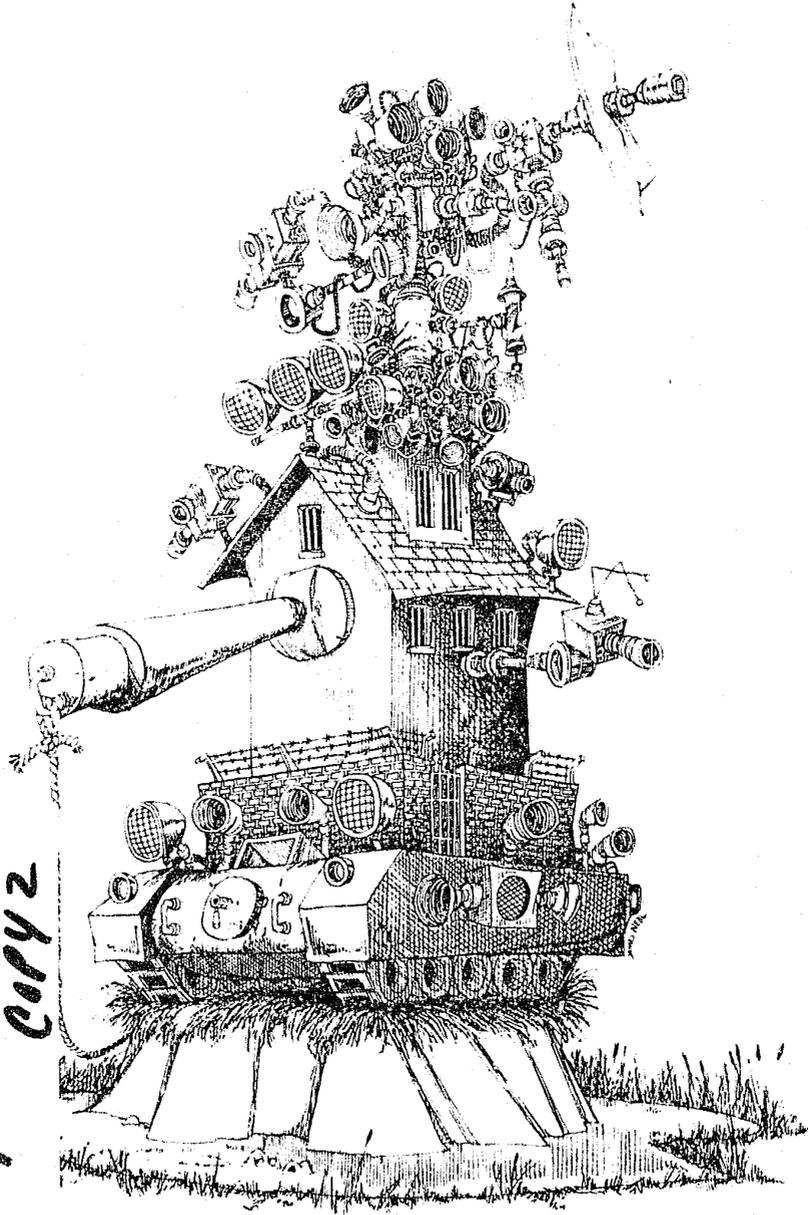


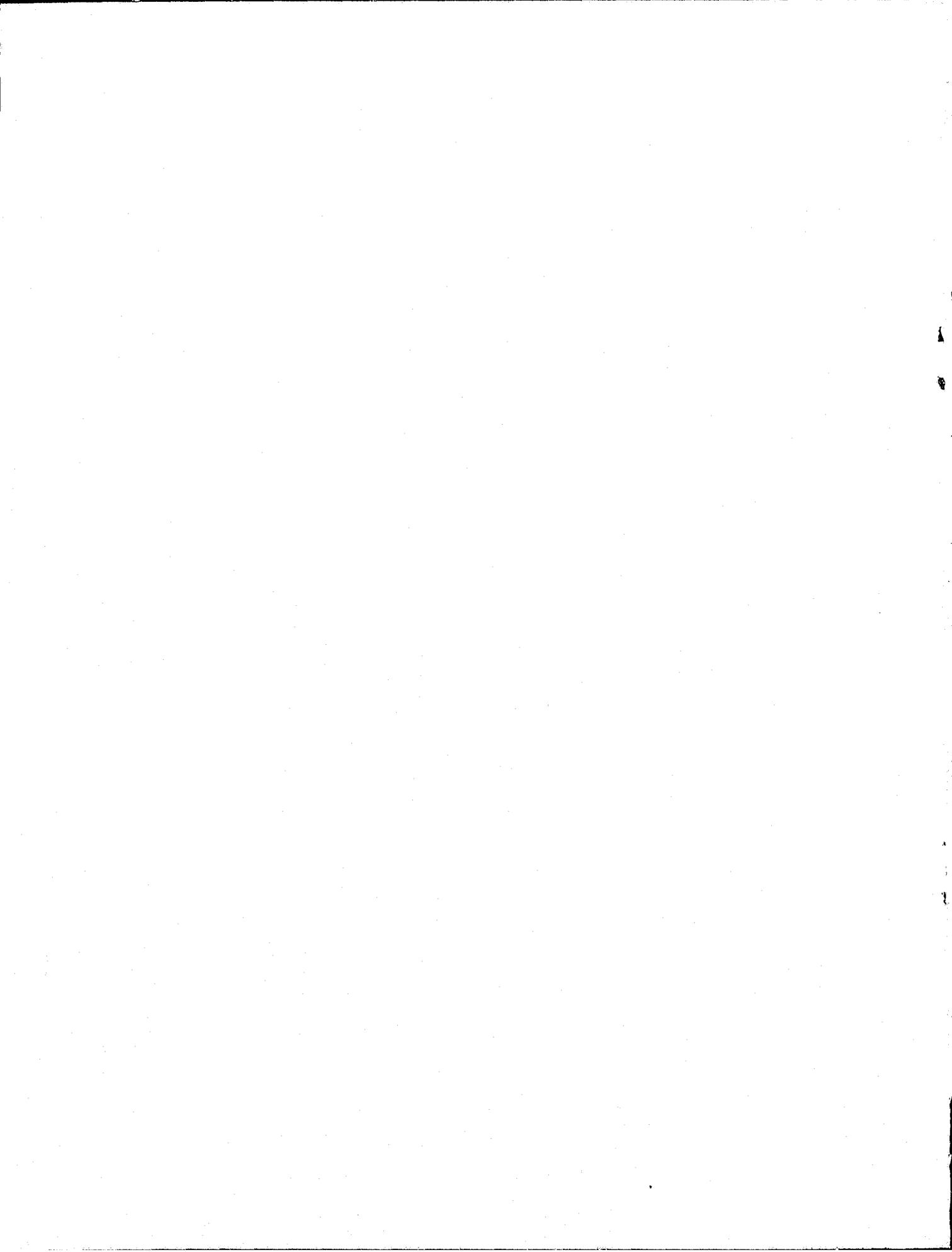
Home Security

Book One: Basic Techniques of Home Guardianship



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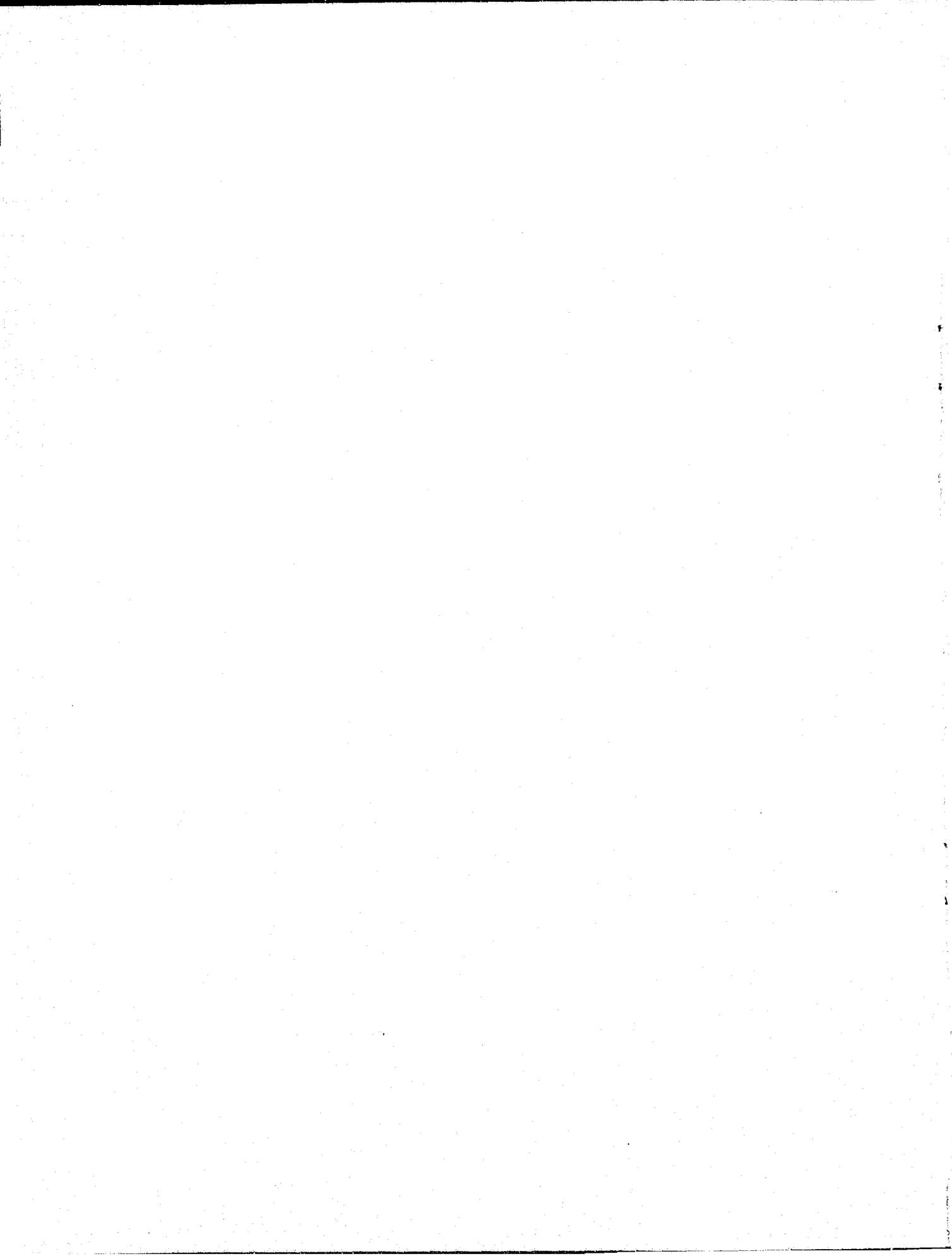
 National Institute of Law Enforcement and Criminal Justice
Law Enforcement Assistance Administration
United States Department of Justice



HOME SECURITY
BOOK ONE: Basic Techniques of Home Guardianship

James Michael Edgar

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PART ONE: THE PROBLEM

What are your risks of being burglarized?

Substantial.

Over three million burglaries were reported last year, one for every 66 persons in the United States. One household in every 25 was victimized according to official police reports. Other sources indicate that at least as many burglaries were never reported to the police. This means that about one household in every twelve was actually burglarized last year. Statistically, therefore, your chances of being the victim of a burglary are one in twelve in any one year. This risk increases to one in six for any two-year period, and to one in four for any three years. Not very good odds. Burglary has, in fact, grown to the point that it is no longer a question of whether you will become a victim, but only a matter of when.

Burglary is usually not considered a violent crime. Officially it is a simple property offense — a crime of stealth and opportunity, not of passion — committed primarily by persons under 25. This is burglary in its pure form: a quiet entry, the selective theft of a few valuables, and a silent retreat. You call the police and your insurance company. You may feel a little uneasy that someone — some stranger — so easily invaded the sanctuary of your home. But the loss was slight, and most of it was covered by your insurance, so you're lucky.

If you're not that lucky, however, you might be presented with a different picture. Broken, torn and

