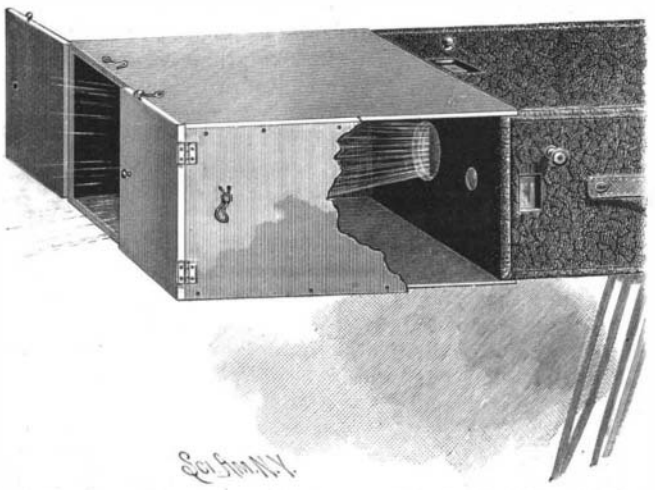
ILLUSIVE PHOTOGRAPHY.

We illustrate some most amusing examples of illusive photography, which are reproduced from some photographs sent us by Mr. Frank A. Gilmore, of Auburn, R. I. Mr. Gilmore does not feel satisfied with representing the human form divine in a single role, he wishes to show on one plate the same person the giver and recipient of a "tip," or both on the offense and defense in a "bare knuckle" fight. If a person is to be photographed in the street, he is given himself for company. Our illustrations tell their own story. The porter with his sack and the gentleman about to give him some money are one and the same; the pedestrian is in the company of his best friend, himself; and the fighter is prepared to annihilate himself. The photographs from which these were reproduced are of excellent quality, and are most interesting.

The method of producing them is very simple. A black-lined box is fitted to the front of a kodak, or any form of camera. The front of the box is closed by two doors. On opening one door a picture may be taken on one side of the plate; on closing this door and opening the other, the other half of the plate is ready for exposure.

The subject poses in one position and is photographed with one door open, care being taken to bring the figure within the proper area of the negative. The finder enables this detail to be attended to. Then the door is closed, the other is opened and the second exposure for the other half of the plate is made with the subject in the other position. It is not necessary to touch the plate holder between the exposures. The cover is withdrawn, the one door is opened and the shutter is sprung. The doors are then changed and the shutter is sprung a second time. Time exposures are rather risky, as involving danger of shaking.

These views were taken with an ordinary four by five inch kodak, and the box was an ordinary cigar box cut down to fit, and blackened inside.



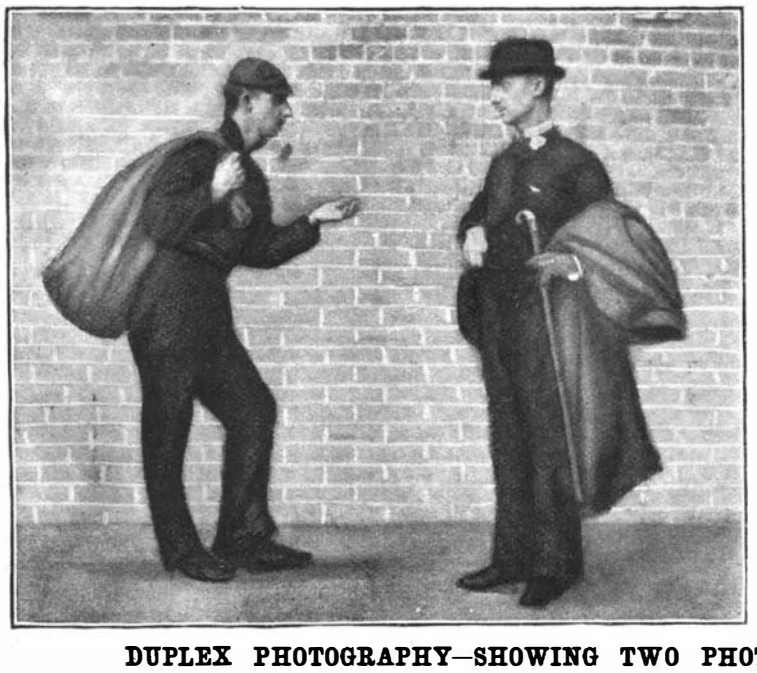
ATTACHMENT TO KODAK FOR DUPLEX PHOTOGRAPHY.

