

MODEL OF C. K. G. BILLINGS'S YACHT VANADIS, SEEN IN LONGITUDINAL SECTION.

YACHT MODEL SIX FEET LONG

ELABORATE PIECE OF WORK FOR C. K. G. BILLINGS.

The Vanadis, Split Lengthwise, Shown in Miniature—Even the Smallest of Fittings Reproduced—Model Collections Favorite Hobby of Many Yachtsmen.

To be an up to date yachtman you must not only own a yacht but have a fully rigged model of it. It is proper, too, to have models of all the vessels a yachtman has owned.

One of the handsomest sets of models yet turned out has just been completed for C. K. G. Billings by the H. E. Boucher Manufacturing Company, which has a well appointed shipbuilding plant on Fulton street. Mr. Boucher has made a study of models. He has made many for the United States Navy and Army departments and has recently made sets of models to illustrate text books used by the cadets at Annapolis.

The new models just exhibited are those of the steam yacht Vanadis, which is one of the finest afloat. The model is as handsome as the yacht and is complete down to the minutest detail. The Vanadis was built by A. J. Inglis at Glasgow from designs by Tams, Lemoine and Crane, and is a steel vessel fitted with three screws, two of which are driven by turbine engines and the other, on the centre shaft, by a reciprocating engine. Her dimensions are 277 feet in length overall, 232 feet 7 inches on the water line, 32 feet 7 inches beam, 15 feet 1 inch depth and 14 feet draft. The model has been built on the scale of one-quarter inch to the foot, so that the model measures just under 3 feet 10 inches from the stem head to the tail and including the bowsprit is 8 feet 2 inches long.

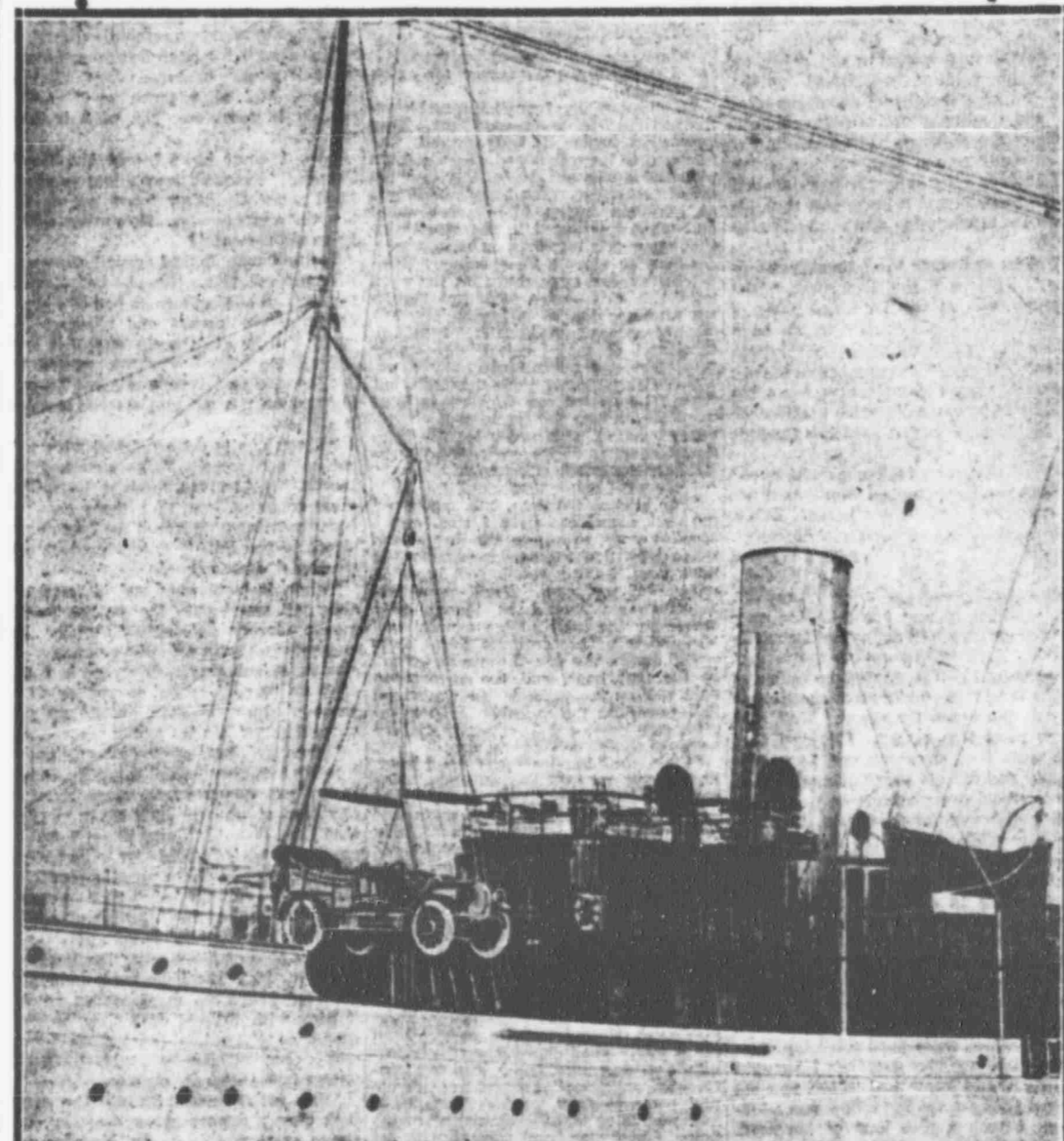
There are two of these models. One shows the yacht standing on blocks just as she would appear in a dry dock, and on this she has all her spars standing, two masts flying flags. This shows the hull and the decks and the deck fittings,

