

## THE DOWN GRADE.

When the engine is a puffin,  
An a-scorin' an' a-buffin',  
Like it mighty o'f'en will;  
When you hear the thing a-blowin',  
Then you know it's hard a-go'in',  
For it's climbin' up a hill.

When it goes a-whizzin' by you  
In a way that's like to try you  
If you're just a bit afraid;  
When it's runnin' fast an' faster,  
Like it doesn't need a master,  
Then it's on a down grade.

When you see a man a-workin',  
An' his duty never shirkin',  
An' a-sweatin' more or less;  
When you see him climbin' higher,  
An' he never seems to tire,  
He's a-climbin' to success.

When you see one goin' easy,  
In a manner light an' breezy,  
Like for pleasure he's made,  
Just remember he's a-showin'  
That it's mighty easy goin'  
When you're on the down grade.

## HALLOWE'EN ADVENTURE.

BY MRS. M. L. RAYNE.

A man whose dress indicated that he was a clergyman boarded a street car in a western city, and at once found himself surrounded by friends. It was the eve of All-Souls' Day, and he was on his way to church, where he was to preach against superstition, and this bery of good-looking girls and stalwart young men was composed of his own people. They were on their way to church also, being destined to a scolding for the sins of former years, when they had kept the eve of All-Souls' in the pagan spirit of Hallowe'en, rioting about with mirrors and lighted candles, melting lead and dropping it into a tub of water, ducking for apples, throwing a ball of yarn down some lonely staircase in some secluded building, all for the foolish purpose of finding out in advance of fate and by uncanny means if lovers were coming to woo. They were going to the little church of St. Winifred, and the pastor was the Rev. David Griffith, and he spoke with his parishioners in an unknown tongue, at least it was unknown to the only American passenger, a man who prided himself upon being almost a linguist.

"May I inquire?" he asked respectfully of a tall brunette, who stood next to him, "what country woman you are?"

"American," she answered in the purest English accents.

"But—but you speak another tongue?"

"Oh, yes, I forgot," she said, laughing, "we are Welsh, and that is our native speech. But it is only when we come together, as on this occasion, that we use it."

It was very evident that they had no need of a Welsh vocabulary in which to express themselves, for they not only spoke English fluently, but with a musical intonation that was delightful to a cultivated ear.

But it was the wish of the pastor, the Rev. David Griffith, that they should not forget the language that was to him the most musical in the world, albeit its consonantal speech of Taffylan is as trying as it is fascinating to American tongues.

"Did you look for a sprig of ash?" asked a pretty young Cymrian of the tall brunette.

"That did I not, Nell; I promised not to anger Mr. Griffith this year as I did last."

"Would he be very angry if you found an even-leaved sprig of ash, think you, Gladys? We would all know what to name it, in spite of St. David's objections."

"H-u-s-h," interposed Gladys, in a whisper, "we are nearing the church. I promised not to engage in any Hallowe'en games this year, so you will not expect me to-night, Nell, after church. I may spell out an apple-paring alone, for the sake of the dear old days."

"I think you are silly, Gladys, to let Mr. Griffith influence you. If amusements that the whole world engages in on this night do not please him, he denounces us all as sinners for participating in them. I think he oversteps his power."

But the car had stopped and minister and people were pouring out and soon had ascended the steps of the little church of St. Winifred.

The sermon was in Welsh, and the minister, a young, handsome man, listened to with close attention, both by the elders of the congregation and the younglings, for he had taken a determined stand against the custom of keeping this one special festival of the year with particular reference to the ghosts and hobgoblins which have made it for their own, as the Welsh people ardently believe, a rite invaded Welsh literature to prove that such a being as a fairy never existed, and he substantiated the statement from his bible. He demanded a greater reverence for the holy office of matrimony than the practice of pulling stalks, big or little, crooked or straight, in order to determine the appearance of a future partner. He denounced the fallacy of eating an apple before a mirror, expecting the future husband would look over the shoulder.

