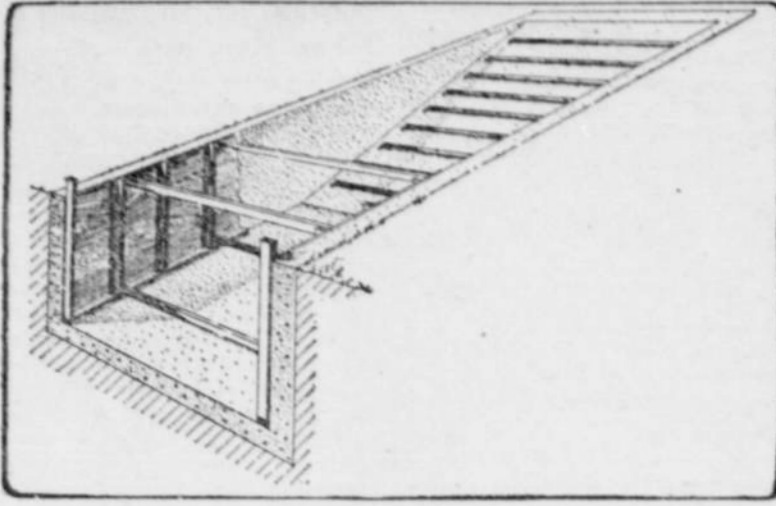


CONSTRUCTION OF CONCRETE MANURE PIT



Shallow Manure Pit.

For maintaining or restoring the fertility of the fields there is nothing better than barnyard manure. By the ordinary methods of piling manure on the ground or storing it in wooden pens or boxes, 30 to 50 per cent of its fertility is lost, according to the U. S. Department of Agriculture. This loss is brought about in two ways: First, by leaching or washing due to heavy rains; second, by fermentation or heating caused by lack of sufficient moisture. Since concrete pits are waterproof, manure may be kept in them as moist as may be necessary and such an enormous waste in the fertility of the manure may thus be entirely prevented. One load of manure from a concrete pit is worth 1 1/2 to 2 loads of manure as usually stored. Moreover, with concrete pits the supply of manure is increased by all the liquid manure, the richest part, from the barn gutters and feeding floors.

Shallow manure pits do very well where the manure can be frequently hauled to the fields. The walls and floor should be 5 inches thick. The clear dimensions of the pit are: Depth, 3 feet; width, 6 feet; length, 12 feet. Dig the trench 3 feet 5 inches deep by 6 feet 10 inches by 12 feet 10 inches. By keeping the sides vertical only an inside form will be needed. Frame the sides and ends separately. For the sides cut the 1-inch siding 12 feet long and nail it to the four 2 by 4 inch uprights 3 feet long and equally spaced. The end uprights for the sides are 2 by 4 inch pieces nailed to the siding; the others are also 2 by 4 but are nailed on edge. It is not necessary to cut these uprights to exact lengths; they may be allowed to extend above the siding. Make the siding for the end sections of the form 5 feet 2 inches long and at the ends nail it to the edge of two 2 by 4 inch uprights. Place a single 2 by 4 upright between each end pair. Cut four cross braces, 5 to 10 inches long, from 2 by 4 inch timbers. Have enough sections of woven-wire fencing, 7 1/2 feet long, to cover the bottom of the pit.

Set up the forms on the finished floor so as to allow a 5-inch wall on all sides. Join them by nailing together the 2 by 4's at the corners of the sides and ends. Do not drive the nails home. Cross-brace with 2 by 4's and with 1-inch boards from each central end upright to the second side upright.

Quickly begin filling the forms with concrete almost wet enough to pour, and keep it practically the same height on all sides. Puddle the concrete by running a long paddle up and down next to the form. Do not punch the earthen wall. Dirt in the concrete may make a poor wall. If the top of the earthen wall tends to



Waste of Barnyard Manure.

crumble, hold it back with 1-inch boards braced against the forms. To keep out floor water, the pit may be extended 6 inches above the ground by using the lower half of a 1-foot board to hold back the dirt, by allowing the remainder to project above the ground level, and by adding 6 inches to the height of the inside form. Remove the forms after the concrete has set four days by first drawing the nails in the corner 2 by 4's. The pit may be used after 10 days.

