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GOOD MECHANISM.



HOSE who engage in the construction of machinery should never allow a poorly-executed article to pass out of their hands, if they desire to establish a permanent business. Many persons commit the egregious mistake of supposing that, if they only make articles or machines cheaper than other parties, and sell them at lower prices—even if the workmanship is of inferior quality—they will be sure to get a large patronage and obtain a permanent custom. They may make large sales for a short period of time, but in the long run they will not obtain a good fixed custom. Not many years ago, a company with quite a large capital commenced the manufacture of rifles on a great scale, in one of our eastern towns; the principal manager conducted the business upon the wrong principle of making cheap and showy articles, irrespective of their quality. In about two years after they had commenced operations, the company was insolvent, and the stockholders lost nearly all their investments. Not many miles from the same place, a few practical mechanics commenced business in the same line and about the same time, with a very small capital; these men, instead of going down, have been going up ever since; and to-day they are doing a large, profitable and permanent trade. These mechanics began business with the resolve and the knowledge to do first-class work, and they have therefore succeeded.

Not many weeks ago, we visited the factory of a successful manufacturer of harvesting machines in one of the cities on the Hudson river; and we were informed that the orders far exceeded the capacity of the manufactory to supply them. We had heard good reports of the quality of these mowers from various sections of the country, and the great secret of their good name chiefly consisted in good materials and workmanship. Hundreds of instances of the same import might be collected and adduced to prove that good mechanism "fights its own battle, and always comes off victorious."

Our attention has lately been attracted by paragraphs that have appeared in many of our cotemporaries, respecting the machines which have been sent out to the mines at Pike's Peak. H. H. Harris, the owner of several quartz mills at the Gregory diggings, states that there are about fifty mills in operation in that region, "not one of which comes up to the anticipations of its friends." The reasons for this failure he gives as follows:—"Much of the machinery has been manufactured like 'slop-shop' clothing—for sale cheap—and, like that same clothing, it is found too cheap when brought into actual service. There is much experimenting with most of the mills, and will be for a year to come. Chilled cast-iron stamps have been sent out; they do not endure like steel ones." Those manufacturers who sent out machines made of inferior materials, and put together in a hasty, bungling manner, have foolishly ruined their reputation in that quarter. As gold quartz mining is a permanent business and extending rapidly, they have thrown away a golden opportunity of establishing a profitable and increasing manufacture of such machinery.

We have known several new and good inventions which had their reputation deeply injured by the

miserable mechanism of the first machines brought before the public. Owing to a combination of defective materials and workmanship, the whole broke down in the first public trials, and the merits of the improvements embraced in their combinations and functions were thus wrecked. No inventor should ever bring a new machine before the public until it is so far perfected in all its parts as to do justice to the improvement he has made. If he acts otherwise, he will do the greatest injustice to himself. "Good mechanism" should be engraved upon the heart and conscience of every inventor and manufacturer.

COURTS OF ARBITRATION FOR PATENTEES.

The expenditures of inventors in obtaining American patents are so limited that there is but little, if any, cause for complaint, even in the most tedious and hard-fought cases that are carried through the Patent Office. It is far otherwise, however, when a valuable patent is litigated in the United States courts; in them the expenditures are enormous and the circumlocutions numberless. In these courts contending parties have battled together for years to their mutual injury, and at last learned, from bitter experience, that mutual concessions and friendly arbitration were the best modes of securing justice and peace. We have frequently stated that our laws relating to the trials of patent cases required reforming; but even with such laws, it is in the power of contending parties to obtain the most just and equitable settlement of their difficulties by arbitration.

A very important patent case of arbitration was lately tried in London, and it affords us a good example of what would be generally effected if such "courts of conciliation" were made permanent institutions. The plaintiff was M. Wheeler; the defendant, W. Turner; and by mutual consent the reference was made from the Court of Queen's Bench to the decision of two arbitrators, who chose a third as umpire. These were Mr. Wm. Carpmael and Mr. W. E. Newton; the umpire, Mr. T. Spence. The complaint was that Mr. Turner had infringed a patent which had been assigned to Mr. Wheeler, dated Dec. 24, 1851. The specific part of this patent which was claimed to be infringed was the manner of arranging and operating shuttles in looms. The invention consisted in "so constructing and arranging loom battens that two rows of shuttles may be used in such a manner that each fabric can have weft thrown in at the back and front of a middle warp, this middle warp of yarn being stationary. The other warp rises and descends above and below the middle warp to open sheds for the passage of the upper and the lower shuttle. Only one reed is used for each pair of shuttles to move in opposite directions at the same time, the top and bottom sheds of the warp being opened at the same instant. The batten is made with two shuttle races similar to those in common looms where only one row of shuttles is used."

