BALLOONS IN THE NAVY.

How They May Be Used for the Purpose of Spying on the Enemy—Great Aid to the Admirals of Fleets.

Balloons are going to play an important part in the work of our navy around Cuba, and each day of delayed action will make them more needful in observing the Spaniard's strengthened lines of defense.

The tortuous waterways and the generally land-locked nature of the harbors, their narrow fortified entrances, and the excellent retreats the wide reaches of water offer to their ships make it imperative that we have some fairly safe and reliable means of making reconnoissances of the Spaniards' positions. The fighting tops, yes, even the mastheads, are of little avail for observation at the distances imposed by the watchful batteries of the enemy, and the captive balloon alone solves the difficulty. This is especially so where high promontories like those of Santiago de Cuba and San Juan completely shut out the harbor from view and make hitting a fleet therin mere guesswork. Recent experiments in Germany, France and Russia have emphasized the importance of the captive balloon in widening a fleet's powers of observation, just in the same way that the captive balloon will serve the army; and the patient trials and study of the Germans have evolved a curious aerostat that by virtue of its shape and peculiar properties is especially well adapted to the greater range of naval work, and it is quite safe to say our own balloons will embody the general features of the German design.

The balloons will really be three balloons acting in concert. The first and largest is like an immense sausage, and bears the main burden of the loaded car. The second is somewhat similar in shape, but hugs the lower end of the big balloon like a creeping caterpillar. This second and smaller balloon acts principally in the capacity of a rudder, and aids materially in holding the balloon in a peculiar position, while the third and small spherical balloon trails along independently behind at some distance and serves in the same steadying capacity that a kite's tail does. In action, this triple balloon floats with great steadiness or immobility when not under way—something impossible in the pear-shaped affair familiar to all of us.

The observation car is pendant from the main balloon, which poises in the air at an angle of about 45 degrees, practically like the position of the kite in common to every school boy, and it is just in that way that the force of the wind is utilized to increase the balloon's buoyancy and to subserve also to that peculiarly marked steadiness or directness of flight.

Made up, as it is, in three separate parts, it is less liable to total and instant collapse in case of puncture, and it is even possible to secure a wider margin of safety by subdividing the interiors by thin membranous walls and fitting them with little valves somewhat like those now used on a bicycle tire, which would enable the balloon to be filled, but which at the same time would shut off automatically an injured compartment by virtue of the unimpaired force of the neighboring good ones. A happy, chance shot that might damage one or even two of the compartments would only cause the balloon to sink slowly like an exhausted bird, and would either enable the aeronauts to prepare for a jump in safety or permit the balloon to be drawn beyond the reach of further attack before touching the water. These balloons are built up in sections out of a wonderfully light but very tough fabrication of silk—a strip a yard long being equal to bearing a burden of half a ton; and a balloon capable of raising a party of four persons will scarcely weigh more than a good-sized boy of 10.

The especial advantages of the balloon for naval work were discovered so recently as 1894. In that year the Russian monitor Rusalka foundered with all hands in the Gulf of Finland. An expedition, under Colonel Nicolas d'Orloff, undertook to discover the location of the lost vessel by using a captive balloon for the purposes of submarine observation, and while he was unable to find the craft, still the results of his search were fruitful in valuable information for future naval purposes. The balloon, which was held captive by a large naval transport fitted up for the service, ascended to altitudes varying from 650 to something just over 1,400 feet. Two observers, who were relieved every three hours, were inmates in the car, and it was found that the naked eye was better adapted to discerning objects at the bottom of the sea than were the aids of telescopes or glasses. With a favorable light rocks and sandbanks were clearly defined at depths of from 19 to 23 feet. Large, light sandbanks—such as prevail about Cuba—could be seen more or less distinctly, depending upon the color of the water, at a depth of even 40 feet, but it was not possible to distinguish the details of objects so deeply submerged. The view from the car reached to a distance of quite 45 miles, and it was possible to hear the sound of distant cannonading which was inaudible to persons on land. Objects on the surface of the water were more easily detected than they could have been on land, and the character of distant craft, whether mercantile or naval, was easily discoverable; and, finally, it was found that the steadier nature of their currents over the water made certain delicate observations possible where the broken currents over the land would have made them prohibitive.

