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ENGINEER'S ISSUE

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THE ENGINEERING DEPARTMENT

And What It Means To You

The Engineering Department is organized with the Engineer Officer as the head of the Department and responsible only to the Executive and Commanding Officers. Directly under him are the First Assistant and the Division Officers.

The Department is divided into four Divisions, "A" Auxiliary; "B" Boiler; "E" Electrical and "M" Main Engine. Each has a line officer and warrant officer as division officers.

The "A" or Auxiliary Division has charge of all boat engines, evaporators, ice machines, machine shop, the heating system throughout the ship and the whistle and siren. There is also the general repair gang, which does all acetylene welding and brazing. This division is on the job night and day. Warm water in the scuttlebutt or a delayed liberty because of a broken down boat, are among the many things that make the importance of the "A" division felt by all hands.

The "B" or Boiler Division has charge of the eight boilers located in the four firerooms, and the boiler-makers shop. This is the largest division but when more than two firerooms are in use its personnel must stand watch and watch. (Four on, four off.) For full power, personnel must be obtained elsewhere. In port the boilers must be cleaned, both fire

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HOUSTON'S FIFTH BIRTHDAY

Monday, June 17, is the anniversary of the ship's commissioning. Five years ago, several hundred men and their officers proudly watched the National Ensign hoisted on board a trim new cruiser of the line, for the first time.

Much green water, and some not so green has gone skirring under her bottom since then. Much has been written about the ports and countries visited during those five short years; much more will be recounted in the years to come, for the HOUSTON seems to be a ship destined to go places!

To those of us who have served on the "Long Horn" ship since her formal introduction into the Naval Service, she has been a real home and our adventures with her will always be the source of pleasant memories.

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OFFICER CHANGES

Comdr. P. K. Robottom, our new Executive Officer, assumed his new duties last Tuesday upon relieving Comdr. F. D. Manock, ordered to duty at Bremerton. To Comdr. Robottom we extend a hearty welcome and wish him as fine a cruise aboard as the old timers have had. To Comdr. Manock farewell and our best wishes for him on his new station.

To the following we bid farewell and successful cruises on their new ships: Lt. (jg) F. B. Stevens to USS

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EVOLUTION OF ENGINES

The power of steam and the employment of that fluid in various forms has been known since beyond the scope of our history. The earliest known record of an engine operated by steam is that of Hero, who, at Alexandria, about 120 B.C., described a steam turbine in which a globe is caused to revolve by the reaction of steam being exhausted to atmosphere. No great progress was made in the application of steam engines to practical purposes until 1650, when the second Marquis of Worchester, Edward Somerset, constructed a steam fountain and employed it in raising water from a moat to the top of the tower of Raglan Castle. There is but little information available as to the origin of the internal combustion engine. In 1680 Huygens, a Dutchman, proposed to use gun powder, exploded in a large cylindrical vessel filled with air, expelling the air through check valves, thus leaving, after cooling, a partial vacuum. The pressure of the atmosphere then drove a piston down to the bottom of the vessel, lifting a weight or doing other work.

About 1794, Robert Street, an Englishman, patented an engine containing a motor cylinder in which worked a piston connected to a lever. This lever operated a pump. The bottom of the motor cylinder was heated by fire. A few drops of turpentine were introduced and evaporated by the heat. The piston was then drawn

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—: THE BLUE BONNET :—

A weekly publication, published by the ship's company of the U. S. S. HOUSTON, Captain W. B. Woodson, U.S.N., Commanding and Commander P. K. Robottom, U.S.N. Executive Officer.

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15 June, 1935

PEP TALK

As my tour of reserve duty aboard the HOUSTON draws to a close, I desire to express my enduring gratification over the fruitful experience I have had.

When a civilian steps aboard a man o' war, the transition is comparable to the passage from Earth to Mars. Everything has changed; everything is different. The first few days mean tension and strain, for the life of a man o' war's man becomes a new, thrilling and lasting experience. This tension was quickly dissipated, thanks to the helpful interest and courtesy shown me.

As the one who originated the plan, in 1923; and executed the campaign, in 1927, to have the HOUSTON named in honor of my native city, it is with especial pride and pleasure that I record anew the feeling of warm, affectionate interest all Houstonites have for the continued welfare of this magnificent and efficient fighting craft. The people of Houston feel they own the HOUSTON as much as does the Navy Department of the Federal Government. They consider themselves "big brothers" to all officers and men aboard.

I am greatly impressed with the smart appearance of the ship; the clean, high type, well-disciplined crew, and the crisp efficiency of their officers. No wonder the HOUSTON was selected to transport two famous Roosevelts on missions of real historic interest.

