

**The Launch of the Battle Ship Oregon.**

The battle ship Oregon was launched at the Union Iron Works, San Francisco, October 26. Technically the Oregon is known as an armored coast-line battle ship of the first class and is one of three the bids of which were opened October 1, 1890. The sister ships are the Massachusetts and Indiana, both built by the Cramps in Philadelphia. Congress appropriated the sum of \$12,000,000 for the three ships and provided that one should be built on the Pacific coast.

The length of the Oregon is 348 feet, beam 69¼ feet, draught 24 feet, displacement 10,200 tons, maximum speed 16½ knots, sustained sea speed 15 knots. The coal capacity is 1,800 tons, making the radius of action at full speed 5,000 miles, or at a speed of ten knots per hour, 16,000 miles. It is protected by a belt of armor seven and one-half feet wide—three feet above and four feet below the water line—and eighteen inches thick. Over the belt is a steel protective deck 2¾ to 3 inches thick. Rising from the armor belt at each end are redoubts 17 inches thick, giving an armored free-board of 15 feet 2 inches. In these redoubts revolve the great turrets, which are 17 inches thick on the incline and 20 on the horizontal. Forward and aft of the belt are heavy protective decks and the coal is stowed to give additional protection. The steel conning tower is 10 inches thick and will be provided with signals, speaking tubes, etc. One military mast is provided carrying two tops for rapid fire and machine guns, the ammunition being sent up through the mast. The engines are of the twin screw, vertical triple expansion, direct acting, inverted cylinder type, stroke 42 inches, diameters of cylinders 34½, 48, and 75 inches respectively. There are four double-ended and two single-ended auxiliary steel boilers of the horizontal return fire tube type. The centrifugal circulating pumps are driven independently.

The battery is composed of four 13 inch breechloading rifles, eight 8 inch breechloading rifles, four 6 inch rifles, twenty 6 pounder rapid-fire guns, two Gatlings and 6 torpedo tubes. The secondary battery is very heavy and would annihilate any small vessel which came within range. The 13 inch guns are 18 feet above the water and sweep through a training arc of 270 degrees. The ammunition will be hoisted through armored tubes. The magazines are specially well protected. Altogether the Oregon is a model battle ship.

**The Planets for December.**

*Mercury* will be morning planet during December and will be visible to the unaided eye during the middle of the month. One must look toward the southeast about an hour before sunrise in order to see it. Mercury will be at greatest elongation, west from the sun 21° 23', Dec. 14, at noon.

*Venus* will be evening planet during December, setting in the southwest between seven and eight P. M. Although so brilliant to the eye it will not, on account of its low altitude, be in good position for telescopic observation in northern latitudes. Venus will be at greatest elongation, east from the sun 47° 29', Dec. 6, at 3 h. 36 m. P. M. In the southern hemisphere this will be a very favorable opportunity to study the surface markings of Venus, and it is to be hoped that Prof. W. H. Pickering and his assistants at Arequipa will be able to add much to our knowledge of this subject and of the rotation of the planet.

*Mars* will be morning planet, but is getting farther south all the time, so that its position will be unfavorable for northern observers. In the southern hemisphere the conditions will be much better. There will be quite a close conjunction of Mars and Uranus December 6 at 4 h. 9 m. central time, when the former will be only 8' north of the latter. Observers in Australia and Japan should be able to see the two planets in the same field of view of the telescope. The ruddy color of Mars and the green hue of Uranus will present a striking contrast. Eighteen hours later Mars will pass close to the wide double star  $\alpha$  Libra, the components of which Webb puts as third magnitude, pale yellow, and sixth magnitude, light gray. Mars will pass 11' north of the brighter star.

*Jupiter*, having but just passed opposition, will be in excellent position for observation during December. We have had a few good views of the planet this year, when much of fine detail was seen upon the surface, notably a large number of very small dark red spots. We have not happened to look at the time when the "great red spot" was visible and cannot say what its appearance this year is. The apparent diameter of Jupiter during December diminishes from 46" to 44". His brilliancy will be greater than that of any other object in the evening sky, excepting the moon, so that none can mistake him. His course is slowly westward in Taurus.

*Saturn* will be visible in the morning, but at a low altitude, so that for northern observers there will be no satisfactory observations. Saturn is in the constellation Virgo, just a little north and east of the star Spica. The planet is the brighter of the two. The rings of Saturn are pretty well opened now, the angle of their plane to the line of sight being now about 12°, and increasing to 14° at the end of December.

Saturn and the moon will be in conjunction December 3 at 3 h. 20 m. P. M., and December 31 at 1 h. 41 m. A. M. Saturn will be about 3° north of the moon in both instances.

*Uranus* is in Libra, very close to the star  $\alpha$ , referred to above in the note on Mars. At 5 h. 32 m. on the morning of December 16 Uranus will be in conjunction with the star, only 3' north. The conjunction with Mars has already been mentioned.

*Neptune* will be at opposition December 3, and therefore in best position for observation during December. Its motion during the month will be 53' west and 6' south. The position December 1 will be one-third of the distance on a straight line from  $\iota$  to  $\epsilon$  Tauri. A photograph taken at Goodsell Observatory, October 18, shows no star as bright as Neptune within 1° of this position.—*Astronomy and Astro-Physics.*

**BROOKS' COMET OF 1893.**

The announcement of the discovery of this comet on the morning of October 17 has already appeared in the SCIENTIFIC AMERICAN, with the promise of further particulars when sufficient observations had been secured.

