GULLING THE PELICAN.

JOHN R. CORYELL.

The willingness of men to reap the fruits of the labor of others should dispose him to regard with interest if not with admiration the same trait and its practical application in any of the members of the lower orders of animals. It is true that he is not inclined to look with the same complacency on his beastly type as on himself, and for this reason we find the jackal universally scorned of men. Nevertheless, there are two qualities the exhibition of either one or both of which will at once command his applause. These are wit and impudence.

The gull has both of these qualities, and exercises them for its own benefit at the expense of its fellows. Behold then a good reason for admiring it! It is not at all nice in its choice of victims, but practices its rogueries with regard only to its own safety and profit. If the victim be small, then force alone is resorted to to obtain the coveted object, which is always something to eat; if strong, then wit is brought into play; and if stupid, then impudence accomplishes the same result. Nor is the gull unaware seemingly of the ludicrousness of the part it so often plays of making others do the work it ought and can do itself, as may be seen in its dealings with the pelican.

The brown pelican (*Pelicanus fuscus*), though its numbers have been greatly lessened, is still plentifully found along the shores of the Gulf of Mexico, and in Florida especially may be encountered without difficulty. It is indefatigable in two pursuits—first fishing and then eating.

It is a ponderous, clumsy bird, with a body as large as a swan's, but with enormous wings which enable it to fly with ease and power and almost with grace. The head, which is almost all bill, is not pretty, but, what is better, it is eminently useful, for it combines fish spear and lunch basket in one. The upper part of the bill terminates in a hook which is fatal to a fish, and the lower part is hung with an elastic pouch into which the captured prey are deposited until desired for eating.

As it has large webbed feet and swims well, it catches a great many fish, just as the ducks do; but it also has a very picturesque way of capturing its finny prey. It sails majestically over the water at a considerable height above it, glancing sharply about for victims in the transparent element below, until, catching a glimpse of one favorably disposed for capture, it launches itself straight downward, and with bill projecting and wings folded cleaves the air like a bolt, transfixing the fish and by the impetus of its fall disappearing under the water, to return to the surface, however, with all the buoyancy of a cork, and with the quarry comfortably tucked away for future reference.

