

How Scales Are Made to Cheat

MAGAZINES and newspapers have given much space in late years to the question of weights and measures, which has resulted in the passage of legislation in many states putting the supervision of this particular branch of work under a defined department of state government.

There are numerous ways of cheating in the use of scales, regardless of the size or make. The art of scale building has advanced rapidly in the last quarter century, but investigation by various departments of weights and measures, both national and state, has disclosed the fact that the inventive minds of those whose unfortunate mental arrangement leads them to defraud their fellow men, has kept pace with this advance.

The most astounding fraud ever perpetrated was that of the famous sugar trust fraud, in which the United States government was robbed of many millions in import tax duty, by the use of a small piece of umbrella steel to throw the scales out of balance. But with most cases of deception, the perpetrator becomes overconfident, and through carelessness leaves a slight clue, which eventually leads to discovery.

Rubber bands have been employed to throw scales off correct balance, but as these are hard to apply they are not so commonly used.

A common method of cheating is to overload the scale counter weights with lead and throw the balance to the credit of the scale owner.

But the most pernicious and ingenious of these is a device recently discovered by the department of weights and measures which is under the jurisdiction of the railroad and warehouse commission of Minnesota.

This is a small piece of tempered steel weighing 1-32 of an ounce, and is used in scales for the purpose of adding to or shrinking the weight of an article. It can be carried in the vest pocket and placed in position on the scale in a few seconds. It has the advantage to the user of being reversible, that is to say, he can take more in buying or give less in selling, than the just and proper weight. The device is in the nature of a false knife-edge or pivot. It has a small projection on one side, which when applied to a scale with the projection towards the back end of the scale beam the effect will be to make a load weigh less than correct, and the reverse is true when applied with the projection toward the front end of the scale beam.

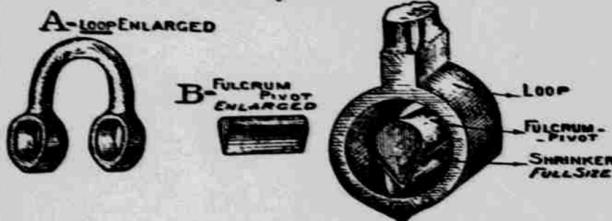
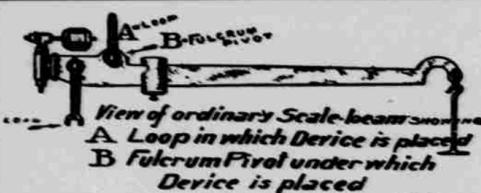
These devices are made so that the use of them on a scale does not affect the beam action whereby an observer could tell that the scale was not weighing correctly, as they allow the beam free action.

The percentage of error in the use of this device would differ, depending upon the make of scale and the multiplying power of the scale beam. All scale beams have not the same measurements, and on one scale the effect was 2 1/2 per cent either in excess or deficiency, depending upon how the device was placed, and on another scale the effect was 5 per cent either way. On some of the new type stock scales with full capacity beams, having no counterweights, the effect would easily be 10 per cent of the load.

These figures are based upon the assumption that the scale would be put into perfect balance after the device was inserted, but if by neglect or desire the scale should not be balanced after the device was put under the fulcrum pivot of the beam, the effect would be to give a false weight of about 200 pounds on any size load in addition to the 2 1/2, 5, or 10 per cent as the case might be.

If one of these devices were used on a scale beam for fraudulent purposes, it would undoubtedly be inserted in the loop from the rear of the beam, and thus could not be seen from the position in which one stands to do the weighing, hence the necessity of looking into the beam loops from the rear of the beam to prove that such a device is not being used.

At a large stock shipping point in Minnesota many complaints had been received relative to the weights over a certain stock scale. On investigation of the scale it was discovered that one of these "shrinkers" was in use. The commission immediately started its special agent out to trace it up. The remarkable part of the investigation is that in the endeavor to find the origin of this device, the trail led through the states of Minnesota, Iowa, Illinois, South Dakota and Wisconsin, and going on the old theory, "where there is much smoke there



TWO SAMPLES OF THE FRAUDULENT DEVICE KNOWN AS THE SHRINKER

must be some fire." It is safe to assume that when continual rumors of "shrinkers" were prevalent, the shrinker device must have been doing some shrinking, and in the case of this particular form of shrinker, which could be used on heavy scales, such as stock scales and grain scales, it has been the farmer and producer who were the victims.