So, in my resumption of civilian status as a member of Houston's City Government, may I express to the ship's able and esteemed Captain

W. B. Woodson, and thru him, to all members of the ship's company, this pride of duty performed aboard; linked with feeling of especial friendship and Godspeed to wider fields of achievement.

The HOUSTON bears a great and honored name. Her record is so impressive that General Sam Houston, were he to return to the scene of his patriotic labors, would smile in happy satisfaction and say:

"Well done—carry out the destiny so well begun."

Wm. A. Bernrieder,
Lieut. (jg), USNR
Executive Secretary,
Cruiser HOUSTON Committee

—: * * * :—
ODE TO A MARINE

I parked my plow on the farm one day
And bedded the old mule down,
Thumbed a ride on the main highway
And forthwith went to town,
I looked around for a job to do
My cash was getting low,
But every place I asked for work
The answer was always no.
My shoes were getting very thin
And my feet were awfully sore
But I trudged along while my spirit ebbed
As I had done for weeks before.
Then I passed a place all draped in flags
With a big sign on the door
"Join the Navy, now and see the world,"
Well, I couldn't ask for more,
The P. O. spoke of trades to learn
And of food of every sort
And your hotel traveled with you
As you cruised from port to port.
They showed me a card with letters writ
Across it big and small
Said read the third line from the top
But I could'nt read at all.
Made me cough, say ah, jump up and down,
They put a telephone on my chest
Took my weight and height and read my pulse
Then told me to get dressed.
The medico scratched his head awhile as
I stood there in a dream
Then he said by gosh! he is dumb as h—
So we will make him a marine!

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HOUSTON'S FIFTH BIRTHDAY

To you who have recently come to a good ship we extend a hearty welcome, and feel assured that your tour of duty will be one full of interest.

No special event will commemorate the "Birthday", but we can all give three lusty cheers for a ship that has ever been near the front in its class and in many instances on top of the heap. Lets help to keep her there, so that her future may be as bright as her past.

SPEED RUN
By Adam Chatterbox

Being the first hand impressions of an embryonic ("would-be" to you) Engineer, during a Speed Run across the China Sea on the Houston. Time: Early evening. Place: After Engine Room.

Just lazin' along, eight knots standard, everything running cool and easy. Big, polished steel shafts throwing off gleams of light as they slowly turn—so slow you may count the coupling bolts.

Throttlemen lounging - taking it easy, it won't be long now; a speed run coming up! Coffee, sandwiches, cigarettes, always welcome, never more so than now. On the floorplates, oilers and pumpmen idling in a cool blower stream, no worries, everything "maskee"! Wisecracks, jokes, laughing; The Officer of the Watch seriously explaining the mysteries of the steam turbine to a lad not long away from the farm.

The Chief Engineer hits the throttle platform accompanied by his Assistant—the zero hour isn't far off now. Clinging heat; sweat saturated dungarees - pump lazily pounding - an occasional glance at guages, dials revolution indicators; no strain, just kicking over.

A clanging bell! Speed change! Going up! All is action now - every man has his part to play, and does it with smooth percision. Open nozzles, adjust valves; everybody on their toes; Another signal from the bridge; another! "Open her up, slowly!" Turbines whine, big gears rumble - fifteen - twenty - twenty-five knots. "Give her the gun!" "Keep your oil pressure up, the temperature down!"

The latest and most modern equipment. Powerful turbines, small, yet under those gleaming casings are concealed the leashed power of tens of thousands of horses. Miles of twisting, curving pipes - steam, oil, water. Burnished copper, glistening brass, silvery paint. Bewildering valves, wheels in rows, pairs, groups; giant steam stops, throttle valves, each one a part of the harness for this Colossus of energy. The engine room seems crowded to overflowing with machinery: Pumps, turbines, electric generators, huge mysterious switchboard,

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NOSEY NEWS by EV' BODY

With the movements of this vessel being quite frequent and visiting several ports during one week the scandal for the week is very touching, in fact very juicy: To head our list we must greet two more members to our famous Golden Grain Club and trust that they enjoyed their trip to Yuma, Ariz., over the last week end.. Congrats to Whitey Harred and Wisnowski. Jossi of the F division could tell us some very interesting tales about ships being in Navy Yards, etc. Could it be possible that Sorrow was running around bareheaded, just to prove that he isn't completely bald? It appears that our fair-haired boy Jones of the dashing 2nd weakened, well anyway he bailed her out, and claims that was his good deed for the day. Slusarsky was caught sneaking into the washroom just before reveille, and what do you suppose he did, nothing else but powder the body. Can you imagine the Panther of the Pike doing such a thing? When somebody said Arizona, that promising son of Columbus Junction, Iowa, suddenly cancelled all social engagements on the beach and retreated to the fair surroundings of the ship. Ashcraft has now followed suit and will gladly give instructions on chaperoning a pooch. Clayton has big intentions of becoming a staunch member of the Golden Grain Club. 'Tis rumored that a certain CM1c is one year older, altho the celebration of the big event actually aged him ten years. Pawlak had quite a 21 day leave, when you consider that he stretched it to ten days, and we learn that the home town gals (Long Beach) are quite the bookkeepers?? Scarierno of the 1st cheese box admits that he is not a bad gig himself. Eggarter comes along and admits that it is good to leave

