

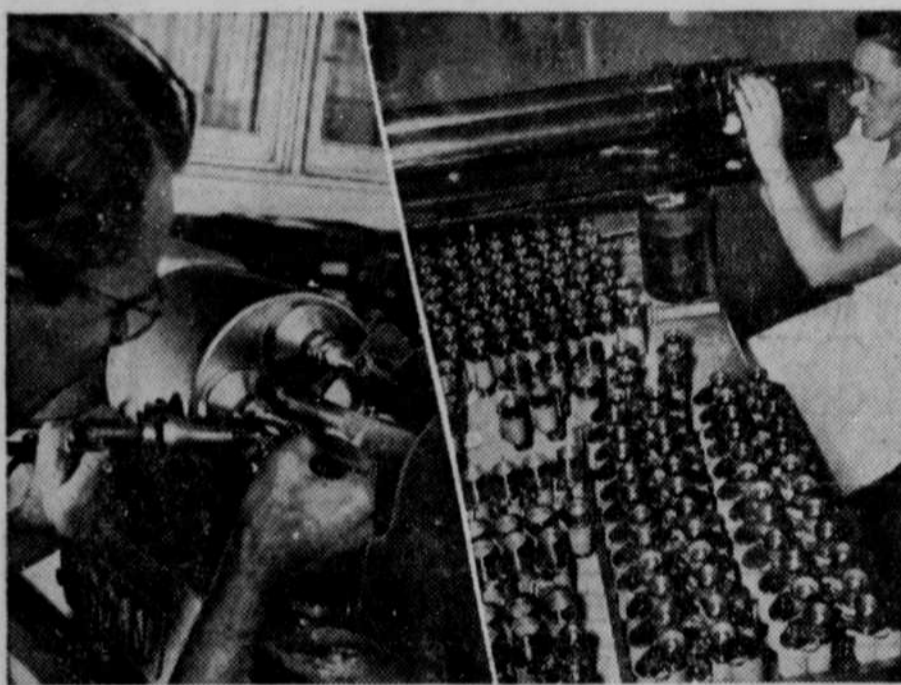
Sharpening the Eyes of the Army and Navy With Lenses

Listen, my children, and you shall hear of a little cog in this great defense program machinery of ours that plays an unspectacular, but vital, role in the whole defense setup. It is the manufacture of optical instruments for our armed forces. It was thought that the U. S. would be up against it when the supply of German optical glass was cut off, but this was not the case. The optical division at Frankford Arsenal in Philadelphia, where some of these photos were taken, now has a staff of 200 persons.



On the bridge of the mighty battleship, North Carolina, Rear Admiral Olaf M. Hustvedt and his executive officer, Comdr. A. G. Shepard (left) hold binoculars as they observe the effects of the firing tests at sea.

Picture Parade



The lathe machine at the left is used for centering lenses and grinding the edges through with the optical center. Right: Looking for flaws in parts of binoculars as they are assembled.



The girl at left is cleaning optical elements that will later be assembled into a battery commander's telescope. Right: Two pretty maids check on finished prisms and lenses.



Field binoculars in actual use. A soldier is spotting aircraft during maneuvers. He tells his partner what he sees and the partner relays the information to headquarters.



Short Story of the Week This Young Couple's Parents Offered Some Marriage Advice

By RICHARD HILL WILKINSON

DELLA KEITH pursed her lips in indecision. It was Saturday and on Saturdays Gordon Black, whom she had known for years, and who was her next door neighbor, displayed considerable annoyance when anyone had the indecency to disturb him from indulging his hobby, which was taking apart and putting together broken-down automobiles. Still, this was important. "Hello," she said, stepping through the gate and standing near Gordon's legs. The legs wriggled. Six feet and two inches of male youth emerged from beneath the car. A grease-besmeared and annoyed countenance stared at Della. "Lo, Del," said the youth, and waited. "Got something to talk over with you," Della said. "It's about us. Father wants us to get married." Gordon grinned. "Mine does too," he said unhappily. "You got it too, eh? Well, what are you going to do, let your father tell you whom you're going to marry?" "Not by a jugful, I'm not!" The youth sat upright. "What does he think I am? Telling me whom I'm to marry?" "I thought you'd feel that way about it. I don't like the idea, either. Father said a lot of things about family friendship, and how he agreed with your father when we were kids to marry us off when we'd grown." Gordon's eyes blazed. "Well, he's a little late for that stuff! You



