A New Brick Kiln.

A new brick kiln was recently tried at Normanton, the advantages claimed for which are economy in fuel and labor. The kiln is 108 ft. long and 8 ft. broad. The raw bricks are set direct from the making machine upon iron wagons, which carry them through the entire length of the new kiln and bring them out at the exit end baked, which saves much of the usual handling. The fires are placed in the middle of the kiln, at each side, and the draught of hot air travels toward a flue or chimney at the entrance end. By this means the bricks are gradually baked before reaching the fires, and after passing the intense heat of the central section they have time to cool before being drawn out at the receiving end, where the burnt bricks can at once be thrown into carts and railway wagons or stacked. The barrows, of which nine are in the kiln at one time, are coupled together, and the action of drawing one out advances each of the succeeding eight a stage, while at the same time pulling in a newly loaded one at the other end. Each wagon holds about 5000 bricks, making 45,000 in the kiln at once, or a total weight of about 300 tons. The wagons are made so as exactly to fit the breadth of the kiln, and, excepting the usual spaces left for the equal penetration of the heat through the entire mass, the bricks are piled upon each wagon to a height of 7 ft., thus filling up the whole space of the arch through which they pass. The iron of which the lower parts of the wagons are composed is preserved from injury through the heat, not only by the fires being on a higher level, but by a superposed layer of fire-bricks and by a current of cool fresh air being secured under the wagons. By means of Mr. Foster's present appliances, which may be still further improved, a load of 5000 finished bricks can be drawn out in five minutes; but a period of four or six hours in the kiln is required before the bricks are sufficiently burned and then cooled enough to be taken out. It is said that the cost for fuel for burning 1000 bricks by this new process is under 3d., and certainly the utilization of heat seems to be in every way complete. No work, says the Leeds *Mercury*, is required inside the kiln; and there are no wickets to build or plaster, the doors being closed at each end after the passage of a wagon until it is time to send in and discharge a fresh load.

Every Day Uses of the Telegraph.—Telegraphy is the great time-saver in all business transactions. It may be used not only for these purposes, but also in those pertaining to domestic economy. For instance, the Duc de Montpensier has, it is said, attained great proficiency in this direction. Telegraphic communication connects every door in his mansion, and the duke can, whether he be in the boudoir, the library, or —Guy Fawkes like—in the cellar, tell when a door opens, and which one it is. Indeed, the system does not end here, for when more than one person of average physique crosses the vestibule the door-mats are so sensitive that the signals are proportionately doubled everywhere, and the duke is made aware that a pair has entered. If the gentleman lately occupying the luxurious chambers in Ludlow street ever visited the veteran statesman during his Spanish peregrinations, we suppose the signals were increased indefinitely, for Spaniards have not the privilege of entertaining men of his status every day. However this may be, it only shows us how much can be done with telegraphy. Every well-ordered hotel has a telegraphic call in each chamber, and our merchants are using it extensively. Bradstreets, with commendable enterprise, have no less than twenty-five branch offices in the city, each with direct wires to the head office. Those who can afford to do so should introduce telegraphy as a means of communication between every part of their household. This is coming, and it will not be long before an electric system of communication will be as necessary in warehouses and well-appointed dwellings as speaking-tubes and bell-wires.—*Iron Age.*

How British Commerce helps British Manufactures.

In an able review of the condition and prospects of the British Empire in the *Nineteenth Century*, Sir Julius Vogel incidentally points out one secret of England's command of the carrying trade of the world, and the importance of that trade to the prosperity of her mechanical industries. The groove into which the conduct of England's shipping has fallen supplies one of the largest systems of trade protection and bounty that has ever been in operation. The whole principle on which the English shipping trade with other countries is conducted is to make the homeward freight supply the profits. On the outward route a bare return to cover expenses, and sometimes not even that, is submitted to, the homeward voyage to make the whole trip a profitable one. For instance, a ship carrying out a $100,000 cargo, makes for her outward freight $12,500. She will under ordinary circumstances make at least $25,000 on the way home, or $37,500 on the entire trip.

If this were equally divided there would be a return of $18,750 each way; the difference between that amount and the sum actually received on the outward route is $6,250, and that is so much bounty to the cargo carried out, or 6¼ per cent. And the same amount may be added as an impost on the homeward freight. This system has arisen accidentally; nevertheless it greatly helps England's exterior trade, the prosperity of which has been largely due to her control of the merchant marine. It will be readily seen how critical would be England's position in case a foreign war should seriously interfere with her commercial supremacy. England is now one vast industrial concern. Deprive her of the means of making that industry profitable, and the loss of wealth would be as rapid as the previous gain.

THE Kansas City *Price Current* says that the drive of Texas cattle this season will reach fully three hundred thousand head in good condition, and they will reach their destination much earlier than last year. Eighty-five thousand head of cattle in Southern Kansas will be ready to go to market by the middle of June.

Glass Type.—*La Patrie* reports favorably on some French experiments to substitute hardened glass for type metal. It is stated that the type-founders' molds and machinery can in general be used without further change. The new types, made of glass, preserve their cleanliness almost indefinitely; they are said to wear better than metal, and they can be cast with a sharpness of line that will print more distinctly than is possible with the old type. There will be also the advantage of an absence of half-defaced letters, since it is a peculiarity of the hardened glass that as soon as it is broken at all, it crumbles altogether. But as transparency will not be required in glass used for this purposes, it is believed that a toughness extraordinary, even for the hardened glass, can be secured. —*Tribune.*

THE narrowest railroad in the world is between North Billerica and Bedford, Mass., a distance of 8½ miles. The track is 10 inches wide. The engine and cars are proportionate with the width of the track. The passenger cars have an aisle in them and a seat on each side, instead of two seats, as a full-grown car. There are 30 seats in each car. The train runs 12 miles an hour; one grade on the road is 155 per mile. The trains consist of two passenger and two freight cars and an engine. The cars and engines have air brakes and all the modern improvements. Ordinary cars weigh four time as much as these little coaches. The cost of the road is $4,500 per mile, and the running expenses are stated to be about one-fourth those of ordinary trains.