

heirs or representatives to be deprived of an inheritance by reason of a will which is the product of a diseased mind.

METHODS OF PROOF.

The methods of proof in litigation involving civil incapacity must be ascertained by a careful perusal of discussions or treatises upon expert testimony.

In order to determine such questions, the courts frequently call upon experts in mental diseases to testify before them. However, in this class of cases, as in all other cases, lay testimony is admitted for several purposes.

Where the person whose acts are being construed has previously been adjudged insane, or *non compos mentis*, by a proper judicial proceeding, prior to the transaction in question, this evidence alone will generally suffice, although this may be overcome by evidence of its untrustworthiness or by testimony that since such adjudication, and prior to the transaction, the mind of the person had been restored to a normal condition.

There is rarely any trouble in determining the effect of such transactions when the person whose actions are sought to be avoided is a lunatic or an idiot.

The main trouble is found in cases in which the insanity is partial, when the person suffers from hallucinations and eccentricities or is afflicted with feebleness of mind not so pronounced as to be self-evident to the ordinary mind.

The courts will permit evidence of the following character:

First: The record of former adjudication of other courts that the person was insane, or *non compos mentis*.

Second: The testimony of lay witnesses as to the conduct of the person tending to illustrate the condition of his mind, and even their opinion as to his mental condition, although the courts will receive such opinion evidence with caution and will not give it the weight that is given to the opinion evidence of experts.

Third: Medical experts will be allowed to testify as to facts and conduct as lay witnesses, will be examined by hypothetical questions and asked to express opinions as to the mental status of the person, based on an assumed state of facts. In addition, they will be permitted, after an examination of the person, to give opinions as to his sanity or mental soundness.

As the law makes distinctions between the amount of mental capacity required in different transactions, it is necessary to consider separately the four named: (a) contracts; (b) deeds; (c) wills; (d) marriage.

(a) *Contracts.*—In order to determine whether a person has sufficient mental capacity to make a contract, it is necessary to consider the definition of a contract. A contract is defined by the most eminent authorities to be "an agreement between two or more persons upon a sufficient consideration, to do, or not to do, a particular thing." The two main features in a contract are first, the consideration; second, the assent—"for there is no contract unless the parties thereto assent, and must assent to the same thing and in the same sense." In other words, sane minds meet upon a common ground.

It is self-evident that mind is the basis of consent, and when the mind is lacking or radically defective, consent cannot arise. Whenever the mind is sufficiently impaired to negative the idea of consent, then the contract is voidable.

The mere superiority of intellect is not a sufficient ground to set aside a contract, no matter how far the stronger-minded contracting party has overreached the weaker. Contracting parties are rarely equal in business shrewdness, and it would be both impracticable and impossible for courts to settle such subtle questions.

In order to invoke successfully judicial interference the mind must be abnormal from disease or mental infirmity, either inborn or subsequently developed. As stated above, the plain cases of insanity and idiocy present no difficulty; the difficulty lies usually where the contracting party was not sufficiently weak-minded

as to appear *non compos mentis* to the ordinary and lay mind.

It is difficult to express in one rule the degree of mental capacity of the parties that is required to give binding force to a contract. A competent author has expressed the rule to be that a contract is voidable when made by one who "is so lacking in mental capacity from idiocy, lunacy, senile dementia, or other defect or disease of the mind that he is incapable of understanding what he is doing. To render a person thus incapable of contracting, his infirmity need not be so great as to dethrone his reason nor amount to entire want of reason; but, on the other hand, it must be something more than mere weakness of intellect. It must be such as to render the person incapable of what he is about, or, to be more accurate, of comprehending the subject of the contract and its nature and probable consequences (Clark on "Contracts," pp. 264, 265).

When the proof discloses the fact that the person was not permanently insane, but suffered from occasional fits of insanity, before the contract will be set aside it must appear that the contract was made during one of the fits of insanity.

