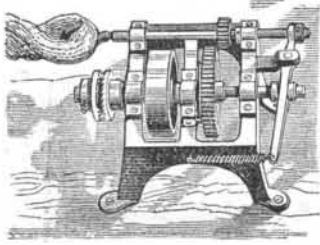


RECENT INVENTIONS.

Yarn Hanking Machine.

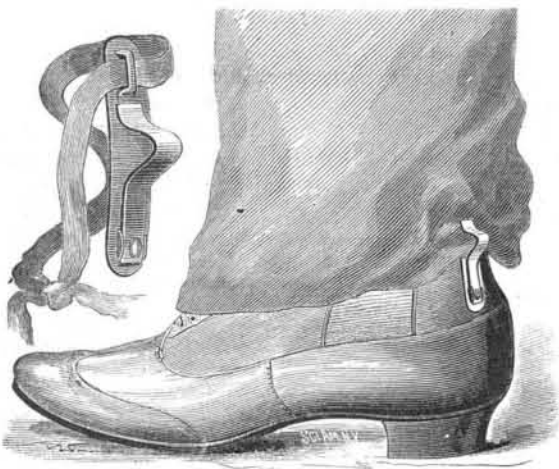
The engraving shows an efficient little machine for hanking all kinds of yarn and twines. It does its work rapidly and with uniformity. Two shafts are journaled in a suitable frame; one of them carries the hanking hook, and is provided with a pinion and a spring-acted clutch lever, which moves the shaft lengthwise in its bearings when the hanking hook is relieved. The driving shaft carries a sleeve on which is mounted the driving pulley. The shaft moves endwise in the sleeve, and carries at one end a clutch capable of engaging a serrated collar on the end of the sleeve, and at the other end a grooved collar engaged by the spring-acted clutch lever. The driving shaft carries a gear wheel capable of engaging the pinion on the hook shaft when the latter is moved endwise by a slight pull on the hank. The gear wheel carries a stud in one side which is engaged by a stop attached to the frame, and stops the hook with its point upward or outward whenever the pull on the hook is released. The pulley on the driving shaft revolves continuously, and when a hank of yarn is placed on the hook and pulled slightly, the pinion is brought into engagement with the spur wheel, and the clutch at the end of the drive shaft is brought into engagement with the notched collar on the sleeve, when the hook is revolved, quickly twisting the hank. When the hank is released the gearing stops and the operation may be repeated. This invention has been patented by Mr. John F. McAfee, of Pleasant Hill, Mo.



The engraving shows a simple and inexpensive device for holding up the legs of pantaloons to prevent them from being injured or soiled by dragging in the mud in bad weather. The invention consists in a plate having a curved spring attached to it by a rivet, and having formed in it a loop, which is offset so as to allow a tape or strap to pass straight through it. The tape is the only fastening required to keep the device in place on the ankle. The construction of the fastener is clearly shown in the detail view, while the other view shows the manner of applying it. The tape is tied around the ankle, and the hem of the pantaloons is placed under the spring. This device is very quickly applied and removed. It obviates the necessity of turning up the pants, and effectually supports them so that they will not touch the walk or the ground. This invention has been patented by Mr. Charles J. McDermott, P. O. Box 84, Sandy Hook, Conn.

New Pantaloons Protector.

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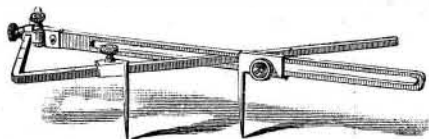
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Instrument for Ascertaining the Draught of Moulding Cutters.

Mr. Granville M. Drummond, 42 to 48 West 13th Street, New York city, has recently patented an instrument for laying out the cutting edges of moulding cutters, so that they will cut a moulding of the desired pattern. The device consists in an angle bar provided with a slide, to which an arm is pivoted, the latter being provided with a slide having a pointer. The angle bar is also provided with a slide carrying a pointer, and by means of the two pointers the height

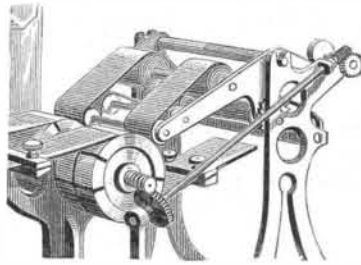


of a member of the moulding is measured, and then the end of the arm and the end of the bar are separated until the angle bar rests against the slide of the arm. The distance

between the pointers will then be the required draught of the cutter at the points corresponding to the certain member of the moulding. The slides are provided with binding screws to hold them in position after being adjusted. This instrument not only saves a great deal of time, but insures accuracy.