overturned furniture, smashed lamps, slashed upholstery. Food and kitchenware swept from their open cabinets, and thrown on the kitchen floor. Clothes from bedroom closets and drawers dumped in the middle of the floor. The bureau on its side, window shades and curtains pulled down. How much will repairs and replacements cost? Who's going to clean up the mess? What kind of madman would do these things? The answer: one kind of burglar.

Or, if your luck is worse, you may come home to find the fire trucks just leaving. Some burglars set houses on fire — maybe in frustration, maybe to conceal the evidence of their crime, or maybe because they like the flicker of flames. Is your insurance paid up? Is it enough to replace everything you own?

Or, if this is truly your unlucky day, when the burglar breaks in, you or your family may be home. When confronted by someone in what appeared to be an empty home, burglars sometimes do strange and violent things.

No one knows exactly how many burglaries end in assault, rape, mayhem or murder — but we do know that if you are in your home when a burglar enters there is a good chance you will be harmed.

Residential burglary is crime's lowest common denominator. It is an offense committed largely by the dregs of the criminal world — the unskilled, the inept, the addicted, the amateur, the stupid, the sick, and sometimes, the outright crazy. Criminals who can't make it in crime's more lucrative enterprises resort to residential burglary where the pickings are relatively slim for

the amount of work and risk required. Professional burglars usually specialize in commercial burglary where the take may be worth millions. A residential burglar who gets a \$200 stereo is doing well, but he may be able to get only one-tenth its retail value from his local fence, or \$20 for a day's work. He has to commit a lot of burglaries to make even a poverty income — which is one reason why there are so many burglaries.

