

**Egypt in the Time of Moses.**

We are only beginning to understand the height of civilization to which Egypt and other ancient countries around the Mediterranean had attained even before the time of Moses, says Sir John William Dawson, in the *Expositor*. Maspero and Tomkins have illustrated the extent and accuracy of the geographical knowledge of the Egyptians of this period. The latter closes a paper on this subject with the following words:

"The Egyptians, dwelling in their green, warm river-course, and on the watered levels of their Fayoum and Delta, were yet a very enterprising people, full of curiosity, literary, scientific in method, admirable delineators of nature, skilled surveyors, makers of maps, trained and methodical administrators of domestic and foreign affairs, kept alert by the movements of their great river, and by the necessities of commerce, which forced them to the Syrian forests for their building timber, and to Kush and Pun for their precious furniture woods and ivory, to say nothing of incense, aromatics, cosmetics, asphalt, exotic plants, and pet and strange animals, with a hundred other needful things."

The heads copied by Petrie, from Egyptian tombs, show that the physical features of all the people inhabiting the surrounding countries, as well as their manners, industries, and arts, were well known to the Egyptians. The papers of Lockyer have shown that long before the Mosaic age the dwellers by the Euphrates and the Nile had mapped out the heavens, ascertained the movements of the moon and planets, established the zodiacal signs, discriminated the poles of the ecliptic and the equator, ascertained the law of eclipses and the precession of the equinoxes, and, in fact, had worked out all the astronomical data which can be learned by observation, and had applied them to practical uses. Lockyer would even ask us to trace this knowledge as far back as 6,000 years B. C., or into the post-glacial or antediluvian period; but, however this may be, astronomy was a very old science in the time of Moses, and it is quite unnecessary to postulate a late date for the references to the heavens in Genesis or Job. In geodesy and allied arts, also, the Egyptians had long before this time attained to a perfection never since excelled, so that our best instruments can detect no errors in very old measurements and levelings. The arts of architecture, metallurgy, and weaving had attained to the highest development; civilization and irrigation, with their consequent agriculture and cattle breeding, were old and well understood arts; and how much of science and practical sagacity is needed for regulating the distribution of Nile water, any one may learn who will refer to the reports of Sir Colin Scott Moncrieff and his assistants. Sculpture and painting in the age of Moses had attained their acme, and were falling into conventional styles. Law and the acts of government had become fixed and settled. Theology and morals, and the doctrine of rewards

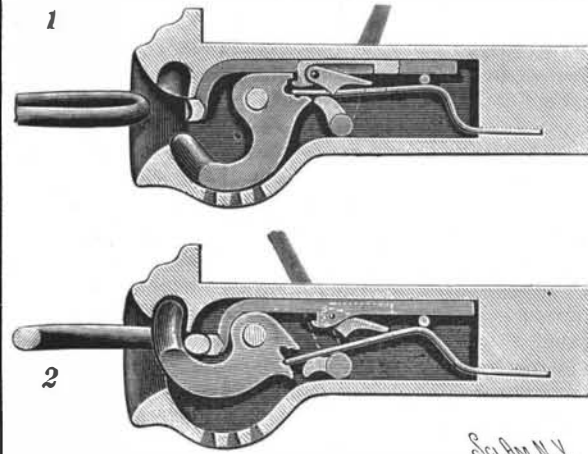
and punishments had been elaborated into complex systems. Ample material existed for history, not only in monuments and temple inscriptions, but in detailed writings on papyrus. Egypt has left a wealth of records of this kind, unsurpassed by any nation, and very much of these belongs to the time before Moses; while, as Birch has truly said, the Egyptian historical texts are, "in most instances, contemporaneous with the events they record, and written and executed under public control."

There was also abundance of poetical and imaginative literature, and treatises on medicine and other useful arts. At the court of Pharaoh, correspondence was carried on with all parts of the civilized world, in many languages, and in various forms of writing, including that of Egypt itself, that of Chaldea, and probably also the alphabetical writing afterward used by the Hebrews, Phoenicians, and Greeks, but which seems to have originated at a very early period among the Mineans, or Punites, of South Arabia. Educations were carried on in institutions of various grades, from ordinary schools to universities. In the latter, we are told, were

professors or "mystery teachers" of astronomy, geography, mining, theology, history, and languages, as well as many of the higher technical arts.