Backed by the reflecting bottom sand about the Cuban ports, explosive mines in the shallower water will stand out strongly silhouetted, as would also other obstructions opposed to our ships' approach—something that could not be detected with safety in any other way. This seems a strange power of the air, but it is only because the eye is carried above the highest angle of the sun's reflected light, and the water becomes as a sheet of glass faced squarely with the light behind one's head.

With a modern equipment of long-distance or telescopic photography it is possible, from a base so steady as one of these balloons, to take pictures of the enemy's coast, forts, hidden batteries and the locations of his vessels and his vulnerable positions. This is not speculation, but an accomplished fact.

Now let us see how the work will be done in all probability. One of the auxiliary vessels will be assigned each fleet to serve as a balloon depot ship, and a good wide stretch of deck will be set apart for the stowage of the balloon, its inflating and for its ascension and subsequent return. The hydrogen gas will be made either down below and supplied by pipe to the balloon on deck, or stored, under great pressure, in stout steel cylinders, which can be carried where most convenient and fed directly into the great folds of the "aerostat." When all is ready, the observing officers step into the car, a fine steel rope, under mechanical control, is let out, and the balloon rises like a great kite high into the air. The ship gets under way, and, with the balloon appearing scarcely larger than a good-sized orange, starts in toward the coast on its mission of observation and detection. Telephonic communication is kept up with the occupants in the car, and the direction and the speed of the craft are at once responsive to the guidance of the watchers in that tiny car a quarter of a mile above. When they have completed their reconnoissance the winding machine is started, and they are quickly and easily drawn down, while a little skillful maneuvering lands them on deck and the nimble seamen soon have the balloon snugly anchored and covered against mishap. The work can be carried on night or day and with wider applications than possible to a fixed military base, and its use on board a naval craft as an auxiliary to operations of the army would be of inestimable value.

The illustration depicts the balloon moored to a speeding torpedo boat and the result, perhaps, of a very good night's work in our behalf. The balloon has ascended from the deck of the vessel as usual, but when at the desired height was fastened to the light-draught and fleeter torpedo boat. This boat has crept in to the neighboring coast under cover of darkness and sought the temporary shelter of some jutting arm of the land. As the first mists of the early morning rise, the balloon, like a poising eagle, soars high above the enemy's defenses, but not so far as to be beyond the practicing reach of its telescopic eyes. There, practically safe from harm's reach, it absorbs so much that is vital to the enemy's welfare, and at the first shot of alarm the boat darts out from cover, and before either boat or balloon can be caught in range they are hastening away to the offing with a wealth of information and such detection as it is impossible for the foe to guard against before an assault be made.

Blanco also has balloons, but they are hampered by the fixed base essential to military operations and the shifting courses of the land breezes, but we shall have a system of espionage second to none—not even his coast-wise telegraph; and whether it be for the massing of troops, the successful bombardment by only one small gunboat, or the grand concerted action of an entire fleet, we shall have the amplest means of information with the least exposure of life.

We shall watch our enemy even while he sleeps, and the first thing he shall see as he looks up from the land still clothed in the gray of dawn, will be our guardian high above and touched by the first glint of the coming day—an omen of heaven's guidance and a promise of golden victory.

ROBERT G. SKERRETT.

KEENE'S "RICHARD."

The Actor's Fight on the Floor That Represented the Bosworth Field.