Where the manure must be stored for a considerable length of time, larger pits or basins are required. Such pits are seldom made over 5 feet deep and are wide enough so that the manure may be loaded on a spreader in the pit and drawn up a roughened concrete incline or run. The slope for such a run must not be steeper than 1 foot up to 4 feet out.

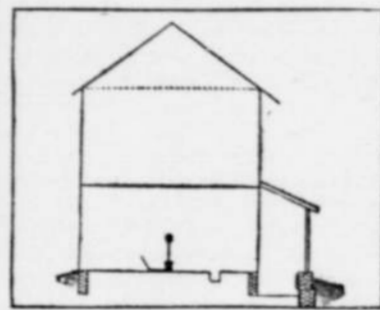
In building a manure basin use a team with a plow and scraper to make an earthen pit in which to build a concrete basin of the clear dimensions shown. In laying out the earthen pit, bear in mind that the concrete walls and floor are 8 inches thick and make due allowance for the same. With a spade trim the sides and the deep end vertical.

In order to form a sump hole from

which the liquid manure can be pumped, in one corner at the deep end of the pit dig a hole 18 inches deep by 2 1/2 feet in diameter. To protect the concrete floor, at the upper end of the driveway excavate a trench 8 inches wide and 2 feet deep for a concrete foundation apron. Extend it around the corners and slope it upward to meet driveway incline.

In general, the framing of the forms is similar to that of shallow pits. If the earthen walls stand firm, only an inside form will be needed. Otherwise, build an outer form. For the forms use 1-inch siding on 2 by 4 inch studding spaced 2 feet 8 inches. These uprights need not be cut to exact lengths. Save lumber by allowing them to extend above the siding. Stiffen each section of the form by nailing a 2 by 4 inch scantling to the uprights at the top and bottom of the forms.

Erect the forms in the pit. Set them on 8-inch concrete blocks or bricks, so that the floor may be built



A Cheap Shelter for Manure.

under them. To prevent bulging, cross-brace the forms with 2 by 4 inch timbers. Begin filling with concrete, as for shallow manure pits, and do not stop until the job is completed.

Lay the floor for the bottom and the incline the same as for shallow pits. To give teams a sure footing on the incline, embed in the concrete the turned-up ends of iron cleats bent at right angles, similar to a capital U. Old wagon tires, cut in lengths not greater than 20 inches and turned up 4 inches at each end, will do. Leave 1 inch clearance between the cleats and the concrete, and set them so as not to obstruct the wheelway. Space the cleats 14 to 16 inches. Roughen or corrugate the bottom crosswise every 6 inches by using a 5-foot length of 2 by 4 inch scantling beveled lengthwise to the shape of a carpenter's chisel. To make the corrugations, set the timber with the beveled face toward the incline. Strike the 2 by 4 with a heavy hammer, so as to indent the concrete to the depth of 1 inch.

Cutter for Silage. There are on the market several makes of silage cutters that will give satisfaction, according to Farmers' Bulletin 578, issued by U. S. Department of Agriculture. The capacity of the machine is an important consideration which should not be overlooked by the purchaser. Many persons make the mistake of getting a cutter which is too small, thus making the operation of filling the silo very slow and interfering with the continuous employment of the entire force of men.

It is better to get a machine large enough so that every one will be able to keep busy all the time. The larger cutters are equipped with self-feeders a labor-saving device which the smaller sizes lack. Other factors to be taken into account in purchasing a cutter are the amount of work to be done and the power available. Of course, for the filling of a very small silo it would not be wise to buy a large machine. Neither would it be advisable to overload the engine or motor by using a cutter which is too large for the power available.

Two types of silage elevators are in use—the old-style chain carrier and the blower. The chain carrier requires less power, but is harder to set up and there is more litter when it is used, especially in windy weather. For these reasons the blower is now fast displacing the carrier.

The blower should be placed as nearly perpendicular as possible so as to reduce to the minimum the friction of the cut corn upon the inside of the pipes and lessen the danger of clogging.

The usual length of cutting varies from one-half to 1 inch. The latter is considered a little too long, since pieces of this length will neither pack so closely in the silo nor be so completely consumed when fed as the shorter lengths. On the other hand the longer the pieces the more rapidly can the corn be run through the cutter.

