

Machinery and Appliances.

IMPROVED SCUTCHER.

MESSES. JOHN HETHERINGTON AND SONS, VULCAN WORKS, POLLARD STREET, MANCHESTER.

Resuming our notice of the machines constructed by the above-named firm, we select this week the scutcher, in which we have to draw the attention of our readers to a very considerable improvement, besides several of only a little less importance.

As observed in a previous article, the scutcher is the original mechanical opener and lap forming machine, being only, we believe, preceded by the Oldham Willow, which did not form a lap. For a time it was a fairly efficient machine, but when the cotton trade began to expand and the freight charges upon the raw material became an item of consideration, cotton began to be compressed, and it was in opening it from this condition that the weakness of the scutcher became apparent. This led to the introduction of the opener proper, which was constructed specially to deal with the matted masses of the cotton in its compressed form. It was placed before the scutcher to prepare the cotton for it, which it discharged in a loose form ready to be fed to the scutcher; the addition of the lap forming arrangement to the opener was a subsequent thought, the device being to ensure a uniform feeding of the scutcher and economy in the cost. As competition originated a demand for the highest degree of excellence, to reach this the finisher lap machine was brought in, by which it was supposed perfection was attained. Quite recently, however, the heavy compression to which cotton is subjected, has led to the introduction of a fourth machine, the bale breaker or opener, into the series, this being placed first of all. A complete series of machines for opening and lap forming on the newest principle, now consists of four, though in many cases there are still only three, and where low numbers are spun, and where the quality is not high, two only, the opener and scutcher, are in use.

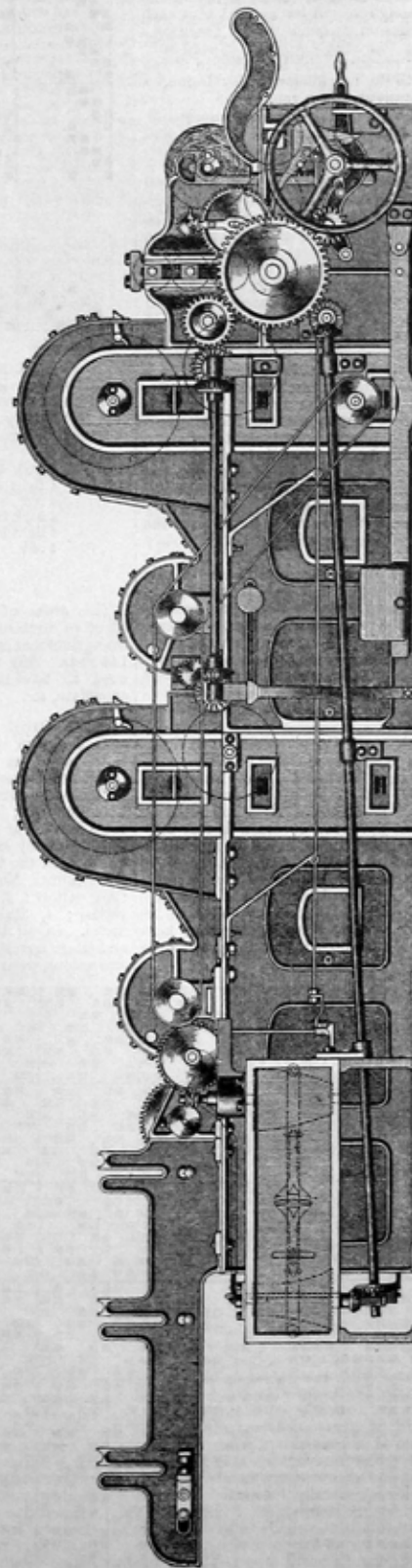
Whether the scutcher be used as an intermediate or finisher, it is highly important that its work should be as perfect as possible. In order to ensure this, machine makers have devoted a great deal of attention both to its principle and details. Amongst these Messrs. John Hetherington and Sons must be awarded a prominent place. The scutcher, as made by them, which we illustrate herewith, has been greatly improved in the most important details, as the following description will demonstrate.