"Thomas W. Keene was the only Richard who ever finished a fight on Bosworth Field to the satisfaction of the gallery,' said a Western man in speaking of the tragedian, whose death on Staten Island has occurred recently. "In his later years Mr. Keene quit this, but when he first went out as a tragedian under the management of Mr. W. R. Hayden, he got down on the floor of the stage in his encounter and fairly dragged himself across the field,' knocking things right and left, while the gallery caused the roof of the house to sag. When Keene secured Hayden for his manager it was understood that Hayden was to bill the show and manage it, but he planned. There was never anything in the line of gorgeous lithographing that surpassed Hayden's posters during the first two seasons in the West. The Bosworth Field scene took up nine-tenths of the big sheets, and if there was any color overlooked I never heard of it. I was in a town where Hayden had billed his attraction along with the Barnum-Bailey show, and I declare on my honor that the stand put up by Billy Hayden drew the crowd. I have been told that the rolling around on the floor business in the Bosworth Field scene was Hayden's conception of the fight and that poor Keene was forced to roll his kingly attire every night under protest. At the expiration of the contract it was renewed with the proviso that there was to be no fighting on the floor."—Ex.

Well Used Sword.

Capt. Weaver, who is going into the war as captain of an Arkansas company, wears a sword which has done duty in three wars. His great-grandfather carried it in the Revolutionary war, his grandfather in the war of 1812, and uncle in the war between the states, and now he expects if he gets a chance to slash some Spaniards with it.

War Welcome at Such a Time.

Mrs. Benham—I see by the paper that a western man has thrown up a good position, sold all his property and gone to Cuba to fight the Spaniards. There's patriotism for you!" Benham—"Probably his wife was housecleaning."

What We'd Like to Know.

First Society Beauty—I see, dear, that it has been fashionable in Paris to be photographed in one's corset. Second Society Beauty—Dear me! what on earth do they want to put them on for?

The Mules Will Be Gone.

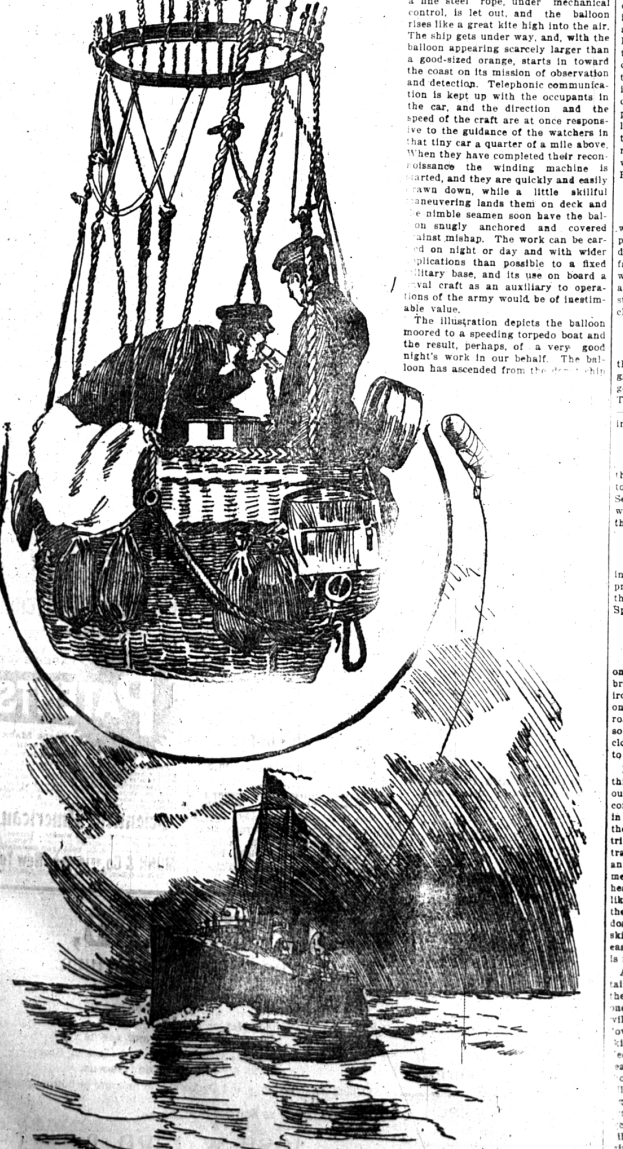
Mule meat is selling for $4.50 a pound in Havana. Unless the town is taken pretty soon by the Americans it is clear that the most valuable part of the Spanish forces will be lost forever.