The Governor's Lady

A Novelization of Alice Bradley's Play

By GERTRUDE STEVENSON

Illustrations from Photographs of the Stage Production

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SYNOPSIS.

Daniel Slade suddenly advances from a penniless miner to a millionaire and becomes a power in the political and business world. He has his eye on the governor's chair. His simple, home-loving wife fails to rise to the new conditions. Slade meets Katherine, daughter of Senator Strickland, and sees in her all that Mary is not.

CHAPTER II—Continued.

"Oh, I like Washington," she said, bringing herself back to the conversation with difficulty.

Her father, noticing her abstraction, remarked indulgently: "She likes Washington, Slade. She likes the East, but she doesn't tell it to everybody on account of father's votes. Now, Slade and I love our western city, eh, Slade?"

"Well," with some reluctance, "it's a good starting point," Slade admitted. "Ah!" Katherine exclaimed, now thoroughly herself again. "There's a man for you! He's not going to let a town stand in his way. Mr. Slade, this is father's Waterloo. He's been the greatest disappointment to me. That's the worst of parents. We children never know how they're going to turn out. If father had only listened to me it would have been Washington for him—Washington for me. But he wouldn't cross the Delaware. He wouldn't leave the West. If it weren't only been a drop of Napoleon in father," she concluded with a sudden burst of vehemence.

"Napoleon!" repeated the senator. "Yes, Napoleon. He got what he wanted, and nothing ever stood in his way. I just love the way he rode over poor old Josephine's heart, don't you?"—and she turned to Slade.

"But he was right!" she continued, earnestly, as if she were making a plea for something that lay very close to her own heart. "Why should we let anyone hold us back? I wouldn't. But mother didn't want to leave the West, so father stuck to his town and his friends and his state. Now he stands in the background and boosts other men politically.

"He wants to boost you," she added, suddenly.

"Letting out secrets," her father accused, playfully.

But Katherine was never more serious. "You're his dark horse," she persisted.

"You're a lucky man, senator," Slade broke in, as he watched Katherine admiringly. "You're a lucky man to have a charming young woman behind you in the race."

"That's all we women are for," answered Katherine, bitterly, "standing behind some man and watching him do things."

"Why, child alive, you do things yourself," the senator remonstrated. "She makes busts, Slade—heads. Done some big guns in Europe."

Katherine sighed and leaned back wearily in her chair. "Oh, in my feminine way, I model," she admitted. "But if there'd been one drop of Napoleon in father I shouldn't have had to fall back on molding clay. I should have been molding," she hesitated, and then finished daringly, "opinions and people."

CHAPTER III.

Just how much more freely Katherine might have revealed her aims and inspirations, Slade could not know, for at that moment the butler appeared and engaged his attention.

As the man withdrew, Slade spread wide his arms and announced grandiloquently:

"The gentleman of the water-front crowd, if you please. Mr. Wesley Merritt, the gentleman who wasn't going to darken my door, is here!"

He broke off with a loud, mirthless laugh. As well as any man who ever lived, he liked to feel the grip of his own power. He had come to the point where it was genuine satisfaction to humble men and conquer things.

"Wesley Merritt?" the senator was almost too surprised for speech. "After his abuse of you in the paper today— And Hunt! How did you do it?"

"This is the sort of thing I like," broke in Katherine, eagerly. "Oh, it's so exciting," she declared, her eyes glowing with eagerness and animation. "Oh, Mr. Slade, how did you make them kow-tow?"

Slade's reply was prevented by the brusque, excited entrance of Merritt and Hunt. The pair, angry and belligerent, strode into the room without a word. Merritt, small, wiry, energetic, was in the lead, followed closely by his shadow and echo, Hunt.

"Is it true?" he demanded angrily, before he realized that Slade was not alone. "How do you do, senator—Miss Strickland!" he exclaimed, in surprise. "Lovely home you have, Mr. Slade," he added, trying to adjust himself to the scene he had not expected.