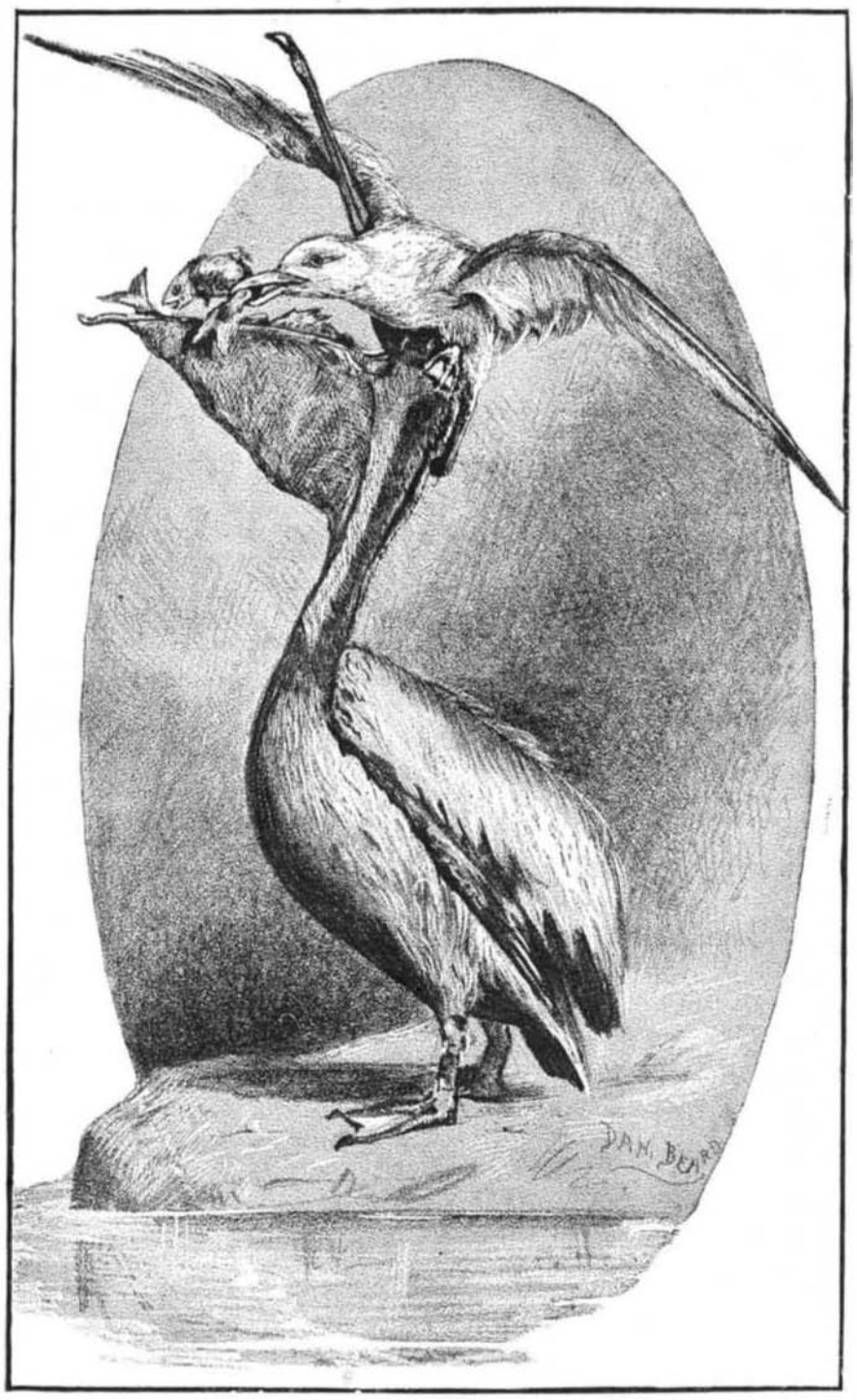
Having labored earnestly in this way until its pouch is full, the pelican seeks a long low ledge of rocks, and there in company with his fellows takes up his position in solemn earnestness to enjoy the fruits of his toil. A skillful toss of the head shoots a fish from the reservoir into the throat, and a gulp sends it on its way into the stomach. A little time for the pleasurable sensation of digestion, and again the head is tossed. And so the game is played with regularity by the whole grotesque line. The long heads are sometimes turned about and rested on the shoulders pointing backward, or more frequently are held pointing vertically downward.

Although a large and clumsy creature the pelican is not necessarily stupid; but by dint of frequent tossing of the well laden pouch it becomes at once gorged and dull, and then is the golden opportunity of the gull.

He impudently alights upon the very head of his victim, and waits patiently until the pelican receives warning from within that another fish is wanted. Up goes the bill, open gapes the awful mouth, out shoots a doomed fish—not into the ready throat, however, but into the waiting bill of the gull, which has adroitly twisted its head so that it can see all that is exposed of the pelican's internal economy, and has snatched the morsel and flown with a wild scream of laughter to eat it at its leisure, if indeed a gull ever had such a state of being.

The pelican is almost too stupid to know that it has been robbed, but the gull gives every evidence of enjoying the trick very little less than the booty, for its farewell shriek sounds derisive enough for the evil one himself.

It might be supposed that the pelicans would learn wisdom in the course of time, but they do not seem to have done so yet, for day after day along the coral reefs of the Florida coast may be seen long lines of gormandizing pelicans entertaining gulls in this way.



GULLING THE PELICAN.

Storms and Gales.

The exceptional character of the season, which has prevailed, not only in our own country, but over nearly the entire Continent of Europe, has directed public attention very forcibly to the forecasts of the meteorologists which are published in the daily papers, and to the evidence on which their assumptions are founded. Nor very many years have passed away since weather prophets were regarded very much as clairvoyants and spirit media are at the present time; a lucky hit in a weather almanac has more than once sold off numerous editions, and made the fortune of the proprietor; but with the advance of science, and the greater diffusion of scientific knowledge among the reading public, these empirical announcements have fallen into decay, and few, if any, readers could now be found to believe in the prophecies of Mr. Murphy, or Zadkiel, or even Old Moore himself.