**AN IMPROVED CAR COUPLING.**

This coupling has a spring-pressed hook to engage the link, and a slide for locking the hook in open position, the slide being adapted to be engaged by the entering link. The construction is very simple, the cars fitted with this improvement being automatically coupled as they come together, while the uncoupling

**DUNLAP'S CAR COUPLING.**

may be conveniently effected without the need of trainmen going between the cars. The invention has been patented by Mr. William Dunlap, of San Diego, Cal. Fig. 1 is a sectional view showing the hook in open position, and in Fig. 2 the link is engaged by the closed hook. The hook has trunnions journaled in the sides of the drawhead, and its rear end has a lip pressed on by the end of a spring, which may be lifted by a cam on a transverse shaft connected with a rod, at whose outer end is a handle at the side of the car. On the same end of the hook is also a second lip, above the first one, adapted to be engaged by a hook on the under side of a slide, whereby the coupling hook may be locked in open position. The forward end of the slide is bent down, and has a head or cross-piece extending into the mouth of the drawhead, above the free end of the coupling hook, so that an entering link will strike the head of the slide and move it rearward, disengaging the coupling hook, and permitting the spring to swing the hook upward to engage the link. On the slide is pivoted a dog whose free end rests on top of the spring, and on the under side of the dog is a lug passing through a slot in the spring, the lug being adapted to be engaged by the cam actuated by the handle lever, whereby the slide may be moved forward to lock the coupling hook in open position. A notch in the rear end of the hook is

also adapted to be engaged by the end of the spring to lock the hook in closed position, the spring being disengaged from this notch by swinging the cam upward by means of the handle lever. Further particulars of this improvement may be obtained of Mr. E. M. Reinhardt, C Street, between 26th and 27th Streets, San Diego, Cal.

**Prizes for Hay and Clover Making Machines.**

In connection with the Darlington meeting of the Royal Agricultural Society of England for 1895 the following prizes are offered by the Royal Agricultural Society of England for: Class I.—For the best hay making machines, first prize, \$100; second prize, \$50. Class II.—For the best clover making machines, first prize, \$100; second prize, \$50. All prizes are open to general competition. The trials will take place during the hay harvest of 1895, on land selected by the society in the neighborhood of Darlington. The necessary arrangement for the grass and clover crops required for the trials will be made by the society. Notice of the place and date of the trials will be posted to every competitor as soon as they are fixed. Every competitor must himself provide for the delivery of his machines on the trial ground, and for the removal of the same after the trials. Horses will be provided by the society to work the machines during the trials, but competitors who desire it may provide their own horses. Every machine must be delivered at the depot on the trial fields in proper working order not less than two days previous to the commencement of the trials. The competitor will find one attendant to drive and work each machine. Any assistance given by the competitor himself or other workman will be noted by the judges. The order in which the several machines will be tested will be determined by the stewards, who will decide by lot. Machines are not to be worked under conditions as to weather and crop when such machines would not be used in the actual work of a farm. The attention of the judges and engineer will be particularly directed to the following matters: Price; weight; simplicity, strength, and construction; efficient protection of the gearing, and freedom of the machine from choking; excellence of work in turning and lightening up of the crop without damaging it; draught in work. Should the judges find any of the machines to be of practically equal merit, they are empowered to bracket them as equal, and so divide the prize money. Entries for the prizes in any of these classes must be made on or before Monday, April 1, 1895, and must be accompanied by a deposit of \$5 for each entry.