ON WHEELING TOURS.

The woman traveler needs to carry on her wheel a small bag containing brush and comb, toothbrush, curling-iron and extra hairpins to replace the ones jolted out in passing over rough roads. A few handkerchiefs must also be remembered. The rest of the clothing can be sent on ahead by train to one's next stopping place.

Many will be the parties made up this summer for bicycle tours throughout northern Illinois and southern Wisconsin, and women will be prominent in all of them. There are many things the woman who makes a long wheel trip should know in order that her travels may be a pleasure instead of an annoyance. All-wool undergarments are a necessity and the only healthful kind to wear. The chills likely to be caught when pausing by the roadside for lunch or rest will be done away with if wool is next the skin. Then the light weight wool is easily washed out by hand at night and is fresh for the next day.

A good costume is a rather short tailor skirt and shirt waists of silk, as they crumple less than the starched ones. Instead of linen collars ribbons will be better, as they do not "melt" down. A light jacket to match the skirt and a rain cape should be carried. A sailor hat is the best headwear, as it shades the eyes. A low shoe and golf or ordinary stockings will be found the best, as in long riding the high boots grow very stiff and cumbrisome. Abroad the enthusiastic cyclist thinks nothing of doing twenty miles on good roads through a smart run, but in this country wheelwomen have a preference for dry roads and clear air.



MAKING OBSERVATIONS FROM A WARSHIP.

JOE'S AMILY.

Until she married Amily had been possessed of considerable self-will and some sharpness of tongue; but now, after three years of Joe Strong's exclusive society, she had become a subdued creature; her face seemed to have assumed a submissive expression of habitual deference. Why she had chosen Joe from among many admirers no one could imagine, for he had not even the advantage of good looks; the sluggishness of his mental capacity was portrayed in every line of his hard, clean-shaven face. He was a man from whom women were wont to shrink, with an instinctive consciousness that he looked down upon them. Men thought him honest, and, by reason of his physical strength, generally deemed it wise to be civil to him, though few really liked him.

No one had seen Amily inside a church since her wedding day, nor did she ever tell her friends of her own meek suggestion, on the first Sunday of her married life, that she and her husband should go to a place of worship together.

"Oh, it be wurship, be it?" Joe had said, with his broad, southern drawl. "Look here, you can wurship at home! That be what I married ye fur—to wursh-up and do my chores."

Amily shut her lips, to open them no more on that subject in his hearing.

This statement included Joe's entire creed on the subject of womankind. He did not ill-treat his wife; and in so much as he never spoke to her without swearing, she grew accustomed to that, and at last did not even notice it. Neither was he a drunkard; he considered that a man has a perfect right to get drunk every night of his life if he chooses; but he so hated having a headache in the morning that, for his part, he preferred to keep sober.

The woman began to think that she was turning into a machine for scrubbing, cooking and sewing. It seemed to her, after three years, that no world existed outside her four walls, from which she only escaped when she went marketing with Joe on Saturday nights. Of course she might have gone oftener—he had never said she wasn't to; but the inclination to do so seemed to have died, along with her self-will, and her joy of life, and her religion. She did not realize how unhappy she was. She thought she was only ill, and perhaps more lonely on that account.

How had it all come about?

It always was, as she had thought, so much more lonely when the sound of his cart wheels died away in the distance, especially now that he came so often and staid so long.

But—was it possible he had said that to her—that she had let him say it? Could it be that she—a woman in whom passion had seemed long ago to die a premature death—could it be that she had made it possible for John Hovenden to speak as he had spoken?