"An astonishing rumor has reached us, Mr. Slade," he finally declared, getting down to the business of his invasion. "It concerns you, senator. It concerns every public-spirited man in the city. Is it true, Slade, that you have bought up our entire water front on which our residences—our old homes—the mansions of the city face,

and that you intend building factories there?"

"Why, yes," Slade admitted, with maddening calmness. "What?" Strickland almost shouted, completely astounded.

"But—but it can't be done," Merritt was so excited now that he stuttered his words.

"It can't be done," echoed Hunt. He was well paid for being an echo. "Our best people live there," protested Merritt.

"I live there," Hunt added, with accumulated emphasis.

"All of us," Merritt continued, "take pride in the view along the water front. It's damnable. Why, out of common decency, man—What do you want of factories, anyway?" he demanded, completely angered and out of patience.

Slade's voice was almost a drawl. It was so low-pitched and so provokingly calm. "Why didn't you and your associates protect your holdings?" he inquired.

"How'd we know a man with millions would come along and buy up the whole beach?" Merritt's wrath was getting beyond the control that Katherine's presence demanded. "Slade, if you persist in this," he thundered, "I'm going to take off my coat and hit back. My paper has an enormous outside circulation, and I'll hasty you once every day. If you propose running for governor, you won't get one vote in your own town. And in one month, or less, you'll find San Francisco has a gorgeous climate."

Slade was unperturbed by Merritt's threats or Merritt's bulldozing. "All right, Merritt," he advised, good-naturedly, "go ahead with your paper, I'll take my chances."

"You will, eh?" Merritt's tone was ominous. "What sort of factories are you going to build?"

"Well," drawled Slade, coolly, "I was thinking of putting up glue factories!"

"Glue!" The one word jumped from everyone's mouth at once. "Glue!" they all repeated, and looked at each other in consternation.

"The h—I you say," then remembering himself. "I beg your pardon, Miss Strickland."

"It can't be done," Merritt went on. "You can't build glue factories here, and he emphasized every word with an angry shake of his finger.

"By God, you—"

He broke off as he saw Bob Hayes stride into the room. Hayes, as Slade's lawyer and almost a member of the family, had the entree to the house at all times.

"Here's my lawyer," remarked Slade, dryly, "ask him."

"Of course it can be done," Hayes informed them, convincingly. "It's perfectly legitimate."

Then, as if to dismiss a perfectly obvious subject, he turned to the girl, who had been enjoying every point that Slade had scored.

Katherine's eyes lighted with warm welcome. It was the first time she had seen Hayes since she had returned. He was the man she had once wanted to marry, once before her father had given her the choice of Hayes or a finishing school in Paris and a tour of Europe. Now she greeted him with cordial friendship, but with none of the sweet tenderness he might have expected from her. Once she had looked up into his eyes and thought him a god. Now, her eyes blinded by the glare of ambition, she saw only a good looking chap, a struggling lawyer, a man who hadn't made any particular mark in the world. She returned Hayes' burning, penetrating gaze with cool, unruffled frankness. In another moment she had turned from him and was earnestly watching Slade, listening to his every word with eager intentness.

"You see, I'm a very simple sort of fellow," Slade was saying, "don't drink—don't smoke—don't keep yachts or horses, don't keep wo—" he stopped in his off-repeated formula as he remembered Katherine's presence, "don't keep horses, so I must do something, as I was saying to Mrs. Slade today. I don't want to bother my neighbors, so I'll build high chimneys, so the smoke won't trouble you much. I'm going into the glue business. That is, of course," and he paused and surveyed the group about him with a complacent elevation of his eyebrows, "that is, unless you gentlemen can keep me busy in some other way. I'm a very active man."

Katherine leaned forward with tense expression to see how the man's opponents would take his game. The senator was smiling, Merritt tapping his foot restlessly.

"Well, boys, it looks as though he had us—strong?" Strickland broke the silence. "Glue! Whew!"

"Are we going to be had?" demanded Merritt, testily, "are we going to stand for this holdup?" and he turned disgustedly toward the door.

"Don't you think we'd better keep Mr. Slade busy in some other way," Strickland repeated.

"I don't," Merritt flung back over his shoulder as he left the room, followed, as usual, by Hunt.

Merritt's hasty departure was the signal for Katherine to adjust her wraps and remark: "We must be late for Trietan."