"And now," said Della, "now that we've won, Gordon, I suppose it's all right to tell?" "Can't get away with it in these modern times. I'm going to pick my own wife. Just because we've seen a lot of each other since we got out of college is no sign we're in love." "Of course not. Fact is, I was lonesome and you were the only man available." "Same here. They've certainly got a nerve. Dad said he'd give me a week to decide. That's a laugh!" The youth's head disappeared beneath the car again. "See you tonight," he called. "Dance at the country club." Della nodded indifferently and went back through the gate. A week later she and Gordon confronted their parents in the library of the Black home. The conference had been called for eight sharp. It was now 8:45. The elder Keith looked up and glowered as they entered. The elder Black silently indicated chairs. "You young folks," began the latter, "probably can surmise why we asked you to come here." He paused. Della and Gordon stared innocently. "Both of you," the elder Black went on, "have reached the marriageable age. And as you probably know, it has long been the wish of Mr. Keith and myself that his daughter and my son should one day be joined in matrimony. Nothing would give us more pleasure than thus to have the families united. We have watched you closely. We find that you are happy in each other's company. You are congenial, helpful, kind. In short, we are convinced we are making no mistake in demanding—requesting—that our wishes be fulfilled." The elder Black took a long breath and sat down. The elder Keith nodded in silent approval and stared at the victims. "Well, what have you to say, Gordon?" Gordon crossed and uncrossed his legs, glanced at Della, winked and regarded his father ludicrously. "I say, father, that you two old codgers—gentlemen are acting quite ridiculous." The elder Black glowered. "Take care, young man! This is a serious business." "Serious for you, perhaps, but decidedly absurd to me. Father or no father, no one is going to tell me who I'm to marry." "And you, Della?" "Absolutely preposterous! It's silly and—old-fashioned. Why you'd think we were living in China or somewhere!" "Then neither of you will respect our wishes?" "Your commands. Your wishes don't enter into it." The elder Black stood up and impressively removed his spectacles.

"Children, you have no idea what this means to Mr. Keith and myself. It has been our dream for more than 20 years. And, I warn you, we'll do everything in our power to bring the union about. We believe we're within our rights. I ask you again to reconsider." "I'm sorry, Father, but I feel that such things should be left entirely to Della and me, without outside interference." "In that case, son, the firm of Black & Son, attorneys, is no longer in existence. You are discharged, ousted! You will also be cut from my will!" Gordon grinned. "Cut away. You have the final say-so there." "And you, Della," said Mr. Keith severely, "will receive similar treatment. Of course, for the time being you may remain in our home. But you need expect no inheritance from me; your weekly allowance will also be discontinued." Della stood up and her face was grave. "Very well, Father. My answer is the same as Gordon's. I'll not submit to any such tyranny!" She turned and started toward the door, Gordon close to her heels. They were part way out when Mr. Black spoke. "Gordon!" The youth turned and waited. "Come back in here. Both of you. This thing has gone far enough. Mr. Keith and I thought—hoped you two would fall in love. We wanted you to. And we got tired of waiting. We tried to force you into this thing—by threats. I can see now we were wrong. After all, every one must choose for himself in such matters." Gordon came across the room quickly and placed his arm about his father's shoulder. "I'm sorry, Dad. I didn't mean to hurt your feelings—but, well, I'm glad you see it our way." Near by Della was clinging to the neck of old Mr. Keith. The old man looked at each other and grinned sheepishly. The two young people looked at each other and smiled happily. "And now," said Della, "now that we've won, Gordon, I suppose it's all right to tell?" Gordon nodded. "Of course. No good to keep it a secret." Mr. Black and Mr. Keith looked puzzled. And Della said happily, "It isn't that Gordon and I don't love each other. We do, very much. It's simply that we're like our old dads—stubborn and independent. Nobody was going to tell us what to do. Not even our pops. And so when we first got wind of this thing last week and were told about this proposed conference tonight, we just slipped away and got married that very day, without anyone telling us we could or couldn't."

Four-Eyed Fish Look Above, Below Same Time

Fish do not have eyelids, and for a simple reason—they live in the water and the water keeps their eyes moist. Most kinds of land animals have eyelids. The main purpose of the lids is to guard the eyes from dust, or anything else which may come into them. One way the eyes are guarded is by blinking the lids; this spreads a bit of moisture over the surface. You and I blink our eyes more than we might think, unless we stop to take note of it. Ordinary fish go into the air so seldom that they do not need lids to guard their eyes. Even the four-eyed fish has water close by; it dips its head often enough to clear the eyes which are kept in the open air. Four-eyed fish? Yes, that's what they are called. Four-eyed fish are from six to eight inches long. They live chiefly in salt water, but sometimes go into rivers. One place where they are found is Surinam, or Dutch Guiana, the home of the Surniam toad and other strange forms of life. In markets of Brazil, four-eyed fish are sold to housewives who take them home to cook. It may be that most of those housewives give little thought to the amazing kind of fish they buy. No other kind in the world has four eyes. From one point of view, we might say this fish has only one pair of eyes, with each one "double." Yet a band of color cuts through on each side, and gives the eye the work of two. One looks downward, the other upward. So the eyes on each side are separate, and the name of "four-eyed fish" can hardly be called a mistake. We may wonder why, in this special case, Nature made the eyes that way. The answer is to be found in a certain fact: the fish has the habit of swimming and floating at the surface of the water. It needs to be able to look up and down at the same time. To see insects above the water, it needs eyes which look upward. These insects supply much of its food. There are little "bugs" and other game to be obtained just under the surface of the water, and to see these the fish needs down-looking eyes.