But there are other, more important reasons. There have been endless debates concerning the cause of the unprecedented rise in crime in the last 25 years. It has been attributed to increasing moral laxity, the decline of religion, the breakup of the family and just about every other manner of social ill. While all of these may have some influence, there are three trends which seem to be more basic reasons for the rise in the crime of burglary.

First has been the rapid increase in the proportion of the population under 25. Since about 85 percent of all burglars are between 14 and 25, it makes sense that as the proportion of the population in this age group increases, so will the number of available burglars.

Secondly, the number of things worth stealing in the average home has multiplied dramatically since the 1940's. Prior to the post-war boom, few families had much worth taking. There may have been an Emerson upright radio in the living room and a few fortunate homes may have had an electric Mix-master. But unless the family was truly well-to-do with furs, jewelry and money in the home, it was usually not worth the trouble of

breaking in.

Times have changed. Few households today are without a color television, a stereo, a tennis racket or two, golf clubs, and a great many other valuable, portable items. Highly marketable property which cannot be traced is what the burglar wants, and what most modern American homes have in abundance.

There are more things worth stealing, and more people in the right age group to steal them.

The final factor is that homes are easier to break into than they used to be. Since 1945 there have been major changes in builder's hardware (locks, hinges) and in construction methods. Most doors and primary door locks used on new houses are highly vulnerable to penetration by even the most unskilled burglar. The lock-in-knob lockset, the primary lock used on 90 percent of all new homes, has by itself made these homes vulnerable to any criminal with a screwdriver and a wrench.

Combining these three trends we end up with more burglars, more things worth stealing, more opportunity to break in and steal them, and therefore, a phenomenal rise in the number of burglaries. As a private citizen there's not much you can do to reduce the number of burglars. That's the job of the police and courts. But there is plenty you can do to protect yourself and your home from the burglar — in fact, only you can do so.

In Part Two of this book, we are going to show you some basic techniques of home guardsmanship — how to defend yourself from the burglar without a lot of effort or expense. Book Two of this series,

entitled The Burglary Game, continues these lessons by showing you how to play the part of a burglar in assessing the attractiveness of your home to burglary. In Book Three (Choosing a Good Lock), we concentrate on locks. Good locks are a basic and important part of your defense.

PART TWO: THE SOLUTION

The solution to your burglary problem is in two parts:

- o Keep the burglar out,
- o Make your valuable property unattractive to him.

The ideal solution is to keep the burglar out. The average residential burglar does not use sophisticated techniques to get into your home. Lockpicking, carefully removing your window glass, drilling through your lock — these are not techniques for unskilled amateurs. The tools of the residential burglar (if he uses any at all) are a prybar, screwdriver, plastic or metal shim, and a wrench. Well over 90 percent of all homes can be quickly and quietly entered with these tools alone. The burglar knows this; so should you.

The burglar who tries to break into your home is not likely to be persistent. He's nervous. He knows that the longer he hangs around outside your home, the greater his chances of being caught. He wants to get inside and out of sight quickly. Usually he will try a few doors and windows.

If they're secure, he may try a few simple techniques to open them. If these don't work, he'll most likely move on. He knows there are easier pickings somewhere else. There is always someone who left his door open, or his windows unlocked.

Your job is to see to it that these attempts fail; to make sure that there are no unprotected doors and windows that can easily be entered, and that the burglar is not given enough time or the necessary concealment to work on your doors and windows for any length of time undetected.

GUARD YOUR DOORS

Despite widespread awareness of the dangers of burglary, entry in about 18 percent of all burglaries is made through an unlocked door or window. Why invite a burglar in? Don't leave your home open to intruders. Lock it up. Always. If you're in the backyard doing a little gardening, don't presume that your presence will deter a burglar from entering your front door and carting away your color TV. He might. And, of course, whenever you leave home for any extended period — to go to work, the store, the movies — your home should be completely secured.

Safeguard your keys. Next to an unlocked door, the easiest way for a burglar to get into your home is by using your keys. Don't leave your house key on your key ring when you park your car in a commercial lot or leave it for service. Nothing prevents an attendant from duplicating your house or apartment key, noting your address, and paying you an unexpected visit later. Don't put your

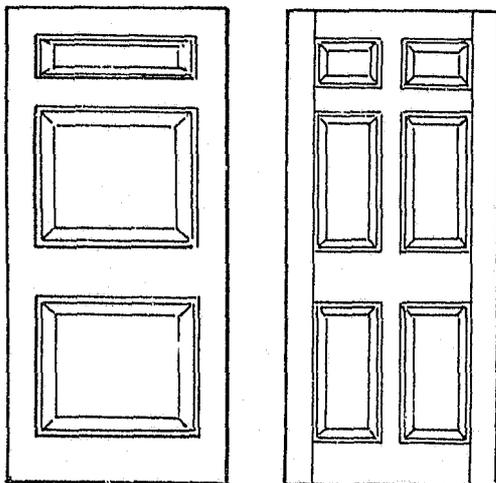
name and address on your key ring. If you lose your keys some good-hearted soul may find them and bring them back to you. But it's also possible that whoever finds them will not have such kind intentions. The proper protection against lost keys is to keep a duplicate set in a safe place, not putting your name and address on them.

Inspecting Your Doors and Door Frames

If you already habitually lock your home and guard your keys, the next step is to examine your doors for vulnerability to common burglary techniques.

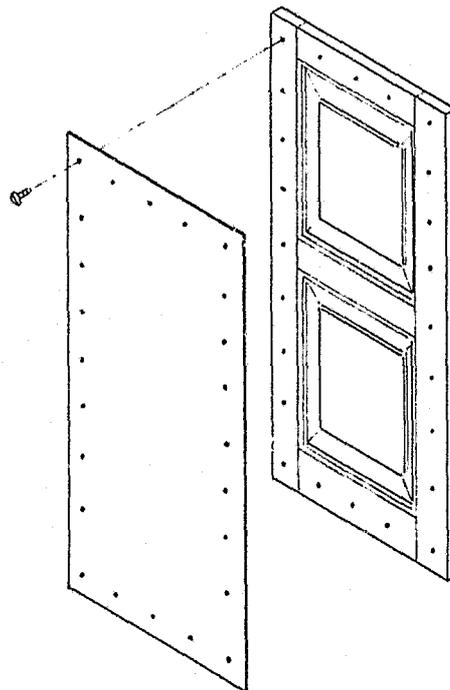
The Door

All exterior doors should be solid and substantial. The doors to watch out for are hollow wood doors (Hollow steel doors are good protection—consider yourself lucky to have them.), and rail and stile doors (panel) doors. It's easy to hammer or kick a hole in a hollow wood