One of the most peculiar divisions of mental derangement is that which subjects the patient to hallucinations, and the books disclose many notable instances in which men, otherwise liberally endowed and possessed of reason, were the victims of strange fancies to the extent that they were mental hallucinations. Wherever this phase of incapacity is relied upon, the general rule is that if these hallucinations have not taken sufficient hold upon the patient as to impair his entire mental faculties, then it must appear to the court that the contract was the result of the hallucinations, or it will not be disturbed. For while it may be doubted if any person who is afflicted with hallucinations is perfectly sane, yet often in the eye of the law he is insufficiently insane to escape the responsibility of all of his civil or criminal acts.

While the law has never had patience with the plea of drunkenness, and even though the great disciple of the law, Coke, pronounced that it aggravated rather than palliated an offence, yet there are instances where drunkenness will be a sufficient ground to avoid a contract. Before, however, the law will permit a contract to be avoided upon the ground of drunkenness of the complaining party, the drunkenness must have been sufficient to destroy the reasoning power, and to deprive the party of the mental capacity to comprehend the nature and effect of the contract.

After giving this rule, it is almost needless to add that slight intoxication, as a general thing, will not be a ground for relief.

However, the law does not require the intoxication to go to the extent of delirium tremens, for when this state ensues the rules in regard to insanity are applied.

(b) *Deeds.*—Deeds are nothing more nor less than executed contracts in reference to the conveyance of land, and the same rules apply to the avoiding of deeds, executed by insane or drunken persons, as to the making of any ordinary contract. And perhaps it may be added that where the deed is voluntary, the same rules are applicable that apply to the contesting of wills. This is especially true where undue influence is exercised over the conveyer.

(c) *Wills.*—Public policy deems an equal distribution of one's estate among those dependent upon him by natural ties of great importance, and while it is true that a person not laboring under a legal disability may bequeath his property to whom he pleases, yet the law requires that in order to do this he must be mentally capable as well as legally capable. It is needless to repeat that if the testator was insane, an imbecile, or an idiot, the will, upon proper proceedings, will be set aside. In wills as in contracts, the difficulty presents itself in persons of doubtful mental capacity.

Every man is presumed to have been of testamentary capacity until the contrary is proven. So the burden of proof rests upon the contesting party to prove that the

testator did not have testamentary capacity. The question then is, What state of mind does the law regard as sufficient to constitute testamentary capacity?

A careful consideration of the requirements of the law in this regard is made by Mr. Pritchard in his book on "Wills and Administration." He says: "It is essential to the exercise of the testamentary power that the testator should understand the nature of the acts and its effects; should understand the extent of the property of which he is disposing; should be able to comprehend and appreciate the claims to which he ought to give effect; and with a view of the latter object, that no disorder of the mind should poison his affections, pervert his sense of right, or prevent the exercise of his natural faculties; that no insane delusion should influence his mind in disposing of his property and bring about a disposal of it, which, if the mind had been sound, would not have been made. If the human instincts and affections, or the moral sense become perverted by mental disease, if insane suspicion or aversion take the place of natural affection, if reason and judgment are lost, and the mind becomes a prey to insane delusions calculated to interfere with and disturb its functions and to lead to testamentary disposition due only to baneful influences, in such a case it is obvious that the testamentary power fails and that a will made under such circumstances ought not to stand."

The same rules in reference to hallucinations, partial insanity, and temporary insanity apply to wills as to contracts and need not to be repeated here. However, there is one phase of mental peculiarity that often is presented in contests over wills that rarely is presented in contests over contracts, namely, the eccentricity of the testator.

Many men of thoroughly sound mind have entertained various eccentric ideas and fancies. These eccentricities frequently relate to the future state of man and the occult in reference to life. The general rule is that mere eccentricity of the testator is not sufficient to overturn a will, especially where the eccentricity was not manifested in the will itself.

D. Marriage.—While marriage partakes largely of a religious and social relation, yet it is also a legal relation. So much is this true that an insane person cannot bind himself by taking marriage vows.