"No man," he declared, "would be willing to wed a woman who would wind a ball of yarn, chanting doggerel manwille, saying over words that are impious as defying fate, or challenging Providence. Hallowe'en is the Devil's Sunday. It is the Witches' night, and we may well believe that the evil one sends out his myrmidons on that night to do his bidding." It was only last year that on the following morning a witch-riden sign "Beer Saloon" had been fastened over the door of the sacred edifice. These were tricks of the devil, and he was there to exorcise him. Nut-cracking was used as an interpretation of the future, and other unholy rites were used in the frolics of revelry of the evening. He hoped his parishioners would desist from this custom of pagan worship.

All were duly impressed with the earnestness of the pastor, but the Welsh people, as the Rev. David knew to his cost, were naturally stubborn, and they loved their traditions. Chloe and Cynthia and Phyllis, with Lubin, their brother, might be influenced, being American-born, but the Llewellyns and Gonerils, of Welshland,

merely shook their high-batted heads, and went home to prepare for a roaring farce in their own homes with such embellishments as they might deem proper—beyond the pastor's back.

Nell Gwynne could not prevail on Gladys to accompany her home, so she went on without her, and David Griffith, waiting, as was his wont, offered to see Gladys safe to her own door. But the girl shook her head.

"I am not afraid," she made answer, "and I could not enjoy the walk after your sermon."

"Has it made such an impression on you?" he asked, forgetting his clerical intonation in a tenderer cadence.

"It has made me unhappy," said the young woman, regarding him with sorrowful, uplifted eyes.

"I am glad," he said with the fire of an enthusiast. "I am tired of preaching to deaf ears. I am glad that one soul is convinced."

"I am convinced in one way only—that you are fighting a great war against evil with straw."

Then she left him, riding home, that he might have no excuse to follow.

Rev. David Griffith had received such a blow straight between the eyes that he saw nothing but a firmament of stars, and leaving the old sexton to close the church, he, too, went home, a humbled and disappointed man, for he dearly loved this same Gladys Allyn and was set on having her for a wife if she would consent. He knew that the Welsh women make the most faithful wives in the world, but he had not found courage to declare himself, and there were several likely young Cornishmen in the field.

Gladys went home and found the house holding high carnival. Her younger brothers and sisters had not attended church, and instead were carrying out all the unholy rites, as David Griffith called them, of Hallowe'en. Bonfires were burning in the yard, and in the kitchen a twirling stick with a lighted candle on one end and an apple on the other amused the youngsters. Three dishes were on the hearth, one empty, one filled with soup, and one with clear water. Bob, her brother, invited Gladys to try her luck.

"Dunno bout you mout get 't' parson," he said with a grimace.

But the girl had no heart for the usual festivities since they had been denounced as sinful, and went up to her own little room and sat there alone until at last love and superstition got the better of her resolution.

"I'll try it just this once," she said to herself, "and never again."

Then she went to an old chest and took out one of the high chimney-pot hats, worn by the Cymri, and a short mother husband cloak and attired in these slipped out and wended her way to the church.

Under her cloak she carried a candle and this she now lighted, and shielding it from the wind she began a circuit of the building. If there was anything in the stories they told, she would see an appearance—the wraith of the man she desired to marry. She carried out this Hallowe'en ritual to the letter, and then in the gloom and shadow of the church Gladys saw a figure approaching and an immediate fear took possession of her.

It was a tall figure wrapped in the folds of a Llandudno shawl, the figure of a man, and a very resolute one, too, for he threw open a door which led to the basement and producing a round object from his pocket began an incantation of some sort.

"I wind, I wind, I wind, who holds?" he cried out excitedly, and Gladys recognized the voice of her fear.

"I hold, I hold, I hold," she answered boldly.

But her voice had exactly the opposite effect of that which she anticipated. It was the young rector, as she knew, who was holding an end of the yarn, the ball of which he had dropped down the basement stairs. When she spoke in answer to his question he wheeled round and beholding, as he supposed, an ancient woman, he made no doubt that she was one of the goblins against whom he had been warning his people, and he started back with a cry, and fell prone to the earth at the bottom of the stairs.