The comet was observed on four succeeding mornings, before clouds and the full moon interfered, and these observations showed that the comet was moving in a northeasterly direction, with a rate of three-quarters of a degree daily.

The comet passed perihelion about September 20, so that theoretically its brightness should be decreasing, but it is holding its light well, and on the morning of October 22 it appeared brighter than at any previous observation. The tail then had a slight curve near the head and a faint auxiliary tail was seen branching from the main tail at an angle of thirty degrees.



THE BROOKS COMET OF 1893.

The accompanying drawing shows the normal appearance of the comet when the tail was straight and as viewed with a power of forty diameters in the telescope. The tail could be traced to a length of three degrees.

As the comet may be followed for some time with moderate sized telescopes, I send herewith a few positions, from which the course of the comet can be plotted to the end of the month or longer.

	R. A.		Decl. North.	
	hour.	m.	deg.	m.
Oct. 19.....	13	24	40	20
Oct. 23.....	13	35	44	40
Oct. 27.....	13	50	49	12
Dec. 1.....	14	05	53	33

From the above it will be seen that toward the end of November the comet becomes circumpolar, and hence observable all night, and on November 27 it is just at the end of the tail of the Great Bear.

WILLIAM R. BROOKS.  
Smith Observatory, Geneva, N. Y., Nov. 8, 1893.

**Remedy Against Epilepsy.**

S. A. Siminoff (*Med. Obozr.*, xxxix., 1893, No. 4, pp. 391-2) details three cases of epilepsy cured by him by the administration of an infusion of common tansy. He has also used this decoction with good effect in cases of neurasthenia, where valerian had ceased to be effective. A glassful of the infusion of the herb (either fresh or dried) is given to the patient at night and in the morning.

**Correspondence.**

**A Family Dough Kneader.**

To the Editor of the Scientific American:

Would you kindly draw attention of those of inventive ability to the great need of a machine for kneading dough for family use?

Such an article that would be self cleaning, and not too expensive, would secure a fortune for the inventor. Every one in the country likes good bread, and the principal cause of failure comes from not being properly kneaded, which a good machine would remedy.

JAS. A. MCCAFFREY.

**How to Make an Egg Stand on End.**

To the Editor of the Scientific American:

My method of standing an egg on end is not by cracking it, but by taking the egg in one hand and striking it in the other three or four strong licks, which readily breaks the thin membrane separating the air from the end of the egg; it also breaks up the yolk of the egg; the parts of the contents of the egg being thus free to move among themselves, the heavier ones settle at the bottom, the lighter ones above, and the air at the top. This is done by placing the egg on end a few seconds and holding it perpendicularly. The center of gravity is thus easily brought within the base and the egg stands readily on either end. I find that this is a fact that is known by but few. It is sometimes used by jugglers who pretend to conjure by incantations. I would like to know if this is generally known.

W. M. GRAYBILL.

[Ans.—A common mode of detecting the condition of eggs is to try to stand them on end. If good, it cannot usually be done. If bad, it can easily be done.—ED. S. A.]

**Welsh Anthracite Coal.**

The price of the screened Welsh anthracite, free on board at Cardiff or other shipping port, as named in a recently proposed contract, is 3s. 6d., or say 85 cents per ton of 2,240 pounds, while it is counted that the cost in New York harbor will not exceed \$2 per ton. There is no import duty on anthracite. The contract calls for deliveries of 500,000 tons a year and as much more as is wanted is to be supplied, subject to the usual reservations in case of strikes, etc. The Welsh anthracite has, when dry, an average composition of 87 to 92 per cent fixed carbon, about 5 per cent of volatile matter, and 3 to 6 per cent of ash. It is an excellent steam coal, and no doubt would, at the prices mentioned, make serious inroads into the market for anthracite and even bituminous coal used in steam making. It would not, however, become as popular a domestic fuel as our sized and clean anthracite, though a marked difference in price would open many doors to it.

The presence of this fuel in our market will cause the managers of our coal roads to consider more favorably the demands of the anthracite miners for lower tolls to tidewater, and the low prices at which it can be sold will be of interest to the holders of the coal road stocks.

It is rather curious that while we are arranging for the importation of Welsh anthracite at such extremely low prices as will make it a formidable rival to our own coal, we could ship our Virginia, Maryland, and Pennsylvania bituminous coals to London at a large profit, owing to the high price (\$11 to \$12 a gross ton) which coal now commands there on account of the coal miners' strikes in the north of England.—*Boston Journal of Commerce.*

**Round Shoulders Cured.**

A woman physician has recommended to the Boston Herald the following simple exercises, requiring little time and no apparatus, for the cure of all except very severe cases of round shoulders, when braces are also sometimes a necessity: "1. Raise arms before your shoulder high, extend arms sidewise, throw head back, straighten head, move arms forward, lower arms, repeat ten times. 2. Stand erect, raise arms before you, rise on tip toes, then throw arms as far backward as possible, sink again on heels and drop arms to side, repeat ten times. 3. Raise arms with elbow bent shoulder high, bringing palms together in front of face, then with elbows still bent swing both arms vigorously backward as far as possible even with the shoulders, palms looking forward. This should be repeated several times, but as the position is somewhat fatiguing, rest or change of exercise may be made between the movements."

Another simple movement designed to bring about a correct position of the shoulder blades consists of holding a cane or wand in both hands, throwing the head back and carrying the stick from "above the head back and down the hips."

As the clothing, if too tight or unyielding about or over the shoulders, may help to produce round shoulders, both the under and outside waist should be comfortable and bands over the shoulder of garments made of elastic.