One of the ablest judges that ever adorned the Supreme Bench of Tennessee, Judge Robert L. Caruthers, speaking for the court, in the strange case of *Jemima Coles*, said: "The test question in all such cases is, whether the party is capable of making any binding contract. The identity of the doctrine that unsoundness of mind vitiates this as well as all other contracts is well established. But every consideration of policy and humanity admonishes us that a contract so essentially connected with the peace and happiness of individuals and families, and the well-being of society, should not be annulled on this or any other ground not clearly made out. The general rule is that those who have not the regular use of their understanding sufficient to deal with discretion in the common affairs of life, or the weakness being so considerable as to amount to derangement, are incapable of contracting a valid marriage."

In the case involved, which illustrates the opinion of the court, complainant, the wife, had been married before the marriage in controversy. At the time of the marriage in question she was about forty-six years of age. For a number of years prior to the marriage she suffered with *prolapsus uteri*. During this period she was afflicted with paroxysms and in these paroxysms was subject to delusions. These delusions were ungrounded apprehension of conspiracies against her life by her own slaves. They were attempting to kill her. She was wild and foolish when in those spells, and when not under them was very eccentric. She had great weakness for beaux before this marriage, and boasted of conquests and showed her many love letters. She became permanently insane in 1850, three years after the marriage in question.

The court held that as the marriage was not consummated while under the effects of a paroxysm, and as the proof showed that at other times, though eccentric, she managed her own business with judgment and understanding, the marriage was valid. *John Bell Keeble.*

CLAREMONDE CHALYBEATE SPRING.—Washington County, Georgia.

POST-OFFICE.—Worthen.
ACCESS.—Via Georgia Central Railroad to Tennile; thence by Sandersville and Tennile Railroad three miles to Sandersville; thence by private conveyance nine miles to Worthen. Following is a qualitative analysis of the water:

Iron carbonate.	Potassium sulphate.
Potassium carbonate.	Sodium chloride.
Calcium carbonate.	Alumina (trace).

The iron carbonate is present in the proportion of about four grains per gallon. The quantity of other ingredients is small. This is a very good chalybeate water, and will no doubt be found beneficial in all diseases in which the carbonated iron waters are indicated. The spring is pleasantly located in a private park.

James K. Crook.

CLARENDON SPRINGS.—Rutland County, Vermont.
POST-OFFICE.—Clarendon Springs. Hotel and cottages.

ACCESS.—Via Delaware and Hudson Railroad to West Rutland Station; thence four miles to springs. This point is seven hours by rail from New York, five hours from Boston, three hours from Troy and Albany, and two hours from Saratoga.

The springs are four in number, and are located in a beautiful valley among the green hills at a level of one thousand feet above the sea. This is doubtless one of the oldest resorts in the country, the medicinal character of the water having been discovered by one Asa Smith, it is said, in the year 1776. From fifteen hundred to twenty-five hundred persons visit the springs annually in pursuit of health and pleasure. Amid the beautiful scenery, pleasant drives, and rare opportunities for trout fishing, the visitor may while away the summer days in a delightful manner. The hotels are said to be of an excellent character. The following analysis was made by Professor Hayes, State Assayer of Massachusetts:

ONE UNITED STATES GALLON CONTAINS:	
Solids.	Grains.
Calcium carbonate.....	3.02
Calcium chloride.....	
Sodium sulphate.....	2.74
Magnesium sulphate.....	
Total.....	5.76
Gases.	Cu. in.
Carbonic acid.....	46.16
Nitrogen.....	9.36

The analysis is evidently incomplete, and a re-examination is desirable. The water is a very pure and wholesome beverage, independently of its medicinal qualities. It is used commercially. *James K. Crook.*

CLARK'S RED CROSS MINERAL WELL.—Mecosta County, Michigan.

POST-OFFICE.—Big Rapids.
This water was discovered on the farm of A. L. Clark, adjoining the southern limits of the town of Big Rapids, in June, 1890. The workmen were boring for gas, but at the depth of thirteen hundred feet they struck a vein of water which escaped under such a heavy pressure that the drill, weighing nearly twenty-five hundred pounds, was borne up with it. The water was submitted to Prof. Albert B. Prescott, of the University of Michigan, who found the following list of mineral ingredients:

ONE UNITED STATES GALLON CONTAINS:	
Solids.	Grains.
Sodium chloride	13,048.59
Magnesium chloride	1,390.78
Calcium chloride	3,261.18
Sodium bromide	86.95
Calcium sulphate	33.24
Iron carbonate	4.46
Silicic acid	.47
Aluminum	Traces.
Potassium	Traces.
Total	17,825.27

Specific gravity at 62° F. (16.6° C.), 1.205.
Weight of one United States gallon of the water, 70,273.19 grains.
Reaction, neutral before and after boiling. Filters clear and colorless.

