American goods are regarded in the Chinese market as worth 15 to 25 per cent more than the products of Japanese mills, which are being sold in China and Manchuria at the low prices of 1908, when raw cotton was selling at about 10 cents per pound in the United States. It is stated that, because of cheap labor, Japan can manufacture fabrics from American-grown cotton at a cost 10 to 25 per cent less than the American mills. The average daily wage of men in Japanese cotton mills is 23 cents, of women 16 cents, and of children 8 to 10 cents. In view of this condition and of England's strong hold on the trade of the Orient, the only hope of American manufacturers lies in expanding their trade in special brands of goods which already hold a commanding position in the East, because of quality and popularity.

The Russian cotton crop, as forecasted for 1910-11, appears most promising, and is calculated to be 900,000 bales of 500 pounds each. The estimated report of the last crop (official statistics being unobtainable) was 397,100,000 pounds, a banner yield compared with former years. The value of last season's crop at the present average price would amount to $94,039,000.

According to the estimates of experts in their calculations for 1910-11, the crop will reach the enormous figures of $108,572,300 in value, something that has never heretofore been approximated. Cotton manufacturers in Russia are much elated over these prospects, and the prophecy that it will not be many years before Russia will become an exporting nation in cotton, even though their mills are increasing in number.

The British Fire Prevention Committee, lately made some interesting tests on the relative inflammability of various textiles and the efficiency of flannelette that has been treated with a view to reducing the risk of fire. Two objects they had in view:

First to obtain data on the relative combustibility and rapidity in flaming of flannelette, and

Second to discover the best method of testing the relative fire resistance of textiles, such as flannelette.

With reference to the latter, the Committee claim to have discovered a suitable test.

One of the conditions is, that if not more than 5 per cent. of the area of the material actually under test burns within sixty seconds, when taken on the average of three samples, the material shall be classed as *non-flaming*. A test of this kind can be easily undertaken. About 450 tests were made upon different classes of material, and fire was applied in each case by a lighted taper or a spirit lamp.

With regard to the classification of the material, they recommend that the definition *flames readily* should be applied to material in which more than 5 per cent., but less than 25 per cent., of the area actually under test burns within sixty seconds; in those cases where the area exceeds 25 per cent. they recommend the definition *burns rapidly*.

In view of these recommendations the Committee suggest, in case of legislation, that where material cannot be classified as *non-flaming* under the standard test, it shall not be permissible to sell such material unless there be plainly woven or printed into the selvage, every yard apart, the words *Burns rapidly*, and that on any flannelette or union sold as being non-inflammable, *i. e.*, as complying with the standard test, there shall be woven or printed into the selvage, every yard apart, the words *Non-flaming*. They also suggest that no flannelette made on the Continent shall be passed by their Customs unless it is non-flaming, and the name of the maker or commission merchant is woven in the selvage.

The full yield from the Egyptian cotton fields will bring the total 1910 crop above 700,000,000 pounds. The Egyptian Government is experimenting on its Korashieh estates with a new cotton seed, styled *Assili*, which has produced approximately 800 pounds per acre. It is like *Afifi* in color, but better in quality, and is expected to fetch $2 more per hundredweight than any other variety cultivated in Egypt.

CHRONOLOGICAL EVENTS IN THE TEXTILE INDUSTRY.

B. C.

5000. Tradition has it, that Foh-hi, the first emperor of China, taught his people the culture of silk.

3600. Weaving woolen stuffs was established as an art at Babylonia; the splendid flounced robe of Ishtar, on the Annubanini stele, attesting to this fact.

2600. See-Ling-Chi, the Empress of China, invented the silk reel, used since then by the Chinese.

1800. A fulling mill represented on the tomb of Usertesen II.

613. The straight tunic first woven on a perpendicular loom, by Tanaquil, the wife of Tarquinius Priscus. Varro, in the year 50 B. C., claimed that he had seen in the Temple of Janus, the wool still preserved on the distaff and spindle of Tanaquil.

529. A purple carpet, made in Babylonia, was spread upon the tomb of Cyrus.

419-348. Iphicrates, the Athenian general, used carpets on his floor.

384-22. According to Aristotle, silk was woven at Cos, by Pamphyle, the daughter of Plates.

370-287. Theophratus, a disciple of Aristotle, referred to the raising, spinning and weaving of cotton, from which the Indians made cloths, either cheap or of great value.

309-247. According to Callixenus of Rhodes, Ptolemy II., giving a magnificent banquet, had the following floor decorations: Underneath two hundred golden couches were strewn the finest purple reversible carpets; there were also laid handsomely embroidered rugs, thin Persian cloths, having representations of animals embroidered on them, covering the centre space of the floor, where the guests walked.

69. Awnings (of linen) were first referred to as used in the theatre at Rome, when Quintus Catulus dedicated the Temple of Jupiter.

63. Awnings (of cotton) were introduced at the Apollonaris games.

A. D.

23-79. Pliny, in his great work, Historia Nautralis, published in 77, gave interesting notes on the cultivation, raising, spinning and weaving of cotton, flax, wool, and hemp.