Lubricator for the Commutators of Dynamos.

This apparatus is for lubricating the commutators of dynamo electric machines to prevent the brushes from cutting into the commutators. The invention consists in a rocking frame provided with rollers to which bands saturated with oil are attached and with other rollers over which the bands pass. One of these rollers, to which the bands are attached, is provided with a ratchet wheel with which a fixed pawl spring engages, which rotates the roller when the frame rocks, thus winding the bands from one roller to the other, so that a fresh surface of the bands will come in contact with the commutator every time the frame rocks. The frame is rocked by an eccentric wheel operated from the dynamo shaft. This invention has been patented by Mr. Levi P. Dollison, of Wabash, Ind.



Krao, the "Human Monkey."

Through the courtesy of Mr. Farini, I have had a private interview with this curious little waif, which he is now exhibiting at the Royal Aquarium, Westminster, and for which he claims the distinction of being the long sought for "missing link" between man and the anthropoid apes. Krao certainly presents some abnormal peculiarities, but they are scarcely of a sufficiently pronounced type to justify the claim. She is, in fact, a distinctly human child, apparently about seven years old, endowed with an average share of intelligence, and possessing the faculty of articulate speech. Since her arrival about ten weeks ago in London, she has acquired several English words, which she uses intelligently, and not merely parrot fashion, as has been stated. Thus, on my suddenly producing my watch at the interview, she was attracted by the glitter, and cried out *c'ock, c'ock*, that is, *clock, clock!* This showed considerable powers of generalization, accompanied by a somewhat defective articulation, and it appears that her phonetic system does not yet embrace the liquids *l* and *r*. But in this and other respects her education is progressing favorably, and she has already so far adapted herself to civilized ways that the mere threat to be sent back to her own people is always sufficient to suppress any symptoms of unruly conduct.

Physically, Krao presents several peculiar features. The head and low forehead are covered down to the bushy eye brows with the deep, black, lank, and lusterless hair characteristic of the Mongoloid races. The whole body is also overgrown with a far less dense coating of soft black hair about a quarter of an inch long, but nowhere close enough to conceal the color of the skin, which may be described as of a dark olive-brown shade. The nose is extremely short and low, with excessively broad nostrils, merging in the full, pouched cheeks, into which she appears to have the habit of stuffing her food, monkey fashion. Like those of the anthropoids her feet are also prehensile, and the hands so flexible that they bend quite back over the wrists. The thumb also doubles completely back, and of the four fingers, all the top joints bend at pleasure independently inward. Prognathism seems to be very slightly developed, and the beautiful round, black eyes are very large and perfectly horizontal. Hence the expression is on the whole far from unpleasing, and not nearly so ape-like as that of many Negroes, and especially of the Javanese "Ardi," figured by me in *Nature*, vol. xxiii, p. 200. But it should be mentioned that when in a pet, Krao's lips are said to protrude so far as to give her "quite a chimpanzee look."

Apart from her history, one might feel disposed to regard this specimen merely as a "sport" or *lusus naturae*, possessed rather of a pathological than of a strictly anthropological interest. Certainly isolated cases of hairy persons, and even of hairy families, are not unknown to science. Several were figured in a recent number of the Berlin *Zeitschrift für Ethnologie*, and, if I remember, both Crawford ("Journal of an Embassy to Ava") and Col. Yule ("Mission to the Court of Ava") speak of a hairy family resident for two or three generations at the Burmese capital. This family is reported to have come originally from the interior of the Lao country, and in the same region we are now told that little Krao and her parents, also hairy people, were found last year by the well known Eastern explorer, Mr. Carl Bock. Soon after their capture, the father appears to have died of cholera, while the mother was detained at Bangkok by the Siamese Government, so that Krao alone could be brought to England. But before his death a photograph of the father was taken by Mr. Bock, who describes him as "completely covered with a thick hairy coat, exactly like that of the anthropoid apes. On his face not only had he a heavy, bushy

beard and whiskers, similar in every respect to the hairy family at the court of the King of Burmah, who also came from the same region as that in which Krao and her father were found, but every part was thoroughly enveloped in hair. The long arm, and the rounded stomach also proclaimed his close alliance to the monkey form, while his power of speech and his intelligence were so far developed that before his death he was able to utter a few words in Malay."

