THOUGHT-READING AS AN AMUSEMENT.

BY F. CORDER.



E statement that this extraordinary power is attainable to some degree by almost every individual will probably be received with surprise and incredulity, yet such is the fact. Incomprehensible as this mysterious phenomenon is, it is so easily produced that it is singular that it has only so recently attracted notice. The marvels of mesmerism and clairvoyance (which

seem to be in some sort related to this) are best left in the hands of scientific and duly qualified men, being dangerous things for the ignorant to meddle with; but thought-reading is a simple matter which can hurt no one, but may afford to many some hours of interesting and novel recreation. It is as a novel amusement for social evenings that we here intend to describe some of its simpler phenomena.

First, to enlighten such of our readers as have never seen any thought-reading, or heard it described, we will give an example. Two persons are equally concerned in the result; one of these fixes his mind wholly and absorbingly upon some object, say, which he either sees actually, or in his mind's eye. The success of the experiment depends much upon the Thinker's power—a power sometimes to be acquired, and enormously to be developed by practice—of concentrating his mind upon the one idea.

The other person—the Reader—who has his eyes usually bandaged, so that no external objects may distract his attention, grasps the Thinker's hands (the two sitting face to face, and as closely as possible), and holds his own mind as blank as possible. If he have any gift of receptivity he will soon, sometimes instantly, see in his mind's eye the form of the object, more or less vaguely, and then perhaps all its details. The appearance of an object, written words, figures, colours, may all be discerned with marvellous accuracy after a little practice, the chief condition being that two people who by experiment find that they suit one another well, should develop their powers by practice, and not try much with others.

But now to clear the ground by some very simple preliminary experiments, which conclusively prove that one mind may affect another by the simple exercise of the will. Let one person, as subject, stand passively, with closed eyes and relaxed ancle-muscles, ready to fall in any direction. Let two others stand, one before and the other behind the subject, with out-

stretched arms, and rest the palms of their hands as lightly as possible against his sides, neither supporting nor pressing him. Now, if these two firmly and simultaneously will the subject to fall in a certain direction when he lets himself go, ten to one he will fall as they wish. The direction is best determined by a fourth person, who should stand in such a position as to be invisible to the subject, even if his eyes were open, and should indicate "forwards," "backwards," "right," or "left" by a silent gesture. Of course the sceptic will say that the subject is unconsciously pressed over on that side. Well, then let the sceptic try.

The second experiment is of the same nature, but brings us nearer to thought-reading proper. The subject is blindfolded and taken out of the room. The rest of the company then decide upon some act for him to perform-to touch or move a certain article of furniture, or the like. Two steady-minded persons then fetch him in, and place each a hand on his shoulder, taking care neither to impede nor direct his movements. They keep their minds firmly fixed on wishing him to perform the appointed act. success of the experiment will then be more or less complete according as those concerned are fitted for the business of Reading or Thinking. These two experiments form a fund of amusement for a family party which is not too juvenile or noisy; for we cannot too strongly impress upon would-be experimentalists that all matters of this kind require to be undertaken in a sober and unexcited frame of mind, levity and laughter being fatal to success.

In early experiments in actual thought-reading, the Thinker, who will probably find unexpected difficulty in concentrating his mind on one thing, had better think of actual and simple objects, placing them on a small table close to him, so that he sees nothing else. The Reader, too, will find a difficulty in allowing his mind to become blank at will, and may scarcely be able to refrain from guessing, or wondering, what the object may be. The slightest exercise of the brain in this way is probably fatal to success. A sheet of bright-coloured paper is said to be the easiest thing to guess, and a row of figures the most difficult, though our own experience does not quite corroborate this. When a good Reader and Thinker have been found, many astounding experiments may be successfully undertaken, a few of which we will here enumerate.

1. Completely unknown objects may be described, written words and even sentences discerned, the position of a hidden article indicated, or any desired act performed by the experienced Reader.

2. Some person may pinch or otherwise hurt the Thinker in any part, and the Reader will experience a feeling of pain in a corresponding place.

3. Any flavour, however delicate or peculiar, tasted by the Thinker can be detected by the Reader.

4. The preceding experiments, as well as many others, are rendered far more marvellous when accomplished without contact. In fact, after a little practice a good Reader can succeed equally well when the Thinker is at a distance of some yards.

We must here particularly impress upon our readers one thing. Thought-reading is a misnomer. Mental picture-reading is the real name for this power. When, for instance, the Thinker has fixed upon a word or a number he must not keep the mere idea of it in his head, or repeat it perpetually to himself, he must see it in his mind's eye, as if written up in chalk letters, for it is only by the faculty of inner sight—if there is

such a thing—that the Reader reads. Thought-reading is very fatiguing to both parties concerned, but especially to the Reader, who should beware of too long-continued exercise of his powers. We have spoken of both in the masculine gender for convenience, but according to our own experience, men make the best Thinkers and women the best Readers. This may not be an universal rule however.

There remains but one thing more to say. Every one who sees these phenomena will ask—does ask—"What explanation do you—does science—offer for these marvels?" The answer is very simple, and may be given in one word—None.

THE GATHERER.

A Railway Velocipede.

The accompanying woodcut illustrates a velocipede designed to transport the *employés* of a railway com-



pany along the lines. It is now used on most of the railways round Lake Michigan. The machine propelled by the rider working the hand-lever, as shown; but the feet can also be called into play in

order to insure great speed. As the friction on the rails is very slight, the driver can readily attain a speed of twelve miles an hour; and if a train should be seen approaching, he can dismount very quickly and cant it off the rails.

Cable Tramways.

In Chicago tramcars are now drawn by cables instead of horses, and with an advantage in cheapness and speed in going uphill. The cable which draws the carriages passes in a tube under the roadway to drums at both ends of the course, driven by stationary engines, and the winding and unwinding of the cable draws the carriage along. It is intended to introduce the plan at Highgate Hill, London, and if successful there we may expect to see it adopted at other places in this country. Experiments of a similar kind have recently been made on the canal from Liège to Antwerp, in which the boats were hauled by an endless cable of Bessemer steel, supported on pulleys along the banks, and kept in continuous motion by stationary engines. The length of the cable was five miles, and the whole canal can be divided into five-mile lengths worked on this plan. The engines act on the cable through a clip-pulley, and the boats are connected to it by cheek-nippers which slip past the supporting pulleys without releasing their hold of the cable.

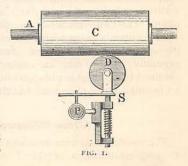
Steel from the Ore.

By the new process of Mr. Bull, iron and steel can be produced in the blast furnace direct from the ore. No solid carbon is employed to reduce the ore, and nothing but iron ore and flux is put into the blast furnace. The fuel is gas delivered in a hot state, and hot air is blown in to burn about ten per cent. of the gas and keep the slag fluid. The gases rise through the ore and flux in the form of carbonic oxide, hydrogen, and nitrogen, while the ore is being fused, reduced, and carbonised into steel. By the "Bull process," the mildest sorts of ingot iron and steel, suitable for rails, tools, and cutlery, can be produced from inferior ores direct and tapped from the blast furnace, like the ordinary pig-iron in the old process.

A New Power Meter.

Mr. C. V. Boys has invented a very ingenious device for automatically recording the work done on

the piston of an engine in any given time. In the ordinary meters of this kind the work is recorded on an "indicator diagram," whose area measures the amount of work done, but to obtain these it is necessary to multiply the mo-



tion of the piston, and this introduces error. In the new apparatus there is no such multiplication of motion. It consists of a piston controlled by a spring,