The storms which are so frequently predicted, and, in the majority of instances, with extraordinary accuracy, are foretold by the state of the barometer at various places on the earth's surface. The reports are received by telegram at the chief office, and being studied hour after hour, serve to indicate the depression at different places, as shown by the fall of the mercury, and the rate at which the atmospheric disturbances are traveling, thus enabling a very accurate estimate to be formed of the direction of the coming storm. Although in this and other temperate climes we live in the region of variable winds, and cannot calculate on trade winds and monsoons, that blow either constantly or for weeks together in one direction, nevertheless the storms that ravage our coasts and wreck our strongest shipping obey certain laws; and, once their presence is known, even on the opposite coast of the Atlantic, their course, and even their duration, can be predicted with a great amount of certainty.

There are few persons of any observant power who may not have noticed that a violent gale seldom blows for any length of time in one direction. The wind changes from south to north, and veers about in an apparently erratic manner. In the account of gales encountered at sea it is frequently stated that, after blowing with the utmost fury, the gale will suddenly be succeeded by an almost perfect calm; but, before the mariners have had time to congratulate themselves on their supposed escape from the imminent peril with which they were surrounded, the gale returns with all its original violence, but in precisely the opposite direction. To the affrighted passengers it appears as if the demon of the storm, regretful of having allowed the vessel to escape, had come back to complete the work of destruction.

It is now some years since that the theory of storms was investigated by scientific men, when it was discovered that they were but gigantic eddies and whirlwinds, such as are in miniature rendered visible at street corners on a windy day, when the clouds of dust, with leaves and straws, are whirled about by the eddy caused by the meeting of two opposing currents of air. If we imagine whirlwinds several miles or sometimes several hundred miles in extent, moving with a velocity that is unknown in this country, we shall have an idea of a cyclonic storm; and as the eddy that has carried the cloud of dust which renders it visible to the eye travels along the highway, so does this huge whirlwind, that takes its rise usually near the West Indian Islands, pass across the Atlantic until it reaches Europe, still retaining sufficient force to inflict the damage with which we are so familiar.

One singular circumstance respecting these storms has been definitely ascertained—that the circling of the current is always in the same direction, which is the reverse to that of the hands of a watch. As the wind thus moves in a circle, it is evident that the direction in which it strikes any building or vessel in its course depends on the part of the circle in which they are; and if the ship is so situated as to be passed over by the center of the cyclone, the gale will increase in intensity until the center is reached, when there will be a sudden calm, which is only a prelude to the recommencement of the tempest from the opposite direction. Since the publication of these facts, vessels seldom allow the center, which is the worst of the cyclone, to pass over them. Now that science has shown the way, they steer out of the storm, instead of following the course previously adopted of running before the gale, and allowing the terrible wind to blow them north, west, south, and east for days together. It is a knowledge of the existence of these circular storms of greater or less intensity, of their rate of passage across the Atlantic, and of their exact direction, which enables our meteorologists to predict with wonderful though not unerring accuracy the coming of gales and tempests, and to enable the mariner to take measures accordingly. By the aid of the returns published daily in the morning papers, and sent by telegram to all seaport towns, thousands of lives have been added to the list of those saved by science.—*London Queen.*

Work in the British Royal Mint.

For the first time after more than two years the process of gold coinage at the Royal Mint was recently resumed. It was even remarked that the strong man who pours the molten stream from crucible to mould, and who holds that post because of his especial skill in directing the metal into narrow apertures without spilling or waste, showed on this momentous occasion some little signs of nervousness and agitation. For gold coinage on Tuesday, says the *Pall Mall Gazette*, was successfully resumed in reconstructed premises with new and improved machinery, and it will probably be long indeed before there is such another interruption of the coinage as has been now happily brought to a conclusion.

The reconstructed mint can now turn out sovereigns at the rate of a million a week without stopping the coinage of silver and copper, whereas previously it could only deal with one metal at a time, and that to a much smaller extent. The beautiful instruments employed for weighing the coin are now manufactured within the precincts of the mint, and are, as is well known, a miracle of minute and ingenious automatic machinery. Out of every hundred sovereigns that pass over the balance, the fastidious little instrument rejects, as either too heavy or too light—but most frequently he latter—a number varying from five to twenty.

