

that the right alloy number is marked thereon before the cupola is tapped, and then make sure that there is enough hot metal in the ladle to fill the mould.

Cleaning.

Various are the processes of cleaning castings—too numerous to describe in detail; but as soon as the rough sand has been removed the inspector should examine and straightway report as to whether more work in the shape of chipping should be done on them or not, and give instructions as to whether they are to be pickled or sand-blasted, etc., in accordance with the original specification.

Inspection.

All castings should be inspected before being conveyed to the Stores; and no Foundry work should be accepted by the Stores unless it bears the inspector's mark. Every article should be registered separately on factory inspector's report, form No. 117, which should be made in duplicate, the original being despatched to the inspector's office in the general stores and kept there on a separate file until the specified articles are delivered; serving as a hustler sheet if the articles are delayed in delivery. The duplicate must be sent to the inspector of the Assembling Floor, who should immediately enter the items on his part list, form No. 96, for the purpose already specified. The inspector's report is then returned to the Cost Office, and remains there on a separate file until the original is received from the Stores; thereupon both copies are filed in numerical order under their job number and according to drawing number, thus keeping track of all time spent by the inspector in the critical stage of each article produced. Some articles cost more than others for inspection, and this burden should be charged up against the respective contracts.

Chemist's Report.

In all large industrial establishments mechanical and chemical tests are a necessity; and this work is done by a qualified metallurgical chemist. Sands, fuels, and metals are analyzed, and materials of which articles and structures have been made are subjected to rigid tests. All this should be done systematically, and records of results carefully tabulated and filed for reference. For this important work form No. 116 has been prepared, and fills the requirements for tests made either on the works or by outside private laboratories. The report form may be utilized for material purchased, or prepared on the works. All time and material costs are to be charged to the respective job numbers marked on the requisition, unless otherwise ordered. Each job must stand for its own expense and burden. It would not be right to make one pay for one's neighbor's expenses; the same principle applies to each job made in an industrial establishment.

Shipping and Storage.

When the inspector has approved and stamped his mark on accepted articles they should be delivered to the Stores

instantly, where an inventory of same should be carefully made. The storekeeper must refuse any article not properly stamped by the inspector.

Cost Records.

On final completion of any particular job, drawings, patterns, special tools, etc., are exchanged by the mechanic

PRODUCTION LIST NO.	JOB NO.	MATERIAL	PATTERN NO.	DRAWING NO.
WEIGHT OF ONE	DEPARTMENT NO.	NAME OF ARTICLE		
NOS. OF PIECES MADE	WORKMAN CHECK NO.	OPERATION, NAME AND NUMBER		
NOS. OF PCS. REJECTED	MACHINE NO.	SIGNED BY INSPECTOR	DATE	
NOS. OF PCS. PASSED	PURCHASING ORDER NO.	INSPECTION STARTED	INSPECTION COMPLETED	
		A.P.M.	A.P.M.	
REMARKS AND SUGGESTIONS:				
"OVER"				
A. J. Lavoie's System, No. 117. Factory Inspector Report. Engineering Dept. No. 3				

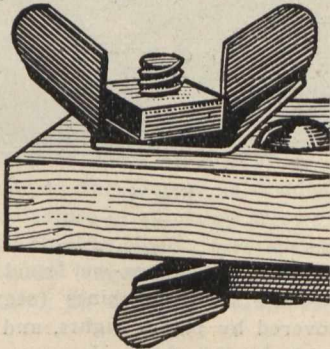
Printed Red on 20 lb. Amber Color Bond Paper. Size of form, 3 in. x 5 in. Padded on bottom only.

for his checks at various places where the above-mentioned articles have been selected, and the job card, form No. 45 and No. 113 is returned by the workman to the foreman's office for approval. Then this form, together with form No. 54 and No. 113, is forwarded without delay to the Cost Office and filed in numerical order under job number according to drawing number.

(Continued.)

COMBINATION WING NUT AND WASHER.

Where it is necessary to remove bolts very often a wing nut is found to be a great convenience, eliminating the use



Combination Wing Nut and Washer.

of a wrench, and thus saving much time. The Aikenhead Hardware Company, of Toronto, have been appointed the

sole agents for the wing washer shown in the illustration. The Twentieth Century Wing Washer is one of the latest products placed on the market by the hardware trade. The simplicity of the device is its greatest point of merit. The usual nuts supplied with bolts are not discarded; they are taken off, the wing washer put on, and then replaced, when the wings of the washer take hold of the corners of the nut, and it can be screwed down the same as an ordinary wing nut would be. It is applicable to either hexagonal or square nuts.

Another use to which this wing washer can be put is in connection with round-head screws. By placing the screw through the washer and squeezing the wings together in a vise, they are so made that they will fit into the slot in the head of the screw, and thus form a thumb-piece, whereby screws and bolts can easily be taken out by hand.

Two sizes are already on the market, the ¼-in. size fitting bolts 3-16-in. and ¼-in., and the ⅜-in. size fitting bolts 5-16-in. and ⅜-in.