

## THE SURGEON'S TOOLS

AS FEW AS POSSIBLE USED BY THE MODERN PRACTITIONER.

To Remove an Appendix, For Instance, He Can Carry Everything Necessary in One of His Pockets. Hand Forged Instruments the Best.

"A surgeon used to carry a bag of instruments weighing often as much as twenty-five pounds when he was called to operate," said a member of the staff of the New York Postgraduate Medical School and Hospital the other day. "Today an average operation, such as the removal of an appendix, calls for no more instruments than can be carried in the pockets."

"I have just come," continued the doctor, "from removing an appendix, and here in this small package are all the instruments I used—a scalpel, two artery clamps, two forceps and a needle. Many operations, of course—gastro-enteric, gynecological and those that have to do with bones—require more instruments, but modern science demands the use of as few as possible in order that time may be saved. Skill and haste are prime factors in an operation. In the old days, before anaesthesia was known, this was to shorten the patient's agony as much as possible. After ether was discovered surgeons for awhile operated more leisurely, but soon finding out that the shock to the patient remaining under ether so long was always dangerous and often fatal they again recognized the importance of swiftness. Diminishing the number of instruments was one of the methods

for saving time. In the operating room in the old days there was always, no matter what the operation, a good sized table laid out with ten or fifteen score of instruments, fifty artery clamps, scissors, forceps and lancets by the dozen. It used to take over an hour to remove an appendix; today the average is about twelve minutes.

"The variety of instruments increases every year as surgeons meet with new needs or solve old problems. In our school here, as in others, many instruments have been devised. Especially to those having to do with the eye, ear, nose and throat have we made valuable additions as well as in the field of orthopedic appliances. The Hippocratic oath precludes the patenting of any such inventions; consequently all instruments are free to be made by all and every surgical manufactory."

The making of surgical instruments in the United States is nearly contemporaneous with the beginning of the republic, and one or two of the prominent firms today date from long before the civil war. In no country are finer instruments made than in the United States. Though the number of men employed is small, every man is a skilled laborer and an artist, with an aptness often as fine as that of a journeyman jeweler, capable of making even the most delicate of the great variety of instruments, amounting to about 10,000, which a surgical house must keep in stock or be ready to produce upon order.

Cast and drop forged instruments have no lasting value, and once the edge is worn off they can never be satisfactorily resharpened. The process which they undergo demands that they be brought three times to a white heat. The first time the steel becomes tempered; the second and third time it becomes decarbonized and loses its temper, the result being an instrument with a shell of hard steel, capable of taking a fair edge, but beneath which the metal is soft and unfit to stand honing.

"All good instruments are hand forged. Thus prices are doubled and trebled over the prices of cast instruments because of the skilled labor and time necessary to their construction. The workman in a careful factory must make a study of his work and learn the physical qualities of the steel or metal he works with, its strength and cutting and tension qualities. General operating instruments are made of steel, silver, platinum, gold and aluminium. German steel, owing to its tenacity, is used for forceps and blunt instruments; English cast steel for edged tools, as it receives a high temper, a fine polish and retains its edge. Silver when pure is very flexible and is useful for catheters, which require frequent change of curve. When mixed with other metals, as coin silver, it makes firm catheters, caustic holders and cannulated work. Seamless silver instruments are least liable to corrode. Platinum resists the action of acids and ordinary heat and

is useful for caustic holders, actuar cauteries and the electrodes of the galvano cauterium. Gold, owing to its ductility, is adapted for fine tubes, such as eye syringes and so forth, while aluminium is by its extreme lightness suitable for probes, styles and tracheotomy tubes.

"Handles are made of ebony, ivory, pearl or hard rubber. Ebony and rubber are used for large instruments, though these at times have handles of steel. Ivory makes a durable and beautiful handle, though it and ebony are not entirely aseptic, because it is impossible to boil them for the purpose of sterilization without their cracking. Ivory and pearl are used for scalpels and for small instruments like those used in operating on the eye. On the whole, the best material for handles is hard rubber, since it may be vulcanized on the instrument, thus making it practically one piece, with no possible seam for the lodging of germs and hence perfectly safe.

"Next to the materials the mode of making determines the instrument's quality. Steel overheated in the forge is brittle or rotten. In shaping with the file the form may be destroyed. In hardening and tempering the steel may be spoiled. In every stage the value of the instrument depends upon the skill applied."—New York Post.

### Bitter Jerrold.

Among the sayings attributed to Douglas Jerrold is a very bitter one he applied to Mark Lemon, then editor of Punch. Lemon was deeply attached to Dickens and showed it in a very open fashion, which perhaps aroused the great satirist's jealousy. At all events, as Jerrold was walking out one day with Lemon and another friend, and Dickens with several more behind them, Lemon suddenly dropped away and turned back. "What has become of Punch?" asked Jerrold's companion. "Did you hear Dickens whistle?" was the cynical reply. "Dickens pays the dog tax for Lemon."