THE bee has long been a type of the industrious worker, but there are few people who know how much labor the sweet hoard of the hive represents. Each head of clover contains about sixty distinct flower tubes, each of which contains a portion of sugar not exceeding the five-hundredth part of a grain. Some patient apiarian enthusiast, who has watched their movements, concludes that the proboscis of the bee must, therefore, be inserted into 500 clover tubes before one grain of sugar can be obtained. There are 7,000 grains in a pound, and as honey contains three-fourths of its weight of dry sugar, each pound of honey represents 2,500,000 clover tubes sucked by bees.

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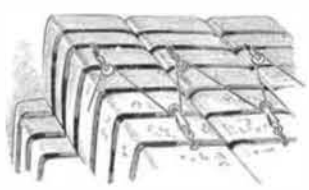
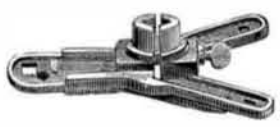
Cotton Bale Binder.

This is a simple contrivance for binding cotton and other bales together when loaded on flat cars to prevent the load from being shaken apart and separated by the shocks and jolts of the car, and also to prevent the bales from being pulled off by cotton thieves. The contrivance consists of two or more hooks having pulleys or eyes strung on a rope, the rope being fastened to one of the eyes or pulleys forming one end of the binder, the hooks being caught in the bands of the bales, and the rope passing over the center of the load in a zigzag course to opposite hooks on the opposite bales of the tier, as shown in the cut, so that the stress of the cord when pulled taut will draw the bales of the respective tiers against each other, thus binding the top tier of the load firmly in a compact mass, which will not be separated by the shocks of the cars, and cannot readily be pulled apart. This invention has been patented by Mr. Lewis Burr, of San Antonio, Texas.



Improved Wrench.

This is a wrench for taking off and putting on the nuts of carriage axles. This wrench is provided with three or more arms or handles arranged to radiate from a common center, and having ribs or projections on their backs for operation in connection with a fixed and adjustable jaw on the meeting face portions of the arms, whereby the wrench is balanced, so that a nut may be run on and off an axle with greater freedom and ease, and the necessity of reaching around the hub when putting on or taking off the nut is avoided, and the wrench, holding the nut, may be laid on the floor or ground without exposing the nut to sand or grit, and the handles being raised from the ground, the wrench may be readily grasped and lifted when required. This useful invention has been patented by Messrs. I. W. & T. F. Giles, of Abington, Mass.

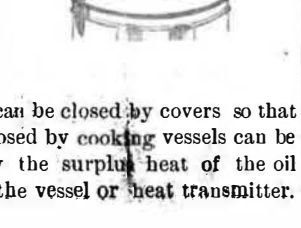


Horizontal Guide for Saws.

This is a device to be attached to standing trees or stumps for guiding a crosscut saw in cutting the tree down or cutting the stump off close to the ground. The invention consists of a main center board adapted to be spiked to the body of the tree or stump to be cut, of two arms hinged to the ends of the center board, and of two guide pieces pivoted upon the hinged arms. In use the device is first spiked, in proper position, to the body of the tree or stump to be cut, and the arms are to be swung backward away from the body of the tree or stump, so as to hold the guides in position for supporting and guiding the saw in starting. The saw having been well started, the arms will be swung gradually forward toward the body of the tree or stump as the sawing continues, so that the guides will continue to support and guide the saw until the tree or stump is sawed entirely off. In this manner it will be seen that no difficulty will be experienced in starting the saw or in causing it to make a straight cut, and will thus be a great relief to the persons sawing, since they will not need to give the saw any special attention. The guide is adjustable to the size of the stump or tree to which it is to be applied. This invention has been patented by Mr. James J. Sadler, of McBrides, Mich.

Cooking Attachment for Oil Stoves.

A new attachment for oil stoves, whereby an increased quantity of food can be cooked on an oil stove, has been patented by Mr. E. Porter, of Leon, Iowa. A flat cup shaped heat transmitter is provided at its middle with a downwardly projecting collar, which is adapted to pass into the top opening of an oil stove. Around the rim of the collar a series of supports project upward from the inner surface of the heat transmitter, and are connected at their upper ends by a horizontal ring or flange, from which a collar projects which has its upper edge toothed or notched. The upper surface of the flange is flush with the upper surface of the rim of the heat transmitter. An annular top, which can be made of sheet iron, Russian iron, ordinary tin, or of cast iron, rests on the rim of the vessel, the flange and a series of supports arranged in a circle and projecting from the inner surface of the heat transmitter. The top is provided with a series of openings, which can be closed by covers so that the openings which are not closed by cooking vessels can be closed by the covers, whereby the surplus heat of the oil stove will be retained within the vessel or heat transmitter. The vessels on the top will thus be heated and their contents cooked. A heat transmitter can also be placed on the collar, the heat passing through the notches in the upper edge of the collar. A great part of the surplus heat of the oil stove is thus saved, and a considerable quantity of oil is economized.



