

philosopher ever dreamt, or poet sang, but which the prophets of Divinity pre-shadowed in the declaration: "The desert shall bud and blossom as the rose." A double verification; for while science will cover the Saharas of the world with waving grass and bending corn, our holy religion will fructify the moral wastes and make of earth a paradise fit for the home of angels.

In proportion as the population of the world increases, the aids of science are becoming more and more indispensable towards making two blades of grass grow where before there grew but one; and the acre of to-morrow must yield the double of to-day's. Hence, a better and a brighter day is dawning for men-of-mind—for those who possess inventive genius and combine with it the industry and the love of its exercise and application. Hard is the heart which does not sorrow over the ill requital of the men of a generation or two ago, whose whole lives were expended in wearing anxiety of mind and wasting toil of body, in poverty, if not even in destitution, in eliminating machineries which were destined to enrich those whom they never knew; in whose veins no kindred blood flowed, while they themselves were to end their labors and their lives in sight of fruitions which the hands of them and theirs were never to gather!

It was a sad record of two weeks ago (SCIENTIFIC AMERICAN, page 276) that, in a single branch of an industrial department, the men who, during the last century, initiated machineries which now fill the mouths of millions of the two greatest nations on earth with bread, died miserably poor; and some of their immediate descendants were only saved from death by want, through public pity! The prospect, however, is cheering, that a better fate and a higher reward await the Kays, and Pauls, and Higbys, and Hargreaves, and Whitneys, of the present and coming generations, and that they will become the Arkwrights, the Cramptons, and the Peels of our own time, for because of them "Cotton is King!"

Whatever may have been the demands of past ages, inventive genius is the necessity of the present. If the sword has hitherto reigned supreme, science must be its successor. The sword may initiate or construct an empire, but science, in its application to industrial pursuits, in the direction of machineries for manufactories, and implements for farms, must be invoked to sustain it. Nations can live by the sword no longer, for the dominion of barbarism has passed away, and empire must be humanitarian and christian, founded on true knowledge and its wise application.

#### THE ENGLISH POLICE.

The English papers are never weary of vaunting the wonderful efficiency of their police, and it is almost impossible to converse five minutes with an Englishman in this country without hearing him mention something that would not be "allowed" in England—actually boasting of the shackles on his own harmless actions. Such is the talk; but a recent event has given the world a real glimpse into the real truth of the matter. Tickets for the late brutal prize fight were advertised in one of the leading London papers, and openly sold at five places in the city, on the day before the combat; notwithstanding all this publicity, the men met in the very heart of England, within 40 miles of the metropolis, and pounded each other's heads and faces for more than two hours, in the presence of lords, earls, marquises, and a crowd of people of all classes, considerable numbers of whom had their pockets picked, at the time, of their watches and purses.

#### FOREIGN NEWS AND MARKETS.

The London *Engineer* states that, in Leeds, the machine trade is very active, and there are several orders on hand for flax machinery, chiefly for Belgium and Germany. The manufacture of tools for government orders is very brisk, and at Sheffield there is continued activity in steel manufacture. All the forges are busy, and considerable difficulty is experienced in getting work done punctually. The manufacture of English files for continental orders is brisk: the best qualities being in most demand. Electro-plated goods are in good request; but it is regretted by the English papers that the orders from America have been very limited this Spring for all kinds of Sheffield wares. A machine for rolling the tires of iron railway wheels, without a weld, has been put in operation, and is working satisfactorily. A large

number of orders for such tires have been received. Some steel tires are also being rolled in the same manner.

The Great Northern Railway, in England, has hitherto held the "A No. 1" position for the speed of its trains; but recently the Scottish trains have rather surpassed them. This has led the company to decide upon introducing a larger and more powerful class of engines, and 12 of these have been designed by Mr. Sturrock, the locomotive engineer of the road. They are to be furnished with 7-foot driving wheels and 17-inch cylinders. The tenders will also be larger to carry more fuel, and thus save stoppages; otherwise there is to be no especial novelty about them, but their average speed will be about 50 miles per hour.

In Manchester, there is an association for suppressing the practice of falsely labelling or marking goods for sale; and the most respectable mercantile firms in all the English manufacturing towns have joined it. The practice of selling goods marked for a certain length, while they are short of this length, has become so common that most persons were so used to it as to hold it no fraud at all; but a bill is about to be introduced into Parliament to meet such cases.