WOOD PANEL OR RAIL-AND-STILE DOORS: These can be a security risk. The panels are often simple to kick out, especially on doors with large panels. Small panels are more difficult to remove by force, and provide better protection. In general, however, a panel door is not as good as a solid-core wood door for security purposes.

door or knock a panel out of a rail and stile door. If the panel is large enough it may permit the burglar to squeeze through. Replace hollow wood and large-panel rail and stile doors with solid wood, hollow steel or a substantial composition



ONE METHOD OF PROTECTING INSECURE DOORS

An .016 inch thick sheet of steel mounted to the inside of an insecure door with screws spaced no more than six inches apart around the door provides good protection against forced entry.

door. If this is not possible, reinforce the existing door by mounting a piece of sheet metal at least .016 inches thick and slightly smaller than the size of the door to the inside face of the door with screws spaced no more than six inches apart all around the edge of the sheet. Once this is painted to match the woodwork, it won't be noticeable. A burglar might kick a hole in your hollow wood door, but he's in for a painful surprise when he tries to kick in that sheet of steel.

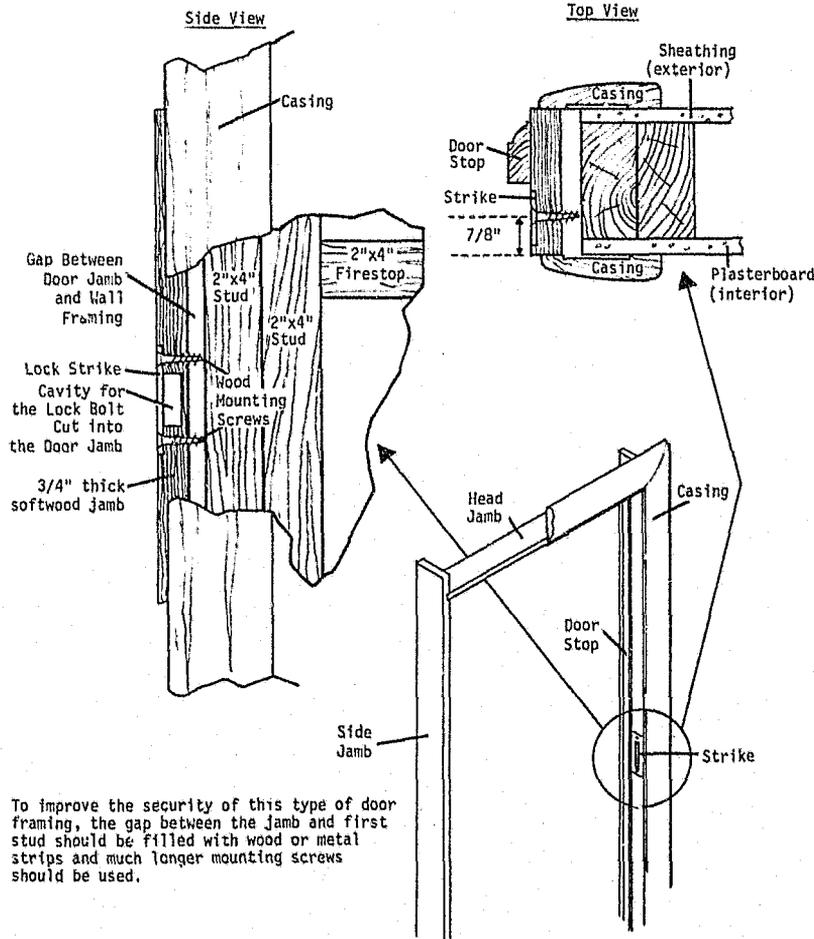
The Frame

Check the frame. Most wood door frames can best be described as flimsy. They are made of 3/4 inch (maximum) softwood and tend to split and break when force (a good kick, for example) is applied to the door. The door frame is installed in a rough opening in the wall which has been made deliberately oversize to make it easier to install the frame without a lot of cutting and trimming. Once the frame is erected, it is shimmed into place with small pieces of wood, leaving a gap between the frame and supporting wall. Door molding (called "casing") is then nailed in place with small finishing nails to cover

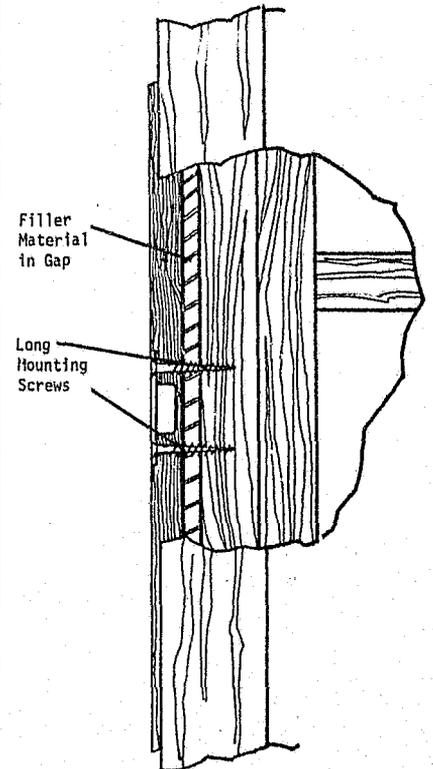
this gap. This common type of construction is not at all sturdy. The thin softwood and gap combine to cause a severe security problem.

The frame, which is thin and limber, can often be spread with a prying tool far enough to release the lock bolt. The remedy is to remove the casing surrounding the door and insert wood or metal filler pieces between the door frame and studs on both sides of the door. They should extend at least 24 inches above and below the lock. Replace the casing and you have just substantially reduced the vulnerability of your home to this common burglary technique.

TYPICAL WOOD DOOR-FRAME CONSTRUCTION



MINIMUM NECESSARY SECURITY PRECAUTIONS FOR STANDARD WOOD DOOR FRAMES



But there is a second problem. Besides bending, softwood frames also break — and very easily. Some lock strikes are designed to partly compensate for this problem, but most common types are not. The accompanying illustration shows a common strike mounted with ordinary short wood screws which penetrate just into the gap between the door frame and studs. This is probably what's in your door now. Even when the gap is filled, these short screws have little additional holding power. They should be replaced with longer screws (about 2 3/4 inches long) which will penetrate the frame, the filler, and at least the first stud of the supporting wall, holding all of these components together as one unit. This provides much greater protection against attempts to split the door