Necktie Fastener.

Neckties and bows have been variously constructed to provide for readily securing them in place; but the ordinary elastic loop appendage used to attach the bows to the collar button or stud is probably the simplest and neatest fastening for the purpose. There is, however, much difficulty frequently experienced in hanging or putting on the bow with the fingers by its attached elastic loop over said stud or collar button. To obviate this difficulty Mr. Wanton D. Slocum, of New Bedford, Mass., has invented the novel necktie fastener shown in the engraving, whereby the elastic loop is readily picked up, placed in position over the collar button or stud, and the bow adjusted with facility to its place.

Transplanting Implement.

The engraving shows a new implement for transplanting flowers, young plants, etc., in such a manner that they are not injured by being transplanted, and do not have their roots loosened from the earth in which they are embedded. The transplanting implement is formed of two spoons or scoops provided with arms which are pivoted to each other. The scoops can be separated and forced into the ground and gradually closed, and the cone of earth containing the roots of the plant will be held between the scoops and can be withdrawn from the ground. Plants, flowers, and shrubs can thus be transplanted very easily and rapidly without any danger. This useful invention has been patented by Mr. John M. Lindsey, of Crystal Springs, Ga.

Bees.

Many persons will just now purchase swarms and commence beekeeping; it is, therefore, essential that they should know something of the natural history of bees. We can calculate by the weight of the swarm the number of bees, as the "authorities" allow 5,000 bees to the pound. The hive will then consist of queen, workers, and drones. The queen lays all the eggs, from which the inhabitants of the hive are produced. She deposits from two to three thousand daily for weeks in succession. The workers perform the essential duties, such as comb building, brood raising, and honey gathering. The drones are the males, and their approach at the swarming season for the fertilization of young queens is a wise provision of nature. They gather no honey, and are driven from the hive during the month of August, when their services are no longer required. Honeycomb consists of six-sided cells made from wax, which is not gathered, but elaborated from honey by the bees. Five worker cells measure one inch across, and in these honey and pollen are stored and worker bees produced. The drone cells measure four to the inch, and in these the drones are raised. The cells in which queens are raised hang like acorns upon the side or end of the combs, and sometimes as many as twelve or fourteen may be found in a hive at swarming time. When a hive is deprived of its queen, previous to the introduction of a foreign sovereign, and fearing that her majesty may not be favorably received, the beekeeper must be careful to cut cut all queen cells save an open one, on which he may cage the new queen, as, when liberated after forty-eight hours' confinement, the bees imagine she has just emerged from the vacant cell, and acknowledge her authority at once. The queen no doubt lays all the eggs; but they must be kept warm by the bees until they produce tiny white grubs, which hatch out at the end of three days, and are then fed by the nurses with a mixture of honey, pollen, and water; when fully grown, at the end of six days, they are sealed over with a brownish cup of wax and pollen mixed together. In twelve days they emerge from their incarceration perfect bees, thus occupying the cell for twenty-one days; first three days in the egg state, six as an unsealed grub, and twelve in a state of quietude ensconced within the cell. Drones pass through like changes, but require twenty-five days to complete the transformation from an egg to a perfect drone. The drone brood may at any time be known by the size of the cells and their convex cappings. Bees can raise queens from eggs destined to become worker bees, provided that drones are abroad to mate with the young queens. Should this occur when no drones are about, all their efforts would be in vain, as the eggs deposited by such a queen would produce none but drones; even the eggs laid in worker cells would produce miniature drones, and the hive go to ruin. Although the queen is much larger and more fully developed than the worker, she arrives at full maturity in five days' less time, and she hatches out in about eight days after being sealed in. The dose of royal jelly which she receives is said to hasten on the transformation scene. The queen lives five years, but the workers' life in summer does not exceed two months, but the bees hatched out in autumn live till the following spring. Drones are to be found in May, but are driven out of the hive before the end of August, and their nervous nature prevents them returning to the hive, hence they die at once. As we advance in the practice of bee keeping, we must avail ourselves of the inventions of modern science, such as bar frame hives and comb foundation, as much valuable time is saved by their employment.—*J. Traynor, in the Farmer's (Irish) Gazette.*

How to Make a Water Varnish.

