

the goods made from such imperfect yarn cannot be made right by the spinner, weaver or finisher. It is, therefore, self-evident that the best obtainable machinery and methods must be intelligently used in the picker room, so that the raw materials prepared therein will be delivered to the cards in a thoroughly uniform condition. The stock must be well cleaned, oiled and blended with the greatest care for uniformity. Hand oiling is out of date and crude, and no picker room is up to date where such an obsolete method is in use for performing such an important part of the work of yarn manufacturing as the uniform distribution of the oil or emulsion over all the stock delivered to the cards, so as to insure a uniform quantity of oil and fiber in each and every operation of the scales of the Bramwell feeder. This feeder has been the greatest success in its own special line of any feeder ever invented, and the builders of it have constructed about 9,500 Bramwell card feeders for this country alone, for handling all kinds of fibrous materials, vegetable, animal or mineral, and the results have been of the most satisfactory character. It is entirely safe for me to assume, however (and I think I am in a position to know), that not over three out of every ten Bramwell feeders in operation to-day are handled to the best possible advantage. In nearly every case where fault is to be found with carders' ideas in operating the Bramwell feed, it is in running them too fast for the amount of work the scales have to perform, and the result is that in many mills the spike apron is not in motion more than one-third or one-fourth of the time daily. The result of running a Bramwell feeder as slowly as possible, according to the quantity of stock it must weigh to the cards daily, is that the sensitiveness of the scales is better controlled when the stock is gently instead of violently dropped into the scale pans, which should be filled on all kinds of stock from two-thirds to level full. Many carders run a light feed on the feed table of the Bramwell feed, which produces an uneven side drawing. With a sufficiently heavy feed to suit the nature of stock being operated on, the result from the first breaker card will be much more uniform in every way. Therefore, every wool carder should adopt slow speeds on the Bramwell feeds, and keep the comb set level to the spike apron, using good judgment, and at all times being governed by the length of staple and the condition of stock he is handling, so that the scale pans will be filled evenly all across the feed, and thus insure a uniform use of and wear of the carding surfaces. He should run his spike and strip aprons together with gears, which not only saves wearing out of the strip apron when always in motion, but also makes the operation of the scales more uniform. The Bramwell worsted feeder differs in construction from the wool feeder chiefly in one prominent feature—the use of a “curved board” or comb, instead of a strip apron or cylinder, to deliver the fibers from the spike apron to the scale pans. As all worsted wools are generally fed either wet or at least damp, so as to give the fibers additional strength and prevent breakage of staple during the carding process, we know that when the stock is wet the tendency of the strip apron or cylinder would be to felt or “roll up” the stock, and cause a loss of “top”

by breaking the fibers at the feed rolls or between the carding points, all of which the curved board prevents by delivering the stock properly and straight to the scales in the same condition in which it is received from the spike apron. The Bramwell feeder deserves twice the care and attention it usually receives at the hands of wool and worsted or shoddy carders, because so much depends upon the result of its work, especially in these days of close margins and reduced profits. In some mills the only doubling of roving on a wool set of cards, consisting of a first and second breaker and finisher cards, is that contributed by the use of two Apperly feeders to each set of cards, which is the case of many of the most successful woolen mills in the country where up-to-date methods are employed. In proof of this assertion, I might refer you to nearly all the various mills in Pittsfield, Mass., and vicinity, where two Apperly feeds to each set of three cards are used by some of the best carders in the United States, with a great saving in labor cost. Uniform yarn is made in all these mills by careful, scientific handling of the Bramwell and Apperly feeders by the carder. The Apperly feeder has been so long before the manufacturers of the woolen world that it is hardly necessary for me to repeat to you its merits or how to apply it practically. It is sufficient for me to state that the carder should carefully handle his stock and use little or no twist, if possible, in the side drawing, so as to feed the stock soft to the feed rolls of the second breaker or finisher card, and will also use as small feed rolls and lick-in as possible, so as to get what carders term a “short bite” on the stock as it comes from between the feed rolls, and thereby prevent bunched or lumpy feeding. The carder must then lay the side drawings exactly parallel with each other on the table, and regulate his tension to the “traveler” on each end with the overhead rig, and speed the pike band on the long end of the Apperly, so as to take the side drawings up to the feed rolls and retain the original angle on the side drawings, as delivered from the traveler truck, and pack his feed as close as possible on the table, so as to get the best results; and the rest of the work is easy, being only a matter of adjustment of speeds or tension to get the roping right on the finisher card. Some carders get all the angle possible on the Apperly by re-adjusting the bridge and traveler on the regular Apperly, so as to have the side drawings fed as straight as possible to the feed rolls, but a special long end Apperly is built to meet the extreme views of carders in this direction. The matter of card clothing cannot be entered into this evening, as my time is too limited, and we will now begin with the mechanical operation of a modern set, with a first breaker card to commence with for wool carding, with a Bramwell feed attached. The Bramwell feeder must be operated, as heretofore explained, in order to obtain the best results, and the stock must be properly and uniformly prepared for the card, or the results will not be good. The feed rolls, burring cylinder and burr guards must be scientifically adjusted to avoid damage to staple or carding surfaces. The first worker next to feed rolls receives the stock in the shape of small locks or bunches, and should on that account be set off from the main cylinder a sixteenth