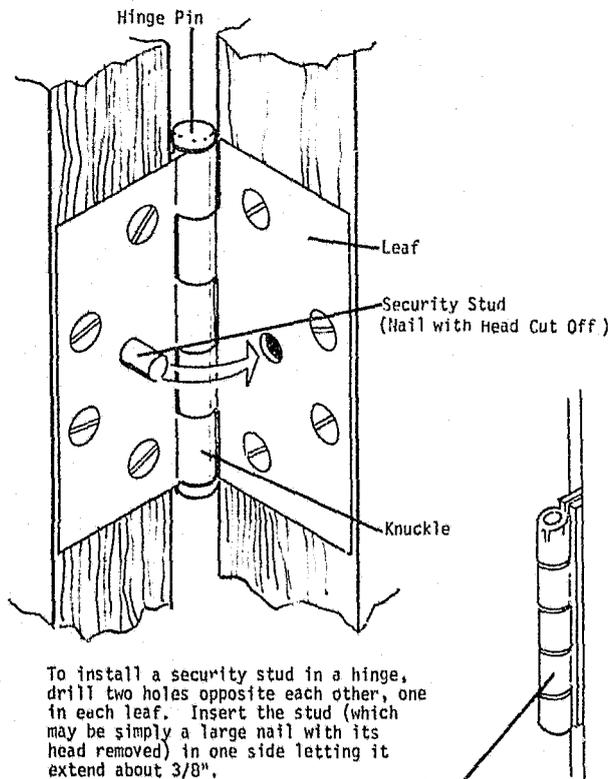
frame. Better security yet, however, would be provided by one of the many high-security strikes on the market. Your locksmith can help you choose one compatible with your locks. You might also carefully read the section on lock strikes in Book Three of this series.

The Hinges

Next, examine your hinges. If your doors are inward-opening (as most residential doors are), then your hinges are on the inside. But if you have outward-opening doors, the hinges are on the outside. All a burglar has to do is remove the hinge pins to take your door completely out of its frame. This problem can be easily remedied by replacing these hinges with "fixed-pin" or "fast-pin" hinges. These are designed by the manufacturer so that there are no hinge pins at all, or the pin cannot be removed. If replacement would be too costly, you can modify your existing hinges by drilling two holes opposite each other on each leaf of the hinge, inserting a "stud" (which may be a large nail with the head cut off) in one hole so that about 3/8 inches of the stud is exposed. When the door is closed, the studs engaged in holes drilled in the opposite leaf will keep the door from being removed even if the hinge pins are gone.

PROTECTING HINGES FROM BURGLAR ATTACKS

Leaf Hinge with Security Stud



To install a security stud in a hinge, drill two holes opposite each other, one in each leaf. Insert the stud (which may be simply a large nail with its head removed) in one side letting it extend about 3/8".

Commercial Hinge Without a Hinge Pin

Aluminum and Glass Sliding Doors Are a Special Security Problem

Aluminum and glass sliding "patio" doors are a notorious security nightmare. The "locks" on most of them are simple spring-loaded latches which can be lifted with a thin metal shim or quickly forced with a prybar. Even worse, most patio doors can be lifted entirely

out of their frames from the outside. (Try it if you don't believe it.) A few simple steps can dramatically alter this picture, however. Sheet metal screws installed in the upper channel of the frame can prevent the door from being lifted out in the closed position. A large number of special locking devices are made for sliding glass doors which prevent them from being jimmed, lifted, or shimmed. These supplemental locks are inexpensive and effective

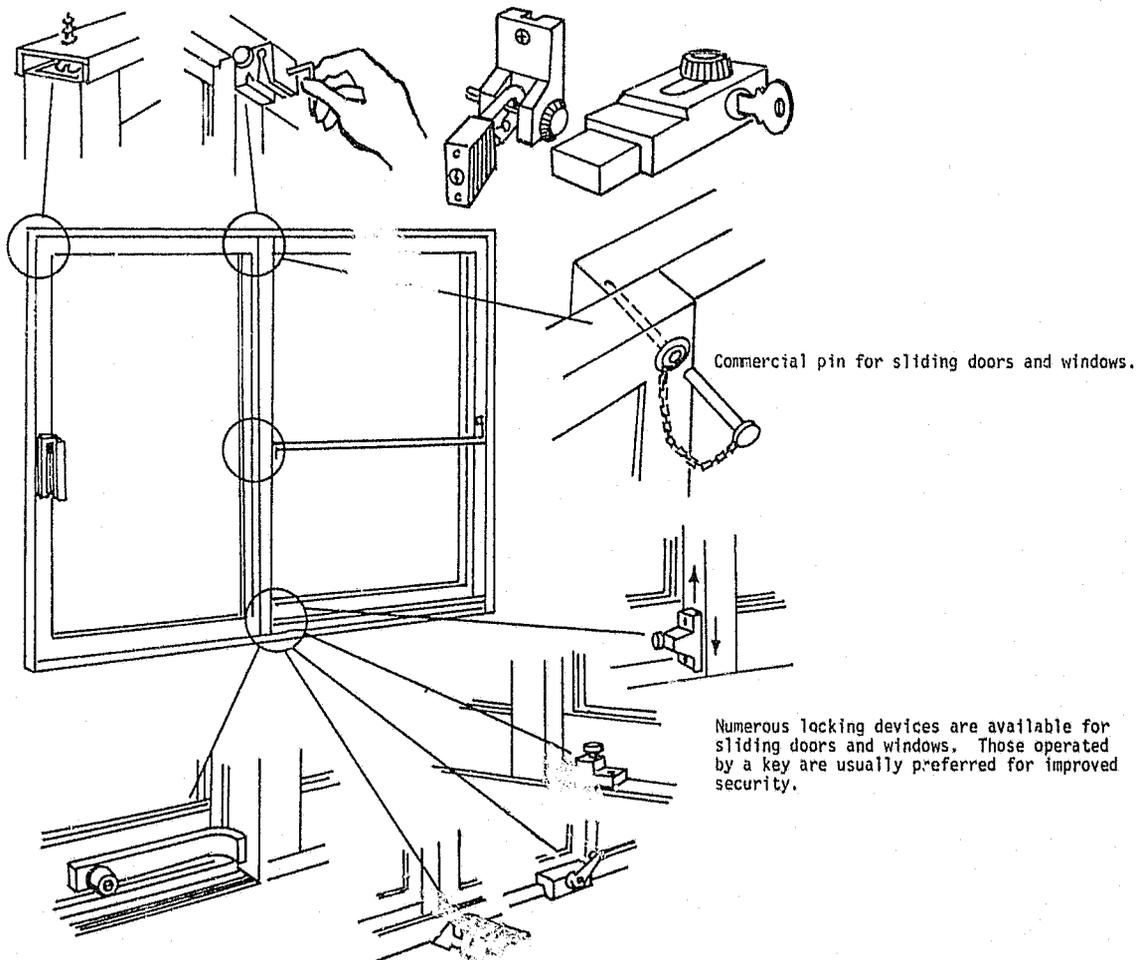
— a good investment even for apartment dwellers since they can be left behind when you move if necessary.