The analysis shows this to be one of the most heavily mineralized waters known. A bath-house for the local use of the water has been erected on Maple Street, opposite the Northern Hotel, and the water is also used commercially. For internal use it is recommended in very small doses, from one-half to two teaspoonfuls four times a day, diluted with plain water. It is said to act as an emetic or as a purge if taken too strong.

The water is recommended for numerous internal disorders, and also for its local effects in ulcers, cuts, burns, or bruises; as a lotion in conjunctivitis, as a gargle in pharyngitis, as an injection in leucorrhoea, gonorrhoea, etc. The hot baths are stated to be of decided value in old cases of obstinate rheumatism. The water is odorless, and it is said that it never freezes at any temperature known in Michigan. *James K. Crook.*

CLARK'S RIVERSIDE MINERAL SPRINGS.—Wayne County, Michigan.
Post-Office.—Detroit.

This resort is located on Fort West Street, corner of Clark Avenue, about two miles from the centre of the city of Detroit. It is reached by electric cars, which pass the door of the bath-house every five minutes. This bathing establishment, which was recently opened to the public, is one of the most elegant and luxurious to be found in the country. The springs are two in number, and furnish an abundant flow of water. An analysis by Samuel P. Duffield, M.D., Ph.D., made in November, 1889, resulted as follows:

ONE UNITED STATES GALLON CONTAINS:	
Solids.	Grains.
Sodium chloride	3,408.50
Potassium chloride	.18
Calcium chloride	860.00
Calcium sulphate	1,790.98
Magnesium sulphate	1,032.02
Magnesium carbonate	11.22
Calcium carbonate	149.16
Silica	3.50
Alumina	13.41
Total	7,318.97

Sulphureted hydrogen gas, 40.76 cubic inches.
Temperature of water, 56° F.

The bath-house is kept open all the year. The waters have been found very useful in the diseases to which the saline-calcic class is applicable. *James K. Crook.*

CLASTOTHRIX. See *Atrophia Pylorum Propria.*

CLAVICLE. See *Shoulder.*

CLAVICLE, SURGERY OF THE.—The clavicle may be congenitally absent or partially defective. It may be deformed in rickets and osteomalacia, or as a consequence of badly united fracture. Fracture of this bone may occur *in utero*.

Diseases of the clavicle are rare. The principal ones noted are syphilis (gumma), tuberculosis, and osteomyelitis; with resulting periostitis, osteitis, abscess, caries, or necrosis.

Neoplasms of the clavicle are seldom met with. The variety of new growth most often seen is some variety

of sarcoma. Carcinoma is much more rare and its occurrence as a primary growth appears somewhat doubtful. Osteomata (exostoses) and enchondromata are seldom reported.

Traumatism may cause contusions, wounds, fractures, or dislocations. Wounds and contusions require no special mention. (See special articles on *Fractures* and *Dislocations*.)

The diseases and neoplasms of the clavicle present no clinical features peculiar to this bone. In syphilis, treatment with mercury and iodide of potassium should be thorough, and if portions of bone die they should be removed. Tuberculosis is apt to begin here in the periosteum, and the sharp spoon should be employed to remove the foci as thoroughly as possible, especially if suppuration threatens or actually takes place. When suppurative osteomyelitis is recognized, an incision should be made over the affected area, and after raising the periosteum the affected portion of bone should be chiselled or scooped away and the resulting cavity drained. Abscess, as elsewhere, requires incision and drainage and the removal of any dead bone.