It was now Gladys' turn to be frightened. Springing to the top of the stairway, she called in clear tones: "Mr. Griffith."

No answer.

"David," she softly.

A deep groan.

Her candle was still burning. She slipped down the steep stairs and saw the helpless form lying at the foot. It took her hardly a second of time to make her cloak into a pillow and slip it under his head. As she lifted his shoulders he groaned again.

"David," she whispered, and then as no answer came she said in a fervent tone, "dear, dear David!"

With that he sat up and laughed—he the grave, dignified parson who had so recently rebuked his people for levity and superstition. Gladys left him indignantly and began to remount the stairs, but he called her back.

"Can I assist you, Mr. Griffith?"

"No, no, not Mr. Griffith, my sweet Gladys. I am your 'dear David' from now henceforth, or here I stay the captive of the sweetest pain by which every man was slain. Take me or leave me, I am yours."

"And shall Trelawney die?"

"And shall Trelawney die?"

Then thirty thousand Cornishmen will know the reason why."

But he didn't die. He came out of the hole into which superstition had led him, leaning on the merciful arm of Gladys, and though he walked with a limp he managed to go home with the happy girl, and made a slight sensation when he entered with her into the midst of the fun and frolic which was raging as furiously as ever.

And the Cornishmen never asked the reason why. They merely looked at the pair with a quizzical regard and condemned all speculation into the dry remark:

"Parson munna seen a witch."

Luther Laffin Mills, the Chicago criminal lawyer, said that when he was a boy he frequently accompanied his father, who was a wholesale merchant, on collecting tours through the northwest. They would travel by wagon, and as his father would have large sums of money about him it was often a problem where they could safely put up for the night. "My boy," the old man used to say, "it is safe to stay at a house where there are flowers in the window."

## A SHIP'S LAUNCH.

First Preparations When the Keel Blocks Are Laid.

It has often been said that man begins to die the moment that he begins to live. It might also be said that a ship begins to be launched the moment she begins to be built. The first thing in the actual construction is to arrange the keel-blocks on which the ship is to rest while she is building. They must be placed at certain distances apart, and each must be a little higher than its neighbor nearer the water. These blocks are usually of the stoutest oak, and are placed from two to three feet apart. They must have a regular inclination, or the ship cannot be launched. In vessels like the St. Louis the incline is about one half an inch in height to a foot in length. In smaller vessels it is often more than one inch to the foot. Larger vessels have so much weight that a sharp incline is not as necessary as with smaller ones. The keel of the ship is laid on these blocks, and as fast as the sides of the vessel are built up great props are placed against them to make sure that by no accident will the vessel topple over.

At length the hull of the vessel is completed. Then it is that the launching apparatus is prepared. This consists of two parts, one that remains fixed on the ground, and one that glides into the water with the ship. The part that goes into the water is the cradle. It is that part in which the hull of the vessel rests snugly, and probably that is why it is called a cradle. When the time comes for the launching, a long row of blocks is built under each side of the ship at an equal distance from the keel-blocks and of the same inclination. On these blocks rest first the stationary "ways." These consist of broad planks of oak, from three to four feet wide, capable of sustaining a weight of from two to two and one half tons to the square foot. On top of these ways are the "sliding ways," of nearly the same breadth, and between the two the tallow is placed. A narrow cleat runs along the edge of the stationary ways, so that the sliding ways shall not slip off as they carry the ship along. Above the sliding ways is what is called the "packing." This consists of pieces of timber packed close against the curving sides of the vessel to hold it firm to the sliding ways beneath. The curves in the hull vary so much that it would be impossible to fit the sliding ways to them, and so, by means of packing the ship is fitted to the ways instead. The packing and the sliding ways constitute the ship by stout ropes. Along its length, at intervals of about eight inches are fixed wedges, the points of which are inserted between the sliding ways and the packing. A rope about the thickness of a clothes-line runs from wedge to wedge so that none may be lost when they float into the water.

