

round without lowering the toe below the heel, while your friend pushes the machine forward, the machine is *too big* for you. The temptation always is to ride too big a wheel, but the beginner should always ride a machine *well within* his reach both for safety and comfort. After you have learned to ride well, you will find you can reach a larger wheel with ease, and you can also use shorter cranks without too much loss of power; but till you have learned to use your muscles to the best advantage, don't shorten up the short end of your lever (the crank) too much. Now, having picked out a good stout, honest machine, with handles of medium length, and *full inch* tire to front wheel, take it home and look it all over, take it all apart and clean and oil it, and put it together again yourself. You'll be sure to learn something to your advantage, something that will come handy some day on the road.

Now you want to learn to ride. Well, if you can get some friend to hold up the machine by backbone and handle while you mount, and then push you around while your feet rest lightly on the pedals, and follow, not control, their motions, and your hands grasp the handles lightly but firmly, why, so much the better; but if you must depend on yourself entirely, get up early and start for some quiet bit of smooth country road with a slight down grade. Push your bicycle in front of you by standing on its left, resting your right hand on the backbone just back of the saddle, and your left hand on the left handle. After a bit you will find that you can guide the wheel very well with the right hand on the backbone only, and this is valuable practice. Having arrived at the summit of your little hill, stand directly behind the machine with the little wheel between your feet, and your hands stretched forward and grasping the handles. Now put your left foot on the step, give two or three hops forward with the right and rise to a standing position on the step. Make no attempt as yet to reach the saddle, but just guide your wheel down hill by inclining your body towards the side towards which you wish to turn, and by pulling gently on the handle towards which the machine seems inclined to fall. When you fall or the machine stops, turn back and push your bicycle up to your starting-place, and repeat this performance till you have gained confidence, can steer a pretty straight line, can step down (on the right foot first) before the machine has lost all headway, and, giving a hop or two, remount the step without much wobbling. You are then ready to learn to mount. Start as before, and after riding a few yards on the step, raise your right leg slowly and carefully, and hook it over the saddle. Do this several times, till you can do it without causing the machine to wobble. Now comes the moment.

Take a fresh start, stand on the step a few yards, hook right leg over saddle, and then, rising on your left toe, slide yourself into the saddle. Don't spring into it, or your chances of taking a header are A No. 1. Once in the saddle, don't be in too much of a hurry to get your feet on the pedals, or you may put pressure on the rising pedal, which, by checking the headway of the bicycle, but not that of the rider of it, will cause them to part company, as the momentum of the rider will surely carry him

forward over the head of his machine. When you are fairly in the saddle, let your feet seek the pedals, but put no pressure on them. Let the feet simply follow them around, and let the machine run on till it stops of its own accord; when it is nearly stopped, lean a little to the left side, keeping the handles straight, and the machine will gently tip that way and let you down on the left foot, which must be taken from the pedal and stretched out for that purpose. Repeat this several times before you try to propel your bicycle by pressing on the pedals as they are going down. Do this gently, firmly and steadily, and without jerk, and you will be surprised to find yourself coming along at a good pace.

Now you want to learn to dismount in some more dignified way than that of letting the speed slack down and tipping over sideways with one leg sticking out to break your fall. Beginners are usually advised to learn first to dismount by the step, a process which is, of course, just the reverse of mounting, but I have usually found that when the beginner removes his left foot from the pedal and thrusts it backward to search for the step, which he cannot see, it is very apt to come in contact with the spokes of the front wheel, and even if it fails to catch in them and throw him, so frightens and disturbs him that he loses control of his machine and gets a fall. My own preference is for the pedal dismount, which may be done on either side, and brings the rider into excellent position for controlling his machine after he reaches the ground. The mechanism of this dismount is not very easy to explain, but the movement itself is simple enough, and consists merely in stepping to the ground and using one of the pedals which is on the downward path as a step. I usually begin to throw my weight upon one of the pedals just as it begins to go down, and step off just as it is at the lowest point. Of course a firm hold must be kept on the handles both during and after the dismount, or the machine may get a tumble and some damage.

There are several other mounts and dismounts which should be gradually mastered, as should also the art of riding without hands on the handle-bar and with legs over the handle-bar, as in coasting. These and various fancy tricks have a certain practical value, not only in familiarizing the rider with his steed, but in case of accident may provide means to escape not open to one who is confined to a single method of mounting or riding. However, these things are not for the beginner (unless in exceptional cases), and I need spend no more time over them.

Now, suppose you have learned to mount and dismount, and to guide your bicycle on a fairly smooth and level road. You want now "to take a ride." Here, as elsewhere, the motto is, "Go slow." Don't try to do too much at first. Practice every day, increasing the length of your journeys daily, now and then trying some hills, little ones at first and then steeper, and when you can navigate fairly well, get over a rather rough bit of road and up a rather steep hill, you are ready to enter upon bicycling proper. Before you start on your first road-ride, see that both your bicycle and yourself are in good order.

Of course you will wear flannel or knit merino underwear next the skin, knee breeches, long stockings, and well-made shoes. Rubber soles are not necessary, and have some serious inconveniences. A Yale shirt and a light straw hat, with at least two clean white linen handkerchiefs (one to tie around the neck if the sun shines very fiercely), complete an ideal outfit for the rider.

Now for the bicycle. Before you start, go all over it and see that every nut which should be tight is tight, that the bearings are well oiled, and the excess of oil that flows over wiped off—that your saddle-bag contains an oil-can well filled with good sewing-machine oil, a small monkey-wrench, a screw-driver, a piece of soft rag and some stout twine, and (if the machine requires them) the special spanners, etc., belonging to it. See that the head is tight enough to prevent shake and loose enough to turn freely, that the pedals run freely with as little shake as possible, and that the saddle is fastened firmly just where you want it. (This will be pretty well back for the beginner, and farther forward for the more expert rider.)

If you are starting early in the morning, take a bite before you start. Never start out with an empty stomach, nor too soon after a full meal. For this early breakfast or lunch a glass of milk, some bread and butter, and some cold meat will answer well—beer or other stimulants had better be left till after the day's work is over, and can be omitted altogether, not only without loss, but with positive gain, at least by most riders. Start early; ride during the cool of the morning. Rest, say from ten o'clock in the morning till three or four in the afternoon. Don't ride too fast; six or eight miles per hour is fast enough for a beginner. Take it easy; enjoy the scenery as you go. Eat plenty of good plain food, avoiding pork and pastry. If you perspire freely, drink freely of water, but let tea alone. This is contrary to the English instructions, but I am satisfied that for this climate it is correct.

In England, the greater amount of moisture in the air prevents the rapid evaporation of sweat from the surface of the skin and the consequent drain upon the fluids of the body, which in this climate must be replaced by drinking freely, or distress must follow. Why tea is recommended I am at a loss to know. I am satisfied that it is far more detrimental than coffee, and quite as bad for the health, if not for the morals, as alcoholic drinks.

When through your day's ride, a bath in tepid—not cold—water and a complete change of clothing is very comfortable, and after supper a mild cigar may be indulged in by the smoker with no fears of any evil consequences. Then early to bed, and rise next day with a sense of health and life entirely new and very delightful.

In conclusion, let me offer a few maxims to the beginner:

*First.*—Always look your machine over before starting, and at the close of a ride. The tightening of a single nut may save you a severe fall or some miles of walking.

*Second.*—See that the contents of your tool-bag are all right, and that there is plenty of oil in your oil-can. Don't trust this to your memory.