Compound fractures, particularly if caused by pistol or rifle balls, require a thorough examination and disinfection under an anesthetic. One may decide also to keep the fragments in apposition by sutures, or to excise the whole or a part of the clavicle. The question of suturing simple fractures of the clavicle is still unsettled. When there is marked deformity, and particularly when sharp fragments appear likely to cause damage to important vessels or nerves in their neighborhood, the operation has some warm advocates.

The principal operative procedures on the clavicle are suturing, or wiring for fracture or dislocation; curetting, for tuberculous or syphilitic foci; incision, chiselling, etc., for osteomyelitis or removal of necrotic fragments; excision of the clavicle, partial or total; and temporary resection. The formation of a *clavicular pseudarthrosis*, for the relief of ankylosis of the scapulo-humeral articulation, has been suggested by Tillaux.

Excision of the clavicle, whether partial or total, may be done beneath the periosteum or outside it. Nearly half the cases of total extirpation of the clavicle collected by Norkus were for "necrosis" or "caries." When operating for these diseases, for fractures, or for benign new growths, the subperiosteal method should be employed. Where it has been made use of, restoration of the bone has taken place to a considerable extent or has been complete in the majority of cases, and the functional result was excellent or perfect, while in some there was no apparent deformity. An incision is made from one end of the clavicle to the other, extending through the periosteum, which is then detached from the bone with an elevator. The clavicle is then disarticulated at either extremity first, as may be most convenient; or it is divided at some intermediate portion and the two extremities are separately released from their attachments and removed. Care is to be exercised not to injure the large vessels adjacent to the sterno-clavicular articulation. It may be necessary to prolong the incision beyond either joint, or to make smaller transverse incisions at either extremity of the wound in order to gain better access to the articulations. When the disease process has separated the bone from the periosteum, it may be possible to extract it through a fistulous tract, or through a small incision dividing the skin and periosteum at a suitable point. Partial excision of the clavicle, removing more or less of the outer or inner extremity or a portion of the middle of the clavicle, may be performed for partial affections of the clavicle in non-malignant diseases. For sarcoma and other malignant new growths, neither the partial nor the subperiosteal method should be resorted to. In the thirty-two cases of extirpation of the clavicle for tumors (sarcomata in twenty-four instances) collected by Norkus, six deaths from the operation resulted. The incision is the same as in the subperiosteal operation. The cutting must always be done toward the periosteum, the attachments of the muscles should be

carefully severed from it, and the bone should be removed either in fragments after cutting or sawing through it, or as a whole, including the new growth. The wound is to be closed by suture after the divided sterno-cleido-mastoid and trapezius above have been carefully united by deep sutures to the pectoralis major and deltoid muscles below.

Madelung advocates temporary resection of the clavicle to give access to the subclavicular region. He recommends the division of the clavicle in its inner third, together with the subclavian and both pectoral muscles, in order to separate widely the divided ends of the clavicle. This gives free access to the subclavicular space and even to the axilla. The clavicle is divided obliquely from above and within downward and outward, in order that the subsequent adaptation of the parts, when the wound is closed, may be more perfectly secured. The pull of the sterno-cleido-mastoid muscle and the weight of the arm are better opposed by the adoption of this plan than if we resort to the straight backward division of the clavicle.

The operation is proposed for the purposes of gaining access to the subclavicular nerves and blood-vessels, of extirpating subclavicular and axillary neoplasms, of attacking diseases of the upper ribs, and of reaching the apices of the pleurae or lungs.

William G. Le Boutillier.

REFERENCES.
Norkus: Beiträge zur klin. Chir., xl, 725.
Madelung: Beiträge zur klin. Chir., xiv., 220.

CLAVUS. See *Callositas.*

CLEAR CREEK SPRINGS.—Bell County, Kentucky.
Post-Office.—Pineville. Small hotel.

Access.—Via Cumberland River and Tennessee Railroad, which connects with the Louisville and Nashville Railroad at Pineville, a distance of three miles from the springs.