The evidence obtained by the agent of the Minnesota commission disclosed the fact that the man who had made these devices had procured from \$5 to \$75 each for them.

The following precautions will be of assistance in helping to detect these, or similar fraudulent devices and prevent the seller of any commodity which may be weighed over a scale from being victimized:

1. See that a scale is in perfect balance before any weighing is done.
2. See that scale beam swings freely, that is, without a stiff jerking motion.
3. See that there is ample clearance about the scale platform, if it is a wagon, stock or dump scale.

At Booth's First Meeting

Old Londoner Tells of the Beginning of Real Work of the Salvation Army.

Standing at the salute by a big tombstone in Abney Park cemetery was an old soldier of the Salvation Army. As the procession filed past him General and Mrs. Bramwell Booth gave him a glance of kindly recognition.

The old man, who is seventy-five years of age, and named Peter Monks, was the late general's first convert in London.

One day nearly fifty years ago, before William Booth had started any mission work, he was walking down a squalid little back street near the London docks when he met Peter Monks outside a notorious drinking house.

"The general came up and spoke to me," said Monks to the Daily Mirror, "no doubt because I looked the bad character that I was then."

"I am looking for work," he said to me. He went on to say that he had left a congregation just before because, he said, they thought more about me than him."

Presently Booth told me he was going to try to hold a meeting on the Mile End Waste—a most daring thing to do in those times—and he asked me to come to it.

"I said I would, wondering what had come over me."

"I went down to the meeting at the Mile End Waste, and found that some of the worst characters from Spitalfields and Whitechapel had gathered round Booth's rough platform and were giving him a very bad time, throwing cabbage stumps and dirt at him."

"Something seemed to 'rise up' in me, and instead of joining in the horseplay, as I usually did, I clenched my fists and simply 'walked round' the crowd."

"The lads knew who I was—I had a bit of reputation as a boxer in those days—and surprised by my taking up the preacher's side and from fear of my fists, they became quiet, and Booth got a hearing, for which he thanked me many times."

"I did not become actually converted for some time, but I went to all the meetings and helped to keep order. When the Salvation Army was finally formed I joined."—London Daily Mirror.

New Acquisition.

"Pop, get me a little wagon to hitch your goat to."
"I've got no goat, child."
"Yes you have, pop. Billy Smith's father says you've got his."

COMBINATION NEW TO HIM

"Lemonade and Ladies" Was Something the Veteran Politician Never Had Heard of.

"Lemonade and ladies!" A certain veteran politician laughed derisively as he read those words on a card this morning.

"Say, Bob," he said, "what kind of a way is this to run a campaign? Seen this card? It's a notice of the Tenth ward Progressive club's meeting to-night at Posey's hall, and it gives a special invitation to the ladies to attend and says ice cold lemonade will be served free. Did you ever hear anything like that, Bob?"

"Lemonade and ladies! That ain't no way to run a campaign. Say, how many votes can these ladies cast? I guess I've had as much practical experience in politics as any man and I'll tell you these Progressive guys ain't going to get very far with their lemonade and ladies. It won't go."

However, despite the warnings of the professional politicians, the Tenth ward Progressive club will serve lemonade at the mass meeting tonight. It is according to the new order of things. If any of the "boys" attend they will be welcome.—Kansas City Star.

Gloves and Thimbles.

"One of the hardest things for shoppers to learn is that the size of gloves and thimbles do not coincide," said a salesman. "If the woman who wears a No. 6 glove asks her husband to buy a thimble for her she tells him to get a No. 8 thimble. If he takes that size the chances are it will only stick on the tip of her little finger. She needs a No. 8. Of course, there are exceptions to the rule, for in thimbles, as in gloves, there are great differences in the make, and a great deal depends too, upon the peculiarities of the hand. But, as a rule, thimbles run about two sizes larger than gloves."

No Room for Doubt.

Railroad Attorney—You are sure it was our Flyer that killed your mule?
What makes you so positive?
Rastus—He dun licked every other train on de road.—Puck.

The Reason.

"My dear, I'm suspicious of that young architect who is visiting our Mabel."
"Why?"
"He's a designing fellow."

getting the beginning of eugenics. When the instinct of motherhood is allowed free play we shall become constructive, synthetic, peaceful.—Twentieth Century Magazine.

The Young Idea.

"When you are a man, my son, I do not want you to grovel on the earth, but to fly on the heights."
"What will I fly with, pa?"
"With a fine ideal, my son."
"Say, pa, can I work it with a gasoline motor?"