with all the boats hanging on the davits. A miniature touring car which stands on the forward deck is shown slung ready to lower over the side and land on some pier. The other is a longitudinal section model.

One side of this shows the yacht floating in the water. The water has been painted by Warren Sheppard, a marine artist. The other side shows the interior of the vessel, giving the arrangements of the five decks. Each room or section of room shown is furnished just as it is on the original, even to the woods and the color of the silks and tapestries. These two models are enclosed in plate glass cases which are dust proof. It has taken several months to build these two small yachts and the cost to Mr. Billings is said to be about \$2,000.

Some idea of the amount of study required to build such a model can be understood from the sizes of the many different parts of the original vessel are known and it is seen how carefully they have been scaled down. A chair that may be 3 feet high on the original is three-quarters of an inch on the model. There are many parts such as turnbuckles that on the original are not more than 6 inches long and 1 inch in diameter. On the models these are one-half inch long and graded to the proper thickness. They are practical turnbuckles, each having a right and left hand thread and have been used to set up the parts they hold. The launches have miniature motors in them and the wheels of these motors turn over. The blocks used in the falls have sheaves so that the boats can be lowered to the water just as they are on the big vessel. The engines are the most delicate pieces of mechanism and exact copies of the originals.

Another detail that has been most carefully worked out is the lighting arrangement. In each room and in the passages are tiny globes showing where the electric lights are placed on the larger vessel and on deck at the bow is the searchlight and on the port side of the half model the mainmast light. From the port side view of the model is most pleasing. The windows and ports have glass. Silk curtains are draped at the windows of the



MR. BILLINGS'S AUTO SHOWN IN PROCESS OF BEING HOISTED ABOARD THE YACHT.

saloon, dining room and owner's quarters and the light from the open side of the model shines through these windows and ports.

The bottom of the model shows the structural steel work, the framing and plating and the reinforcing under the engine. Above the keelson there are several compartments. In the bow and at the stern are two small compartments used for trimming the vessel. Aft of the one in the bow is the chain locker, and the cable is shown leading down from the storeroom to the refrigerating room and platform, where fresh provisions for use on a long voyage can be stored away. Still further aft is a coal bunker and there is coal ready to be shoveled into the furnace. The boiler and furnaces are next shown. The smokestack leads up from this space and further up in the stack is shown how the smoke from the galley stove is carried off. More ladders come aft to the boiler and then there is the engine space. This yacht has two turbine engines and one is shown on the port side. Between these two turbines is a reciprocating engine that drives the main propeller and the shafting with all its bearings terminating finally in the three bladed wheel is shown. Aft of this engine space is the auxiliary engine used for lighting and ventilating. Still further aft is the accumulator room with all the accumulators shown wired and aft again are the tanks for oil and for water piped and with pumps attached.