History in the News

By ELMO SCOTT WATSON

IF YOU want a composite picture of "Your Yank," i.e. the average young man starting service in the United States army to defend his flag and his country here it is, according to a recent compilation of official figures by the war department. Your Yank is five feet, eight inches tall, weighs 144 pounds, has a chest measurement of 33½ inches, wears a 9½-D shoe and a size 7 hat. After a few months in the army, however, the recruit has gained in weight on army food, wears shoes one-half size larger and has an expanded chest measurement. This is indicated by tests of average recruits, although complete examination comparable to that given upon the individual's entrance into the service is not routine. To keep this average soldier in fighting trim for the first year, the Quartermaster corps spends \$404.65, of which \$175.20 is for his food; \$162.05 for clothing; \$15.79 for individual equipment; and \$51.61 for barracks equipment. Weapons, ammunition, pay and other expenses incurred during his training are not included in these estimates. The army spends about 48 cents a day, or \$175.20 a year, to feed him. The American soldier eats at the finest army mess in the world. On a weekly basis his garrison, or peacetime ration consists of the following average quantities of basic



To Private John E. Lawton, 21-year-old lad from Everett, Mass., fell the distinction on November 19, 1940, of being the first in the nation to be accepted in the army under the Selective Service law. He is pictured above in full army uniform and carrying away his duffle bag at Fort Devens, Mass.

foods. 4 pounds, 6 ounces of fresh beef; 14 ounces of chicken; 1 pound, 12 ounces of fresh pork; 7 eggs; 9 pounds, 3 ounces of fresh and canned vegetables; a little over 1 pound of cereals and dry vegetables; about 2 pounds of fresh and canned fruits; 14 ounces of coffee; 4 pounds, 6 ounces of potatoes; and 4 pounds of fresh and evaporated milk. Clothing needed to outfit the enlisted man when he begins duty costs the government \$107.89. Maintenance cost of clothing for a year is \$54.16, making a total clothing cost for his year in the army of \$162.05. Clothing issued to the soldier includes 8 pairs of shorts (either cotton or woolen), 8 undershirts (usually cotton, but 2 may be woolen); 9 pairs of socks, 3 pairs of shoes—2 pairs high brown service and 1 pair low dress oxfords; 6 pairs of trousers—4 cotton khaki and 2 woolen, 6 shirts—4 khaki and 2 flannel, woolen, or O.D.; 1 woolen overcoat; 1 cotton field jacket with woolen lining; 3 herringbone cotton twill jackets (to soldiers not issued one-piece work suits), 3 pairs of herringbone twill trousers to go with jackets; 2 pairs of canvas leggings (when not issued boots); 4 neckties—2 black woolen and 2 cotton khaki; 1 herringbone twill hat to go with suit of similar material; 2 caps—1 woolen, 1 cotton khaki (except in tropics); 1 woolen or serge coat; 1 cotton khaki web waist belt; 1 pair of woolen, O.D. gloves; 6 white cotton handkerchiefs, and 1 steel helmet. When he enters the service the enlisted man receives 1 toilet set containing shaving brush, tooth brush, comb, safety razor with 5 blades; 1 pair of suspenders; 2 identification discs with 1 yard of tape; 2 hand towels; 1 bath towel; 2 bar-rack bags; 1 canvas field bag; 1 cartridge belt (if armed with rifle); 1 pistol belt (if armed with pistol); 1 mess kit; 1 canteen and cover; 1 pack carrier; 1 cup; 1 fork, 1 spoon; 1 knife; 1 haversack (if not issued field bag); 1 web pocket (if armed with pistol); 1 first aid pouch; 1 strap for carrying field bag.

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- Always keep perfume in a dark place. Daylight will affect every odor differently, according to its formula. In extreme cases perfume turns bright red as soon as it has been exposed to the sun.
- Leftover stock from cooked vegetables contains valuable minerals and vitamins. Save it to use in soups, stews, and sauces.
- Salt meat requires longer boiling than fresh. Put it into cold water, quickly bring it to a boil, then let it simmer.
- To bring out the full flavor of raisins, dates, currants or figs, soak them in a little boiling water for five minutes. Two table-spoons of boiling water for each half cup of fruit will be satisfactory.
- Keep your furnace, flues and chimney clean. Dirt and soot cut down furnace efficiency. Cleaning once a year should be enough, but if you burn a high-soot coal, your furnace may need cleaning twice a season.
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