We are now ready for the launch. Tallow to the thickness of about an inch has been spread between the ways as they were put in position, nearly sixty barrels being necessary for a ship like the St. Louis. The cradle sits snugly against the ship's bottom. The vessel, however, is still resting on the keel-blocks. The task now is to transfer the ship from these keel-blocks to the launching supports, and to take away the keel-blocks. Then when the weight of the ship rests on the launching-ways alone all that is necessary is to saw away the "sole-plates" at the bow, where the stationary and sliding ways are fastened together, and the ship by her own weight will probably slide into the water. If she needs a start, several "jacks" using hydraulic power are ready beneath the keel to lift her a trifle and give her a push.

## A Scout's Marvellous Faculty.

Every one who has spent much time upon the frontier has heard of the remarkable faculty of Dolores Sanchez, the famous trapper of New Mexico and Southern Arizona. So eminent an authority as General Nelson A. Miles, who has had unusual personal knowledge of the work of trappers and scouts, is quoted as saying that some of Sanchez's accomplishments are more extraordinary than that he is a scout, and that his powers bore on the mythical. General Ruger tells the following story of an experience with this remarkable man to show the skill of an expert scout.

"I was once in pursuit of a lot of Comanches, who had been followed by a company of so-called Texas Rangers. On the eighth day after the scattering Sanchez found the trail from a single shoe horse. When we were fairly into the rough, rocky Guadalupe Mountains he stopped, dismounted, and picked up from the foot of a tree the four shoes of the horse ridden by the Indian."

"With a grin smile he handed the shoes to me and said that the Indian had tried to hide the trail. For six days we journeyed over the roughest mountains, turning and twisting in apparently the most objectionable way, not a man in the whole command being able to discover by Sanchez's means, a single mark by which Sanchez led us, following the devious windings of this trail for over 150 miles, and only three or four times dismounting so as to more closely examine the ground, he finally brought me to where the Indians had reunited."

## Doctoring Cut Flowers.

"There are a great many dodges that the public never dream of in connection with the enormous sale of button-holes and bouquets. For instance, we often give a perfume by artificial means to the flowers we sell," said a florist to a writer in Answers.

"The greater number of doctored flowers are either those which are fading, and 'off-color,' or those which usually have no scent at all. In the case of the former the flowers are dipped in a weak solution of sal ammoniac, which, for a time, revives them in the most marvellous way.

"But the chief doctoring is with the

flowers which, as a rule, have little or no scent. First of all these are put into a metal box with ice, and then by a very simple process they are subjected to a continuous current of carbonic acid charged with perfumes of the required vivacity. There is an immense amount of profit made by scenting those violets which in the order of nature have no perfume.

"In certain districts prodigious quantities of violets having no scent are to be found, while the naturally odorous ones are quite rare by comparison. But in first-class florists' places no unscented ones are sold, for an alcoholic solution fixed by means of glycerin is used in the case of the scentless ones we receive. It is the same with other flowers, except that some other appropriate scent is used instead of the violet, of course.

## Cultivating Bacteria.

To the uninitiated mind, it may smack of absurdity to say that at no distant day the bacteria of butter and cheese will be cultivated as we now cultivate other commercial products. A writer on this subject says: "The fermentation of cream and of cheese is already as much of an art as the fermentation of malt in the manufacture of beer. In the curing of tobacco the same activity is discovered, and the day is not far distant when commerce in high-bred tobacco bacteria will be an accomplished fact. In short, we may look forward to the day when the bacteria active in agriculture will be carefully cultivated, and the bacterial herd book will be found along with those of the Jersey cow and the Norman horse." On a par with this is the sterilization of products, which process is necessary before the thorough bred bacteria is introduced.