LOCKS FOR STANDARD SWINGING DOOR ASSEMBLIES

Take a look at your other door locks. Most exterior doors in new American homes are equipped by the builder with lock-in-knob lock-sets (which are also known as key-

METHODS OF SECURING HORIZONTAL-SLIDING DOORS AND WINDOWS

Screws in the upper track prevent lifting the door out of the track. "Charley Bar" may be purchased or made from a piece of wood and placed in the bottom of the door track.

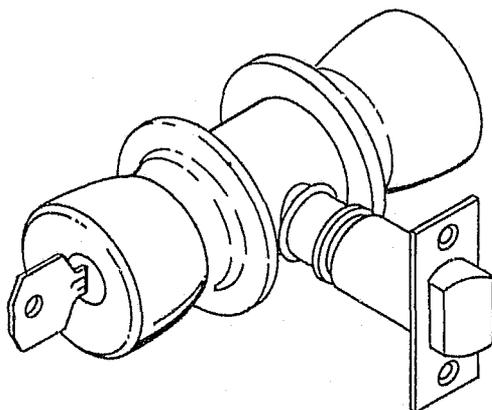


in-knob or cylindrical locksets, depending on the manufacturer). This is unfortunate because they provide virtually no protection against burglary. There are a number of ways to defeat the lock using a screwdriver, wrench or hammer. The lock's cylinder is contained in the knob where it is exposed to a variety of forceful attacks. Once it is removed it is a simple matter to retract the the latchbolt holding the door in place.

Ideally, lock-in-knob locksets should be replaced. Some lock manufacturers have recently introduced new types of deadbolt locks designed to substitute for the traditional lock-in-knob lockset. They usually fit into the same hole in the door, and are easily installed with common hand tools by any home handyman or -woman.

Auxiliary Deadlocks

The other option is to install a good auxiliary long-throw or interlocking deadbolt lock on the door in addition to your lockset. Unlike the latchbolt in a lock-in-knob lockset, the deadbolt is square-faced and

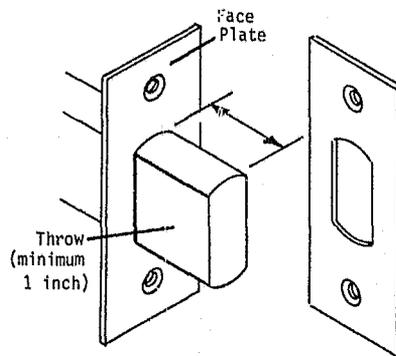
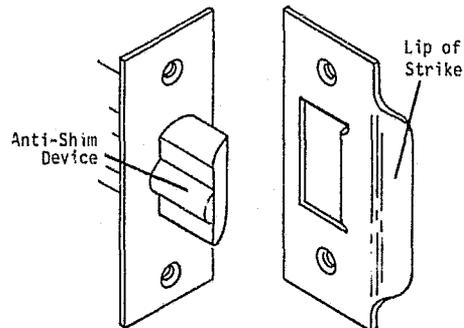


LOCK-IN-KNOB LOCKSET: Should never be relied on by itself for protection against burglars. It provides virtually no protection. Replace it with a deadlock designed for that purpose, or supplement with a good auxiliary deadlock properly mounted on the door.

not spring-loaded. It cannot be easily pried or shimmed. The long-throw deadbolt (the bolt must extend at least one full inch from the edge of the door) is excellent protection against frame-spreading. Better protection still is provided by an interlocking deadbolt which, as its name implies, interlocks the door and frame so that the frame cannot be spread away from the door by a prybar. The most commonly used interlocking deadbolt lock is the vertical-throw deadlock illustrated here.

TYPES OF LOCK BOLTS

Latchbolt With Anti-Shim Device and Strike:
This type of bolt is never adequate protection and should not be used except with an auxiliary deadlock.



Horizontal Long-Throw Deadbolt and Strike:
Throw is measured from the face plate to the end of the bolt with the bolt in the fully extended position.

Installing Auxiliary Deadlocks

Most supplemental deadlocks can be easily installed by most home dwellers with common hand tools.

Some locks are designed to be fastened to the door with wood or sheet metal screws. Others are mounted by bolting the portion of the lock body on the inside of the door to the portion on the outside of the door to the portion on the outside with machine screws (more commonly called bolts by everyone but engineers). This through-the-door, metal-to-metal mounting is much more secure. Generally, you should try to avoid locks that mount to the door with sheet metal or wood screws. These fasteners are designed to hold the lock to the fabric of the door itself. The security of the installation de-

pends, then, on the strength of the door fabric—which is usually thin steel, plastic, or wood and is not up to the job. An auxiliary deadlock mounted to the fabric of the door in this manner can be knocked off from the outside with a hammer and punch. This type of attack seems to be on the increase precisely because so many auxiliary deadlocks are being installed with screws.

THE GARAGE DOOR

Finally, don't forget the garage door. Not only are valuable and stealable goods (like tools) likely to be in the garage, but the garage often provides a way into the house. Lock the garage door at all times with a good, case-hardened padlock if no built-in lock is provided.

LOCKS SHOULD BE MOUNTED WITH INTERLOCK MACHINE SCREWS (BOLTS), NOT WITH WOOD OR SHEET METAL SCREWS

Wood and sheet metal screws should not be used to mount locks to doors. They do not have adequate holding power to resist forceful attacks. Machine screws (commonly called "bolts") which fasten one half of the lock on the interior to the other half on the exterior of the door are much more secure.

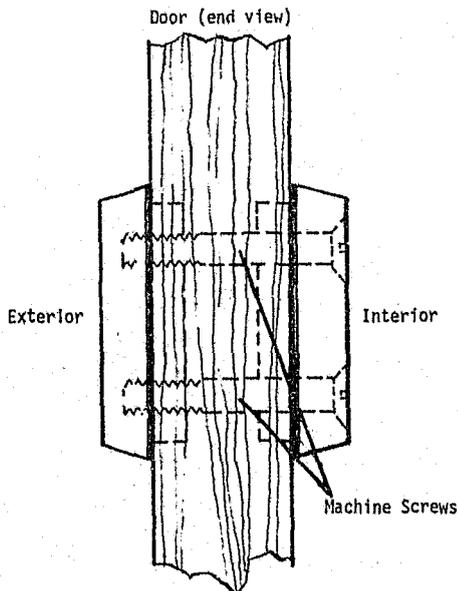


Sheet Metal Screw



Wood Screw

Proper Mounting (Simplified Illustration)



SUMMARY

In summary, then, to provide reasonable protection for your home you should get rid of your lock-in-knob locksets or, at least supplement them with bolt-mounted long-throw or vertical-throw deadlocks. Its usually better to replace rather than supplement so you won't be tempted to rely solely on the lock-in-knob lockset when you're "just dashing down to the store for a minute." Most replacement primary deadlocks force you to use the more secure deadbolt simply because they do not contain a latchbolt. If you do supplement rather than replace, always use the deadbolt.