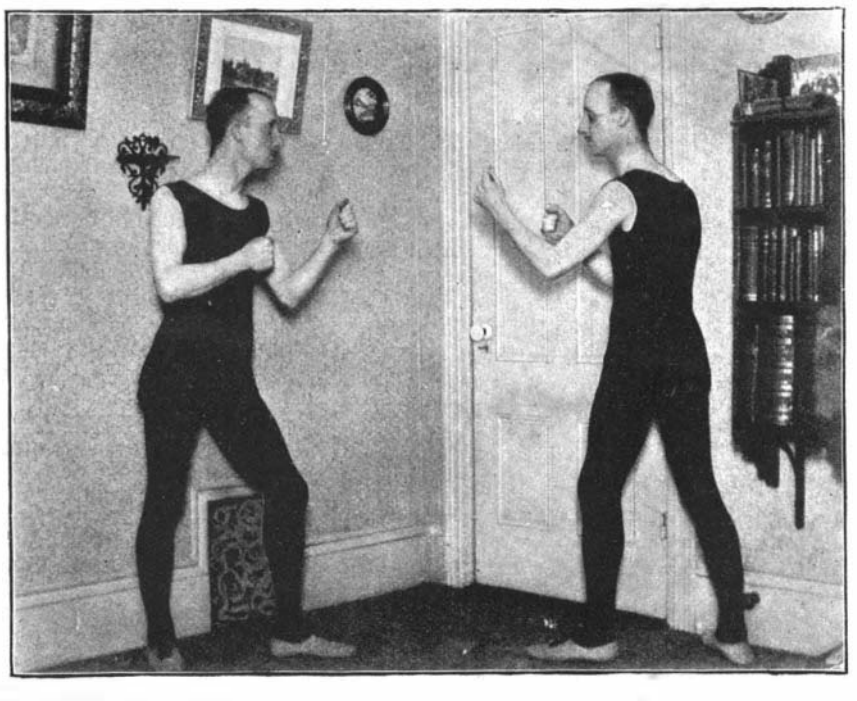
Electrical Wonders and Anticipations.

It is not an extravagant statement to say that never before in the history of the world has there been a scientific discovery about which centered such magnificent dreams as are being built up on certain recently discovered electrical principles. Among these the foremost place must be given to the astounding discoveries of the young Servian genius, Nikola Tesla, which are so novel and so extraordinary that the most imaginative of inventors are unable to foresee what form their development will take. Just as experimenters were beginning to think that they knew all that could be learned about electricity, and that further improvement must be in the line of more perfect mechanical application, Mr. Tesla shows us the electric fluid under conditions in which it differs from ordinary electricity as much as light differs from heat. A current of 2,000 volts will kill a man in the twinkling of an eye, but this modern wizard lets currents pour through his hands with a potential of 200,000 volts, vibrating a million times a second and showering from him in dazzling streams of light. For some time after the experiment ceases his body and clothing emit streams and halos of splintered light.