On the lower deck or berth deck are rooms for the officers, the forecabin with berths for the crew and other storerooms. Some of these rooms are not shown open because cutting the vessel longitudinally leaves a partition, but those rooms that are shown open are fully furnished.

On the main deck forward is the windlass and a small engine for hoisting. Just aft in an open space a big touring car is carried and this car can be hoisted on slides, lifted up to the deck and lowered to a deck ready for the owner to start off on a trip on land at any port where he can get the yacht alongside a pier. The foremast has been removed. This mast is not stepped through the deck but rests on a steel support which takes very little room. The mast is stayed in the usual way and the rigging is set up by the shrouds. Silver wire is used for the shrouds.

The main dining saloon comes next.

This is in a mahogany deck house with handsome plate glass windows, richly upholstered and furnished in mahogany. There is a butler's pantry aft which connects with the owner's galley. On the other side of the smokestack is the crew's galley and then come some storerooms. In these rooms there are brass bedsteads and the detail has been carried out so thoroughly that there are pillows and cushions on the bed in each berth on the floor and mirrors on the bureaus.

At the after end of this deck the steam steering gear can be seen. It shows the quadrant and the way it works on the rudder. Over the dining saloon there is a sun deck and at the after end of that is the chart house, with bridge above. Aft of the smokestack is the wireless room, where the instruments are shown. Two launches are swung from the davits of the half model, and these launches have motors, the wheels of which will turn over.

The full model gives more attention to the outward appearance of the vessel. Of this there are six boats on the davits, and guns are mounted forward and aft. The flags are flying from the mastheads and these flags can be lowered and hauled in which will save through blocks. The whistle is at the forward side of the mast, ventilators are in position and everything to be found on the yacht itself can be seen in miniature.

Mr. Boucher is now at work on a still larger model for Morton F. Plant. He is reproducing the big steam yacht Iolanthe, but in a somewhat different way, and as the model of the Iolanthe is smaller than the Vanadis this model will be larger.

Henry A. Morse of Boston has had made models of all the yachts he has owned, which are to be shipped shortly to his home in Boston. In this lot are copies of the schooner Derbish, the sloop Coasack and Brigand, the new schooner Vision, the knockabout Aspinet and the motor boat Vim. There are made to a scale of three-eighths of an inch to the foot and are fully rigged. Mr. Morse, who has just returned from a trip around the world, has brought back models of Japanese and Chinese junk and Dutch fishing boats which he has also made. Frederick Fletcher has ordered models of his cruising power yacht Cristina, the schooner Rosemary and some knock-about and motor boats. For the Eastern Yacht Club models are being made of the Emerald, Spokane, Arbella, Vim, Joyette and Wolf, vessels famous in that club's history, and the New York yacht club has ordered full rigged models made of the cup defenders Mayflower and Puritan.

STUDIES IN SUPERSTITION

The Myth of the Cat.

"It will be of vital importance to me," said Ruthven, "if this strange old woman should turn out to be my father's missing sister, Miss Aurora Ruthven. As you say, the name she goes by, Anne Ruden, is not so very unlike, and then the circumstance of the letter, undoubtedly in her hand, postmarked 'Plymouth'—"

"Easy goes it, sir," Jim Lance, detective sergeant, interrupted cheerily. "The captain is anxious to oblige the British Consul-General and consequently to oblige you. We'll find your aunt, never fear, whether she is this queer one or another queer one. There is no use in getting in a funk; though I understand how anxious you feel to get to the end when you are nearing the end."

"Then, I haven't heard a word from Wales since I landed," continued Ruthven. "I left them in such a state."

"Think of it, to find all in a day that the mine which had been the support of our family for generations not only was exhausted but that the manager, fearing to confess the truth, had been stripping the supports and galleries for months, so that not even that poor resource remained. No wonder my father, brought face to face with ruin, with several hundred employees dependent on him for bread, should have thought of his sister Aurora's fortune, the accumulated dividend from her share for thirty years, fairly going begging for lack of an owner."

"If she is alive it is right that she should have the chance to help. If she is dead, then my father's natural heir, though of course she might have willed it from him."