400. Chinese silk culture introduced into India.

420. Silk cloth woven at Khotan.

530. The silk culture of Corinth taken under the patronage of Emperor Justinian.
680. Crape first made at Boulogne, France.
930. Cotton and silk manufacturers introduced into Spain by Abderrahman III.
1068. Flemish weavers followed William the Conqueror into England.
1080. The first Weavers' Guild formed in England.
1107. Flemish weavers settled in Norwich, England.
1147. Silk weaving established at Palermo, by Roger, the Norman King of Sicily, bringing, for this purpose, weavers over from Corinth, Greece.
1200. Silk manufacture started in Venice.
1248. Lucca, the most prominent town of the central province of Italy, engaged in silk culture and its manufacture.
1253. Linen industry in England established by Henry III., bringing, for this purpose, linen weavers from Flanders.
1327. Broadcloth manufacture started on a large scale in England, by Jack of Newberry.
1339. Broadcloth weaving started in Bristol, England.
1348. Worsted trade, first referred to, started at Norwich, England.
1376. The manufacture of woolen cloth introduced into Ireland.
1386. The Linen Weavers' Guild formed in London.
1488. Vasco da Gama visited Calicut, then an important centre of India's cotton manufacture.
1489. Henry VII., of England, by an act, fixed the price of woolen knitted caps at 2*s.* 8*d.*
1492. The wild cotton plant found growing in the West Indian Islands, by Columbus.
1519. Magellan, when then circumnavigating the globe, found the natives of Brazil sleeping on beds made of cotton down.
In this year Cortez sent cotton fabrics to Spain.
Cotton was then cultivated and manufactured at the coast of Guinea.
1521. Silk manufacture established at France, chiefly at Tours and Lyons.
1528. The Company of Clothworkers incorporated in London.
1533. The Brunswick spinning wheel invented.
1536. De Vica found cotton planted on the mainland of America, by Spanish settlers.
1537. Knitted silk hose worn by Prince Henry (afterwards Henry II. of France).
1554. The manufacture of fustians started at Norwich, England.
1560. Queen Elizabeth of England, ordered silk hose from Spain.
1561. Barbara, the wife of Christopher Uttmann, at the castle of St. Annaberg, Saxony, invented the art of making pillow lace.
1589. William Lee, M.A., curate of Calverton, Eng., invented the stocking frame.
The ribbon loom invented in Holland.
Sail cloth first woven in England.
1605. James I. of England joined the Clothworkers' Company, as men dealing in the principal and noblest staple ware of all these islands.

(*To be continued.*)

COTTON CARDING.

Practical Points on the Management of Fly Frames.

(*Continued from page 18.*)

SPEEDS OF SPINDLES:—Old fly frames, or such as running on coarse work, or where a low grade of cotton is used, are run slow as compared to new frames, fine work and when a good quality of cotton is used, and when such frames then can be run at a higher speed as compared to former conditions. Do not overspeed your frame, since there is a limit to the speed of every machine, beyond which it is not advisable to go, on account of excessive speed being the means for developing defects, again unnecessary wear and tear to the machine will result, ends will break down more frequently, and, we must remember in connection with the latter item, that the frame has to remain stopped for piecing up, even if only one end breaks, hence loss in production.

MANAGEMENT OF BOBBINS ON CREEL:—Never have the bobbins on the creel of one size, but have them of two or more different sizes, so that the tender will not have to fill the creel with new bobbins all at one time. A good plan is to run the bobbins in two sections, *i. e.*, have one half of them about half full, while the other half of the bobbins in the creel are either completely full or about empty. When in this case, meeting with some extra large bobbins, and which are not running out with the rest, they may be taken out of the creel before they have become empty, in order to equalize its set in creel. These short pieces of bobbins, in turn, are then used up at the end of the creel, and where they are more conveniently under the eye of the tender of the machine. Following up the procedure, thus referred to, will be the means of preventing chances of making singles. In place of dividing the running out of the bobbins into two sets, the same can be split up into three or four sets or sections, if so desired. About 3 rows of full bobbins are kept in reserve on the top board of the creel, so as to be handy for the tender, and at the same time, prevent frames from running short of slubbing or roving. See that full bobbins, when in the creel, do not touch each other, since friction thus created would prevent the ready unwinding of the bobbins. To prevent too hard twisted bobbins (provided such are met with) from over-running, retard rotation of the skewers by inserting under their feet some cotton, again if meeting with bobbins containing insufficient twist and in consequence of which they continually break, insert skewers having a sharp point, so as to lessen friction.

CLEAN MACHINES REGULARLY:—Only in this way can quantity and quality of work be produced. Brush off the creel twice a day, and pick flyers on medium work at every doffing, and oftener in connection with fine work; never fan them off, since this causes bunches to catch with the work. Clean gearing of head end of machine twice a week, and spindles and bobbin gears, etc., once a month. Keep head of flyer clean, also slot in top of spindle, in order to provide a perfect fit for the pin in the slot. Never permit