Hitherto it has been the practice to supply one fan to each pair of cages, and the fan has been placed in the centre of the shaft, and has necessarily been subject, at its high speed, to a certain amount of unsteadiness, accompanied by an irregularity of draft. The makers have obviated both of these defects, by dividing the large fan into two small ones, putting one on each side, which distributes the draught better, and brings the cotton more evenly to the cages; the fans also work with much greater steadiness, as they are arranged so much nearer to the bearings, and can, therefore, be run at the highest speed without injurious effects resulting.

A second point to be noticed is an improved arrangement of the cages, in which the larger one is placed on the top, and the smaller one below, the former being put considerably nearer to the beater than before. This gives a much greater effective area of grid bars and dust box, and of course correspondingly increases the cleaning power of the machine. The arrangement also provides a space clear of the cotton under the part of the top cage, against which the cotton first strikes, after coming from the beater. Thus the dirt shaken out at this point falls directly through the grid bars, and is not liable, as in the ordinary arrangement, to be caught and carried in between the two layers of cotton forming the lap, and from which it has to be shaken out in the subsequent process.

A third point, the one to which special reference is made above, and which is perfectly novel, and probably the most important of the series, is the improvement made in the cone box, which has been rearranged in several respects. The cones themselves have been almost doubled in diameter, and the levers by which the strap is traversed have been made longer, and the fulcrum placed at one end. As a result, the strap fork at every point of its movement is kept much more closely to the cone, and moves up and down with a nearly vertical and parallel motion, the action of the fork and the movement of the strap being much quicker and more sensitive than previously. In the old arrangement with short centres the strap fork was carried away from the cone, and the action was slower and less certain.

The feeder is made either with a pair of ordinary feeding rollers, or with piano motion, at the option of the purchaser. At the lap-forming end of the machine the sheet of cotton is compressed by four calender rollers placed one above the other, by which arrangement the unrolling of the lap without "sticking" is assured. The driving cone is driven by a shaft and bevels from the lap-forming end of the machine.



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It will thus be seen on summing up these improvements that the total is an important one, and well worth the careful inspection and consideration of every person interested. The extraction of a greater percentage of dirt and the formation of a more even lap are important advantages in themselves, as these are the primary ends sought, and being attained thus early they are arrived at with less damage to the cotton, which is necessarily subjected to less beating. The speed of the machine, and consequently the production, may be increased, which is another distinct advantage. The new arrangement of the strap levers and the increased diameter of the cones ensures a quickness of action and a sensitiveness of movement that has produced unexpectedly good results in the uniform structure of the lap, scarcely the slightest variation ever taking place in the weights. The new arrangement has stood the test of the severest trials, lumps of cotton being thrown upon the feed in the most irregular manner, yet yielding a lap sheet in which no irregularity can be discovered. Similar tests on the opposite side, by the abstraction of large pieces of cotton from the laps in the creel, have been made without affecting the regularity of the weight. In fact, a lap may be allowed to run off, and thus the feed be reduced 25 or 33 per cent., yet the resulting lap will not be affected more than 4 to 6oz. in weight. Of course, those upon the creel will be drawn in all the faster. As an even lap constitutes the foundation of all good yarn, the importance of these results where good work is desired will be obvious. These are strong statements to make, but they are not beyond the deserts of the machine, as anyone may ascertain for themselves by obtaining an inspection of it at work, which may be had upon application to the makers as above, or they will be glad to give any further information that may be desired.

Foreign Correspondence.

THE MCKINLEY CUSTOMS BILL.

(FROM AN OCCASIONAL CORRESPONDENT.)

NEW YORK, U.S.A., March 6th.

