

idly, and are more tenacious, and are smoother on their surfaces than the best English hand nail so generally used by blacksmiths. Having seen a machine in operation, we can speak unreservedly in favor of its action and the work which it executes. The claims embraced in this patent may be found on page 59, Volume 9 SCIENTIFIC AMERICAN. Patents have also been secured through our agency in foreign countries. For additional information in regard to machines, rights, etc., address James L. Leete, 180 Broadway, N. Y.

New York State Fair.

The Annual Fair of the New York State Agricultural Society having been advertised to be held at Hamilton Square—in the vicinity of this city—last week, it was expected that it would be no small affair, and this expectation did not end in disappointment.—The grounds were well selected, being dry, airy, rolling, and romantic. The fields everywhere gave forth the sweet breath of new mown hay, and after the first day—which was rainy—the weather was delightful.

LIVE STOCK—The inimitable Barnum, under whose management the live stock was placed, had made ample arrangements for their reception. The whole field of eighteen acres was squared with sheds, laid out into stalls for horses, hogs, and sheep; and running transversely through one quarter of the field were ten rows of sheds for neat cattle. The show of horses was fine, although the number was limited. The greatest attraction among them all was the celebrated racing mare Fashion, with her colt. The show of mules was excellent; about forty teams were on the ground, some of them being by far the finest we ever beheld.

The number of hogs was not great, but the samples were good. Sheep of every description, Saxony, Merino, South Downs, Beckwell's, &c., made a respectable appearance. The most of them were exhibited for their wool-bearing qualities. It is a fact, that those which have the finest wool make the poorest mutton, while the coarse woolled sheep make the best; both kinds therefore should be raised with an eye to their separate qualities.

The greatest curiosity exhibited in this class of animals was three Cashmere goats, with their long silky fleeces, white as the snow on the lofty Himalays. There were two kids of a month old, and their dam.—The kids appeared to be spiritless, and we are afraid that our climate is not adapted for them. We hope, however, they may be thoroughly acclimated, as there can be no doubt of their great value, in regard to their fleeces. Some shawls made in Cashmere from the wool of these goats sell for \$500 and \$1000.

The number of milch cows was very small but we did not see an indifferent one in the lot. The bulls seemed to reign masters of the field, both in respect to numbers and weight of metal. Two Durhams were perfect mountains of flesh, and were white as the foam of the torrent. We cannot say that we like these light colored animals, and we have heard it asserted that they do not stand our rigorous winters so well as the dark Devons, a number of which were on the ground, and made a fine appearance. The white Durhams, it appears to us, are a cross with the old native wild cattle of Deucalonia; they resemble them in color, but are much larger.

There was a great quantity of geese, ducks, and Shanghai bipes exhibited, and they attracted a great deal of attention, especially that of the ladies.

MACHINERY—The most conspicuous machine on the grounds was the adjustable Wind Mill of D. Halliday, which was illustrated in the last number of the SCIENTIFIC AMERICAN. It was continually surrounded by a crowd of visitors, and was much admired.

REAPERS—The Reaping and Mowing machines engaged more attention from those present than any others. We counted nine different machines exhibited by as many owners, but some had three, four, and five machines of the same kind.

The first in a long line of such machines

was that of H. Waterman, of No. 114 South st., N. Y. It embraces three new features, 1st, the action of the cutting knives; 2nd, spring fingers in which they work, and 3rd, the gathering of the cut grain into bundles of a certain weight. The knives have a slanting cut motion, being hung on vibrating arms. The spring teeth always keep them clear, and the manner of making the bundles allows of smaller ones for damp and heavy grain, than for dry and light grain. A new Reaping Machine by Fisk Russel, of Boston, has knives which have a slanting cut like that of Mr. Waterman's, but each is hung separate, so that they can be changed at pleasure. They receive a reciprocating motion from a rotating wheel with a fan edge which plays between two rollers on the knife shaft. These two machines from their novelty were continually surrounded by large crowds. The Self-Raking Reaper of J. Atkins, of Ill., manufactured by J. S. Wright, of Chicago, appeared to excite profound attention. The ingenuity displayed by the inventor in designing this machine, entitles him to rank with the greatest inventors of the age. This reaper was illustrated on page 41, Vol. 9, SCIENTIFIC AMERICAN. Manny's Reaper and Mower, with Woods' improvement, was exhibited by W. A. Wood, of Hoosick Falls, N. Y.; Ketchum's Reapers and Mowers, made by Howard & Co., of Buffalo, N. Y., were the most numerous, and were all well made. Thomas D. Burrall, of Geneva, N. Y., had excellent Reapers and Mowers on the ground. Week's Mower and Reaper, by Mayer & Co., 197 Water street, this city, and one by J. Adriance, of Po'keepsie, N. Y., were admired for their excellent construction. A machine by D. Fitzgerald, of this city—the inventor of fire-proof safes, and termed "Fitzgerald's Grain Cradling Machine," has a peculiar feature for gathering and discharging the grain. Instead of a horizontal revolving reel, as on McCormick's and other reapers, he has two vertical barrels revolving towards each other centrally, and these have long crooked fingers which gather in the grain towards the center of the machine, and discharge it in swaths from a channel at the rear. We also noticed one of Forbush's reaping machines. We may have overlooked some reaping machines, but we think not. There was much confusion, however, and it was somewhat difficult to make a thorough examination.

