Scientific American. 292 Inventions. Mr. P. R. Mehlgarten, in the employ of the New Lowel Machine Shop, Lowell, Mass., is agent SCHIELS' ANTI-FRICTION CURVE.--Continued from Page 1. for the United States and is enabled to fill all

New Kind of Cotton Bagging. The Southern Whig says, "We understand

that Col. Mosery, a native of this State, and for many years a resident of Wilkes county, but now an enterprising citizen of Mississippi, has discovered a process by which a very superior article of Cotton Bagging can be made of the long moss so abundant throughout the Southern States. We learn that he is about securing a patent for his discovery, and that he has just returned from the North, where he as purchased machinery for a Bagging Factory which he is about to establish at or near Jackson. Mississippi. If this experiment should succeed as well as the discoverer of the new process anticipates, it will probably effect a revolution in the manufacture of this article, which enters so largely into the annual consumption of the planters of the South-as doubtless bagging manufactured of this material can be furnished much lower, while it is said to be far superior to any now in use."

Improvement in Pitchforks,

Mr. Alinzor Clark of Southfield, Richmond Co., Staten Island, has invented an improvement on pitchforks which is well worthy of patronage and for which he has taken measures to secure a patent. The improvement consists in the manner by which he can transform the fork from one of two prongs, to three prongs, so as to make it more suitable for forking and and pitching, both long and short hay, &c., as may be desired. The transforming of the prongs can be performed in a second and either as a the or three prongs, are retained firmly in their places. We like to see improvements in agricultural implements-agriculture is the right hand of our national prosperity.

New Pumping Apparatus.

We see it stated in some of our exchanges that Mr. W. G. Johnson of St. Georges, Deleware, has made some valuable improvements in apparatus for pumping water and has in operation an engine with a cylinder four inches in diameter, and twelve inches stroke, with which he is working eight pumps, each fifteen an a half inches in diameter of bore, and twelve inches of stroke, making sixty-four strokes per minute, and discharging the water nineteen feet high.

Wilson's Stone Cutting Machine.

In our article on Wilson's Stone Cutting Machine, last week, Messrs. Shelton & Flagg were mentioned as the proprietors of the patent. This was an error; Messrs. Shelton Flagg & Andrews, of No. 12 Wall street, Counsellors and Attorneys, are the Attorneys for the proprietors, and are their agents in this city. There was also an error in the name of the firm owning the machines now at work in New York-the true name is Sherman & Houdayer.

New Iron Bridge at Washington.

Mr. Rider of this city has put up one of his iron Bridges over the Creek, at Washington. It has a span of 110 feet; it has two carriage ways and two foot paths, and presents a very graceful appearance. It was tested as to capacity, last week, by Mr. Rider in presence of President Taylor, Mr. Ewing of the Home Department and the Mayors and Councils of Washington and Georgetown.

New Carriage Step for Stages.

Some of our omnibuses have got up a new weight per annum, and that an acre of cocoa nut trees, requiring little cultivation, will procarriage step, which is thrust out when the In some instances, the old forms evidenced centre of the hole in B must be drilled out, duce at least twice as much sugar as an acre door opens, and springs in when the door closes. This is done by the driver pressing with and the two pieces rubbed against each other. of sugar cane requiring much more cultivaa less amount of friction than the new one, but this was for a limited period only at the the rubbing surfaces being cleared occasionaltion. his foot upon a spring. This step will prevent commencement, as very quickly the destruc- ly with a soft brush, removing any particles of the boys from riding for nothing. We called The Austrain government has notified that it tive wear, increasing towards the centre, caussand which may scratch one or other of the attention to a step of this kind in volume 4, will pay 20,000 ducats to the person who will and are glad to see its introduction. ed so much friction that the parts adhered surfaces. After continuing the movement for construct and deliver the best locomotive for firmly together. a short time, the inclination to the anti-fric-Silk Manufactory in Massachusetts. the railway which passes by the Summering, The conformity of this principle with the tion curve gradually appears, and the longer the mountain which separates Styria and the M. Vogel, a Swiss gentleman and the inworkings of nature is a circumstance arguing the rubbing is continued, the nearer do the sur-Archduchy of Austria. ventor of the heddle machine, is about to start most favourably for the application of the new faces approximate to the contour referred to .a silk factory near Chelsea, Mass., to make system; and the following experiment, which The dotted lines in fig. 8 illustrate what is Among the passengers by the Avon steamribbons, vestings and all kinds of figured silk any one may easily try, affords the evidence meant. Mr. Schiele has exhibited the aper, from the West Indies, lately, was a negro work. physician, who visits England to submit to the paratus he has employed, together with the required by the practical man. Alum and Muriate of Soda are found in con-Take two pieces of chalk, A and B, fig. 8, results obtained, to any one who may wish to government a plan, founded on scientific expe-[P siderable quantities in Columbia and Lincoln A is cylindrical and conically tapered on one pass his own judgement upon the idea, as re- riments, to supersede steam as a propelling to counties, Georgia. The muriate stoda is salt. end, which is made to nt nicely into B. The duced to practice. power, but which will end in -

