

however, for the proposers in one instance, the sample sent was very much poorer in quality than the worst ones thrown away weekly by the company. And we might cite many other instances which would support the value of the system insisted upon by the company, that is—absolute accuracy in construction.

In one of the lower shops we were shown a hook shaft which had a slight scratch in it, made by the turning tool; its value was not impaired in any way—it would work perfectly, but yet it was, we were informed, likely to be condemned, because, as our guide remarked, to allow it to pass unnoticed would be a departure from established rules, for which there was no precedent, and to which infraction no bounds could be set. Here lies the secret of the success of the Wheeler and Wilson sewing machine; for as all parts are interchangeable, being exact duplicates, the one of the other, entire uniformity throughout is attained.

The growing length of our article warns us to be brief. We must pass through this department hastily, only glancing at the bobbin or spool that runs between the hook and slide ring this is, in appearance, the simplest part; of the invention, but much depends upon its construction. They are made in three pieces, the two sides and a brass center; the sides are stamped out of a tin sheet, then put over the brass center, and that closed up on to them; the spool is then apparently done, but it must be placed in the lathe, turned to an exact size at its edges, and to a specified shape on its sides. Mr. Perry informed us that at one time great difficulties were encountered in the working of their sewing machines: they would go very well for a time, but on resuming operations, after ceasing a while, no satisfactory work could be done. This, as it may be supposed, was a source of much anxiety to the Company, and our informant stated that the trouble was laid to the hook; that whenever anything was out of order in the machine, that part always took the burthen of the blame. Finally, however, he took a machine home and puzzled over the cause of its mal-operation for some time, until he at length discovered that by always putting the bobbin with the same face toward the hook it ran perfectly well. This trouble led to the invention of special machinery for the manufacture of this part, and no further inconvenience of any kind is experienced.

With this little interpolation, let us leave the machine shops and all their attractions behind, and enter other apartments. If we look in at this large room we shall find it full of polished and finely-executed cabinet-work. These are the cases which adorn and protect the new household god that now sits upon nearly every hearthstone in the land. We remark how the tables are put together in sections, so that they shall not check or spring, each one being made of five thin pieces laid one upon top of the other and then glued fast. Let us pass the packing room and the japaners at their labors, and go to the "tuners" or inspection rooms. This branch of the sewing-machine business comprises the accurate and final adjustment of the several details which

have passed through other hands. Unto these men is given the authority to reject any and every portion of the work that does not agree with the gages; for these latter tools are brought into requisition again for the we-don't-know how many hundredth time. Arbitrary accuracy is insisted upon, and the unlucky jobber or workman, whose labor is thrown out, must bear the expense of it himself. After the machines are all adjusted, they are then put on a long table, and run for two hours, by belts attached to the shafting overhead, so that all their working parts may have the little asperities which still exist in them, smoothed off. They are then handed in to a mysterious-looking apartment, closely walled in on all sides, having the announcement "No admittance" staring us in the face; by reason of the presence of the superintendent, however, we march into this *a sanctum* and see the practical operations there. The workmen alone are excluded from this room; visitors accompanied by the authorities are at all times allowed access to it, as they are to all the other departments within the building.

It will be palpable to any one that this department requires much experience with the subject, and great business integrity, for into the hands of these two men are committed the reputation, in a great degree, of the Company's manufacture. No matter how well made they may be, primarily, if the adjustment is bad the machine is unsatisfactory in its operation. The machines are sewed with and tested in every way to prove them, and if they fail in any one particular, the inspector opens a little door in his apartment and thrusts the machine out with its fault affixed to it written on paper. No words pass on either side, and the affair, seems quite an inquisitorial process. If every part works harmoniously, the piece of cloth that was used in trying the machine by sewing, is left on the plate with the thread still through it, both above and below, remaining in the needle. This prevents any suspicion on the part of purchasers that the piece was ingeniously manufactured for business purposes and then attached to the Wheeler and Wilson machine. It is almost supererogatory to say in concluding this division of our article, that none but the best materials are used. The steel for the hook and shaft (it being all in one piece) is English, the cast iron is American, and the wrought iron is also native, from Ulster county, one of the finest brands in the world for tenacity and integrity of fiber.

It is with much regret that we pass, with only a slight mention, the several branches of decorating the machine, or silver-plating, and the foundry and blacksmith departments. In the artist's rooms we saw several machines most beautifully finished in gold and pearl, and indeed, in all the different trades and operations carried on within the workshop, such as cabinet-making, the foundry, the japaners, finishers, decorators, blacksmiths, adjusters and needle makers, matters of new and striking interest presented themselves. It is only left us in concluding our article, to remark upon some of the most noticeable features of this vast manufactory. These are the cleanliness,