HAY PRESS—A large parallel lever press of Deering & Dederick, of Albany, N. Y., which was illustrated on page 384, Vol. 9, SCIENTIFIC AMERICAN, was on the ground, and applied to pressing hay. Its good qualities were readily acknowledged by all who saw it operate.

We noticed three "Horse Powers," one being new and never before exhibited, viz., McCord's, which was illustrated on page 316, last volume SCIENTIFIC AMERICAN, and which has been patented recently. It is a very compact power, and must be very durable, the very qualities which our farmers require. We counted no less than eighteen straw cutters, which afford evidence to us that such machines are of deep interest to agriculturists. A number of them have been illustrated in our columns, likewise some of the Grain Drills on exhibition; want of space prevents us from specifying these, but they are now generally known. A number of good grain winnowers graced the Hall of Manufactures, among which was one by J. Keech and S. Stillwell, of Waterloo, N. Y., which could be converted into a grain separator by closing a lid, and into a simple fanning mill by opening it. A machine for rolling out tubes of sheet metal with great rapidity, was exhibited by Mr. Webster, of this city. J. L. Mott, the well known inventor and manufacturer of cast-iron vessels, exhibited quite a variety of his wares, especially his cauldrons, which are very serviceable for farmers to boil feed for their cattle, &c. Thompson & Munsell, of this city, exhibited a number of McGregors' excellent cauldrons, which are adapted for the same purposes. A rotary machine for cutting ditches, made at Canandaigua, N. Y., by Mr. Pratt, was looked upon favorably.

The machines and manufactures on exhibi-

tion were neither great in number nor variety; other State Fairs have been better in this respect, but not in character. On the whole, the Fair was good; we are sure that for the number of visitors, and the display of live stock, it was the best ever held. Flora Hall was a scene of gay attraction for the lovers of fruits and flowers. Hovey, of Boston, took the lead for fine pears. The display of grapes was tolerable; we suppose our Cincinnati friends will consider it in this respect a meagre show. In one tent were two cheeses, each 524 lbs. weight, made at Rome, N. Y. The art of cheese making is not yet so generally understood as it should be. With the same quality of milk one farmer makes cheese which sells in the market for two cents per lb. more than another's, but from the opportunities we have had of examining cheese, we believe that a vast improvement has been made in the art within the last ten years.

The Fair closed on Friday last week, having been kept open for three days. The officers of the State Agricultural Society, we understand, are pretty well pleased with the results; it paid well, and it really deserved this.

Fraud in Coal.

The manner of selling and delivering coal in our cities is a matter that is exciting some attention. As the custom is, the purchaser possesses no means of determining whether he has good weight or measure, having to rely entirely on the honesty of the seller and the employers. The Boston *Advertiser*, speaking on the subject, says:

"It is the practice, we understand, in England, to send the coal to the purchaser in large bags made of some stout material adapted to the purpose. The bag is intended to contain a given weight, say 200 pounds; a pair of scales is sent with the load of coal, and the purchaser, if he pleases, can weigh every bag; but he generally contents himself with weighing one or two taken at a venture out of the wagon load."

We do not see why this excellent plan of preventing coal dealers from defrauding purchasers could not be carried out in other places as well as London. Such a law is much required in New York as in that city. At every police station in London, there is also a pair of scales for weighing coal, to which the purchaser can make the carter drive his wagon to be weighed, if he is dissatisfied with the dealers' scales.