### Liberty, Equality, Fraternity.

The French philosopher M. Le Bon, commenting on the motto of the revolution, "Liberty, Equality and Fraternity," declared that the real difference between the French and the British lay in the fact that the French were enamored of equality and cared little for liberty, while the British insisted on liberty and never gave a thought to equality. And when some one quoted this to Rudyard Kipling he instantly added his own comment to the effect that what the American really preferred was fraternity. "He is a good fellow himself, and he expects you to be one."

### Convinced.

Mr. Spongely (slightly related)—Splendid! Magnificent! Do you know, Uncle Eli, I believe I shall never get tired of seeing the sun set behind that hill! Uncle Eli—That's what me an' mother's beginnin' to think.—Puck.

## What Can be done on a Jefferson County Farm.

Alfred Truman, of Brookville, writing on agricultural conditions in this region, selects the farm of Levi Schuckers, of Emerickville, as an example of intelligent, up-to-date culture of the soil. After mentioning the supposed poor agricultural conditions existing, Mr. Truman cites Mr. Schuckers' case to the contrary, as follows:

"The production of Mr. Schuckers' farm, although our seasons are limited to less than five months duration, are equal both in quantity and quality to the best farms in the counties of Lancaster and Chester, a spot we call the garden spot of America. And if all the land the country cultivates was made as productive as is the soil of Mr. Schuckers a population of four hundred millions of people could be sustained. His average production of wheat per acre is double that of our western prairies, and his yield for this year is 500 bushels. When the census report for his township was read by the census officials at Washington, for the year 1900, the figures giving Mr. Schuckers' production of crops for that year, were discredited and the report returned, as the officials stated, for correction; but as absolute facts had been given in the first place there were no corrections to be made."

Mars was not a favorite among the classic Greeks, nor is his name month a great favorite among the Gothic moderns. The god of war was a barbarian intruder in the Olympian circle. There was something Thracian, and by that token crude and unworthy in his manner. He was more of a blusterer than a fighter, and Homer narrates with evident relish how Pallas Athene tumbled him over in combat, his vast bulk covering several acres. Of wild aspect, untutored ways and indifferently wits, he had little to recommend him but his immoral origin.

Such also is the month that has taken the war god's name. One poet notes its "ugly looks and threats." "A half wild creature cast from nature's lap," another calls it. The proverb "mad as a March hare" says the same thing with less reticence. English people call the month "March Manywenthers" and thereby intimate their doubt of its capacity for sustained purpose. It is the Thracian of the twelve, as September is the Tyrian. There is something blustering and barren in its aspect, as there is in what people call "a good war." The winds that blow from one end of it to the other are not "the winds of God." A peck of March dust may be worth a king's ransom, as a wise saw has it, but from the average human it gets less grateful greeting. "Beware the Ides of March" is good wisdom for our common humanity.—New York Mail.

"If a business man is wise," says Andrew Carnegie, "he puts all his eggs in one basket and then watches that basket. If he is a merchant in coffee, he attends to coffee; if a merchant in sugar, he attends to sugar and lets coffee alone, and only mixes them when he drinks his coffee with sugar in it. If he mines coal and sells it, he attends to the black diamonds; if he owns and sails ships, he attends to shipping, and he ceases to insure his own ships just as soon as he has surplus capital and can stand the loss of one without imperiling solvency; if he manufactures steel he sticks to steel, and lets copper severely alone; if he mines iron-stone, he sticks to that and avoids every other kind of mining, silver and gold mining especially. This is because a man can thoroughly master only one business, and only an able man can do this. I have never yet met the man who fully understood two different kinds of business; you cannot find him any sooner than you can find a man who thinks in two languages equally and does not invariably think only in one. Subdivision, specialization, is the order of the day."

President Roosevelt said in his address before the Long Island Bible society: "There is in the English Language no word that is more abused than that of education. The popular idea is that the educated man is one who has mastered the learning of the schools and the college. It is a good thing to be clever, to be able and smart; but it is a better thing to have the qualities that find their expression in the Decalogue and the Golden Rule."

"No nation was ever overthrown by its farmers. Chaldea and Egypt, Greece and Rome, grew rotten and ripe for destruction not in the fields but in the narrow lanes and crowded city streets, and in the palaces of their nobility."

### ALLEGHENY COLLEGE.

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The case of Kate Brady and John C. Brady, her husband, vs. The Borough of Brookville, an action was brought to recover damages for injuries received by Mrs. Brady on a defective sidewalk in front of the Litch property, on East Main street, which was set for trial at the August sessions of the Court of Common Pleas, was settled by the parties, upon payment by the Borough of the sum of \$940 and record exists in the case, the Litch estate agreeing to compensate the borough to the extent of the settlement. In this connection it may be well to call the attention of property owners to the fact that those who willfully allow the sidewalks in front of their properties to become out of repair run the risk of losing their homes through judgments being secured for damages for injuries received.—Brookville Republican.

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