"That is not likely, sir, if, as you say, disappointment in love drove her away from her kin. Those who brood are not much for change. You say you found a scrap of a letter from her among the effects of an old nurse? May I ask what she was writing about?"

"About a cat," answered Ruthven somewhat reluctantly. "Nurse Marigold, a strange and lonely old woman, had a brood of black cats of which she was very fond. We thought that Aunt Aurora must have written for one of them, though I left too hurriedly to hunt up the shipment."

"All you say, sir, goes to show that the captain made a good guess in poking out old Anne Ruden. She lives among the rough folks of our iron mines, just as your relative might naturally choose to do. She has a black cat of which she's overfond; indeed they say that why she neighbors are so shy of her."

"A queer lot, then, Cornish and Welshmen—hard workers, thrifty, but liable to outbreaks. There's a learned professor I sometimes advise with, Dr. Achilles Blore of the university, and I heard him say once that their virtues and vices were alike primeval."

and abandoned shafts. Everything seemed coarse, hard, and unfamiliar to Ruthven, and his heart sank within him as he thought how the nature of a girl who had been the beauty of his countryside must have changed for her to have dragged out the dreary years of her disappearance among such surroundings.

A tow-headed child limped out from a hut and stood on one foot, her shrunken limb drawn up under her dress, while her hand to her white, pinched face shading her eyes from the sun.

"Have you seen old Anne about, little girl," asked Lance.

"With a scream she fled scurried away. As if at a word from her a man came out from the house and looked sourly at the newcomers, though he pulled a tuft in respect to the sergeant."

"We are looking for old Anne, Penryll," said Lance.

"Then you may find and take her, sir," replied the man. "You'll meet no one else who has seen her or heard of her for days; but it's too good news that she's gone."

"That's a fair sample, sir," said Lance, "they left Penryll scowling and muttering, behind of old Anne's popularity. Begging your pardon, but they think her no better than a witch and I'll miss my guess if under fellow, not a bad sort either, hasn't got it in for her on account of the little girl's leg. Well, here we are, and all we are too I fear, judging from the lot to let look."

They entered the broken down hovel set in a depression of the brow of the hill. All was gaunt and wretched emptiness within, the bed stripped of its covering, the cupboard open, a shelf swinging from one hook on the wall.

"Look," said Lance, "there's been some devil's work here," and he pointed to a rear corner where the flooring had been torn up and the earth thus exposed showed signs of having been broken and tramped. "Wait until I bring help."

Presently he was back with Penryll and a gang of laborers, all alike reluctant yet coerced by fear of the law. They set to work digging with spades and picks. The light, friable soil yielded readily, frequently falling in and falling away as if there was a cavity underneath.

They prospected here long ago, explained Penryll, and didn't half put back. "Blast me! what was that?"

"That's two blazing coals backed and impelled by a ball of black that came whirling out of the pit, scattering the men and flashing after them as they rushed headlong into the open."

"It was the cat, sir," said Lance.

am glad of the chance to belate it with a concrete instance and at the same time aid you in the interests of justice."

"Now, then, to descend to the particular, I assume that you think that this unnatural element entered this case in the somewhat familiar form of a cat?"

"You would have thought so yourself could you have seen the creature springing out of the solid earth where there was every reason to suppose the dead body of old Anne's deserted house."

"And this belief of yours was shared by the Welsh and Cornish and what not you levelled into service?"

"The talk of the whole mining community, doctor, so the overseer tells me. One and all are ready to swear that they saw the cat as they ran spring over their heads and go on up and up, getting bigger and brighter all the time until it disappeared with the moon behind the clouds. There's not one but scots a way like mad if he sees me coming; there's not one that will go by himself within stone's throw of old Anne's deserted house."

"All the better for our task, my man," rejoined the doctor briskly, as he put together certain belongings. "All the better for our task, which of course is to watch there throughout the night. Come along, now, there is no time to lose."

"But I don't quite see, doctor," said Lance at length when they were well on their way.

"Then you are in the right superstitious twilight, where things seem but are not seen. Let me elucidate a little. 'As long ago as when the cattle fathers of these men were performing their rites to old Chaos and Night in oak groves the faith was supreme and supreme among them that a witch makes a familiar of a cat, and especially of a black cat—that is, you understand, an attendant spirit by demon—and often assumes its shape or transforms herself into it. Our knowledge of the cat is more limited, yet more practical.'"