In Great Britain, there are now 32,500,000 cotton spindles in operation in the factories, and these have been increasing at the rate of 45,000 per week, or 2,300,000 per annum. In Russia, there are only 70 cotton mills, comprising 100,000 spindles, in operation.

In France, there are 2,624 locomotives employed on all the railroads, of which 2,521 were made in that empire. When railroads were first introduced upon the continent of Europe, the locomotives were obtained from England; but Italy, France, Austria, Germany and Russia are now independent of England for their engines—they construct their own. On the German railroads, there are 2,850 engines, 2,277 of which are of domestic manufacture, 301 English, 190 Belgian, 60 American, and 22 French. In Berlin (Prussia), there is one of the largest locomotive shops in the world. It has turned-out 1,200 engines since it was established, a few years ago.

The Metropolitan Board of Works have advertised for tenders to supply per-chloride of iron for deodorizing the Thames and other sweet-smelling institutions in London during the present summer. No less than 5,000 gallons will be required per day, and double this amount on some occasions. We recommend this substance to the Health Commissioners of New York; they may require some of it during the approaching warm season.

#### NEW YORK MARKETS.

BEESWAX—American yellow, 33c. a 35c. per lb.  
BREAD.—Ship, 3½c. a 4½c. per lb.  
CANDLES.—Sperin, city, 38c. a 40c. per lb.; sperm, patent, 48c. a 50c. wax, paraffine, 50c.; adamantine, city, 17c. a 19c.; stearic, 27c. a 28c.  
COAL.—Anthracite, \$4.75 a \$5; Liverpool orrel, perchaldron, \$8.25; cannel, \$10 a \$10.50.  
COPPER.—Refined ingots, 23c. per lb.; sheathing, 27c.; yellow metal, 20c.  
CORDAGE.—Manilla, American made, 8c. a 8½c. per lb.; Rope, Russia hemp, 12c.  
COTTON.—Ordinary, 7½c. a 8c.; good ordinary, 9c. a 9½c.; middling, 11½c. a 11¾c.; good middling, 11¾c. a 12¾c.; middling fair, 12¾c. a 13¾c.  
DOMESTIC GOODS.—Shirtings, brown, 30-inch, per yard, 6c. a 7½c.; shirtings, bleached, 26 a 32-inch, per yard, 6c. a 8c.; shirtings, bleached, 30 a 34-inch, per yard, 7c. a 8½c.; sheetings, brown, 36 a 37-inch, per yard, 5½c. a 8½c.; sheetings, bleached, 36-inch, per yard, 7½c. a 15c.; calicoes, 6c. a 11c.; drillings, bleached, 30-inch, per yard, 8½c. a 10c.; cloths, all wool, \$1.50 a \$2.50; cloths, cotton warp, 62c. a \$1.37; cassimeres, 75c. a \$1.50; satinetts, 30c. a 60c.; flannels, 15c. a 30c.; Canton flannels, brown, 8½c. a 15c.; Kentucky jeans, 8c. a 18c.  
DYE-STUFFS.—Barwood, per ton, \$18 a \$30; Camwood, \$10 a \$12.5; Fustic, Cuba, \$38 a \$39; Fustic, Tampico, \$35; Fustic, Savanilla, \$20 a \$22; Fustic, Maracibo, \$19 a \$20; Logwood, Laguana, \$22 a \$23; Logwood, Tabasco, \$21; Logwood, St. Domingo, \$14.50 a \$15; Logwood, Honduras, \$16 a \$17; Logwood, Jamaica, \$13.50 a \$14; Lima wood, \$50 a \$65; Sapan wood \$45; Cochineal, per lb., \$1.08; Bichromate of potash, 20c. a 21c. per lb.; Cream of tartar, 38c. per lb.; Madder, 13c. per lb.; Lac dye, 10 c. a 50c. per lb.; Blue vitriol, 9½c. per lb.; Catechu, 6½c. a 7½c. per lb.; Copperas, 1½c. per lb.  
FLOUR.—State, superfine brands, \$5.40 a \$5.45; State, extra brands \$5.50 a \$5.60; Michigan fancy brands, \$5.50 a \$5.70; Ohio, common brands, \$5.60 a \$5.70; Ohio, fancy brands, \$5.85 a \$5.95; Ohio, fair extra, \$6.15 a \$6.25; Ohio, good and choice extra brands, \$6.30 a \$7.25; Michigan, Indiana, Genesee, Ac., \$5.60 a \$6; Genesee, fancy brands, \$5.70 a \$5.80; Wisconsin, extra brands, \$5.85 a \$7.50; Missouri, \$5.75 a \$7.85; Canada, \$5.70 a \$7.40; Virginia, \$7 a \$8; Rye flour, superfine, \$3.80 a \$4.25; corn meal, \$3.80  
GEMS.—Per lb. Gamboge, 25c.; Arabic, picked, 14c. a 28c., sorts, 10c. a 10½c.; Benzoin, 50½c.; Copal, Cowrie, 4½c. a 5½c.; Damar, 9½c. a 14c.; Myrrh, East India, 10c. a 25c.; Myrrh, Turkey, 25c. a 32c.; Senegal, 6c. a 10c.; Tragacanth, sorts, 17c. a 37½c.; Tragacanth, white flaky, 75c. a 80c.; Shellac, 50c. a 55c.  
HEMP.—American undressed, \$120 a \$150; dressed, from \$160 a \$200. Jute, \$100. Italian, \$275. Russian clean, \$190 a \$200 per ton. Manilla, 6½c. per lb. Steal, 5½c.  
INDIA-RUBBER.—Paris, fine, a 65c. per lb.; East India, 52c. a 55c.