She stood as he had left her when he went out, with her face to the fire, and

PALE AND BREATHLESS.

her hands tightly clasped behind her. The wind roared down the chimney, the rain beat upon the pane, just as on that evening a month ago. Strange, happy, eventful month!—and it had ended like this.

"I will take you away," he had said; "no one will know where you go. I will make you happy, Amily."

She had not realized till that moment how happy he had already made her—how changed her poor empty life had been by his daily visits. She had not known, till he spoke, that she was hungry for love and kindness; but she had known it then when it had cost her an effort to refuse him; she knew it now, when she thought of his words and his look brought a strange tremor with it, and made her hide her face in her hands with a little cry of pain.

She laid the supper, listening for Joe's footsteps, and expecting every instant to hear it above the noise of wind and rain. He was late. She went to the door and tried to peer through the gloom, forgetting all the excitement and strangeness of the afternoon in her anxiety lest ill had befallen him. At last, as the clock struck 11, she had made up her mind to brave the horrors of the lonely road and to go out and seek him.

She had already put on her hat and cloak, when the door was thrown open and Joe entered.

"Ah, Joe, I was just coming——"

Her sentence was never finished, for she staggered back in horror, pale and breathless.

Joe had availed himself of the privilege possessed by the lords of creation; he had braved the prospect of a headache, and, for the first time since his marriage, he was hopelessly intoxicated.

Amily stood by the wall; for some minutes she was too appalled to move, and she said not a word. Then the color came slowly back to her lips and cheeks, and her dark eyes took a look that was dangerous. Gathering her skirts about her as though she feared pollution, she walked past him, out of the door, and up the creaking stairs to the little bed chamber.

"We shall soon be in London," said John Hovenden. "I've only one place to stop at on the way. Are you warm enough?"

"Yes, oh yes, thank you. Do drive quickly—some one will see us," she answered, drawing back timidly behind the awning.

At last Hovenden drew up at the gate of a great house that lay back in its garden.

"I shall be with you again directly," he said, as he sprang to the ground and hurried up the gravel walk.

The sudden stillness after the noisy motion of the cart seemed to recall Amily to herself. The haunting bitterness that had been with her all through that miserable day, the strange wild desire to be anywhere but in the lonely little cottage outside the village, seemed suddenly to give place to a different state of mind. The touch of the man's hand was gone from hers; it was a relief. She had not wanted it, she never would want it, nor him, nor his love. What she wanted was that Joe should be kind to her, that Joe should love her a little, and be contented with her. If she left him this would never be—if she left him he might even love some one else! Terrible thought, that sent the color dying over the face of Joe's Amily! She had loved Joe when she married him; he might not be all that she had thought; he might be—he likely was—a hard kind of man. But he was Joe, and she loved him.

Amily sprang from the cart, and love, the old love of her life, seemed to lend her wings as she fled down the dark roads towards her home. She never looked behind; never looked back at what she was leaving, nor at the sin she had been so near committing. She looked neither to right nor to left; the darkness had no horrors for her that night. Joe would be at home; he would be angry with her, he would swear at her; he might possibly, for the first time in his life, be rough with her. But she deserved it all, and—he was Joe!

The carrier had taken her a long way, it was nearly 11 o'clock before she was in sight of her home. There was a light in the kitchen window, and as she came closer she saw on the blind the shadow of her husband as he paced to and fro. For a moment only she hesitated, and then lifted the latch and went in.

Joe turned, and the husband and wife stood face to face in silence. Then she spoke, raising her face to his with almost child-like pleading.

"Joe, I'm sorry. I meant to go away for always; but I—I had to come back."

Joe looked at her without speaking at first. Then he drew the back of his hand slowly across his eyes.

"Take off them wet cloes, old girl," he said; "you'll be catchin' cold. And, put the stoo on, do, and let's have a mouthful. I be starvin'."—Exchange.

PROFESSOR OF NURSING.