"We know that it retains a fondness for home and will return, even from a long distance, shall I say a flight among the clouds? In the place where it has been reared, Ergo we may reasonably count on this black cat coming back."

"Well, then, doctor, supposing it does, which I hope it won't?"

"You see how strong even with you is the innate dread! What then must be the effect upon Penryll, for instance, of its sudden reappearance? I agree with you that he had a superstitious grudge against old Anne, attributing the withering of his little girl's leg to her malign influence. May it not well be then that we can bring about confession through fright?"

any one knew, beyond the length of the nose, except this queer, uncanny doctor, who lately had been getting queerer and more uncanny as if drunk on his own medicine, and who now kept wagging his old head and chuckling as if over ideas more outlandish and unreal."

Yes, Dr. Achilles Blore had reservations of his own which he found vastly amusing. The story brought by Lance was not altogether new to him. That very morning a gentleman in dress and manner had called on him, who oddly enough had neglected to give his name. As a matter of course, in the absorption of his favorite subject, the doctor had not thought of asking it until it was too late.

As a fellow archæologist, the stranger had said, who in Egypt and the Orient had investigated to a slight degree the myth of the cat, he was taking upon himself the liberty of paying his respects to the most eminent authority on superstition in the hope of being enlightened on one moot point.

"If it is this, doctor," he had continued, "if a witch in artifice mortis has occupied the body of the cat that has been her familiar attendant does she thereby in this fine form acquire or preserve any greater length or tenacity of life than would pertain to the cat itself?"

"Such a possession being demoniacal, of course, of mortal limitations," the doctor had answered. "The most erudite inquirers agree that it is the malign intensity of the witch that gives vitality. While this is unappreciated the cat obeys by her spirit is not subject to the laws of its kind. Provided, however, it must be noted, that a sharp stake has not been driven through either the dead heart of the witch or the live heart of the cat, for in either case, so the ancients held, possession ceases at once and forever in the common mortality of both."

"Let me read to you a curious instance cited by the learned De Lira," the doctor had gone on, now firmly astride of his hobby. "It is in subdivision 12 of chapter 16 of his 'De Natura Rerum.'"

He had leaped lightly into an allover and up a ladder, but when he had returned with the ponderous tome his visitor was gone.

It occurred to the doctor on hearing Lance's story that this mysterious visitor might have been none other than the Randolph Mayne who had lately laid claim to the fortune of Aurora Ruthven.

He had leaped lightly into an allover and up a ladder, but when he had returned with the ponderous tome his visitor was gone.

It occurred to the doctor on hearing Lance's story that this mysterious visitor might have been none other than the Randolph Mayne who had lately laid claim to the fortune of Aurora Ruthven.

He had leaped lightly into an allover and up a ladder, but when he had returned with the ponderous tome his visitor was gone.

was any verity in the superstitious belief which had obsessed mankind from the earliest days.

Not that the doctor gave much credit to the mixture of primitive fact and up to date fiction he had prescribed for his visitor. Oh, no; he was a simple inquirer, seeking elucidation with a match. Therefore, assigning to Lance a laudable suspicion of Penryll, he had made a subterfuge of it to gain access to the hovel in the hope that Mayne might return to demonstrate what there was or was not in the myth of the cat.

It was black dark as the scholar and the detective toiled up the hill, but at the brow they each caught a glimmer coming from the declivity in which the hovel was set.

"No wonder, sir," said Lance, "that we're a one of the miners is around and their houses are all shut right and tight. A light from that deserted shanty will give whoever is in there full license to do whatever it is he's about."

"If it is the man I think it is," replied the doctor, "he realizes that as thoroughly as you or I. Your main object, Lance, is to solve the mysterious disappearance of old Anne Ruden and to catch her murderer if she has been killed. Very well, then; get together a posse of the mining folks and surround the house. Meanwhile I will watch without."

Up to the side of the hovel Dr. Blore crept, to stand on a billet of wood and peer through the dusty window. In the rear corner a man was digging where the miners had dug with a fierce energy oddly contrasting with his fashionable raiment and white hands.