Hayes followed her. "I must see you alone, Katherine. You're still free—there's no foreigner on the scene, is there, Katherine?"

"Bob," Katherine's voice was sweet but firm. "I don't think I shall ever marry Bob—"

"Oh, nonsense," he protested. "No," even more positively. "The more I see of men—but what's the use? There never was but one man I could have got on with, and I didn't happen to live in his time."

"Who was the boy?" Hayes asked, lightly.

"Strange," Katherine replied, pensively. "I've just been talking about him—Napoleon Bonaparte."

"Oh, Lord—that fellow." Hayes was much relieved. "Can I have tomorrow evening?"

"Yes—if you—yes—tomorrow evening, Bob."

Her voice lingered a bit on the Bob, and with quick impulsiveness Hayes caught her hand and kissed it.

In another minute she had turned to Slade.

"Oh, Mr. Slade, won't you let me make a head of you?"

"A head of me?" Slade repeated in surprise.

"Think it over," Katherine suggested, as she and her father went out, leaving Hayes and Slade watching her proud, graceful figure until it disappeared from view.

Slade looked critically at Hayes for a moment or two after the girl had gone.

"Oh, now I remember," he suddenly exclaimed. "You're the chap she gave up for Paris a long time ago?"

"When she was twenty-one and I was twenty-four and six feet one inch of a western lawyer, just out of the woods. How does Mrs. Slade take to this governorship business?" he finished, abruptly.

"She doesn't take to it." Slade's voice was hard.

"I was afraid she wouldn't."

"Well, nobody's going to stand in my way." A malignant light showed in his eyes.

"My boy, I'm out to win."

In spite of the fact that he was in full evening attire, he thrust his hands into his pockets and almost strutted about the room. "I outgeneraled that crowd here tonight. By God, I did! Do you know—?" He paused in his walk and looked down on Hayes' six feet sprawled over one of the brocade chairs—there's just a little drop of that fellow—Napoleon Bonaparte—in me!"

"Napoleon Bonaparte got on by leaving a woman behind," Hayes returned, seriously, refusing to enter into Slade's spirit of self-satisfied good humor.

"You mind your own d—n business, Bob," Slade turned on him, suddenly.

"All right—I'm off to the opera. I only meant that Napoleon was a bad boy for you to follow, because he treated his first wife like a dirty dish-rag. That's why I'm glad that second little Austrian hussy paid him back. That's all I love Mrs. Slade. When I was sick with fever in your mining camp she was a mother to me."

"Don't forget that I made you," Slade reminded him. "L," and he tapped his chest. "I gave you your chance."

"I don't. All the same I'd hate to see you elected, because of Mrs. Slade. It seems to be the regular thing, becoming universal, for a very successful man to leave home the minute he's on his feet. Good night."

"One minute, Bob. You've given me a lot of good advice. I'll give you some. Are you in love with that girl?"

"Yes," Hayes grunted; "good night. Is that all?"

"No," Slade paused, watching Hayes through narrowed eyelids. "That girl needs a large pie with every one of her fingers in it. Bob, I'm sorry for you. Your pie isn't big enough."

"Well—it's my pie. Good night," and he was gone.

After Hayes had gone, Slade sat, his arms resting on the table, staring into space. Every now and then the corners of his mouth came down and his eyes narrowed. He was thinking of Katherine Strickland and Hayes. That woman for Hayes! Hayes must be a presumptuous pup to ever think of winning that queen. Such women were meant for the kings of the earth—not for their hirelings.

(TO BE CONTINUED.)

NEW DISCOVERY ABOUT ANTS

Scientist Asserts That the Insects Have a Regular Form of Salutation Among Themselves.

Ants have long been known for their excessive industry, but from a curious communication which has just appeared they seem to have surpassed all other insects by organizing an elaborate system of signaling.

Professor Bugnion, who has recently investigated the habits of the white ant, reports that the "soldiers" of that species give warnings or encouraging signals by knocking with their jaws upon dry leaves, thereby emitting a crackling sound. Placing some of these ants on a big plate and covering it with paper, he found that the "soldiers" among the ants responded to his taps with a rustling, crackling sound.