dear old Long Beach for a spell, but we are wondering whether it is too many gals or too many beers? Those two old men of the ship seem to have the lads backed to the wall when it comes to showing off the gals, you know who we mean, Adkins and Ellard. That native son of Texas, Farquhar, was supposed to be, oh so bashful according to his gal, but a recent demonstration in public has somewhat changed the opinions of many. And along with this comes word of another prospect in the G. G. Club. My, my, how those badges are selling lately. Too bad I don't get a cut. Kinda be able to buy a Packard. Dear old Snarfy Joe (our ladies man), just returned to the ship so early the other evening from his latest heartbreak and we find that she sent him back as it would be for his own good. Our "Man about town" from the Scullery could relate some interesting tales of his conquests, but he is so modest! McKee demonstrated first aid to the gig, but apparently his methods were a little rough. Charlie Furr's efforts to remain as No. 1 Nasty Man, received a violent setback when he was discovered wearing some blue stripped shorts!!! Ask Bill Aue why he could not wait for the P.E. train to reach Long Beach. Some say he had the motorman drop him off in some field. Anyway he missed the boat. Bill says, "and so would you." Porky Rich, a recent member of the G.G. Club, pulled homestead the other evening and spent the evening as the guest of the city in the elaborate hotel at the corner of Broadway and Pacific. My, how interesting life is? When the C&R gang honored Fansher with a special trough on the mess table, his feelings were upset considerably. Imagine, he wouldn't eat from it. Westerfield just couldn't keep away from his love upon his return to Diego, but we would suggest that you have a bodyguard with you as those shot-guns are bad! The boiler-maker's evident chagrin when informed about his new rival. Wade says: "Anyway they didn't have to hit me with a hammer, I'm a boilermaker by accident, not by nature." Davis and his whistle are on friendly terms again. Take a chance Johnson telling the lads and lassies on the Pike about his position as "cobble" on the ship. Ashlins agitation over winning an anchor pool and not rating liberty.

OFFICER CHANGES

Artic; Ens. R. E. Bly to USS Brooks, and Ens. T. L. Watkins to USS Tarbell.

Lt. R. B. Vanzant, who came aboard this week, has already become a familiar figure about the decks. Relieving Lt. A. J. Homann, he will assume his duties as Assistant First Lieutenant. Lt. Homann is leaving for recruiting duty Detroit where we hope he will find us plenty of fine young men to man our new ships.

Lt. (jg) J. B. Berkley (Ye Editor) leaves this week for the USS Holland. Wonder if they have any Nosey News for him to censor there.

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THUMBNAIL SKETCHES OF "BLACK GANG" CELEBRITIES

As Seen and Heard Along 'Washroom Passageway'

"Pop" Early's brogue, as broad as 'tis long. "Tiny" Rimmer's grin and carefree easygoing way. Moe Ivy's pose when he does the "family" laundry; not to mention the space he occupies. "Squeekie" Campbell frantically trying to catch up on his "gig-oloing" while "the cat's away". John Lee's comical posing as the "original tough guy." Hall lecturing on "over-his-head" subjects to somebody who wouldn't be interested anyhow. "Panama" Sanders telling how he wrestled that 450 pound bear to a draw. Kentner and Cawthorn making the air "blue" in their competition for first place in the "Growlers" Club. Gallant's cigar and holder once cocked at a jaunty angle; since he said, "I do", it has drooped perceptibly and his intense air is heart rending. Bulla's swaggering walk since we forgot about his money making profession—fighter. Dickey lying about his wealthy father, who is a Iowa farmer. "Hank" Cromwell lying about any and everything and being highly offended if not believed. Sharp's change of manner since becoming a Benedict; once the nosiest of storytellers, now the personification of silence. "Art" Hand's serious attack of "libertyitis." Wommack's habitual "yowsah". Durler's profound attachment to his bunk. "Fatso" Wade's brand new rate and the razzing he's

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THE ENGINEERING DEPARTMENT

sides and water sides—a long and tedious job. Frequently the boilers must be rebricked, another back breaking job.

The "E" or Electrical Division has charge of all things electrical thruout the ship. To enumerate the various electrical appliances would take too long, but in general they are, fire control circuits, lighting and power circuits. Every electrical motor, generator, searchlight, etc., on the ship is cared for by this division.

The "M" or Main Engine Division has charge of all machinery in the two enginerooms, consisting of everything from turbines to fire and bilge pumps.

