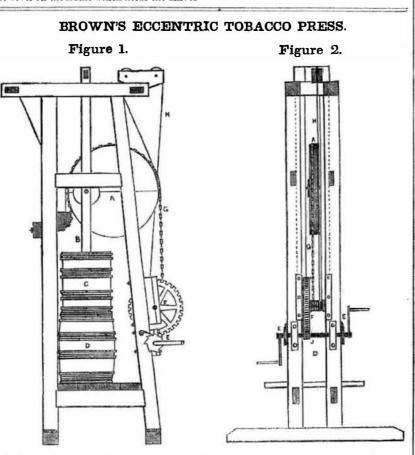
# Scientific American.

Improved Machinery for Grinding Spiral Knives. Mr. Jas. L. Plimpton, of Westfield, Mass., has invented some valuable improvements on machinery for grinding Spiral Knives, for which he wisely has taken" measures to secure and excellent features; one is to grind the edge that as the stone decreases in diameter the feed of every one of the same bevel, and to change of the knive frame becomes slower in proporthe bevel on the frame which holds the knives tion.

without changing the knife or knives, as in the old way; the other is to accommodate the feed of the knives on the frame to the speed of the stone, to make the grinding time uniformthis is done by a friction roller on a swinging a patent. The invention embraces two new frame, running in contact with the stone, so



view of a press constructed upon the principle embraced in the patent of Mr. A. D. Brown, of Clinton, in Georgia. It is intended for pressing tobacco on plantations, but it is equally applicable to the pressing of hay, as a cider press, &c. As the principle patented is described on page 96, this vol. Sci. Am., we need not describe it again. In this press the crank, axle and wheel, and the eccentric pully are combined, and according to modifications of gearing, the power may be increased to any amount; the principle of great speed where little power is required, always being maintained, and vice versa. A is the eccentric lever pully; B is the stock of the pressure block; C and D represent the barrel and packing cov. er; E E are the ratchets; F, the cog wheel on the drum shaft, which is driven by a pinion, J. (fig. 2); G is the chain passing round the drum, F, over the eccentric pully, and is secured on a strong block on the frame ; H is the rope which raises the follower and block up, after the tobacco, &c., is pressed in the barrelor ed in our columns. bex. It is not necessary, after our reference

### Variations of the Compass.

The loss to Great Britain by shipwrecks. appears from carefully prepared statistics, to amount annually to between 500 and 600 ships, or about three vessels in every two days. The cause has been attributed, in a great measure. to misdirections of the compass produced by attractive power of the iron used in the construction of the vessels, as well as the funnels, tanks, and guns employed in men-of-war. The result varies in different cases, and a remedy

This engraving represents a side and an end | above, to describe the operation, any further than to say, that if the pin is 1-16th of the diameter of the eccentric pully from its periphery, and a 48 inch cog wheel, 6 inch pinion, 8 inch drum for the chain, and 15 inch cranks are used, the power applied will be multiplied nearly 300 times; any amount of power can be applied by this kind of gearing. It is, perhaps, a work of supererogation in us to say any thing more in favor of this simple press-to show the beauty and elasticity of application to so many useful purposes, and to set forth its very extraordinary merits. In Georgia, where Mr. Brown has been known for twenty years as a good practical mechanic, his press has at once arisen to eminence, and come into extensive use, and, at the present moment, he has orders from almost every State in the Union for presses, for cotton, hay, tobacco, or some other purpose. All the parts being so simple, so easily made, and so easily kept in repair, no wonder it at once met with a favorable reception when it was first publish-

> of double bellows, consisting of two bags of skin, by which the air is forced through the sian, Saxon, and Austrian lines of tele long tapering tubes of the two horns of the oryx. The person using the bellows squats between the two bags, which he raises and depresses alternately, working one with each hand. Their hammer and anvil consist of two stones. They nevertheless contrive to turn very neat workmanship out of their hands, such as spears, battle-axes, assagais, knives, sewing-needles, &c. The men of this tribe

and embowers the trellis work of quite a large garden, besides climbing a tall tree. The weight of the immense clusters of grapes hanging upon it, now about half grown, is estimated at a ton. To stretch out any of the branches in a direct line, they would measure from three to four hundred feet. The description of the grape is not natural to the country, but was brought to Natchez in the old Spanish times. It is called the "Jack Grape," from "Spanish Jack," the nickname of the Spanard who planted it. Some years ago, Madame Bingaman, now dead, offered Mr. Casey five hundred dollars if he would remove the vine safely to her garden, in the environs of the city; but no sum of money whatever, would induce the owner to part with it. It produces a wine which has the taste of Hock.

#### The Electric Telegraph in Europe.

It is well known that various projects have been proposed for a Transatlantic Telegraph : this will be no easy matter, owing to the length of wires required. In the present state of Electrit Telegraph science, it is impossible, owing to the distance of such a length of wire letween the batteries. Between Calais in France, and Dever in England, the distance being no more than 25 miles, the project of an ocean telegraph is not only feasible, but the construction of one is in actual operation to unite France and England. The Telegraph is to be on Bain's principle, now so well known in America. The telegraph, like steam navigation, will be themeans of spreading rapidly the arts and sciences of civilized nations among all lands. The Dublin University Magazine says :

"When the powers of this improved telegraph shall be brought into all operation, and when the mode of intercompunication shall be available by the public inall parts of Europe, great changes in the social and commercial relations of the centres of commerce and population must be witnessed. Hitherto, the use of the telegraph has been mited to the Government. The public has ben altogether excluded from it. Such a syster, however, cannot be of long duration, and th precursors of a speedy change are already aparent. A project of law has been presented the Legislative Assembly, by the French Gvernment, to open the telegraph to commerc and the public. Lines of electric telegraph ave been constructed, and are already in veration, along the principal lines of railway irFrance. A commission has been appointed, by the Belgian Government, to report upon thmeans which ought to be adopted to construc lines of electric telegraph throughout that kindom. Lines of considerable extent are in opation in the Prussian States, and still more exaded systems are in preparation. Measures. & in progress for the establishment of lines of ectric telegraphs in the territories of Ausia, Saxony, Bavaria, Wirtemburg, Baden, anall the lesser states of Germany. The Emper of Russia has issued orders for the constru tion of lines of telegraphic wires to connect \$ Petersburg with Moscow, and with the Prugraph."