Assuming the accuracy of these statements, and of this description, little Krao, of course, at once acquires exceptional scientific importance. She would at all events be a living proof of the presence of a hairy race in further India, a region at present mainly occupied by almost hairless Mongoloid peoples. From these races the large straight eyes would also detach the Krao type, and point to a possible connection with the hairy straight eyed Aino tribes still surviving in Yesso and Sakhalin, and formerly widely diffused over Japan and the opposite mainland.—A. H. Keane, in *Nature*.

Aid of Machinery to Labor.

Labor is a natural burden upon humanity; yet it is the key which unlocks the storehouse of wealth, convenience, and luxury. By the use of invented and applied machinery muscular work is greatly relieved, and results cheaply and extensively obtained. In all this, however, intelligent skill is not supplanted; but rather there is a wider field created for the same, and more and more does it come into demand as the facilities for production multiply. Man, of course, may exist as our forefathers did, living in a rude and limited way on the necessaries of life, and even these secured only at the expense of oppressive toil; but as improvements are made, and varied and enlarged benefits flow therefrom, he rises in the scale of being, and the sphere of life is extended. The easy supply of want in any direction only begets efforts in others; and as matters thus progress, instead of the demand for useful industry being diminished, there is more and more inducement to laborers to employ themselves with the exercise of every faculty.

It is a mistaken view, therefore, to imagine that there is the least tendency in the use of machinery to supersede the necessity of workmen, and take from them all opportunity to labor. Their skillful hands, discerning eyes, and intelligent brains are surely destined to find an ever widening field. Of course, the worker must not remain stationary, content to live and die an antiquated fossil, while all the world about him is changing and progressing. What he once did painfully and slowly with the hands alone he must now more abundantly accomplish through the agency of labor-saving devices and tools. Society has need of more production, and will only be satisfied with even more and more. With its prosperity and progress the laborer shares; and to-day he has more of the comforts and luxuries of life than were enjoyed by kings a hundred years ago. The prejudice against improvement, and the jealousy against capital and associations in their efforts to manage and direct production into more efficient and beneficial channels should disappear. As changes occur, old ruts should be promptly abandoned. By adapting himself to circumstances as they are thrust upon him, there is not a man who cannot succeed and find a market for his labor far beyond his ability to supply.—*Dubuque Trade Journal*.

New Iron Bridge over the Yazoo River.

The Memphis, Vicksburg, and New Orleans, or what is better known as the Wilson line of railroads, is now building quite a large iron bridge over the Yazoo River, some twelve miles above Vicksburg, Tenn. The construction of the piers for the bridge has been vigorously prosecuted for some time past. The point selected is unusually difficult and expensive for the construction of a bridge, as there is no bed rock or other material within reach for the foundations to rest upon, and the river, even at low water, is nearly 40 feet deep.

The bridge will consist of three spans about 300 feet long each, two of them fixed spans, and the third, a draw span, located in the middle of the channel. These will be some 6 feet above the level of extreme high water, and slightly above the elevation of the banks on either side. There will be five piers, one at each end on the bank and three in the river. To obtain the requisite supporting capacity, piles—100 in the pivot and 72 in each of the other two channel piers—are driven to a depth of 40 feet into the river bottom. The outfit to drive these piles consists of a regular pile driver engine, with a 4,000-pound hammer, a Skinner steam hammer weighing 7,000 pounds, and a large duplex Worthington pump to supply a water jet, when this can be used in place of driving, or to assist the latter. When the jet can be used to advantage, pipes are so arranged that one or more powerful jets are brought into play at the point of the pile, excavating a hole for this latter to sink into. The caisson for the first pier is 56 feet in diameter, with sides 2 feet thick and 6 feet high; the roof consists of solid timber and is 7 feet thick.

The piers, when complete, will consist of piles sawed off level with the bottom of the river. Surmounting these is a solid platform (the roof of the caisson) of timber 7 feet thick, on which will rest the piers proper, which will be one continuous mass of concrete. The cost of the entire structure is estimated at from \$225,000 to \$250,000.