The First American Girl to Fill Such a Chair in College.

On Miss Hannah Kindbom, a bright young woman of Swedish birth, has been conferred the distinction of being the first female to secure the position of professor of nursing in an American college. Miss Kindbom has just been installed in that capacity in the University of Texas. Previously she was superintendent of nurses at the John Sealy hospital, Galveston. Miss Kindbom was born in Sweden twenty-six years ago. Her father is a lawyer of Stockholm, and she was educated at a private school in that city. When young she showed an intense interest in medicine and nursing, and when 13 years old attended a course of lectures on "First Aid to the Injured," and gave up all her spare time to visit those who suffered. After finishing her education Miss Kindbom trained as a nurse at the Sabbaltsberga hospital, and later came to New York.

MINIATURES OF THE EYE.

Painters Now Reproduce the Optics for Gifts to Friends.

Among the latest novelties in what might be called love tokens to very dear friends is what is called "the beloved eye." This, of course, is not the genuine article, but a miniature painting of the human eye, done most exquisitely on ivory and set about with precious stones. The painting of the eye alone is by no means a trivial task, and the one who wishes to offer a presentment of his or her optic to the beloved one must give many sittings to the miniature painter in order to enable him to produce the exact color and expression, so the fad for "beloved eyes" is too eccentric and too costly to be lasting.

Tombstone Orthography.

The summit of bad spelling in an epitaph seems to have been reached by the following inscription in English, found on a gravestone in the Caroline Islands put up to the memory of two brave sailors:

Sacred to Wilm. Collis
Boat Steerer of the SHIP
SaiNT george of New BED
ford who By the Will of
Almitey god
was slvirillery injured by a
BIGL WHALE
off this Iland on
18 March 1860
also to
Pedro Sabbanas of Guam
4th MaTE drouwned on
the SAME Date his
Back broken by WHALE
above
Mentioned

What a Baby Can Do.

It can wear out a pair of kid shoes in twenty-four hours. It can keep its father busy advertising in the newspapers for a nurse. It can occupy both sides of the largest-sized bed manufactured, simultaneously. It can cause its father to be insulted by every second-class boarding-house keeper at the seaside, who "never take children," which in nine cases out of ten is very fortunate for the children. It can make itself look like a fiend just when mamma wants to show "what a pretty baby she has." It can go to sleep "like a little angel," and just as mamma and papa are starting for the theater, it can wake up and stay awake until the last act.

Village Built on Chalk.

There is a village in England built upon an enormous bowlder of chalk. This bowlder is half a mile long, and must have been carried coastward a distance of twenty-five miles by some great iceberg.

Dangerous Value.

Mrs. Jaggers—You ain't worth the powder and lead to blow you up! Her Worst Half—Thank heavens!

WONDERS OF THE WAR.

Interesting Stories Will Be in Order When the Soldiers Return.

No aspect of our war with Spain is stranger to the American people than the sudden removing of tens of thousands of our regular and volunteer soldiers to foreign lands. Some are preparing to go to Cuba, others to Porto Rico, and, stranger than all, thousands are to be hurried to the Philippine islands, almost half way round the world from our national capital, and 7,000 or 8,000 miles westward of San Francisco.