#### Sticking, or Court Plaster.

Bruise a sufficient quantity of isinglass, and let it soak in a little warm water for fourand-twenty hours; expose it to heat over the fire till a greater part of the water is dissipated, and supply its place by proof spirits of wine, which will combine with the isinglass.

# and preparing the weft, previous to weaving. Scientific and Mechanical Information.

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Junentions

Improvements in Carding.

Messrs. J. Lambert & J. Zimmerman, of

Waterloo, N. Y., have made an improvement

in the working of Carding machines, for which

they have taken measures to secure a patent,

and which is said to card double the quantity

at least, in the same time, than has usually

been done by the old mode of operation. The

"Workers," instead of carrying round the wool

from the main cylinder, at once, by revolving in

a contrary direction, revolve with it, and car-

ry the wool but a short distance to the strip-pers, and thus, by the way, they are geared;

the "workers" are rendered workers indeed,

Tapestry, Velvet, and other Carpets.

has taken out a patent in England for an im-

proved method of manufacturing carpets, the

designs of which are produced from the weft

threads, which are previously printed to pro-

duce the design or pattern. He makes velvet

carpets by employing chenile weft, previously

printed, which weaves up into the patterns de-

signed; he also makes carpets by the printed

weft, which work up into patterns on both

sides of the carpet, like those of the ingrain

carpet. The principle of this important im-

provement in carpet weaving to do away

with the jacquard, lies in the mode of printing

Mr. James Templeton, of Glasgow, Scotland,

and not merely in name.

More than ever, our attention for the future will be devoted in procuring the latest and most important information from all parts of the world, respecting new and useful improvements and discoveries. Our correspondent in London, of whom we spoke a few weeks since, will impart interest to our columns, by his reviews on the Grand Industrial Exhibition, to be held in London next year. All inventors prefer to have engravings and descriptions of their inventions brought first before the public, through the Scientific American. The reason is plain; we have the largest circulation of any other paper, and the public look to our columns for what is new and useful.

Improvement on Steam Engines. Messrs. B. Donkin and W. Farey, styling themselves Civil Engineers, have recently taken out a patent in England for improvements in disc engines, connected with which, their patent embraces an improvement in working slide valves to equalize the pressure of the steam on both sides of the slide; to do this, the face on which the valves slide, is serated or grooved, and these grooves will contain steam under the valve.

#### To Inventors and Patentees.

Our list of patent claims is worth more to you than the price of the volume. Our index is so arranged that all the patents granted, are classified, and affords a most useful and standard work of reference. Inventors who consult their own interests, cannot be without the Scientific American.

## Crank and Pully.

A number of experiments with two boats, the one named "Crank," and the other named "Pully," have lately n made on the East River, by Mr. Peter River, by Mr. Peter tes, to test the com-parative value of Mr. Yates' invention; the Pully, we have been informed, has universally been the victor. In the course of one or two

	weeks we will illustrate Mr. Yates' invention		also manufacture large wooden bowls, which	
	of the "Pully," as applied to a steam en-		they cut out of the solid piece, the tool they	
	gine, in place of the crank.	has accordingly been established in England,	use for this purpose being a small implement	ture shall be such that, when cool, it may
1	gine, in place of the claik.	where every ship of the Royal navy has its	shaped like an adze.	form a trembling jelly.
	Notice.	compass adjusted before proceeding upon a		Extend the piece of black silk, of which you
	In referring to the address of the proprietors	cruise. The przetice has, as yet, not been	States.	propose making your plaster, on a wooden
	of the Rotary Brick Machine in our last week's	CAUCIFICCU DO ENO INCICUITORIO INDITINO.	Under this head the Natchez Free Trader,	frame, and fix it in that position by means of
	number, it should have read, "Address Wag-		of the 10th inst, has the following paragraph :	tacks or pack-thread. Then apply the isin-
	ner & Imlay, 203 Market, or 74 Walnut st.,	The Bakatlas work a great deal of iron,	Mr. William Casey, corner of Union and	glass (after it has been rendered liquid by a
	care of A Miller, Esq., Philadelphia.	manufacturing various articles, with which	State streets, in the city of Natchez, can boast	gentle heat) to the silk with a brush of fine
	India Rubber Flute.	they supply the neighboring tribes. They	of a grape vine which is, undoubtedly, the	hair (badger is the best). As soon as this
	An eight keyed flute made of india rubber	obtain their iron from ore, which they procure	monarch vine of the United States. It rises	first coating is dried, which will not be long,
	has been made in this city, by Mr. Badger.	by excavating in the surrounding mountains.	from the ground in a single trunk of some three	apply a second; and afterwards, if you wish
	It has a fine polish and looks like tortoise	This ore is smelted in crucibles, a great deal	inches in diameter, nearly straight, and well	the article to be very superior, a third. When
ЦЦ a	hell. It has a beautiful tone and cannot be	of the metal being wasted, and only the best	proportioned, to the height of about nine	the whole is dry, cover it with two or three
En a	ffected by the weather.	and purest being preserved. They use a sort	feet, when it spreads into branches, and covers	coatings of the balsam of Peru.
99-	P			
Lo.	GA10			PFICE IC
- Second				