LITTLE MISS CALIPERS

How a Sick Lumberjack's Daughter Made Good.

By N. J. COTTON.

Amos Tuttle hobbled slowly into his rude log shack, a half mile below the landing and camp of the Kilkenney Lumber company, and wearily threw down his string of wooden figure tablets and callipers.

"It's no use," he dejectedly exclaimed, "I can't go on with that scaling. The rheumatism has got me worse than ever. I don't know what's to be done. I asked Dunn for a lay-off to-night, and he told me if I quit now it would be for good. He's had it in for me for a long time, and I suppose he thinks this is his chance to ship me."

"I'm sure I don't know what is to become of us, with a payment due on the farm," complained Mrs. Tuttle, a little worn, tired-faced woman.

"Say, dad!" cheerfully exclaimed a sturdy, rosy-cheeked girl of eighteen, throwing an arm lovingly around his neck. "Why can't I take your place on the log pile? I have been with you ever since I can remember, scaling timber."

"Why, gal," replied the old man, tenderly stroking her cheek, "it's no place for you among all those rough men."

"But I know the most of them, dad, and I am not afraid."

"Amos Tuttle loved his daughter better than anything else on earth, and he was proud to have her offer to step into the breach. But instinctively he shrank from consenting to her coming in contact with all those rough men. For several moments he tenderly regarded her in thoughtful silence. At length he spoke, but with evident reluctance.

"Well, Rita, if Dunn is willing you may try it, but if any of those Jacks insult you, gal, tell me, and I'll crawl up there on my hands and knees and shoot the cusses."

Then next morning Amos Tuttle could not get out of bed, but his substitute, cheerful and self-reliant, promptly at seven o'clock swung the calipers and figure tablets across her shoulder and resolutely started for the landing. Clad in short skirts and red sweater, with long gaiters and overshoes, and her riotous curls confined by a long topped Canadian boggan cap, she successfully defied the cold and was a most bewitching wood nymph personified.

Jim Dunn, the boss, was alone on the landing when she arrived. The teams had gone up the mountain after their first load, and the landing men had not come up from the camp. Dunn was a big, coarse, illiterate man, who kept his job by sheer muscular force.

"Hello, little one," he exclaimed in a coarse, familiar voice.

Rita acknowledged the greeting as graciously as possible. She had an instinctive dread of this man.

"Father is laid up with rheumatism. May I take his place?"

Dunn regarded her a moment in open admiration before answering, then laughing coarsely he said:

"It's irregular, gal, and might cost me my job, if the company knew it. But, I'll be damned if I won't do it, on one consideration. If you'll give me a kiss every morning, I'll do it," he finished.

Rita's heart sank.

"Is there no other alternative?" she asked.

"I don't know what that jawbreaker means; but I reckon you mean, is there another loop-hole? I opine there ain't. It's a kiss a day, or you don't get the job."

"Put a daughter of yours in my place, Mr. Dunn," she pleaded.

"Ain't got none, an' if I had reckoned a kiss wouldn't hurt her any," was his unfeeling reply. Her plea had fallen on barren ground. She hesitated. It was an infamous proposition he offered, but on it hung her father's job, and they needed the money.

"I accept," she crisply replied, "provided you take the kiss when no one is around."

"All right, my dear, just as you say. Guess I'll take me first installment now."

Inwardly Rita trembled, and an overpowering disgust for this beast filled her soul. But she resolutely held up her head and submitted to the sacrifice.

It was well Amos Tuttle did not witness the act; if he had Jim Dunn would never have lived to insult another woman.

Energetically wiping her outraged lips, Rita went to the scaler's little shack to wait for her first load of timber.

It was not long before several teams drove on the landing, with clanking of chains, booming of dragging timber, and hoarse shouts of the teamsters. Rita's debut created a sensation, but it was a cordial, good-natured one.

Admiration for the plucky girl who so bravely took her father's place amid such trying circumstances brought out a shout of approval from those rough men.

One old teamster, a friend of her father's, shouted enthusiastically: "Bully for yew, little Miss Calipers!"

A cheer and the name were taken up and repeated, until the woods rang with the echoes.

There was not a man in camp but would have championed her, and taken a licking from Dunn, had she appealed to them. But she realized Dunn was a power there, and it would do no good to appeal to anyone. When she could stand it no longer she would quit.