The location of the springs is in the Clear Creek valley, almost entirely surrounded by mountains. The elevation is about thirteen hundred feet above the sea level. This region possesses many advantages in the way of charming scenery, exhilarating mountain air, etc. The springs in use are two in number, possessing about the same general characteristics. The following analysis was made by Robert Peter, State Geologist of Kentucky, in 1883:

ONE UNITED STATES GALLON CONTAINS:	
Solids.	Grains.
Calcium carbonate	2.07
Magnesium carbonate	Traces.
Calcium sulphate	.33
Magnesium sulphate	1.43
Calcium chloride	.16
Sodium carbonate	1.84
Silica	.51
Alumina	Traces.
Total	6.34

The water is said to be remarkably pure and well adapted to the uses of the table. We are informed that it has long enjoyed a considerable reputation in dyspepsia, liver and kidney affections, skin diseases and disorders of the female pelvic organs. *James K. Crook.*

CLEAVERS. See *Rubiacea.*

CLEFT PALATE.—By cleft of the hard and soft palates we mean a fissure of greater or lesser degree existing in the roof of the mouth, including, it may be, the alveolar ridge in front, and extending back to the extreme end of the uvula. These clefts are of two kinds, congenital and acquired, the former being by far the more frequent.

PATHOLOGY.—As to the congenital form, nature does not complete her work as originally intended, and while we can consistently indorse the views of those who think the defect to be entirely due to the want of a meat diet and

of sufficient phosphates of lime on the part of the mother, still there are many other factors to be considered.

H. E. Dennett, D.D.S., of Boston, has stated that "all flesh-eating animals take as much of the bone with the flesh they eat as they can break with their teeth sufficiently fine to swallow, and all have good dental organs."

Several years ago the lions in the Zoological Gardens of London were fed upon flesh containing too large bones for them to break and swallow. The young born while this method of feeding was pursued, it was observed, had cleft palates and lived but a short time. The lions were then fed upon small animals, whose bones they could break easily, and the young born afterward had perfectly formed palates.

It is safe to assert that the same causes which produce rickets in children have also a like effect in producing cleft of the hard palate. Hereditary tendency has been mentioned by some authors, and this I have observed in the history of some of my own cases.

Mr. Lawson Tait, F.R.C.S., in his paper on "Cleft Palate," has very briefly, in somewhat different words, referred to this pathological condition, and is very strong in his belief that in certain localities it is quite endemic, and that, in his experience, heredity had been a great factor. He says he has known cleft to miss as many as three generations, and then appear in an hereditary form.

The late Dr. Gurdon Buck has reported a number of interesting cases of hereditary cleft occurring in his practice, upon which he operated with success.

I lay much stress upon asking the parents questions bearing upon these points.

Intermarrying is an element to be considered in the study of the pathology of these cases (see Ferguson's "Surgery").

In a majority of cases in which the fissure is single, it is to be found on the left side, and the deviation of the two segments of the alveolar circle is fortunately, in these cases of single split, seldom great. My experience has been that in double fissure through the alveolar ridge, the vomer often has its only support below in the intermaxillary projection, that is, the intermaxillary bone or bones appear as an appendage to the vomer, being held or assisted in position by fibrous, cartilaginous, and mucous tissues. This island of intermaxillary bones and tissues, which is so very noticeable in double harelip, especially when associated with double split or fissure of the alveolar circle, has been a source of deep study to histologists as well as to pathologists. The former have spoken of it as analogous to the premaxillary bones in some of the lower animals, and yet it has been very difficult to detect, in the youngest fetal human upper jaw, the differ-

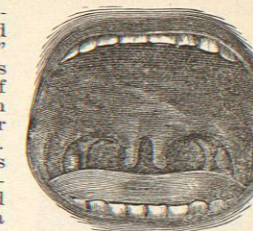


FIG. 1361.

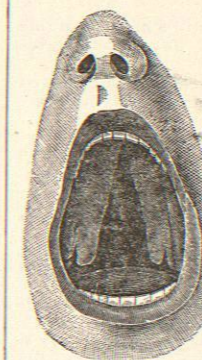


FIG. 1362.

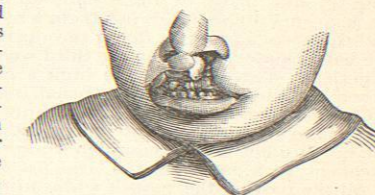


FIG. 1363.