Probably no one will be more amazed and more permanently so, at this unexpected condition of affairs than the soldier himself. Our regulars are a matter-of-fact lot of fellows, who take duty as it comes and goes, and never allow themselves to be astonished, but to be transported at short notice in the cool northern springtime from the north Atlantic coast, the great lakes, from windswept prairies and passes, the dry air of the west and the mountains to the extreme tip of Florida, with its languid murky breezes, would of itself be change enough to compel attention to the size of the country. To send them to Cuba, whether the skies be clear or overflowing with warm rains, is to fill them with wonderment. To men accustomed to the neat villages of the United States, to roads that are at least distinct in outline, to forests that, at worst, are passable and to farms that do not go entirely untilled, Cuba, in its desolation, where the possible luxuriance of the tropics cannot hide, must be a series of wonders. But the Philippines—imagination staggers at the prospect of following the volunteers in their journey toward the farthest east by way of the Pacific west, a sea voyage more than twice as great as the width of the Atlantic, and to be taken by thousands of men, not one in twenty of whom ever saw the sea, and thousands of whom never saw a larger craft than a skiff or a canoe! During the civil war a well-planned effort was made for a few moments in danger of coming to naught because the charging division, composed of men from the interior states, suddenly saw before them the Atlantic and a few ocean steamers. They were good soldiers, but no quantity of military discipline can divest a man of ordinary curiosity. So imagine the dazed condition of volunteers from the eastern portion of the far west—or, indeed, from any part of the country—being put ashore on the Philippines, where climate, vegetation, houses and people are so entirely different from anything the average American has ever seen—where the cattle are only as big as goats and the horse is almost a curiosity! Americans think they know human nature, for have they not among them the representatives of all nations of Europe, some of Asia, most parts of Africa, to say nothing of the American Indian and the American tramp? But the Philippine natives are unlike any of these in manners and habits. American armies have thus far been the world's most fertile source of war stories; the civil war added about 5,000 titles to the nation's list of books of home origin, but when the American soldier begins to embody in literature his recollections of foreign experiences incident to the present war all war story records will be broken and the wonder will not cease while the veterans remain alive.

How He Enjoyed Himself.

Eddy county (N. D.) has a man who owns a threshing rig with which he has been threshing nearly all winter. He failed to get his flax threshed during the season last fall, so he stacked the grain, got his engine and machine in position, constituted himself engineer, fireman, feeder, pitcher and everything else, and has been enjoying himself for the past three weeks. While not making any big runs, he is getting there just the same.—New Rockford (N. D.) Transcript.

Powerful Lighthouses.

The average candle power of the eighty-six first-class British lighthouses is 20,650, whereas the thirty-six first-class French lighthouses have a luminosity equal to 34,150 candles. Since 1847 France has constructed eleven new lighthouses, with an average of 8,200,000 candles, and the new lighthouse at Eckmuhl is of 40,000,000 candle power.

Good Stayer.

Driver—And what made you think I was an athlete, Miss Juno? Miss Slydig (yawning)—Your staying qualities.—New York World.

WHAT THE LAW DECIDES.

An ordinance making it unlawful to sell fresh pork or sausage made therefrom between June 1 and Oct. 1, is held in Helena vs. Dwyer (Ark.) 39 L. R. A. 266, to be unreasonable and void because it violates the inalienable right of men to procure food, since such food when sound and free from disease is useful and nutritious.

A by-law of a live stock exchange limiting the number of solicitors that any member shall employ, with a provision for its enforcement by fine, suspension or expulsion from membership is held, in Payne, McElhinney vs. Chicago live stock exchange (Ill.) 39 L. R. A. 373, to be an unlawful restriction on the freedom of trade and business.

A contract with a ticket broker, enabling him to sell tickets at less than the schedule rates, is held, in Raleigh & G. R. company vs. Swanson (Ga.) 39 L. R. A. 275, to be in violation of the act of congress to regulate commerce, when the tickets are for interstate transportation, and the contract is therefore unenforceable and void.

A contract between connecting lines fixing the proportion and extent of their several or correlative liability between themselves is held in Rose vs. Wollenberg (Ore.) L. R. A. 373 to be outside the statute of frauds. With this case is a note presenting the other authorities on the effect of the statute of frauds upon such contracts between cosureties.

The right of a city to make its bonds payable in gold coin only is sustained in Murphy vs. San Luis Obispo (Cal.) 39 L. R. A. 444, under a statute authorizing them to be made "payable in gold coin or lawful money," as the statute is necessarily construed, taking all its provisions together, as giving the city the option to make them payable in gold coin alone or in lawful money.