Ensure that your sliding glass doors are protected (and your sliding windows, too, for that matter). And check that garage door.

More information about locks, their

uses and their construction is present in Book Three of this series, Choosing a Good Lock. Before you make any decisions about locks, we urge you to read it.

PROTECT YOUR WINDOWS

If a burglar can't get in through your doors, his second choice will be your windows. Windows, by nature contain a basic security flaw, glass. Glass can be easily broken. But our knowledge of the habits of burglars reveals that the risk inherent in glass is somewhat less than one might think. Burglars are reluctant to break glass. It's noisy. There are very few ways of breaking a window pane quietly — especially a large pane. And the noise that breaking glass makes is naturally alarming. It almost always signals trouble and seems to impel anyone hearing it to rush to investigate. Burglars do not like unexpected company.

Generally, if a burglar does decide to risk breaking glass, it's to reach in and unlock the window (or nearby door). Burglars are most reluctant to crawl over the sharp edges of broken glass for obvious reasons. So if you can keep a burglar from unlocking your windows, even if he breaks the glass, he will probably give up and go away.

But, if your windows are not secure, the burglar also knows several ways of opening them without breaking glass. Naturally, these are his preferred methods — and the ones you should defend against. One way is to pry the window open with a stout pry bar. Standard crescent sash latches used on most double-hung (vertical-sliding) windows will not resist much force even when brand new, and after

the wood at the top of the lower sash has rotted a little from constant exposure to moisture and sun, forcing the latch becomes quick and simple. On steel and aluminum windows crescent sash latches are a little harder to force, but not much.

Another favorite burglar's trick is to slip a thin blade or piece of wire between the upper and lower sashes to manipulate the latch open. This takes a little practice, but a great many residential burglars have mastered the technique.

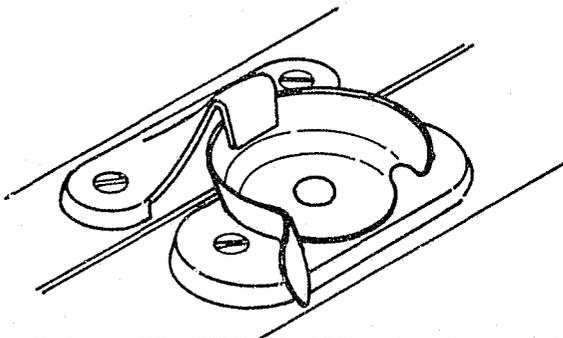
Preventing Entry Through Your Windows

These attacks are easy to prevent. Windows can be pinned to frustrate prying and manipulation. The pins hold the window securely latched even if the burglar succeeds in opening the crescent latch. Key-locking pins are also available commercially. These are usually designed so that the window can be locked in a closed or slightly open position for ventilation. When locked, these cannot be opened even if the burglar decides to risk breaking the glass. He's left with a choice of climbing over the sharp edges, or giving up. Usually he'll give up.

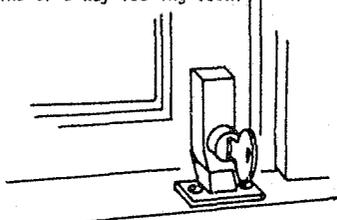
Horizontal sliding windows are protected just like sliding glass doors: screws in the upper channel and a good supplemental lock to resist prying and shimming. There are a wide variety of locking devices for all other types of windows including pivoting, casement and louvered windows which are reasonably effective. The type of window which cannot be secured under any condition is the jalousie window. These are popular in southern climates because they permit good

METHODS OF SECURING DOUBLE-HUNG (VERTICAL SLIDING) WINDOWS

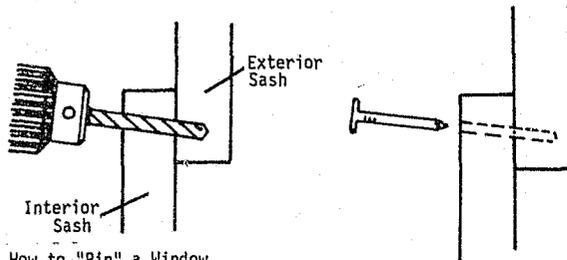
Crescent Sash Lock: This "lock" can be easily opened by even inexperienced burglars.



Double-hung windows should be protected with pins or a key-locking lock.



Commercial Key-Operated Lock: Prevents the window from being opened even if the glass is broken.



How to "Pin" a Window

1. Drill a hole through the inside sash and three-quarters of the way through the outside sash on a down-sloping angle (as shown).
2. Insert pin or nail.

ventilation, but they offer little security since all the intruder has to do to get in is to slide the jalousie panes out of their frames. The only practical solutions are outright replacement or wire grills or bars on the outside of the window.

**Grills, Bars and
Plastic Glazing:
Their Uses and Risks**

If you are reluctant to risk even

the remote possibility of a burglar gaining entrance by breaking your windows, there are two additional precautions you can take. One is to replace the glass in all windows within 18 feet of the ground with a break-resistant acrylic or polycarbonate plastic. The second is to install steel bars or metal grills over each window. Either option is likely to be expensive (and impractical if you rent). But if you need this level of security, by all means do it. Neither job is, however, something a homedweller would ordinarily want to tackle without expert help. Grills and bars must usually be custom-made for each house. Plastic glazing must be installed in a special way, often requiring alterations to existing window frames, otherwise it can be easily removed by a burglar. Acrylic plastics are flammable and may be prohibited for home glazing in some areas. Fixed security grills and steel bars can also prevent you from getting out of your home in a hurry if the place catches fire. Your best bet is to use hinged grills which can be unlocked and swung open from the inside to permit rapid evacuation. But before you install either bars or security grills, check your local fire codes.

If you're not too concerned with appearance, there is one way of installing security plastics which is both simple and effective. This is to screw a heavy sheet of plastic to the frame surrounding a glassed-in opening on the inside. If a burglar breaks the glass, he is still confronted with the break-resistant sheet of plastic which is generally more difficult to penetrate. This type of installation is usually not suitable for large windows, but can often be used to protect vision panes (glass openings) in doors where the burglar could break the pane and reach

in to unlock your lock from the inside. Plastic mounted behind the vision pane frustrates this attack.

An alternative, however, is to leave the glass alone and replace your existing lock with a double cylinder deadlock. This lock must be opened with a key from the inside as well as the outside. A burglar might break the glass, but without a key he still cannot get the door open. You should make sure you can, however, and in a hurry. In the event of a fire, you may not have time to hunt for the key. Hang a spare on a chain near the door, but out of reach and out of sight of the burglar. The chain should be long enough to reach the lock. Teach your children how to unlock the door. The general rule is that in the event of a fire you never want to be trapped by your own security devices.