He stopped, he turned for a moment as if so highly wrought as to be sensitive to the doctor's noiseless approach, and the light on the table shone full on his drawn and haggard face. It was the visitor who had asked the curious question regarding transformation and the length of demoniacal life.

Presently, the man, as if between two fears, resumed his digging even more frantically. Then the doctor saw something else, a sharpened stake on the table beside the lamp, and his blood ran cold at the inevitable deduction from the sight.

This man, then, must know that either the dead body of the woman or the live body of the cat was buried there.

If the former, then he must be the murderer; if the latter, then the cat must have supernatural powers to come all the way through the solid earth. After all, there was more comfort in reading about uncanny things in the safe seclusion of a college study than in actually seeing them alone and in the dark, in the midst of an ignorant community apt to express its panic of terror in brutal deeds.

But the soft, friable soil was flying out so rapidly, in such high mounds, that he could not go. Already the man was out of sight in the pit; already he must be

THE BIG LEAGUES IMITATED.

Small Boy Baseball Players in City Lots Do Surprising Things.

City lots baseball with small boys as players reveals occasional glimpses of real major league technique. The onlooker who has seen the big fellows, high, fat, well-dressed, and the picture in the newspaper during the spring training trips or in the championship games doesn't realize the complete uses of these action photographs. If he could see some of the grass eaters, as the small boys are known, playing their games he would know how some of the eager students of baseball are.

The batting position of this or that star is copied faithfully. It is amusing to see some little lad, hardly as tall as the bat he wields with difficulty, standing up to the plate in imitation of some hero of the big league field. These small boys swing the bat, plant the feet and meet the ball with the finish of veterans very often, young though they are.

Only the other day an observer, watching a scrub game, saw a boy of about 12 do a fallaway slide to second that would have been hard to improve. The boy was on his way to the bag and the ball had him beaten a step. His slide, a copy of what is just now the correct thing in major league circles, carried his body out of reach of the basemen, while his feet found the base in safety.

The boys copy too the throwing styles of the big players. The pitchers wind up and deliver the ball as they have seen it pictured. This brings to mind a point about what is natural throwing.

In England, where cricket is the game, the ball is always the full size, and the bowler, the small boy on the commons or heath in England falls into that style, but doesn't throw as the American lad does. In Germany the youngster who resses a ball uses an awkward round arm motion, unlike the American style. Indeed, it is hard to teach the German lad to pitch as the American does. It seems the most natural thing in the world for the American small boy to take a ball and let his first and second fingers direct its flight.

With the increased popularity of baseball and the spread of knowledge of the tactics of the game, the corner lot player has developed wonderful tactics. One group saw the other day a game in progress in which a ten-year-old at the bat, with two out and a man on second, batted the ball toward first. The act was a surprise and he got away with it.

A few seasons ago that play, sprung in a big league game, worked well too. It is the strategy of the game, the corner lot player has developed wonderful tactics. One group saw the other day a game in progress in which a ten-year-old at the bat, with two out and a man on second, batted the ball toward first. The act was a surprise and he got away with it.

A few seasons ago that play, sprung in a big league game, worked well too. It is the strategy of the game, the corner lot player has developed wonderful tactics. One group saw the other day a game in progress in which a ten-year-old at the bat, with two out and a man on second, batted the ball toward first. The act was a surprise and he got away with it.

A few seasons ago that play, sprung in a big league game, worked well too. It is the strategy of the game, the corner lot player has developed wonderful tactics. One group saw the other day a game in progress in which a ten-year-old at the bat, with two out and a man on second, batted the ball toward first. The act was a surprise and he got away with it.

A few seasons ago that play, sprung in a big league game, worked well too. It is the strategy of the game, the corner lot player has developed wonderful tactics. One group saw the other day a game in progress in which a ten-year-old at the bat, with two out and a man on second, batted the ball toward first. The act was a surprise and he got away with it.

A few seasons ago that play, sprung in a big league game, worked well too. It is the strategy of the game, the corner lot player has developed wonderful tactics. One group saw the other day a game in progress in which a ten-year-old at the bat, with two out and a man on second, batted the ball toward first. The act was a surprise and he got away with it.

