRESPONDENTS.

May (KENSINGTON).—Yes, I am always glad to hear from girls. There is no reason in the world why your little brother should not inherit your machine as soon as you grow out of it. The only thing to be careful about is to see that he does not have it before he is sufficiently grown. He must on no account be "over-reached," or the exercise will do him harm instead of good. **W. R. (TOW LAW).**—Replies cannot be sent through the post. Yes, it is a serviceable article. The advantages of a candle lamp are cleanliness and the ease with which a reserve supply of illuminant can be carried. You can also see with great ease the amount of candle you have left when starting out. Personally, with all its disadvantages, I still prefer the old-fashioned oil, but it is necessary to take the trouble I have explained in a former article in order to get the best results. "Messrs. Joseph Lucas & Co., Birmingham," is a quite sufficient address. **L. L. (CHRISTCHURCH).**—The Turner Bi-carrier is an excellent thing. For a girl's machine there is nothing better, owing to the convenient position. The same firm's front carrier is also good. It has recently been adopted by the War Office for fitting to the new army cycles. **Harry N. (HENDON).**—There is no reason why you shouldn't have Warwicks on your Rover. You will be well-shod, as well as well-mounted. It depends, of course, upon the roads, but for average riding about and touring I should expect them to last at least ten thousand miles. The pattern of Middlemore & Lamplugh saddle you have chosen will serve admirably. **W. H. S. (SOUTHAMPTON).**—Re the New Forest, see articles in the *Co-operative News*, for April 27th, May 4th, and May 11th.

Several answers held over.

H. P.

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