

ordered, and keeps the training pointer informed as to the correct setting of the sight.

4. The other members of the crew must, by careful attention to the details of the drill, attain the greatest rapidity and precision of loading, which is only to be acquired by constant training as a team.

5. Those members of the crew concerned should observe the following rules:

(a) Use every effort to gain the maximum rapidity of hits.

(b) After the gun is loaded, fire the first time the cross wires bear accurately on the target, provided it is possible to hold them "on" momentarily.

(c) Never fire a gun when the sights do not bear accurately on the target.

(d) Whatever any member of the crew has to do in serving a gun, *do it thoroughly*, and time will be saved in the long run.

Ordnance Duties of Junior Officers of Divisions.

32. When midshipmen graduate from the Naval Academy, and go out into the service, they are, in addition to their watch and other duties, assigned to duty, sometimes in charge of divisions on small ships, but usually as junior officer of a division on a large ship.

33. During the course at the Naval Academy, midshipmen have received instruction in all of the theory of ordnance and gunnery that will be of practical value to them in their sea-going duties in the future, but owing to the lack of time and facilities, their instruction in practical gunnery has necessarily been of an elementary character. They have been instructed in the principles of straight shooting; have been drilled at certain classes of guns, and are familiar with the use and advantages of the various devices for the training of gun pointers and gun crews, but owing to the scope of this subject of practical gunnery, owing to the continual changes and improvements in naval ordnance, and to the lack of opportunities for more practical experience, midshipmen, in going out into the service, must realize that they are yet under instruction, and have much to learn, the main difference being that while they are at the Naval Academy they are taught, drilled and made

to recite to their instructors—information being thus placed in their hands, whereas, after graduation, they must study for themselves, and often obtain the desired information only after much research. Before graduation their failure to understand a subject, only affects their recitation or examination; after graduation a lack of knowledge on practical professional matters subjects them to chagrin in exposing their ignorance before the men of their division, whom they are supposed to instruct; it affects their reputation as officers, and it diminishes the efficiency of the ship on which they are serving. If the midshipman happens to be detailed as the officer in charge of a division before he has had experience as a junior officer, with little opportunity to practically learn the duties of a division officer, it is the more necessary that his effort to learn all of his practical duties be diligent and absolutely thorough; for on him alone will rest the responsibility for the efficiency or inefficiency of the division, the merit of which will be clearly shown at the first record practice.

34. The primary duty of any divisional officer is to develop his division as a whole, by drill and instruction, so that it can efficiently perform any of the various duties required of it. The various drills which the divisions have on board ship are for the purpose of perfecting them in each of the exercises, in order that under actual service conditions they can perform these duties efficiently and without further instructions at that time. It is, in short, so that the division may be maintained at all times ready for any service which it might be called upon to perform were a war to break out immediately. This point is frequently lost sight of by young officers. It should always be remembered that the final test of the efficiency of a division is a consideration of the question "If action were imminent, would I desire the division to be more proficient?" If the answer is "yes," now is the time to add to its proficiency. Knowledge is valuable only for its power to produce results. In divisional duties, the entire object is to do practical things, not to teach theory. Practical knowledge of a most detailed kind is necessary to an officer to insure his gaining the highest possible practical results from his division. The standard of excellence in each division, boat crew, or gun crew, is not how much they know, or how well they are instructed in the per-

formance of their duties; it is how well do they *perform* the duties which are required of them; and the nearer a division approaches perfection in its actual drills, the nearer have the officers in that division succeeded in the perfect performance of their duties.

35. No person can efficiently drill or instruct others in any subject unless he himself knows thoroughly and accurately every detail of the drill or the matter under consideration; therefore after reporting for duty on board a ship, the midshipman should at once prepare himself for his divisional duties by thoroughly informing himself on every detail concerning the division to which he is assigned, whether he is in charge or junior officer of it. He should realize that he is now an officer, and that he will be so regarded by both the officers and the crew of the ship, and that so long as his knowledge of every detail of matters under his cognizance is not greater than that of any man of his division, just so long will he fail to command the highest respect from his men.

36. A midshipman should, therefore, immediately after reporting for duty, begin diligently to inform himself on all matters pertaining to his own duties, the duties of his division, and of each individual man in it. He should make out a copy of a complete watch quarter and station bill of the division to which he is assigned. This should show the individual duties of each member of the division at general quarters, fire, collision, boat, company, and landing drills, as well as the cleaning station of each man. If he is to be the junior officer of the division, this bill should be copied from his divisional officer's station bill; if he is to relieve some other officer in charge of a division it should be obtained from that officer in order to avoid any unnecessary changes in the stations of the men. If he can obtain it in no other way, it may be copied from the ship's station bill, but this will not show the individual duty of each man at each exercise. He should as quickly as possible become acquainted with each man of his division, learning their names and rates, their personal characteristics, their individual value and degree of reliability. He should acquire a thorough detailed knowledge of the position of the ordnance and appurtenances supplied to his division; learn the location of the magazines, ammunition hoists and scuttles, pumps, hydrants, fire hose, tarpaulins, hatches, etc., within the limits of

his division, and, by visiting the part of the ship in which his division is stationed, preferably with the division officer or with the officer whom he is to relieve, familiarize himself with each duty that the station bill requires his division to perform, so that at the very first drill he may intelligently perform his duties as an officer. He should, in brief, as quickly as possible, render himself familiar with every detail connected with his division and the duties which it has to perform, and as a test of his proficiency in this respect, he should run over in his own mind the duties of his division at the various drills, and ask himself if he is competent to perform the duties of each man at each drill. An officer cannot be proficient in his divisional duties until he is competent to do this.

37. A thorough detailed knowledge of the guns of his division, their mounts, accessories, firing mechanisms, and ammunition, as well as a detailed knowledge of the drills, practical notes in connection therewith, the place where each article required at drill is stowed, and the exact duty of each member of the gun crews is an absolute essential. He should therefore make a careful study of all available literature descriptive of his guns, mounts, ammunition, etc., as well as all instructions concerning the care, preservation and manipulation of his guns. Instructions for training gun pointers and gun crews, and for conducting target practice, should be matters of perfect familiarity with him, and he should as soon as possible render himself familiar with the current orders of the ship, by reading the Captain's and the Executive Officers order books. As the primary duty of any division is the effective use of the guns of the ship, the details of the duties above given for both the division officer and for each member of the guns' crew are matters of extreme importance to him, and should be strictly observed.

38. As junior officer of a division, a midshipman is the assistant of the divisional officer, and he should by observation of that officer, attempt, in all practical details, to profit by his more extended experience; a midshipman should endeavor to make his manner of carrying out the drills and exercises, and his general method of handling the men of the division, conform as nearly as possible to that of the divisional officer, and he should evince

as great an amount of zeal in the progress and efficiency of the division as he would do were he himself the divisional officer. All instructions governing the divisional officer, apply with equal force, except when clearly inapplicable, to the junior officer of the division.

39. After having thoroughly acquired and mastered all information concerning the duties of his own division, the midshipman should then, like any officer on first joining a ship, devote himself to a study of the details of the entire ship. He should, however, never allow this, which may be regarded as *general information*, to in any way interfere with an absolutely thorough knowledge and performance of his duties in his own division. This is his primary duty; this is where he is stationed; and this is the division which he is responsible for developing.

40. The daily divisional duties of a junior officer, will of course be as required by the divisional officer, but the following may be laid down as general rules:

The junior officer of a division should always be present during the period assigned to cleaning gun-bright work. He should see that all men who are not excused are present, and that those who are present clean all of the bright work of the gun, including that usually cleaned by those who are excused or who are necessarily absent. In the performance of this duty he should, so far as practicable, give his orders only to the captains of the various guns, and should require them to supervise the cleaning of their individual guns, and to detail the individual numbers who are to clean the bright work of the absentees.

At morning quarters he assists in forming and inspecting the division, as required, accompanying the divisional officer throughout the inspection. While at quarters during the temporary absence of the divisional officer, he takes command and sees that order is preserved.

At drills and at all exercises he should be diligent in requiring the performance of every single detail. At any time when the divisional officer is absent, the junior officer succeeds to the performance of all of the divisional duties.

If a midshipman is detailed as junior officer of the Engineer or Powder Division, his general duties are similar to those above

described. His first duty is, in every case, to make himself master of the situation by thoroughly informing himself on every point which falls under his charge, including not only the mechanical arrangement and details of the mechanism in his division, but also of all ship and naval regulations governing his duties, of the customs of the ship, the customs of the service, etc. In whatever capacity an officer may serve on board ship, his duties are laid down in a general manner in the U. S. Navy Regulations, and adequate information on all professional matters are available to him; ignorance of regulations is never an adequate plea for inefficiency.

Therefore, to whatever duty a midshipman is assigned, he should remember that his value, reputation, and ability will depend on his knowledge of his profession, his attention to his own duty, and the exactitude which he requires of his subordinates in the performance of their duties.