Take of shellac (in thin flakes) a quarter of a pound and water one pint, place them in a tin saucepan or other suitable vessel on the fire or over a gas stove, and raise to boiling point. When this is reached, add a few drops of a hot saturated solution of borax, stirring vigorously with a glass rod or clean stick until this shellac is all dissolved, which will be in a few seconds. Do not use to much borax, but add slowly and stop short of complete solution rather than the other way. After this the solution is filtered through charcoal, and the water varnish is ready for use.

Some may ask, What is it fit for, now it is made? That is what I intend to describe. First of all, for wet collodion negatives it is invaluable, as its use entirely does away with split films, and when only one or two prints are required the negative need not be varnished with spirit varnish. All that is required, after the negative is washed, is to flood it with the water varnish, stand up to dry, and when dry the negative is ready for the printer so far as the surface is concerned. A film so protected stands a great deal of rough usage and is not very easy to scratch, while for retouching the surface is superb. For wet collodion negatives the advantages are certain immunity from split films and saving of time, trouble, and expense of spirit varnish, fire, etc., and risk of cracking the plate from the action of heat.

For gelatine negatives water varnish is applied directly after they are washed, and when dry the retouching is performed and spirit varnish applied in the usual way, when there will be little danger of the films being silver stained, no matter how long they are in use.

A gelatine negative, covered with water varnish and dried, was placed upon a shelf, and a cotton wool plug out of a silver funnel was laid upon the film. At the end of three days no sign of a silver stain was visible, and this without any spirit varnish over it. I do not doubt, from my own observations, that this water varnish will be found far superior to a film of plain collodion, besides being easier and simpler of application.

One important point in favor of a water varnish is the fact that it can be applied to the film when wet, and therefore with all its pores open; while that part of the varnish that does not sink into the film, but remains upon the surface, will give a gripe or hold for the subsequent film of spirit varnish, affording a promise of security more in accord with the known permanence of a well varnished collodion negative.

With these remarks I am content to leave the formula in the hands of photographers, with a firm conviction that those who adopt it will find great benefit in its use.—*W. T. Wilkinson, in Br. Jour. of Photo.*

General Scott, of England.

Major-General Henry Y. D. Scott, C.B., F.R.S., late Royal Engineers, died at his house, Silverdale, Sydenham, on Monday, April 16, aged 61. He had been actively employed up to a short time before his death, and had just finished superintending the construction of the great International Fisheries Exhibition. General Scott acted formerly as Instructor in Surveying and Practical Astronomy at Chatham, and also as Examiner of Military Topography for the Military Education Department at the War Office. When he retired from the army in 1871, he became Director of Buildings at South Kensington, acting as architect to the Royal Albert Hall and Science Schools. He was also Secretary to the Royal Commissioners of the 1851 Exhibition. He devoted much attention to the utilization of sewage, and took out a great number of patents in connection with this subject. Perhaps the most important of the processes he invented was one for the manufacture of cement from the sludge obtained by precipitating sewage.

Interesting Experiment.

Dr. Eder and Mr. Plener are continuing their interesting experiments in Vienna in the way of separating pure bromide of silver from gelatine emulsion by the simple expedient of centrifugal force. Dr. Eder reports that the bromide of silver thus separated presents several very interesting features. There are distinctly two kinds of silver bromide, he says; that precipitated by alcohol, and that precipitated by water. The former appears to be most sensitive to indigo rays, and the latter to the blue rays.—*Photo. News.*

IT is said that the matinee nuisance is getting unbearable in London. But the worst part of it is not known. A theater filled all the afternoon cannot possibly become properly ventilated by the evening; therefore the air breathed by the evening audience is of the most foul description. Moral: Don't go to an evening performance after a matinee, if you can possibly help it.

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