It may be of interest to the manufacturers of Great Britain to learn something regarding a measure now pending in Congress, and popularly known as the "McKinley Customs Administration Bill." This measure has passed the House of Representatives, and it is now before the Senate for treatment. In its present form it contains many important—indeed, radical—modifications of the Customs administration. The official statement is made that the object of the Bill is to simplify the methods of business at the Custom-houses, to obtain uniformity in appraisements and in the assessment of rates of duty, to prevent frauds, and to secure a thorough and impartial enforcement of the Customs and Tariff laws.

The principal feature of the Bill is the change in the method of appraisement and reappraisement. Reappraisement is afforded as a sort of relief in case of dissatisfaction on the part of the importer with the valuation placed upon his goods by the Government officials, called appraisers, and it is effected through the action of a Board of Reappraisement, composed of a merchant and a general appraiser. That the results have been satisfactory may be doubted when we remember that the merchant acting as an appraiser is generally interested in the question as a friendly competitor, if not as a rival. The proposition is now made to have nine general appraisers for all the ports of entry, three of them constituting a board of general appraisers. Section 12 of the Bill is as follows:—

That there shall be appointed by the President, by and with the advice and consent of the Senate, nine general appraisers of merchandise, each of whom shall receive a salary of 5,000 dols. a year. Not more than five of such general appraisers shall be appointed from the same political party. They shall not be engaged in any other business, avocation, or employment, and may be removed at any time by the President for inefficiency, neglect of duty, or malpractice in office. They shall be employed at such ports, and within such territorial limits as the Secretary of the Treasury may from time to time prescribe, and are hereby authorized to exercise the powers and duties devolved upon them by this Act, and to exercise, under the general direction of the Secretary of the Treasury, such other supervision over appraisements and classifications for duty of imported merchandise as may be needful to secure lawful and uniform appraisements and classifications at the several ports. As many as three of the general appraisers shall be on duty as a board of general appraisers daily (except Sundays and legal holidays) at the port of New York, during the business hours prescribed by the Secretary of the Treasury, at which port a place for samples shall be provided, under such rules and regulations as the Secretary of the Treasury may from time to time prescribe, which shall include rules as to the classes of articles to be deposited, the time of their retention, and as to their disposition, which place of samples shall be under the immediate control and direction of the general appraisers.

This provision for a place of samples and the retention thereof for reference is for the purpose of securing uniformity of treatment for duty purposes, both as to classification and value, throughout the country. Now, let us take up

Sec. 15.—That if the owner, importer, consignee, or agent of any imported merchandise, or the collector, or the Secretary of the Treasury, shall be dissatisfied with the decision of the board of general appraisers, as provided for in section thirty-seven of this act, as to the construction of the law respecting the classification of such merchandise and the rate of duty imposed thereon under such classification, they, or either of them, may, within thirty days next after such decision, and not afterwards, apply to the circuit court of the United States, within the district in which the matter arises, for a review of the questions of law involved in such decision. Such application shall be made by filing in the office of the clerk of said circuit court a concise statement of the errors of law complained of, and a copy of such statement shall be served on the collector, or on the importer, owner, consignee, or agent, as the case may be. Thereupon the court shall order the board of appraisers to transmit to said circuit court a certified statement of their findings of the facts involved in the case and their decision thereon; and the facts so found and certified shall be final and conclusive upon the court; which statement and certificate of the board of appraisers shall constitute the record in the circuit court, and said circuit court shall proceed to hear and determine the question of law involved in such decision, and the decision of such court shall be final, unless such court shall be of opinion that the question involved is of such importance as to require a review of such decision by the Supreme Court of the United States, in which case said circuit court, or the judge making the decision may, within thirty days thereafter, allow an appeal to said Supreme Court; but an appeal shall be allowed on the part of the United States whenever the Attorney-General shall apply for it within thirty days after the rendition of such decision. On such original application, and on any such appeal, security for damages and cost shall be given as in the case of other appeals in cases in which the United States is a party. Said Supreme Court shall have jurisdiction and power to review such decision, and may affirm, modify, or reverse such decision of such circuit court, and remand the case with such orders as may seem to it proper in the premises, which shall be executed accordingly. For the purposes of this section the circuit courts of the United States shall be deemed always open, and said circuit courts, respectively, may establish, and from time to time alter, rules and regulations not inconsistent herewith for the procedure in such cases as they shall deem proper.