Evidence was adduced by the plaintiff to show that this was a useful invention; while the defendant proved that prior to the plaintiff's patent he had worked several looms in which were shuttles thrown simultaneously through two sheds that were formed by a standing india-rubber warp. Upon examination, however, it appeared that the defendant had thrown his shuttles simultaneously in the same direction, while the plaintiff contended that his invention was the throwing of the two shuttles in opposite directions. The arbitrators were now placed in the same position as our United States Supreme Court in determining the construction to be given to the patent. The defendant contended that the peculiar wording of the specification covered the combination of a standing india-rubber warp with the simultaneous passage of the shuttles through two separate sheds, in whatever direction the shuttles were thrown. The plaintiff, on the other hand, repudiated this construction given to his patent, and maintained that the throwing of the shuttles simultaneously in opposite directions was a main element of the invention.

The award of the arbitrators was to the effect that the plaintiff's patent was good; that it was confined to the use of a standing india-rubber warp, in combination with two shuttles thrown at the same time in opposite directions; also that the defendant had infringed this improvement. The defendant might use a standing warp and throw two shuttles simultaneously in the same but not in a contrary direction.

In this case, the question for decision was narrowed down to a very small difference; and perhaps, if the arbitrators had been less considerate, they would have decided that there was no difference between throwing both shuttles in the same or contrary directions—that these were analagous operations. The arbitrators are men of high respectability in London, being patent agents and attorneys; and their profession enabled them to give a more correct and intelligent decision than could have been made by any judge who was merely well versed in law. This is a question which deserves the attention of all our patentees who may have patents in dispute. It is well-known that our United States judges are distinguished for probity and legal acquirements, but they are altogether dependent upon the experts who are hired by the contending parties for their opinions regarding the utility and novelty of the inventions in litigation. By choosing honorable and competent arbitrators (and there are many such in our country) in patent disputes, justice, we believe, would be more quickly and economically secured to patentees than by the common modes of grinding cases through the equity and common law courts.

INGENUITY STILL ACTIVE.

The records of the Patent Office show that, generally throughout the summer months, the number of applications for patents considerably decreases. This year, judging from the amount of business done at our office, and the number of patents issued weekly, we should think the falling-off scarcely perceptible. We find, by reference to our files, that, during the month of August, last year, there issued five lists of patents, four of which contained in the aggregate 331 patents; this year, during the same time, the number has increased to 400, exclusive of designs, extensions and re-issues, thus showing a wonderful spirit of progress and activity among inventors. This progress will appear the more marked when we state that, in 1855, during the month of August, less than 150 patents were issued. While the Examining corps of the Patent Office has been generally efficient and active, those connected with the Scientific American Patent Agency have been no less so, as the list of patents published this week fully shows. It numbers 98, of which 45, or almost one-half, were prepared at this office. In fact, our business has so much increased this summer, that we have been obliged to enlarge our force of Examiners. This indicates our rapidly increasing business, and points to the gradual absorption of the entire patent agency business of the United States. We are about to commence the Fall campaign with renewed energy. The members of the firm, with their experienced corps of draughtsmen and specification writers, are still to be aided by Hon. JUDGE MASON, who will counsel in all legal matters connected with patents. All business connected with the examination of inventions, preparing specifications, drawings, caveats, assignments of patents, prosecuting rejected cases, interferences, re-issues and extensions of patents, and opinions of the infringement and validity of patents will receive the most careful attention.

COMPLETE SETS OF THIS JOURNAL.—We are asked whether the advertisements, in our paper, of complete sets of the SCIENTIFIC AMERICAN, are by responsible parties, and if it is safe to remit the money. We can only reply that we do not know whether they are responsible or not. Of course, no publisher of a paper can take the trouble to ascertain whether all the statements made by all his advertising patrons are true. If we could answer the query, we should be pleased to do so, but as we cannot, our inquirers must seek the information elsewhere. It is presumed that no person of common sense will remit money to pay for articles in advance to any man, without being first satisfied of his position and character. We may say, however, that, of the first volume of the SCIENTIFIC AMERICAN only a few hundreds were printed, and the number of complete sets now extant are very small indeed. We have tried repeatedly, but without success, to find complete sets for libraries, and we confess to some astonishment when we saw the advertisement of a party in Kansas, proposing to sell several sets at a very low price.

WINDMILLS.—There is a great demand from the South and West for a good windmill. Manufacturers will do well to advertise them in our columns.