Moreover, apart from this audible signaling, there appears to be some inaudible form of signal, for the professor asserts that the "soldier" ants salute the worker ants.

To do this, "the insect stands firmly on its legs with the head raised and the body slightly oblique, and shakes itself for an instant with a convulsive shudder. This seems to mean something."

If you want it to be a sunny world step wearing a cloud on your brow.—Florida Times-Union.

OLD LONDON JOURNAL

GAZETTE IS MOST VENERABLE BRITISH NEWSPAPER.

Publication Has for Two Hundred and Fifty Years Officially Chronicled the History of the Island Empire.

Modern newspaper enterprise has somewhat dwarfed the importance of the London Gazette, Britain's oldest newspaper, which for 250 years has officially chronicled the history of the country. Today it is practically only used for such announcements as the king's birthday honors list and legal notices. Time was, however, when the Gazette was the only medium through which the public could learn any foreign news or any public announcement which royalty and statesmen had to make.

Nowadays such announcements, while being sent to the London Gazette, are simultaneously communicated to the more important newspapers. For even today the London Gazette is controlled by the government, and a particularly watchful eye is kept on the advertisements in its pages, which are regulated by law. These advertisements are mostly of an official or legal character, of which it is necessary to keep a record, and earn for the nation about \$60,000 a year. No great manufacturer could obtain a puff in its pages, even though he were willing to pay \$50,000 a line for it. Altogether, the Gazette yields the country a profit of about \$100,000 a year, although practically the only people who buy it are government officials and lawyers.

One of the most curious facts regarding the London Gazette is that while it is Britain's oldest newspaper, it is also one of the youngest, in the sense that it was not until 1908 that it was registered at the general post office for transmission by inland post as a newspaper. Previously it had been regarded as a government publication only, and was dispatched "O. H. M. S."—in this way escaping postal charges altogether. But apparently the government saw a way to reap a few extra halfpence by having it registered.

The Gazette varies in size very considerably. Sometimes it consists merely of one page, and sometimes of the between four and five hundred, but the price always remains the same, viz. one shilling. There was one memorable week in 1847, which was known as the "Railway Year," when so many parliamentary notices had to be published that the Gazette for the week totaled about three thousand pages.

One of the most interesting numbers of the Gazette ever published was the Diamond Jubilee number, the whole paper being devoted to an official record of that historic celebration.

As an illustration of the importance of the Gazette in the old days, it might be mentioned that as recently as the Crimean war the Gazette was the first to publish that important item of news, the victory of Alma. At one time the London newspapers had to wait for the publication of the Gazette in order to secure such news of public importance as the list of casualties, which the war office in those days sent direct to Fleet street.

It is the proud boast of Messrs. Harrison, and for more than one hundred and thirty years published the London Gazette, that although kings and cabinet ministers contributed to its pages during the time they published the paper, and although thousands of employees were engaged on the work of producing the Gazette, no official secrets sent to them for publication have ever leaked out.

The Gazette is probably the only paper which returns the original copy to its authors along with the proof. This is done in the case of communications from sovereigns and cabinet ministers.

Activities of Women.

It is claimed that women medical students complete their course much quicker than men.

The average earnings of women employed in the clothing trade in England is \$2.12 per week.

Women among the lower classes in New York have started a crusade against high rents.

Women constitute only four per cent of the persons engaged in transportation in this country.

Women are now prohibited from working between certain hours at night in 14 European countries.

In Persia women are forbidden to go unveiled in the presence of any man but her husband.

A Pennsylvania woman paid \$25,000 to a beauty doctor to make her a physical ornament to her home.

Teachers in the Newtown, Mass., kindergarten schools receive only \$300 a year salary.

Waterproof Cement.

It is said that the United States army engineers have long used the following mixture for water-proofing cement: One part of cement, two parts of sand, three-quarters of a pound of dry powdered alum to each cubic foot of sand. These are mixed and dried, and to them is added water in which has been dissolved three-quarters of a pound of soap to each gallon. This, it is said, is nearly as strong as ordinary cement, and is quite impervious to water, and does not effloresce. For a wash, a mixture of one pound of lye and two pounds of alum in two gallons of water is often used.—Scientific American.