A week passed, and Mr. Tuttle grew

no better. Dunn was somewhat addicted to drink, and on several occasions Rita had been saved further indignities by the opportune arrival of the landing man.

On Monday morning Dunn had been drinking more than common, and insisted on kissing Rita several times before he would release her.

Suddenly she was conscious of a stranger present, and looking up she saw a tall young man standing in the doorway sympathetically regarding her.

There was a quick step, and a clenched fist caught Dunn on the ear, and he went down. With a curse, he was on his feet in an instant, ugly as a bull. Dunn was a fighter, and Rita trembled for the stranger; but her concern was needless; he just played with Dunn; circling around him, and when he wished he promptly knocked him down, until Dunn, acknowledged he had enough.

"Now," said the stranger, standing over the prostrate man, "don't you ever try to insult this girl again, or you won't get off so easy next time; and remember she is to continue with the scaling unmolested. I suppose you may as well know, first as last, that I am Ralph Orton, eldest son of Arthur Orton, senior member of the Kilkenney Lumber company. I shall be here for some time, looking after our interests; and if I hear of any more of your deviltry, we shall dispense with your services."

Finishing with a cheerful nod to Rita, he turned on his heel and walked away.

Dunn painfully rose to his feet and slunk away, a look of concentrated hatred on his brutalized face. Rita, trembling with excitement, went into the shack to think, and secretly cherish something new and strange that had entered her soul.

The days and weeks went by uninterrupted. Ralph Orton took up his abode at Tuttle's home, and the old man soon acquired a distinct liking for this energetic young man. Ralph helped Rita with her work when he was not on the mountain.

Dunn kept his place in sullen, vindictive silence. Ralph and Rita soon fell into the pleasant habit of waiting for each other at the landing, and walking home together in the twilight.

It was a Saturday night in February. The men had all come off the mountain early, except Ralph and Dunn. Anxiously Rita waited, but still they did not come. The sun had dropped behind the western horizon in a deep red setting, tinging the snow blood red. She trembled. A foreboding of danger reached out and closed about her heart. Suddenly she heard a step on the snow. Darting behind a tree, she waited, alert and expectant. Her quick ear told her it was Dunn. Presently he came in sight, and her heart sank like lead. His face carried a covert look of triumph. Instinctively she knew something had happened to Ralph. Soon as his footsteps had died away she sprang into the road and sped up the hard mountain road like a startled fawn.

Her one thought was of the man she loved better than life. She had no definite idea where to look for him; nor had it occurred to her to alarm the man. She knew he was in grave danger somewhere on that bleak mountain side, and on her rested the task of rescuing him; so, panting and trembling, she sped on. Every few steps she stopped and called his name. No answer came back, but the moaning of the light breeze through the woods. On she pushed to the top of a ridge. It had got quite dark now. Pausing on a ledge almost on the top of the cant, she shouted:

"Ralph! Ralph! where are you?"

"Here, Rita, at the top of the cant," came the quiet, reassuring reply. With a glad cry she hurried to the top of the ridge, where a lone spruce stood. Then she stopped, and her heart sprang into her throat. She saw his danger, and swayed dizzily.

"Courage, my little girl, courage," came from the smiling lips in cool, even tones. "This is some of that devil Dunn's work. When my back was turned the coward laid me out. Take heart, little one, we win yet." It was an appalling situation. Ralph was bound to the lone spruce with a piece of snub warp. The spruce was nearly cut off, so that it cracked ominously in the rising wind.

Rita heard it roaring in the distance, and knew when that wave reached them the spruce would break and leap over the ridge to the north, a sheer drop of one hundred feet. A nameless terror seized her as she frantically dug at the knots, and the rising wind roared in her ears like the knell of doom.

"Take it easy, Rita, dear, there is plenty of time," his cool voice reassured her. "My knife is in my pocket, tear it out and cut the warp."

Nearer and nearer the wind came, roaring like a demon in her ears.

With one last mad effort she cut the last coil, and Ralph stepped from the tree, safe.

With a wild, exultant swoop the wind tore through the tree tops and, with a sharp crack, the lone spruce sprang over the ledge.

"My brave little girl," he tenderly whispered as she clung to him, choking back quick, nervous sobs.

"Thank God! you are safe, Ralph," she fervently murmured.

"God is good, my dear," was the sober reply.

"Let us thank him, Ralph," she softly whispered.

Devoutly two faces were lifted heavenward, one, fair and trustful, the other strong, masterful, compelling, and in each were thanks, mute and appealing.