INDIGO.—Bengal, \$1 a \$1.55 per lb.; Madras, 70c. a 95c.; Manilla 60 c. a \$1.10; Guatemala, \$1 a \$1.25.  
IRON.—Pig, Scotch, per ton, \$34; bar, Swedes, ordinary sizes, \$35 a \$36; bar, English, common, \$41 a \$42.50; refined, \$50 a \$52; sheet, Russia, 1st quality, per lb., 12c. a 13c.; sheet, English, single, double and treble, 3½c. a 3¾c.; anthracite, pig, \$24 per ton.  
IVORY.—Per lb., \$1.25 a \$1.30.  
LATHS.—Eastern, per M., \$1.50 a \$1.75  
LEAD.—Galena, \$5.90 per 100 lbs.; German and English refined, \$5.55 a \$5.70; bar, sheet and pipe, 6½c. a 7c. per lb.  
LEATHER.—Oak slaughter, light, 28c. a 31c. per lb.; Oak, medium 28c. a 31c.; Oak, heavy, 28c. a 30c.; Oak, Ohio, 28c. a 30c.; Hemlock, heavy, California, 19½c. a 20½c.; Hemlock, buff, 15c. a 18c.; Cordovan, 50c. a 60c.; Morocco, per dozen, \$21 a \$23; Patent enameled, 15c. a 25c. per foot; light Sheep, morocco finish, \$7.50 a \$8.50 per dozen; Calf-skins, oak, 50c. a 55c. per lb.; Hemlock, 37c. a 55c.; Belting, oak, 32c. a 34c.; Hemlock, 28c. a 31c.  
LIME.—Rockland, 75c. per bbl.  
LUMBER.—Timber, white pine, per M. feet, \$17.75; yellow pine, \$35 a \$40; oak, \$25 a \$30; Eastern pine and spruce, \$13.50 a \$15; White Pine, clear, \$35 a \$37.50; White Pine, select, \$25 a \$30; White Pine, box, \$16 a \$18; White Pine, flooring, 1½ inch dressed, tongued and grooved, \$24.50 a \$28; Yellow Pine, flooring, 1½ inch, dressed, tongued and grooved, \$29 a \$35; Black Walnut, good, \$45; Black Walnut, 2d quality, \$30; Cherry, good, \$45; White Wood, chair plank, \$42; White Wood, 1 inch, \$23 a \$25; Spruce Flooring, 1½ inch, dressed, tongued and grooved, each, 21c a 22c; Spruce Boards, 14c. a 16c.; Hemlock Boards, 12½c. a 13c.; Hemlock wall strips, 10c. a 11c.; Shingles, cedar, per M. \$28 a \$35; Shingles, cypress, \$12 a \$25; Staves, White Oak, pipe, light, \$65 a \$68; Staves, do., pipe, heavy, \$80 a \$85; Staves, white oak, pipe, culls, \$30 a \$35; Staves, do. hhd., heavy, \$70; Staves, do. bbl. light \$30 a \$35; Staves, do. bbl. culls, \$20; Mahogany—St. Domingo, fine crotches, per foot, 35c. a 45c.; St. Domingo, ordinary do., 20c. a 25c. Honduras, fine, 12½c. a 15c.; Mexican, 13c. a 15c.  
NAILS.—Cut, 3½c. a 3¾c. per lb.; American clinch, 4½c. a 5½c. American horse-shoe, 14c. a 18c.  
OILS.—Olive, Marsailles, baskets and boxes, \$3.50 a \$3.55; Olive, in casks, per gallon, \$1.20 a \$1.30; Palm, per pound, 9½c.; Linseed, city made, 60c. a 61c. per gallon; linseed, English, 61c.; whale, fair to prime, 35c. a 37c.; whale, bleached, 57c.; sperm, crude, \$1.41 a \$1.44; sperm, unbleached winter, \$1.45; lard oil, No. 1, winter, 90c. a 93; red oil, city distilled, 55c.; Wadsworth's refined rosin, 25c. a 35c.; boiled oil for painting, 25c. a 35c.; tanner's improved and extra, 25c. a 35c.; camphene, 47c.; fluid, 45c.  