Counterfeit Coin.

The New York *Journal of Commerce* calls the attention of the public to a counterfeit quarter of a dollar, which is the closest imitation in appearance of the genuine coin, which ever fell under notice. It was taken at the post office, and paid into the sub-treasury, where it was detected by Mr. Edward H. Birdsall, the weigher and tester of coin. This counterfeit appears to be made of zinc, or other bright metal, is cast to resemble exactly the genuine coin, and is afterwards "galvanized" with pure silver. It is dated "1853," is about ten grains lighter than the genuine, and is very brittle. By the latter characteristic, it may easily be detected, as it will readily break by a blow from a hammer; the specimen referred to was broken by Mr. Birdsall between his thumb and fingers. There are probably but few now in circulation, and receivers of money will do well to be on their guard against them.

Colt's Patent Case in England.

The report of the Committee of the House of Representatives, on the Colt Patent Case, has found its way across the Atlantic, and has been made the subject of what is intended to be a profound criticism of American political practices, by the *Manchester Examiner*.—Strange to say, however, the author of the article commits the astonishing blunder of calling Horace H. Day, (the manufacturer of India rubber goods) "a professional letter writer," and he therefore attempts to throw odium on the integrity of those connected with the American press. Throughout the whole of the investigation in this case, no ev-

idence was elicited to implicate a single person connected with the press. Our English cotemporaries, before commenting on American affairs, should well consider old David Crocket's advice, "be sure you're right, then go ahead!"

Draw Bridges.

An improvement in draw bridges for railroads and other purposes has been made by H. B. Perry, of Bridgeport, Conn., which consists in making the bridge double, of a hollow ellipse, with a basin of water between the two parts to contain a vessel, each having a swing or draw, and so arranged that when one is open the other will be closed.—The ends of the draws are provided with metallic arms, which in operating or closing the draws, operate switch levers at the ends of the bridge, which move the switches of the rail track, whereby an advancing train is always made to pass on the track which runs along the closed draw. This will prevent trains from running into the water of river crossings, because the draw of the track on which the train is running will never be left open.

Beautiful Silver Plate Gift.

We were shown yesterday, a beautiful silver tea set, consisting of a coffee urn, a tea urn, a water pot, a slop and sugar bowl, cream cup and salver, and twelve silver forks and spoons, which is to be presented to E. W. McGinnis, by a number of the citizens of Pottsville. The different pieces are chased in beautiful style. The salver has upon it the following inscription:—

"To Enoch W. McGinnis, from gentlemen interested in the Schuylkill Coal Basin, as a testimonial of their high appreciation of the intelligence and energy, that surmounting all obstacles, whether of prejudice or of theory, have established the fact of the accessibility for practical working of the White Ash coal measures throughout the entire basin."—[Philadelphia Gazette.]

The Ohio Baby Convention.

We have been informed upon the best authority respecting the National Baby Convention at the Fair grounds, Springfield, O., that the Ohio Agricultural Society had nothing to do with it. We are happy to be informed of this, for we think that such a convention affords proof of the want of good sense in those who originated and conducted it.

To Mariners.

Professor Bache, of the Coast Survey, announces the discovery of a very dangerous sunken ledge, in the neighborhood of the "Minot Ledge," in the approaches to Boston bay, which has only ten feet of water on it at low water, spring tides. The rule for avoiding it, is *not to pass to the southward of the "light-boat,"* where strangers have no excuse for going at any time.

A Huge Pan.

The New York Novelty Works have completed an immense copper vacuum pan, weighing five tons, for the Boston Sugar Refining Company. It is 7 feet and 6 inches deep, and is welded together in the most substantial manner. Its entire cost will be about \$8,000, and it is one of the largest in the world.

Castor Oil in Cholera.

The cholera patients of King's College Hospital, in London, were successfully treated, as Dr. George Johnson says through the London *Times*, by castor oil administered in half ounce doses until the bowels re-act. He says, that in fifteen cases taken after decided collapse, twelve recovered.

Professor Morse is said to have discovered the skeleton of a mastodon near Poughkeepsie, and is now at work excavating it. It is spoken of as the most perfect specimen ever yet found. The bones are partially petrified

A pumpkin vine spreading out of a manure heap at Pittsfield, produced 34 pumpkins whose aggregate weight is 592 pounds.—These must be what some people call "some pumpkins."