A few seasons ago that play, sprung in a big league game, worked well too. It is the strategy of the game, the corner lot player has developed wonderful tactics. One group saw the other day a game in progress in which a ten-year-old at the bat, with two out and a man on second, batted the ball toward first. The act was a surprise and he got away with it.

A few seasons ago that play, sprung in a big league game, worked well too. It is the strategy of the game, the corner lot player has developed wonderful tactics. One group saw the other day a game in progress in which a ten-year-old at the bat, with two out and a man on second, batted the ball toward first. The act was a surprise and he got away with it.

THE BIG LEAGUES IMITATED.

Small Boy Baseball Players in City Lots Do Surprising Things.

City lots baseball with small boys as players reveals occasional glimpses of real major league technique. The onlooker who has seen the big fellows, high, fat, well-dressed, and the picture in the newspaper during the spring training trips or in the championship games doesn't realize the complete uses of these action photographs. If he could see some of the grass eaters, as the small boys are known, playing their games he would know how some of the eager students of baseball are.

The batting position of this or that star is copied faithfully. It is amusing to see some little lad, hardly as tall as the bat he wields with difficulty, standing up to the plate in imitation of some hero of the big league field. These small boys swing the bat, plant the feet and meet the ball with the finish of veterans very often, young though they are.

Only the other day an observer, watching a scrub game, saw a boy of about 12 do a fallaway slide to second that would have been hard to improve. The boy was on his way to the bag and the ball had him beaten a step. His slide, a copy of what is just now the correct thing in major league circles, carried his body out of reach of the basemen, while his feet found the base in safety.

The boys copy too the throwing styles of the big players. The pitchers wind up and deliver the ball as they have seen it pictured. This brings to mind a point about what is natural throwing.

In England, where cricket is the game, the ball is always the full size, and the bowler, the small boy on the commons or heath in England falls into that style, but doesn't throw as the American lad does. In Germany the youngster who resses a ball uses an awkward round arm motion, unlike the American style. Indeed, it is hard to teach the German lad to pitch as the American does. It seems the most natural thing in the world for the American small boy to take a ball and let his first and second fingers direct its flight.

With the increased popularity of baseball and the spread of knowledge of the tactics of the game, the corner lot player has developed wonderful tactics. One group saw the other day a game in progress in which a ten-year-old at the bat, with two out and a man on second, batted the ball toward first. The act was a surprise and he got away with it.

A few seasons ago that play, sprung in a big league game, worked well too. It is the strategy of the game, the corner lot player has developed wonderful tactics. One group saw the other day a game in progress in which a ten-year-old at the bat, with two out and a man on second, batted the ball toward first. The act was a surprise and he got away with it.

A few seasons ago that play, sprung in a big league game, worked well too. It is the strategy of the game, the corner lot player has developed wonderful tactics. One group saw the other day a game in progress in which a ten-year-old at the bat, with two out and a man on second, batted the ball toward first. The act was a surprise and he got away with it.

A few seasons ago that play, sprung in a big league game, worked well too. It is the strategy of the game, the corner lot player has developed wonderful tactics. One group saw the other day a game in progress in which a ten-year-old at the bat, with two out and a man on second, batted the ball toward first. The act was a surprise and he got away with it.

A few seasons ago that play, sprung in a big league game, worked well too. It is the strategy of the game, the corner lot player has developed wonderful tactics. One group saw the other day a game in progress in which a ten-year-old at the bat, with two out and a man on second, batted the ball toward first. The act was a surprise and he got away with it.

A few seasons ago that play, sprung in a big league game, worked well too. It is the strategy of the game, the corner lot player has developed wonderful tactics. One group saw the other day a game in progress in which a ten-year-old at the bat, with two out and a man on second, batted the ball toward first. The act was a surprise and he got away with it.

A few seasons ago that play, sprung in a big league game, worked well too. It is the strategy of the game, the corner lot player has developed wonderful tactics. One group saw the other day a game in progress in which a ten-year-old at the bat, with two out and a man on second, batted the ball toward first. The act was a surprise and he got away with it.

A few seasons ago that play, sprung in a big league game, worked well too. It is the strategy of the game, the corner lot player has developed wonderful tactics. One group saw the other day a game in progress in which a ten-year-old at the bat, with two out and a man on second, batted the ball toward first. The act was a surprise and he got away with it.