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HOMIE TOWN HELPS

AMERICA MIGHT COPY THESE

English Towns and Villages Shown to Be Far Ahead of Those of This Country.

Those who read the report of the Stanley investigating committee, which arraigned the methods of the United States Steel corporation in dealing with its employes, will be impressed by an account of an English village, which was printed recently in the Yorkshire Observer of Bradford, England. The condition of the average small wage earner in the mine and factory districts of the United States is not enviable. Social surveys have afforded the general public opportunities to study the way in which these poorer Americans live. In contrast is the successful experiment conducted by the Yorkshire Main colliery at Edlington, near Doocaster, England.

Land near the mine was sold to a reputable land development company, which in turn sells or leases plots to private builders. The latter are required to conform to a sanitary and architecturally pleasing plan approved by the colliery company. The site of the village is 120 feet above the sea level. On one hand is a pickling woods and on the other hanting grounds and the picturesque cliff of Levitt Hagg. The streets are wide and have grass plots and trees in the center. There are ample yards, the business houses are confined to one particular district and space has been allotted to four churches. Two recreation grounds have been laid out with a combined area of four acres. In the center of another four acres is the village school. At present there are 850 cottages, but with an addition under way, the number will soon be increased to 1,400.—Indianapolis News.

CO-OPERATION IN RURAL LIFE

Governor of Oregon Has Appointed a Commission Which Seeks to Promise Good Results.

The governor of Oregon has appointed a "Rural Life Commission" of 15 members, four of them women. Its slogan is "co-operation," which at the very outset is applied to good roads, betterment in housing, improvement in farm products and marketing, better teachers and increased pay for them, one church for one community, and a lot of things which would not be attempted by the individual. For example: Many farms have running water in the barn to save the labor of men, and none in the house for the convenience of women. This is to be remedied. Hereafter, by the plan, all farmers shall raise the same products, so that the middlemen will come to the community instead of the farmer, going to the market with only his own wares. There will be uniformity of price, saving in freight and advertising, and prompt payment for goods.

In our village there were two churches on opposite corners, and a school and a grange hall similarly situated. It is proposed to close both churches, using one for a neighborhood home, with gymnasium, library, etc., and using the grange hall for preaching, Sundays.

Must Plan for Structures.

Of much more importance than plans for streets, are those for the structures on them. In fact, often expenditure for streets indirectly raises death rates. I have in mind several cities near here that have spent all of their money, bonded themselves to the utmost, and are now practically bankrupt, having exhausted their resources for expensive paving, wrote Daniel H. Burnham. Their death rates are high, yet they can do nothing for their people, because of their orgies of street building. They have no health department, no hospitals, no laboratories, no school inspection, no building inspection, no anything which runs straight to the welfare of the people, because of their street improvements.

Clerks Should Read the Ads.

The success of any retail store depends largely upon the loyalty and intelligent efforts of the clerks.

Advertising has a great deal to do with store success, is absolutely necessary, in fact, but the clerk has the last call on the customer. The effect of the advertising is tempered by the efforts of the clerk.

The ad brings the customer in—suggests quality and value—but the clerk must do the rest.

Every live clerk should believe in advertising—should read advertising—should know every morning what his own store and its competitor is advertising for that day.

"Out of Sight, Out of Mind."

"To discontinue advertising," says ex-Postmaster General John Wammaker (one of the largest advertisers in the world—and, naturally enough, one of the most successful business men), "is like taking down your sign. If you want to do business, you must let the people know it. I would as soon think of doing business without clerks as without advertising."

Women Are for Peace

One of the fruits of sex equality will be the decline of war—international strife, industrial strife and sex strife. Women may not know how to play fair, at first, but they will be more apt pupils than the men. In masculine contests the rules are often more important than the game. What is fair in war? Murder, but not torture. What is fair in industrial war? Starvation, but not murder. Dynamit-

ing is not fair, but blackmailing is, evicting is, monopolizing food is, maintaining tuberculosis tenements is. These rules won't pass, boys, when the girls learn to play the game. The tyrannical employer will have to go, syndicalism and sabotage (the logical answers to arbitrary capitalism) will have to go. We already have the children's bureau with a real statesman, J. J. Lathrop, at the head. We are

getting the beginning of eugenics. When the instinct of motherhood is allowed free play we shall become constructive, synthetic, peaceful.—Twentieth Century Magazine.