Having presented on the front page, fig. 4, a | of their axis; D the diameter of the larger section of a regulator of a locomotive engine, part; d the diameter of the smaller part; L it will be understood that the same curve is ap- length of generating curve; G the distance of connected with his agency. plicable to all revolving valves, (perhaps subthe centre of gravity of the curve from the axstitutes for slide values,) revolving joints in is; C the co-efficients of friction, and N the pipes, spindles of lathes, railway turn-tables, number of revolutions. The curve is one of footsteps of upright shafts, and numerous othgreat grace, reminding us of Hogarth's "bounder applications, which will strike the mind of ing line of beauty," and is most accurately the mechanician at once. The friction of this drawn by the apparatus, fig. 1, which is concurve in its bearing, is at a minimum, and structed by Mr. Schiele. may be expressed as follows :- 8GLNP

$C(D^2-d^2)$

principle to the grinding surfaces of MILL where P is equal to the whole pressure, the STONES, being a vertical section, and shows rubbing surfaces have to bear in the direction beautifully how the gradual variation of the

Figure 5 is an ingenious application of this

Figure 5.



curvature in relation to the increasing distance | oil cup is in communication with the lower of the parts from the centre of motion, equalstep, to lubricate it. The oil gathers in the izes the rubbing pressure in the most perfect step at I, and runs off in the small conduit, N. manner. The lower step at I is supposed to 0 is a canal round the stone, B, for receiving the grain. The space between the rubbing bear about equal pressure from the side and from below, in the direction of its axis and the surfaces adjoining the canal opens sufficiently to receive the grain, which gradually descends inclination of its thicker part is at B, fig. 1. until it is ground, when it passes off by a For the construction of the rubbing surfaces spout below, (not attached.) S is the band; of mill stones, it is taken at an inclination of a a are sills to support the apparatus. about 45°, as at B, fig. 1, for the larger diam-To afford a comparitive test of the effect eter; this being considered sufficient for the produced by the new curve, in relation to that grain to slide down. The application of the of ordinary rubbing surfaces, the inventor curve is also shown in fig. 5, to footsteps. A formed a variety of frictional contours of equal is the upper or inner running mill stone; B is diameters from the same cast of iron, carefully the lower or side stationary one: C is the spinannealed, and compared each of them sepadle secured to the stone by a nut, D. E is the rately, under different pressures, in the direc-

can be raised by securing them in the frame, Fig. 6, of our engravings, represents a sec K L. These frames are fastened to the larger itonal view of the different forms tested; and stone by nuts, TV, screwing on bolts, U. An fig. 7 exhibits the same after wear.

tion of their axes, with the proposed curve.

Figure 8.



pulley. The pivots run in bearings, H I, which

Figure 6.

orders through the company and to attend to any communication, post paid, upon business

Manufactures from the Cocoanut.

" The cocoa manufactures are remarkable for simplicity of the process resorted to, and for the usefulness of the articles produced, in many instances, from materials formerly thrown away as useless. The cocoa nut as it comes from the tree consists-first, of the outer husk, composed of fibres matted and adhering together; secondly, the shell; and, thirdly, the kernel. The manufacturers up to the present time employed only the outer husk and kernel. The natives of India have long used the fibres obtained by rotting the outer husk till the fibres can be seperated by beating the husks .--The fibres are spun into yarn by the native girls and women, by rubbing such fibres between the palm of the hand and the surface of the leg; and in this manner is made the large quantity of Coir yarn brought into that counand used for weaving cloths for covering passages and rooms, and also matting for various uses. Notwithstanding this rude mode of spinning the fibres up to the present time no better means have yet been introduced; and the whole of the yarn employed in England try is imported. This, however, may be accounted for by reason of there having been no practical mode of obtaining the fibre in Britain from the husks till very lately. Now, however, that ready means of obtaining the fibres from the husks are known, it is reasonable to expect some better means of spinning will be invented. The husks are beaten to obtain the fibre, which consists of three descriptions :first, a light elastic fibre suitable for stuffing furniture; secondly, a coarser fibre used for making mats; and thirdly, a strong fibre used for brushes and brooms. The husks are soaked for some time, then subjected to the presure of grooved rollers, and then by successive processes of carding by revolving cylinders armed with bent teeth, the fibres are combed out, the separate descriptions of fires being deposited in different receivers. The uses of these fibres are for making of brushes, brooms, mats, and mattresses. The kernels are dried in the sun, then pounded in mills to extract the oil; but in more modern times the dried kernel has been pressed between mats in powerful presses .--The oil for the most part is sent to England, and was formerly largely employed in the manufacturing of candles. The oil being, when it comes to London, of about the consistency of lard, requires pressing to separate the stearine from the œlaine, and this is done between mats of cocoa nut fibre pressed in powerful presses. The stearine was used forcandles at first alone, then in combination with stearic acid of tallow, producing what are called composite candles; and it was the introduction of stearine of cocoa nut, combined with stenc acid, which constituted the first step to the great improvement which has taken place in the manufacture of candles. The larger quantities of cocoa nut oil, however, are now exported to France to make soap,-the use of such oil in candle making being now for the most part substituted by palm oil. It has ately been proposed, in Ceylon, to employ the juice of the cocoa nut tree for the making of sugar; it being considered that each tree is capable of producing upwards of one hundred