

is next made to pass between a series of wooden rollers, which gradually consolidate and compress its fibres and free it of all the surplus water. By means of heated rollers, through which it is caused to pass, every particle of moisture is at length removed, and it is calendered by being pressed between heavy polished iron rollers. The positions of two small revolving wheels, with cutting services, between which it is caused to move, regulate its width as required, and it is finally wound upon reels, from which it may be cut off into sheets of any length.

The entire operation is so simple that the visitor who has an opportunity of inspecting it cannot fail to comprehend it almost instantly. The machinery, nevertheless, requires to be of exceeding accuracy, and is accordingly rather expensive. Its capacity admits of the production of 9,000 pounds of paper per day, but only about three-fourths of that amount is at present manufactured, or between 180,000 and 190,000 pounds per month. Two thousand tons of straw are yearly consumed here in the manufacture of paper. But forty per cent. of this, however, is available as fibre. The balance passes off into glutinous matter and silica, neither of which being convertible into dollars and cents represents an appreciable value. This immense waste in the raw material is, however, fully compensated for in the advantages of the product. Compared with paper made from rags, straw paper has more body for the same weight, is better adapted for fast presses, and it will not readily tear, and calenders much more smoothly. As to whether it can be produced at a cheaper rate, we shall not take it upon ourselves to state. There are probably not over half a dozen factories in the United States engaged in making it. Two or three of them are situated in New York and another in Cincinnati. There is but one newspaper establishment in Philadelphia which uses straw paper for printing purposes.—*Philadelphia Press.*

#### Making Paper from Corn Leaves.

We translate the following from *L'Invention* :—

The conversion of the fibres of maize into paper is today an industrial fact confirmed by extensive success, and this discovery cannot fail to influence considerably the price of paper. This discovery, it is true, is not absolutely new; in the Eighteenth century the manufacture was in operation in Italy with remarkable success; but, strange to say, the secret was kept by the inventor, and was lost at his death. Many attempts since made to revive the manufacture have all recoiled before the difficulty of removing from the leaves the silica and resinous matter which they contain, and which obstructs the conversion of the pulp into sheets. Happily, this secret has just been re-discovered, and not, as would have been anticipated, by a chemist, but by a simple Jewish writing-master—M. Moritz Diamant, an Austrian subject—to whom the new industry is going to give a considerable fortune. His process is applied at the present moment on a very large scale, at the imperial manufacture of Schlogelmühle, near Glonitz, in Lower Austria. Although the machinery of the establishment was constructed for working rags, and is not at all adapted to the kind of preparation that corn leaves require, the essay that has been made has had a prodigious success; the paper obtained leaves nothing to be desired in strength, homogeneity, polish and whiteness. In the last point, particularly, the sheet from corn surpasses that from rags, which always contain impurities that can be removed only with great difficulty.

It is Count Carl de Lippe Veissenfeld who operates at this moment the discovery of M. Moritz Diamant, interested, as may well be supposed, in the fabrication of paper from maize.

According to the German Journal from which we have

borrowed the preceding details, the principal advantages of this manufacture are the following :—

1. It is not solely possible to produce from the leaves of maize all the species of paper manufactured at this day; but it happens, furthermore, that in several respects this paper is superior to that made from rags.

2. But little starch is required to prepare the paper for receiving writing, which results from the fact that the corn leaves already contain a natural ingredient that takes the place of starch. This ingredient may be easily removed if desired.

3. The bleaching of this paper is effected almost instantaneously by a process the most simple and the most efficacious. It is, furthermore, only feebly colored, and for wrapping paper, bleaching is entirely unnecessary.

4. The paper from maize is stronger—more tenacious—than the best paper made from rags. There is none of the fragility which characterizes paper into the composition of which ordinary straw enters—a fragility which is principally due to the abundance of silica contained in straw.

5. In the process invented by M. Moritz Diamant, no species of machine being necessary to convert the fibres of maize into paper pulp, and this conversion being made by means entirely different from those employed in working rags, there results a great simplification in the apparatus, and consequently a notable reduction in the manual labor and the expense of the manufacture.—*Scientific American.*

#### British Wool.

Mr. Caird, M.P. (of Michigan Central Railroad notoriety), read at a recent meeting of the Council of the Royal Agricultural Society of England, a paper upon British wool. He remarked that, although there had been an immense increase in the importation from foreign countries and the colonies during the last twenty years, the rearing of sheep for the production of British wool continued to be one of the most profitable branches of our industry. Within the period referred to there had been, no doubt, in the imports from Spain and Germany, a diminution of about 4,000,000 pounds; but at the same time, to compensate for this, there had been an increase from Russia, the Low Countries, Denmark and Portugal, of no less than 20,000,000 pounds. There had been an increase within this period, in round numbers, from Australia, of from 13,000,000 pounds to 54,000,000 lbs.; from South Africa, of from 1,000,000 pounds to 14,000,000 pounds; from the East Indies, of from 4,000,000 pounds to 14,000,000 pounds. At home the increase in the amount of wool produced was equally remarkable. In 1842 the home-grown wool did not exceed 100,000,000 pounds; it now amounted to 120,000,000 pounds. There had been, in short, an augmented supply of wool to the extent of nearly 75 per cent. It had not been followed by any diminution of price to the home producer. Now, the countries in which the production of wool is likely to increase most rapidly, viz., Australia, the East Indies, South Africa and South America, are all unsuitable to the production of the lustrous long wools, for which there is a great demand. The British Islands supply this wool in the greatest quantity. They may be almost said to have a monopoly of it, and there are no countries which can enter into competition with them. Mr. Caird is, therefore, of opinion that the British wool-grower should develop its production as much as possible, and he thinks the supply may be increased by good farming and liberal feeding. The best cross that could at present be adopted on suitable soils would, he adds, be obtained by using the improved Lincoln or Leicester ram, in which the desirable qualities of length, lustre, strength and fineness of wool seemed to be best combined.