## Uncle Allen Advises.

"I notice, my dear," said Uncle Allen Sparks to one of his nieces, "that when you have a toothache it's the worst you ever had. The young man who was here last night was the ugliest fellow you ever saw. According to your statement a little while ago, it took you forever and a day to learn how to make a sponge cake. The house, you say, is full of flies. You have just declared that the room is as hot as an oven, you have the dreadful headache you ever had in your life, and the boy across the road is making the fearful racket a boy ever made. Don't you see, my child, this sort of thing won't do? Some time in your life you will really have an experience requiring the superlative degree to describe it, and you won't be able to convey any idea of it. You will have used up all your adjectives. That is all. You can go to thumping the piano again."

## Postal Telegraphy.

A well known inventor and electrician announces his firm conviction that it is time to get out of the telegraph its full working value, and that it ought now to be used for the carriage of the mails, not in the physical sense, but literally, all the same. He believes that 40,000 or 50,000 letters of about fifty words each every day be profitably sent over a couple of copper wires at a rate of twelve to fifteen cents a piece. Thousands of such letters now pay twelve cents in the mail to insure the saving of half an hour after a journey of twenty-four hours. The plan is based necessarily on "machine telegraphy," which has been on trial before and not gone very far.

## An Odd Ordinance.

Connellman Towle, of Oakland, Cal., recently introduced and engineered to second reading an ordinance compelling all bathers within the city limits of that town to tie up their heads in a sack while bathing. The ordinance provides that all bathers must wear "a shirt or jersey covering the entire upper part of the body except the arms. The ordinance passed to the printers, and it was the often-abused intelligent compositor who discovered that if it passed the Council every bather in Oakland would be compelled by law to bag his head. The ordinance was reported back, and is to come up for final disposition this week.

## Valuable Remedy For Burns.

Chance led to the discovery in the Paris hospital recently of what is claimed to be a valuable remedy for burns. A surgeon who was using picric acid as an antiseptic accidentally dropped fire on his hand and proved that he experienced no pain from the burn. This set him to thinking and experimenting, and he found that wounds healed with a solution of picric acid did not blister, and healed readily in the course of four or five days. The cheapness of picric acid and the ease with which it may be prepared and kept in readiness, make it a most valuable remedy, and it is to be hoped that further experiments will establish its efficacy.

## A Victim of Superstition.

Superstition reigns tyrannically in many rural districts in Italy. Lately a fortune-teller prophesied to a young farmer and his sister, living near Noto, Sicily, that on the evening before a certain feast both would die a violent death. This so affected the minds of the poor dupes that they became insane and rushed shrieking through the streets. A brother of these unfortunate then came somehow to the conclusion that the calamity was due to the witchcraft of their stepmother, and in a fit of blind rage killed the poor woman with a hoe.

## Deer "Skinners."

Gangs of "skinners," men who slaughter deer wholesale solely for the hides, are again at work in the mountains of Curry county, Or. A hunting party just returned from the region relate that it was not unusual to come across a dozen or more carcasses of deer in the course of a day, left to rot by the law violators. It is estimated that more than 700 deer have been killed in that section this summer solely for their hides. The "skinners" find a ready sale for the hides, and make much money at the wretched business.

## THE LIME KILN CLUB.

Brother Gardner in the Garden of Eden.

When the sound of the triangle had called the meeting to order Brother Gardner slowly arose and looked up and down the aisles and said:

"If Calamity Bates am in dis hall dis eav'nin' he will please step dis way."

Calamity was there, and he promptly stepped out and advanced to the president's desk.

"Brudder Bates," continued the president as he looked down on him, "Yo' went ober to Brudder Shin's cabin t'other night to pass a soshul hour."

"Yes, sah," was the reply.

"Arter sum litle talk 'bout free silber, sound money, an' de treasury reserve yo' swung de conversashun round to de garden of Eden. While Mrs. Shin sot dar wid her mouf open and Samuel was a speakin' his feet to de cure de cold in his head, yo' went on to tell what you knowed 'bout dat garden. Yo put de land at 100 acres. Yo' got in a ribber, two springs, a lake, and a groto. Yo' had peaches 'an' pears 'an' plums 'an' grapes 'an' apples by de cart load. Yo' had birds singin' and possums runnin' 'bout. Yo' had chickens ready to be boiled, fried an' baked. Yo' had Adam whisin' an' Eve singin', and all was happiness an' joy."