How many of you of the Deck Force have been through the Engineering Department? Altogether too few. Drop down and see us whenever you have a few minutes and we will be glad to answer any questions. Know your ship from double bottoms to foretop.

In closing, a word about blowing tubes. As soot is collected in the boiler on the heating surfaces it insulates these surfaces from the gases of combustion and decreases the efficiency of the plant. If this soot is allowed to remain on the heating surfaces for any length of time, sulphur in the gases will form sulphuric and other injurious acids, which attack and corrode the surfaces. The reason for blowing tubes is to get rid of the soot and not to dirty the paint work on the top-side.

THUMBNAIL SKETCHES OF "BLACK GANG" CELEBRITIES

getting! Lutz and his numerous love affairs; or is it just affairs. Nicolette's appetite and love for "Burhead." Shank's gloomy look; about what? Chief Water Tender Smith's indignant, "Don't get fresh with me." Starkey's ability as an ace of the two-wheeled riders. (When he learns to leap his steed over P.E. trains he expects to go in for more spectacular stunts.) Lee and Couch's evident anxiety over missing the Chaumont. "Country" Lord's soulful "crooning" in the washroom. "Doggone it!" "Put-put" Putnam's forgetting about his heavy-money contract to sing with the Beverly Hillbillies.

SPEED RUN

valves, rods, bells, telephones, voice-tubes, dials, gauges, indicators, warning annunciators, raucous klaxons; commonplace to the engineer, bedlam to the uninitiated!

A jangling signal; open up! a few more turns! The propellor shafts are whirling around more than three hundred and fifty times each minute. "Hard over, right rudder! One hundred and eighty degree turn! A lurch—she swings over on her beam, the massive gears rumble and growl in protest. Nonchalant oilers inspect bearings, caressing them with grimy paws. "Running cool, O. K.!"

Counters spinning, eyes on the clock! The strain is beginning to tell, a throttleman wonders how four hours can seem so long. Coming around. "Mark!" "Watch your turns!" "Watch the back pressure!" "Watch the oil, the make-up feed, catch the counter!" Readings on the hour and the half. Only four more hours of this, then back to steady steaming.

ENGINEERING COMPETITION Versus Fuel Oil Economy

As perhaps most everyone knows, Engineering competition is based on fuel oil allowance. This allowance is fixed by the Bureau of Engineering and is the same for all ships in each class. To use exactly what is allowed both at anchor and in an underway status means a 100% score.

The HOUSTON'S average score since commissioning has been well above that called "perfect" and in most instances above the other heavy cruisers.

Because of circumstances beyond our control, we have not gotten an "E". One year we were not eligible; another, the reason was insufficient mileage; last year was a non-competitive year, as is the current one. It isn't much fun to run races, win them, then be "cheated" of the well-earned prize. There is some satisfaction though, in knowing we give the other "big" cruisers something to worry about. Since becoming eligible the Houston has never dropped into second place! And if all hands continue to cooperate by being conservative in the use of water and lights perhaps we may yet sport a glistening White "E" on the after stack.

EVOLUTION OF ENGINES

up, admitting a quantity of air which mixed with the inflammable vapor. This mixture was ignited by drawing in a flame through a port uncovered by the piston. The resulting explosion drove the piston up to the end of its stroke and forced the pump piston down.

In 1799, Lebon, a Frenchman, patented a gas engine in which gas and air were supplied, under compression to a combustion chamber where the mixture was detonated. The hot gases were then distributed by means of valves to a motor cylinder. This engine was also double acting in that work was done on both sides of the piston.

In 1820, the Reverend W. Cecill of Cambridge, England, constructed an engine which was moved by pressure of the atmosphere upon a vacuum caused by the explosion of hydrogen gas mixed with air.

The first engine in which the explosive mixture was compressed within the engine cylinder, by the ascent and descent of the piston, was introduced in 1838. Ignition by means of a primary battery and coil producing a jump spark, was used for the first time in 1860. The standard type of internal combustion engine involving four cycles (one working stroke for every two revolutions) per cylinder in a single acting engine was exhibited by two Germans, Otto and Langen, at the Paris Exposition in 1878. The two cycle engine (one working stroke for every revolution) was produced by Dugold Clerk, an English engineer.

In 1893 Rudolph Diesel introduced a new form of internal combustion engine. The essential feature of his engine consists in the compression of atmospheric air to a sufficient temperature to ignite the fuel oil, which is injected at a predetermined rate during a part of the expansion, or working stroke. This type of engine is used in practically all submarines and is making possible, great strides in commercial surface vessels and heavy traction locomotives.

"Matrimony," said Eddie Cantor, "is not a word, but a sentence." Somebody adds that it's a long sentence, with many words in it.

Send the BLUE BONNET home.