According to this provision, Congress assumes to exclude the judicial power when these taxes are in question, and this in spite of that section of the constitution which reads that "no person shall be deprived of life, liberty, or property without due process of law." I might add that Congress has always excluded the judicial power from meddling with value, but that the same course should be taken in regard to name, classification, and rate does not follow.

The real motive appears to be, according to many observers, that as the Protectionists control, for the first time in many years, at once the House of Representatives, the Senate, and the Presidency, it would be an excellent opportunity to get some such measure on the statute book, whereby they might exercise, by means of the nine new appraisers, the power of classifying articles in defiance of the Courts, and thus of changing rates; they would then need no new legislation in the near future.

That this attempt to embarrass and impede trade relations between the United States and foreign countries and incidentally to radically modify, without the gravest reasons, a naturally and gradually evolved system of Customs laws and procedure, ripe with the experiences of a century, should meet with opposition on the part of the commercial community of New York, Boston, Philadelphia, and other ports, the business interests of which are thus assailed, is not surprising. Delegations have made known their complaints in the Senate Committee-room, and the result of these somewhat tardy efforts will be made known when the bill is reported to the Senate. The right of trial by jury will not be taken away so easily. In section 19, it is intended to restore the duty on various charges incidental to merchandise, which charges are exempt under the present Tariff Act, that of March 3rd, 1883. It might be best quoted in extenso.

Sec. 19. That whenever imported merchandise is subject to an *ad valorem* rate of duty, or to a duty based upon or regulated in any manner by the value thereof, the duty shall be assessed upon the actual market value or price of such merchandise, as bought and sold in usual wholesale quantities, at the time of exportation to the United States, in the principal markets of the country from whence imported, and in the condition in which such merchandise is there bought and sold for exportation to the United States or consigned to the United States for sale, including the value of all cartons, cases, crates, boxes, sacks, and coverings of any kind, and all other costs, charges, and expenses incident to placing the merchandise in condition, packed ready for shipment to the United States, and if there be, used for covering or holding imported merchandise, which is free of duty or which is subject to a specific rate of duty, any material article other than the usual or necessary coverings used for covering or holding such merchandise, duty shall be levied and collected upon such material or article at the rate to which the same would be levied and collected upon such material or article at the rate to which the same would be subjected if separately imported. That the words "value" or "actual market value," whenever used in this act or in any law relating to the appraisement of imported merchandise shall be construed to mean the actual market value or wholesale price as herein defined.

Under the present law, if the invoice or the entered value be advanced 10 per cent. by the U. S. appraiser, that fact is declared by law to be presumptive evidence of intentional undervaluation, and the offence is punished by the imposition of an additional 20 per cent. *ad valorem*. For example, if the entered value is 1,000 dols. and the appraiser increases the value to 1,100 dols., the duty collected, say on silk goods, the duty on which is 50 per cent., would be—

1,100 dols. — 50 per cent.	= 550.00 dols.
1,100 " — 20 " "	= 220.00 " "

Total duty collected . . 770.00

It would seem best not to assume guilt, but to let the importer, if accused, in common with the other citizens of the United States, be considered innocent until after the evidence has been sifted he is proved guilty. Nevertheless, the McKinley Bill would appear to regard importing as a crime; it lays down the principle that in case of an advance by the appraiser of more than 20 per cent., the entry shall be held to be presumptively fraudulent, and the collector of customs shall seize such merchandise, and proceed as in the cases of forfeiture; and in any legal proceedings which may result from such seizure the fact of such undervaluation shall be presumptive evidence of fraud, and the *onus probandi* shall be on the claimant to rebut the same; he is *prima facie* a law breaker and a perjurer.