"Yes, sah," replied Brother Bates, as he wondered what was coming.

"Brudder Shin hain't much of a hand to git excited ober g'adens, as yo' kin tell by his own, but yo' went on so dat he finally got roused up an' axed yo' whar 'dis place was. Kin yo' member whar yo' located it?"

"I kin, sah. Dat g'aden was in Cuba, an' Ize bin right past de place fo' times."

"Didn't see Adam or Eve 'round dar, did yo'?"

"Dey was dead, sah."

"Wall, when Brudder Shin reckoned dat G'aden was in Italy, what did yo' dun do? Called him names an' finally hit him on de jaw! Brudder Bates, I want to remark a few expreshuns to yo' an' I want 'em to surge right ober yo' libin' so lile de waves, rollin' down Lake Erie. In de first place, yo' was just as wrong as Brudder Shin 'bout de locashun of de G'aden. In de next place, it am none of yo' bizness whar it was, how big it was, or what it looked like!"

"Yes, sah," was the reply, "Mebbe dar was a G'aden an' Mebbe don't doan' consarn yo' neither way. If some white man, who hain't got nuffin' to do an' lots of money to do it on wants to go spoonin' 'round to find whar de G'aden of Eden was, dat's his own bizness. Yo' is simply a common black man. Yo' air 'bout six dollars a week, an' yo' am de fadder of fo' pairs of twins. It cums mighty hard fur yo' to pay rent an' git three meals a day. Yo' debts finger up mo' dan yo' kin save in 6,000 y'ars. De idea of yo' foolin' away time an' hittin' folks on de jaw 'bout de Garden of Eden am 'bout de biggest fool thing I eber heard of!"

"Doan' I want to know all 'bout it sah?" protested Brother Bates.

"What fur?"

"Fur to git knowledge."

"What yo' gwine to do wid knowledge?"

"How am knowledge 'bout sunthin' way back 6,000 y'ars ago gwine to pay yo' house rent an' keep shoes on yo' wife's feet?"

"Yo' knowed wheder Adam could jump six feet or ten, would dat fur codfish fur dem fo' pairs of twins? If yo' knowed wheder Eve had red ha' or black, would it help yo' to pay me back dem two dollars yo' borrowed ober two y'ars ago?"

"No, sah," stammered Brother Bates, beginning to weaken.

"Of, co'se it wouldn't! It would jest be a leetle mo' wind power fur argument. It hain't yo' bizness nor my bizness, nor any oder black man's bizness to keer a continental cocked hat wheder de G'aden of Eden was on a side-hill or down in a valley; wheder it took a thousand y'ars to build de Pyramids of Egypt, or only fifty; wheder dis yere air was all kivered wid water six times or only twice; wheder de planets am inhabited or all grown up to scrub; wheder dis globe was made in six days or 10,000 y'ars. None of us want to go back furder dan to remember what debts we owe an' why we dun han't paid up. Our bizness am to look ahead. If we knowed a man who's gwine to let out de job of whitewashing '200 feet of bo'd fence it consarns us a heap mo' den Noah's ark eber need to. Brudder Bates!"

"Yes, sah."

"Yo' go an' sot down, an' sot down hard! I shall fine yo' \$3,850 fur discussin' religus matters contrary to de by laws, an' I want dis to be a caution to all oder members as well."

"Boat half of our cull'd folks' religin consists in openin' ur moufs 'an' gulpin' down de past, an' a good sheer of de oder half am devoted to arguvin' 'bout what we doan' know, can't know an' doan' want to know 'bout de present an' fucher. What we want in general an' in pertickler am less religin an' mo' gittin' up airly in de mawnin'—less G'aden of Eden an' mo' taters in de house—less Adam and Eve an' mo' bacon an' codfish. We will now open one of de ally winds to let dat smell of burnin' wool git out of de hall an' den purposed to tackle de programme of reg'lar bizness."