PAINTS.—Litharge, American, 7c. per lb.; lead, red, American, 7c.; lead, white, American, pure, in oil, 8c.; lead, white, American, pure, dry, 7½c.; zinc, white, American, dry, No. 1, 5c.; zinc, white, French, dry, 7½c.; zinc, white, French, in oil, 9½c.; ochre, ground in oil, 4c. a 6c.; Spanish brown, ground in oil, 4c.; Paris white, American, 7c.; a 90c. per 100 lbs.; vermilion, Chinese, \$1 a \$1.10; Venetian red, N. C., \$1.75 a \$2 per cwt.; chalk, \$3.75 per ton.  
PLASTER-OF-PARIS.—Blue Nova Scotia, \$2.75 per ton; white, \$3.50; calcined, \$1.25 per bbl.  
RESIN.—Turpentine, soft, per 280 lbs., \$3.40 a \$3.50; common, 310 lbs., \$1.63; strained and No. 2, \$1.65 a \$1.75; No. 1, per 280 lbs., \$3 a \$3; white, \$3 a \$4; pale, \$4.50 a \$5.50.  
SALT-PETER.—Refined, 12c. a 13½c. per lb.  
SOAP.—Brown, per pound, 5c. a 5c.; Castile, 9c. a 9½c.; Olive, 7c. a 7½c.  
SPELTER plates, 6c. a 6½c. per lb.  
STEEL.—English cast, 14c. a 16c. per lb.; German, 7c. a 10c.; American spring, 8c. a 5½c.; American blister, 4½c. a 5½c.  
SUGAR.—New Orleans, 6c. a 8c. per lb.; Porto Rico, 6c. a 8c.; Havana, brown and yellow, 7c. a 8½c.; Havana, white, 8½c. a 9c.; Brazil, white, 8c. a 8½c.; Brazil, brown, 6c. a 7c.; Stuart's granulated, 9½c.  
SUMAC.—Sicily, \$60 a \$80 per ton.  
TALLOW.—American prime, 10½c. a 10¾c. per lb.  
TIN.—Banca, 31½c.; Straits, 30c.; plates, \$6.50 a \$9.25 per box.  
WOOL.—American, Saxony fleece, per lb., 54c. a 58c.; American full blood merino, 48c. a 52c.; extra, pulled, 42c. a 47c.; superfine, pulled, 36c. a 38c.; California, fine, unwashed, 20c. a 28c.; California, common, unwashed, 10c. a 18c.; Mexican, unwashed, 11c. a 14c.  
ZINC.—Sheets, 7c. a 7½c. per lb.  
The foregoing rates indicate the state of the New York markets up to May 2d.

There is a slight change in the price of ordinary cotton from last month, but all the other qualities remain unaltered. No change has taken place in domestic dry goods, and none in dye-stuffs; but the latter business is quite dull at present. This is rather an unfavorable sign in reference to calico-printing, woolen cloth and carpet manufacturing. The changes in flour have been considerable, and with an advance on most brands amounting to 25c. per barrel. There has been a fall of about \$1 per ton on pig iron, and a slight rise in lead.

We notice a reduction in the prices of some sorts of leather; also, in most of our domestic oils and naval stores. There are quite a number of changes in the above table from the one of last month; mostly in reduced prices. Oil from cotton seed is becoming a marketable commodity. From conversations with those who have visited the Pennsylvania oil regions, we have been informed that it extends for a distance of 200 miles in length, and is 40 miles in breadth. Some suppose that the subterranean supply is inexhaustible; while some suppose that the oil wells will soon give out. There is quite an excitement among the people in the whole valley of "Oil creek," and it is very difficult to get at facts as to the quantity obtained from a single boring. Some of the coal oil manufacturers entertain fears that these natural oil fountains will affect their business and lower their prices.