The wildest dream of the inventor could not have foreseen that while currents of low frequency are deadly, these are harmless. Mr. Tesla says that he will soon be able to wrap himself in a complete sheet of electric fire that will keep a man warm at the North Pole without harming him. Neither Merlin nor Michael Scott nor any of the wizards of old ever wrought a more potent miracle, even in fancy. The meaning of this is too far beyond us to be realized at present. We can no more grasp its significance than Franklin could discern the electric motor in his captured thunderbolt. Equally astounding, and with more visible usefulness, is Mr. Tesla's discovery that currents of such enormous potential and frequency can be transmitted without the use of wires. A room can be filled with electricity from copper plates in ceiling and floor, so that electric lamps will burn without any connecting wires as soon as they are brought in. In the same way intelligence and power may be transmitted without a circuit, doing away with the necessity for trolleys, storage batteries, and subways. When it is considered that such startling changes as this are already theoretically possible, it will be seen that in the inventions upon which we so complacently congratulate ourselves we have only timidly paddled along the shore of the great sea yet to be explored.

This sudden enlargement of the ideas of scientific men in regard to the nature and the possibilities of electricity has led the New York *Mail and Express* to bring together in a symposium the opinions of well-known electricians as to the future developments of electrical science. Mr. Edison thinks we shall yet be able to get electricity direct from coal—a discovery compared with which the philosopher's stone is a bauble. Then our steamships will need only "a snug little bin for 250 tons of coal instead of one for 2,800 tons." Successful aerial flight, electric cookery, a transatlantic telephone, a real telescope with which one can see around the world by the medium of a wire, the formation of wholesome food products under the potency of electrical affinities—these are some of the things which imaginative inventors foresee. Most startling of all, though it was suggested nearly ten years ago by an undergraduate in a Western college, is Mr. Edison's idea that unspoken thought may be recorded by electrical apparatus applied to the cranium, and either reproduced at pleasure or transmitted to another person.—*Springfield Republican.*





DUPLEX PHOTOGRAPHY—SHOWING TWO PHOTOGRAPHS OF SAME PERSON ON A SINGLE NEGATIVE.

New High-Speed Cruisers.

The British Admiralty have given out orders to the Naval Construction and Armaments Co., Barrow, and Messrs. James and George Thomson, Clydebank, Glasgow, for the construction of two high-speed cruisers for the British navy, to be named the Powerful and Terrible respectively. These two cruisers are each to be about 500 ft. long, and will therefore be the longest afloat. They will conform more to the type of Atlantic liners, and will have great coal endurance. They are to have an armored deck, which alone is to afford protection, except that the coal will be so arranged as to assist to this end. Speed is to be the first consideration, hence the great length. The principal novelty is the use of the water-tube boiler for the first time in a high-speed cruiser. It is not improbable that the boiler adopted will be the French Belleville type, although the details are not yet irrevocably determined. This boiler is the one which has been most extensively tried in vessels, but in Britain there is no experience of it. It is, however, being fitted to 22 cruisers or battleships ranging up to 14,000 indicated horse power in six Russian vessels; while the Messageries Maritimes has fitted it to seven vessels, in some of which it has been worked satisfactorily for ten years. It has been tried also in other navies, but not in any case in large cruisers, which are to attain a speed of 23 knots, as in the cases of the Powerful and Terrible.

Arctic Geology.

According to Sir Henry Howorth, the Arctic lands, during the Pleistocene period, instead of being overwhelmed by a glacial climate, were under comparatively mild conditions. Since Pleistocene times the climate has been growing more and more severe. The author bases this conclusion on a study of the Arctic flora as displayed in Greenland, Spitzbergen, and the uncovered moraine of the great glacier in Alaska, and also upon certain faunal facts. He cites evidence to show that the present flora of Greenland is undoubtedly a relic of an old flora which has survived in favorable localities, and not an importation since glacial times. The same is true of the Spitzbergen flora. The discovery of a colony of sea cows on Behring's Island seems to indicate a recently milder climate in that region. The peculiar types of northern migratory birds suggests that at no very remote period they lived the year round in their present breeding places in Northern Siberia, Greenland and Spitzbergen, and that it is the present ever-increasing cold that leads them to migrate in search of warmth and food. In short, the only glacial climate we are warranted in supposing to exist in the Arctic lands is that which is now current, and it is the product of changes in the level of the earth's crust since Pleistocene times.—*Geol. Mag.*