"Would an appeal be in order at dis juncture, sah?" asked the Rev. Penstock as he arose.

"What sort of an appeal?" queried the president in reply.

"An' appeal from yo' decishun, sah. 'Pears to me dat if de members of dis club wish to discuss religus subjects in deir own homes de rules an' regulashuns can't stop 'em."

"Do yo' wish to appeal from my decishun, sah?"

"Why, I reckon—"

"Hold on a minit, Brudder Penstock!" said Brother Gardner as he began removing coat, vest, cuffs and collar. "Now, sah, go ahead wid dat appeal!"

"I—I hain't got no appeal to make!" replied Penstock as he sat down.

"Oh! Yo' hain't! An appeal am allus in order in dis club. Praps some oder members wants to kick again de decishun of dis cha'r?"

No other member did. For sixty seconds Paradise hall was so quiet that Elder Toots' bunion could be heard to ache. Then, as he proceeded to resume his garments the president said:

"I doan' say dat members can't discuss religus subjects at home, but when such discussuns result in somebody bein' hit on de jaw den I shud take a hand in. Brudder Watkins, riz up dat winder back of yo', and Brudder Shin, yo' put sum lemon-juice on de stove to kill off de microbes floatin' 'round us."

Supreme Moment in a Launch.

That a launch is a matter of mathematics, as well as of great skill and labor is shown by the fact that the man of science who has the matter in charge always makes a set of calculations showing the strain on the ship and its precise condition at practically every foot of the journey down the ways. If a boat should get in the way, or if it should take an unusual length of time to knock out the keel-blocks, or if any one of half-a-dozen things should cause serious delay, the scientific man knows just how long he can wait, and just how far the limit of safety extends.

There is always one supreme moment in a launch, and it is at a time that escapes the average spectator. It is when the vessel gets fairly well into the water. This is when an important factor known as the "moment of buoyancy" comes into play. If you can imagine a vessel sliding down an incline without any water into which to drop you can see that the vessel would tip down suddenly at the end which has left the ways, and would rise at the end still on the incline. But really, in successful launches, the stern of the vessel is gradually lifted up by the water, and this throws the weight forward on that part of the ship still resting on the ways. The force of the water is called the "moment of buoyancy," and the natural tendency of the ship to drop to the bottom of the stream is called the "moment of weight." Now the moment of buoyancy must always be greater than the moment of weight, but it must not be very much greater, for if it were it would throw too much weight forward on the stern of the ship still on the ways and might break it down, or injure the plates or keel of the ship. When the great English battle-ship Ramilles was launched, this did really happen, and so great was the strain near the bow that parts of the cradle were actionally pushed right into the bottom of the vessel. It is this danger of disaster that causes the scientific launcher to make the most careful calculations, as to the conditions surrounding the ship at every foot of her journey into the water.

## All Are Without Fingers.

In a Lincolnshire village in England lives a family who suffer under the curious deformity of being fingerless. This peculiarity, says Pearson's Weekly, does not appear to be one of those freaks of nature which may appear in one individual and not be transmitted to the next generation. From what can be learned, the singularity has existed in the family so far as history or tradition extends, and there seems at present no signs of its dying out, as the grandchildren are as devoid of fingers as their grandfathers.

The hands of this remarkable family present the appearance of having had the fingers amputated or chopped off roughly and unevenly below the second joint, leaving a short stump. There is no nail or hard substance, and were it not for the absence of the fingers one would conclude that the defect was due to an accident; but, as though nature had attempted to compensate for the absence of fingers, the thumbs are abnormally large and strong.

The family are in other respects fully endowed by nature and do not appear to suffer the disadvantages the absence of fingers might be expected to entail. One of the daughters, aged 20, can write, sew, knit, and is in every way as dexterous and accomplished as other girls of her age and station. When asked if she "did not find it awkward to be fingerless," she replied: