



AT WORK ON THE LOADING DUMMY.

By the use of this machine men become experts at lifting and loading the heavy shells, and at the same time much wear and tear of the guns is saved, as the breechblock is swung into position after each shell is loaded and is opened again for the next shell. The mechanism would soon be worn out if the big guns were used for such practice work.

FAST SHELL LOADING.

Uncle Sam Making Experts by the Use of a Dummy Gun.

How does a man feel after he has lifted a ton?

When some one asked that question of "Pop" Kennedy, shell man aboard the Missouri, one of Uncle Sam's visiting warships, last week, he replied: "It makes yer feel like"—

Just then the officer of the day appeared with in earshot and "Pop" bit the answer off and saluted. Then, as an afterthought, he added: "That is, it makes yer feel like that at first, but after you get used to it, say, it's dead easy."

"Pop," as his messmates call him, is one of the shell men aboard the Missouri who got into the habit of lifting a ton in course of the recent target practice of the ships of the Atlantic fleet in the harbor of Guantanamo, Cuba. Of course, the ton lifted was not in a solid bulk, for the several tons lifted almost daily by the Missouri's men were each cut up into twenty parts and were in the shape of 100-pound projectiles. These had to be lifted from the floor and placed in the breech of a 6-inch rifle. There are records to show that the feat was accomplished by "Pop" in twenty-eight seconds.

Possibly there are those who imagine that stuffing 100-pound shells into the breech of a 6-inch rifle at the rate of 20 in 28 seconds, or even 20 in a half minute, is easy work. Such persons may convince themselves by lifting a 100-pound bag of meal from the floor to a table and back to the floor again a few times. By doing so even the most skeptical can arrive at some definite idea of the physical endurance called for in the performance of the feats of the shell shovers aboard the Missouri.

As "Pop" Kennedy put it the other day, "It's liable to make you lame." "That's no joke," added another of the Missouri's shell men standing near. "Why, when I tackled that game for the first time, gee, I thought I was coming apart. It was all right up to about the tenth one, then the shells began to get heavy. My muscles began to get sore, and then they seemed to stiffen up. Honest, when I reached for that twentieth shell there was no more feeling in my arms than there is in that turret yonder, and I was almost afraid to bend to lift it up for fear I'd crack in two."

"It's all in knowing how," volunteered "Pop." "Now a 6-inch shell is a mighty troublesome thing to handle. If you don't tackle it just right there's no doing anything with it, and if it ever gets away from you look out for your toes; that's all I have to say. If it strikes your feet you'll likely wear crutches the rest of your life. No, I never had one get away from me. I usually tackle them this way," and, stooping over the 6-inch shell that lay at his feet, with one hand he yanked its sharp pointed nose into the air with a quick pull. At the same time the other hand lifted the back of the shell and shoved the whole forward just a bit. For the fraction of a second the big shell poised in the air, then settled down, its nose in the crook of one of the shell man's arms, while his other hand caught

and held the rear of it. Another quick movement and the shell had slid across his arm and gone home with a "chug" into the breech of a 6-inch gun.

"That's not so hard. Could do it easier though if I were a bit higher," commented "Pop" as he stepped aside and the breechblock swung into place with a vicious bang.

"But, bless you, loading the guns is easy compared to what we get on that loading machine," explained one of the shell men. "You see that thing is only for practice. It's really nothing but a big tube. The shell slides through it into a trough and is picked up and put through again."

The object of the dummy loading machine is to give the shell men an opportunity to acquire speed and proficiency in the handling of the shells without wearing out the breechblocks of

the guns. Of late much attention is being paid by all the ships in the navy to these drills, for in actual service much depends upon the promptness and accuracy of the shell man. Should he "muff" a shell at the critical moment, should he let it roll away from him, should he drop it—in short, should he fail to send it home safe and true when the breechblock of the big gun is swung open for him—the consequences might be serious. It is entirely possible that such a failure on the part of the shell man at a critical juncture might give the enemy a chance to get in a shot that would send the ship to the bottom. So Uncle Sam is drilling the shell men of his fleets, and has brought many of them now to a degree of perfection in which they think little of handling twenty of the big 100-pound shells in thirty seconds. The training received on the dummy vindicated itself in the

tests at Guantanamo, and Captain Pendleton of the Missouri is well pleased with the showing made by his men.

This dummy loader is the latest invention of the ordnance department, and the American navy is the only one to adopt and put it into use. The machine is a facsimile of the breech and powder chamber of a big gun, up to where the rifling begins. Loading it requires the identical motions that are employed in the actual loading and firing of the real weapon. One man opens and closes the breech, the shell man grasps the projectile and quickly rams it inside, and the "take-off" man catches the shell as it falls out at the end and shoves it again to the loader at the front. The whole makes a continuous operation for the loader. By the time he has put in the last shell and the breech is closed and locked it is ready to be swung open again by the plug man, and in goes an additional shell. A marked economic improvement is the saving of the life of expensive guns. The breechblock of these would soon be worn by the constant slamming and the denting of the quickly thrown shells. In the drill every man of the gun crew of twenty has to load twenty shells. As ten crews is the average, the mechanism is operated about four thousand times a day. This tremendous wear would be disastrous to the life of the costly guns.

The new device is manufactured entirely in the Brooklyn Navy Yard, under the supervision of Captain Rohrer, inspector of ordnance, and Superintendent McCluskey, in charge of the ordnance machine shop. It is made mostly of steel, although there are a few parts of brass, and these are supported by a framework of steel. Each weighs about fifteen hundred pounds and is six to eight feet in length. The one shown in the accompanying illustration is intended for the Connecticut. In the future all new ships are to have at least two of these gun drilling machines, and the American gunner is destined to lead all others in rapid and accurate loading.

In the handling of a 6-inch gun in action there is much more to be allowed for than the time consumed by the shell man between the order to load and the order to fire. In the first place, there is the breech to be thrown open, the shell to be inserted and pushed home, the 36-pound powder charge to be rammed in behind it, the breech block to be closed and locked, the primer to be adjusted and the gun sighted, all before the order to fire can be given. All these operations require time, and to reduce them to the lowest possible minimum of time it is essential that each man behind the gun do exactly what he is assigned to do, and get out of the way of the other members of the crew without the loss of the fraction of a second.

There are records aboard the Missouri showing that in the recent trials off Guantanamo the 6-inch guns averaged 7.19 shots to a gun a minute, and 5.465 hits to a gun a minute. With the big 12-inch guns the average was 1.995 shots to a gun a minute and 1.49 hits to a gun a minute. The 3-inch guns, which are much easier to handle, averaged 8.255 hits to a gun a minute. In one test the Missouri's gunners planted ten shells from the big 12-inch guns of the after turret in a 12x16 foot canvas target in three minutes at a distance of 1,600 yards, while the ship was moving at a 10-knot speed. The targets used in the recent tests had at both



LOADING SIX-INCH SHELLS INTO THE BREECH OF A GUN ON THE MISSOURI.

"Pop" Kennedy is here shown in his famous specialty. His record is loading twenty shells in twenty-eight seconds. Each shell weighs one hundred pounds. In less than half a minute, therefore, "Pop" raises one ton from the deck (in instalments) and shoves it into the gun. Such strength and endurance seem marvellous.