process of making paper from Indian corn, which is now in use by M. le Comte Lippe-Weissanfeld.

All kinds of paper may be made from it, and in some respects the papers are superior to those made from rags. It requires but little sizing to fit it to receive ink, the natural leaf containing a substance which answers for it, but which can easily be extracted when desirable. It is bleached rapidly, easily, and inexpensively, and may be used for wrapping-papers without bleaching, as it is but slightly colored. It is stronger than the best paper from rags and has not the brittleness of straw-paper.

In M. Moritz's process, as no machine is necessary to convert the fibre into pulp, and this conversion is done in an entirely different way from the manufacture of paper from rags, there results a great simplification in the tools and a consequent notable reduction in the cost of making. A manufactory is now in operation in Switzerland. It is worthy of remark that the richest leaves in textile material are those which envelope the ear.—*Cosmos*.

On the Difference in Size of Medals of Different Metals obtained by Stamping, and by Casting in the Same Mould. By H. W. DOVE.

From the Lond. Edin. and Dub. Phil. Mag., October, 1860.

Baudrimont has found (*Ann. de Chim. et de Phys.* vol. lx. p. 78) that wires of different metals drawn through the same press are not all of the same thickness; for they are of different degrees of elasticity, and after being drawn through the press they expand to different amounts. This expansion is proved by the fact that, with the exception of gold wire, no wire can be drawn through the same aperture through which it has been pressed. Silver requires the least force, but the expansion caused by elasticity continues for several weeks.

It appeared probable that in stamping medals something similar would prevail, and that medals of different metals stamped in the same die would be different in size. This is most readily seen in those medals in which the impression is symmetrically arranged in reference to the edge, as is the case with the medals of the French Exhibition, in which the coats of arms encircle the French eagle in the middle. One of those in silver, and one in bronze, were placed in the stereoscope, the eagle being fixed in the middle. After some time, the stereoscopic combined medal was seen in the form of a hollow escutcheon, and of the color of an alloy of the two metals. Evidently, the reason of this lies in the nonius-like shifting of the individual lines of the impression. This result, which I have described (*Optische Studien*, p. 29), I have also obtained with large gold and silver medals which were kindly entrusted to me from the Royal Mint in Berlin. It was probable that medals obtained by casting would show the same thing, and this was found to be the case with tin, bismuth, and lead. The casts were very beautifully executed for me for this purpose by Prof. Kiss. Hiero's crown led to the application of specific gravity to detect an adulteration; the stereoscope is a new means.—*Poggendorff's Annalen*, vol. cx. p. 498.

Painting by Centrifugal Force.

In the establishment of M. Deffner, at Esslingen, among other objects, they make large quantities of bird-cages. In order to paint the wires, they are first immersed in a vessel of the paint, suffered to drip for a few minutes, and then placed in boxes on the circumference of a horizontal wheel of about two feet diameter which is turned with great rapidity. By the centrifugal force thus generated, the excess of paint is thrown off, and a thin and even coating only is left.—*Mittheilungen des Hanoverschen Gewerbevereins; Bull. de la Soc. d'Encour. pour l'Ind. Nat.*

Sulphide of Phosphorus for Matches.

M. Puscher, of Nuremburg, proposes the use of sulphide of phosphorus in place of the phosphorus itself, in the manufacture of matches. It is easily made by taking 4 parts by weight of phosphorus and 1 of sulphur coarsely powdered, placing them in a vessel of porcelain and covering them with water at 100° Fah.; in a few minutes the liquid sulphide is formed. The water is poured off as far as possible and a cold, and very thick solution of gum is added. The sulphuret mixes with this solution with great ease and rapidity. The sulphide of phosphorus is fluid even at 32°, and inflames more easily by friction in the air than phosphorus itself. Excellent matches may be made by using only 3½ per cent. of the sulphide. When the sulphide and gum are thoroughly powdered, the other ingredients, such as peroxide of lead, nitrate of lead, and a little sulphide of antimony are added. As the mixture is made cold, some rosin may be added to augment the flame. There is thus a great economy, both of phosphorus and of time, and the matches thus prepared have less smell than those made with phosphorus alone.—*Dingler's Polytechnisches Journal; Bull. de la Soc. d'Encour. pour l'Ind. Nat.*

AMERICAN PATENTS.

AMERICAN PATENTS ISSUED FROM APRIL 1, TO APRIL 31, 1861.

Adhesive Material,	A. J. Russell,	City of	N. Y.	2
Air Engines,—Hot	Stephen Wilcox, Jr.,	Westerly,	R. I.	2
—,—,—Steam and Hot	Darius Musselman,	Lucas co.,	Ohio,	30
Amalgamator,	S. E. Woodworth,	Murphy's,	Cal.	9
Augers,—Hollow	S. P. Gilbert,	Racine,	Wis.	2
Axes,—Manufacture of	Levi Dodge,	Cohoes,	N. Y.	2
Axgave Americana,—Dressing	E. J. y Patrullo,	Merida,	Mexico,	23
Baby Jumper,	J. A. DeBrame,	City of	N. Y.	30
Barometer,	H. A. Clum,	Auburn,	"	16
Bathing Apparatus,	J. C. Schooley,	Cincinnati,	Ohio,	2
Bed,—Portable Folding	G. N. Seidler,	Hartford,	Conn.	2
—,—,—Spring	Stewart Elder,	Buffalo,	N. Y.	23