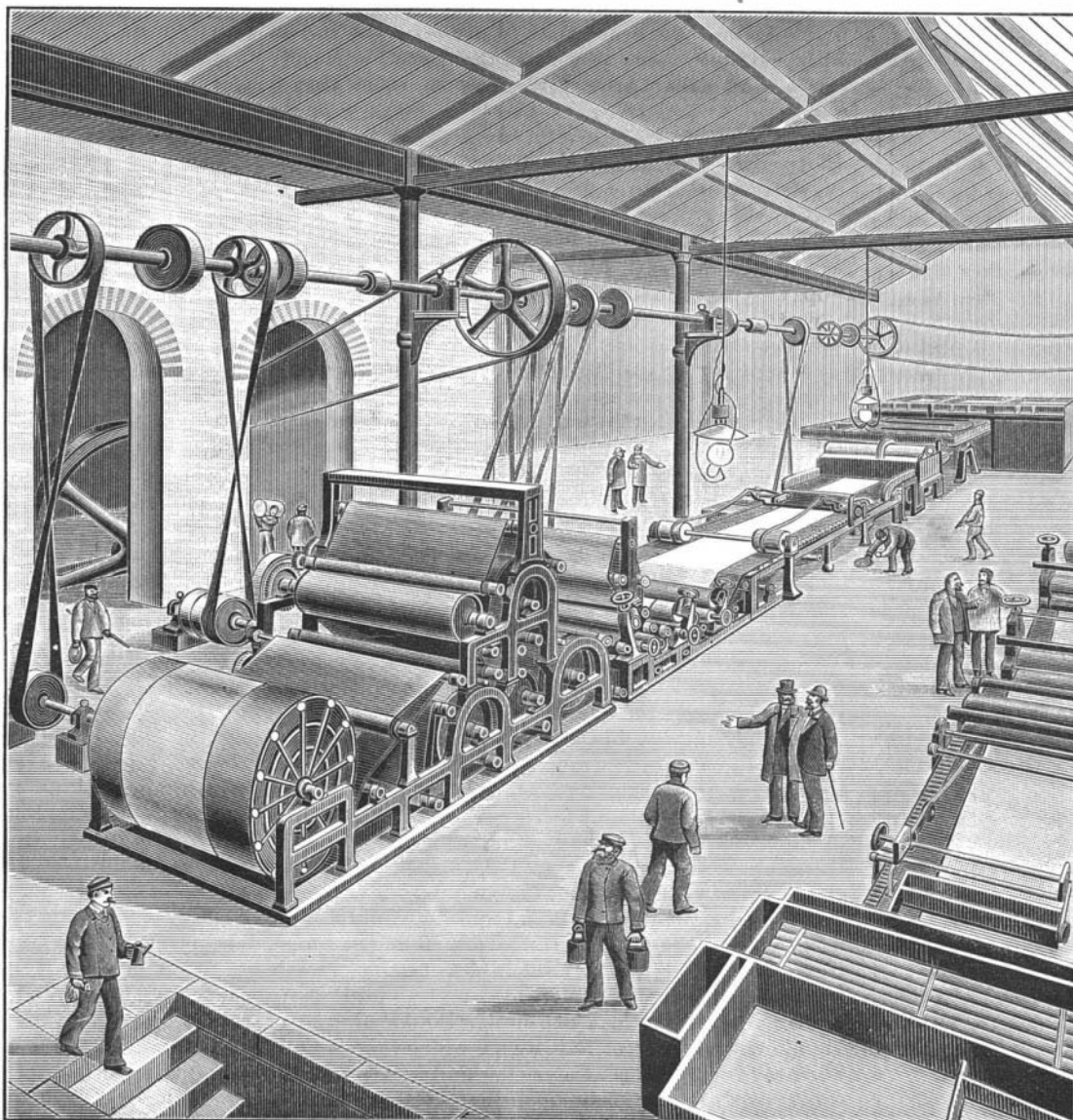
**CIGARETTE PAPER.**

Cigarette paper is a superior article, presenting numerous qualities. Good cigarette paper should be very thin, very uniform as to pulp, and very strong and resistant. It ought not to become disintegrated when it is slightly wet; in burning it should leave but a small quantity of ashes, and not give out a disagreeable odor; and, finally, in burning, it should not disengage substances injurious to the health.

Superior cigarette paper is manufactured exclusively from linen rags. It weighs 9½, 10 and 15 grammes per square meter. In burning it emits no odor.

Ordinary cigarette paper is manufactured from substitutes. Its pulp often contains a certain amount of wood pulp, especially the paper designed for export. Such paper is heavier and weighs from 12 to 20 grammes to the square meter. In burning, it may emit a slight odor, because the wood pulp contains resin, the combustion of which disengages gases offensive to the smell. In reality, the odor is perceptible only in paper containing large proportions of wood pulp. Apart from that, the quantity of resin contained in the paper is so small that the combustion always proceeds nearly without odor.

In its broadlines, the manufacture of cigarette paper does not differ from that of ordinary fine paper. A single point is special, and that is the finishing, which has to take a long time and be well done. The pulp must be finished slowly, progressively, and with as short fibers as

**BURON'S CONTINUOUS CIGARETTE PAPER MACHINE.**