INCREASING A BURGLAR'S RISK OF DETECTION

When you have taken these minimum steps to secure your doors and windows, your home will be reasonably protected from the usual methods a burglar uses to gain entrance. If he's really determined, he can still get in, but it will take him longer to defeat your security. Your next step is to make him feel that if he hangs around too long, he's sure to be spotted. This will discourage him from taking the extra time he needs. Keep in mind that the prospect of being detected in the act of breaking into your home makes any burglar feel very nervous.

Lighting

Burglars thrive in dark and hidden places where the likelihood of detection is slight. By eliminating all

such places next to your home, the burglar's chances of being spotted are vastly increased. He knows this and will pass you by.

An increasing number of burglaries are taking place in the daylight. Careless people who leave their doors unlocked or who have flimsy locks are the usual victims of these attacks. But if you have secured your doors and windows and practice good security, your greatest risk is at night. Burglars love the dark. So eliminate it. Light up your yard, or, if you live in an apartment on the ground floor or with a balcony within 18 feet of the ground, make sure the outside is lit. Lighting, even with the increasing price of electricity, is still an inexpensive deterrent to burglary. Standard incandescent lamps are suitable for most applications. Where larger areas are to be illuminated, sodium and mercury vapor lamps are available, and they are very inexpensive to operate. There are a few points to remember, however.

- o Secure your lighting. Make sure that a burglar cannot easily break or disconnect your lights, or you will have wasted your money. There are a number of good, inexpensive, weatherproof and tamper proof lighting fixtures on the market for almost any residential application.
- o Be sure all possible entries to your home are lit. Don't illuminate the back yard and ignore the sides and front. There's no rule that restricts burglars to the back yard.
- o Eliminate hiding places next to your house. High dense shrubbery next to the house provides excellent conceal-

ment, not only for burglars but for rapists and muggers as well. Trim shrubs away from your doors, and make sure they extend no higher than two feet below the bottom of your windows.

Alarms

If you live in an isolated area, keep a lot of valuables in your home (a practice that is not recommended), or are in a high crime area, you may need the added protection of an alarm. Note that we said you may. Alarms are not the universal panacea they are often claimed to be. They are not substitutes for protected windows or doors or for good visibility. Less expensive alarms — ones in the price range most people can afford — detect the presence of an intruder and give a local warning, usually a siren, bell or buzzer. These are called "local alarms." There are also alarms that automatically call the police, or alert a private security service. The type that automatically dials the police are illegal in many localities — and unwelcome everywhere since they tend to tie up police telephone lines. Those that notify a security service ("central station alarms") are commonly used for the protection of commercial premises, but are usually too expensive for most residences. Initial installation will usually cost about \$1000.00 and there is also a monthly service fee.

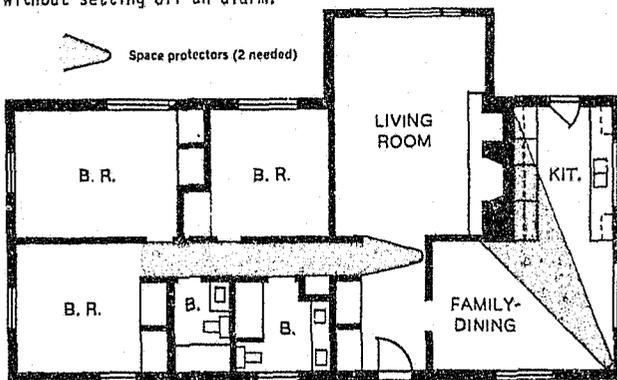
Local alarms are adequate for most residential applications. They may add a reasonable measure of protection when combined with other security measures. Most fall into two major categories:

Perimeter Alarms set up an electronic barrier or perimeter all

around the house or apartment. Each point of possible access (all windows and doors) is tied into the alarm system. The elements of the system are a central control box, an annunciator (siren, bell, horn or buzzer), sensors at all possible entry points (which usually detect the opening of a door or window), and connectors between the sensors and the control box. These connectors may be wired or wireless. Wired systems are the least expensive to buy, costing as little as \$140-\$160 for an average home. But they require a lot of work to install, and the cost of installation may be many times the purchase price. Wireless systems usually have small radio transmitters in the sensors which send a signal to a receiver in the control box. These are easier to install and involve no unsightly wiring, but their purchase price is usually much higher than a wired system. Either type of system can provide adequate protection — if you really need it.

Space Alarms protect the interior areas of a home, not its perimeter entry points. They usually consist of a transmitter and receiver in a single box. The transmitter beams out a cone of ultrasonic radiation (harmless) or radar waves which spread over the area to be protected. If it detects movement within this area, the receiver triggers the annunciator. For apartments and small homes one space protector may be entirely adequate. For larger homes, two or more will be needed. Their effectiveness depends to a great extent on where they are located. Generally, they should cover areas which must be crossed to go from one part of the house to another. The accompanying illustration shows proper location in a single story ranch house.

PROPER LOCATION OF INTERIOR SPACE ALARMS. The illustrated placement ensures that a burglar could not move from one room to another without setting off an alarm.



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Both perimeter alarms and space alarms have drawbacks. The primary disadvantage of space alarms is that they do not detect a burglar until he is already inside. Further, many are sensitive enough to detect roaming pets, drapes blown by the furnace fan, and many other normal movements. Until you have properly adjusted the range and sensitivity of the device (which can only be done through trial and error), you will be plagued with false alarms. Even after it's adjusted, a space alarm can still be a problem. It cannot distinguish between you and a burglar moving across its protected area. As far as it's concerned any movement is suspect. Space alarms can make nocturnal visits to the bathroom a startling adventure.

Perimeter alarms also have disadvantages. Inexpensive home perimeter alarm systems have been rather consistently plagued with mechanical problems due, frankly, to efforts by manufacturers to reduce costs. Poorly designed and manufactured sensors are the main problems. Some have been found to be adversely affected by changes in temperature and hu-

midity. Dust, dirt and corrosion can disable a sensor as can repeated shocks caused by opening and closing the windows or doors to which they are attached. Badly designed sensors have been found to be unable to withstand constant cycling (i.e. deactivating and reactivating the system) without mechanical breakdown.

Your best protection against these deficiencies is to ensure that any perimeter alarm you buy meets or exceeds the minimum performance standards established by the National Institute of Law Enforcement and Criminal Justice for the various types of alarm sensors. These standards are based on extensive tests of a wide variety of alarm systems conducted by the Law Enforcement Standards Laboratory of the National Bureau of Standards. When you buy an alarm system, find out from the dealer whether the sensors used have been tested against the appropriate NILECJ Standard, and meet the minimum requirements established for the type of sensor(s) being used in the system. There are separate standards for magnetic, mercury, mechanically activated and sound sensors, the common types found in most alarm systems.* Buy an

* NILECJ-STD-0301.00, March 1974, Magnetic Switches for Burglar Alarm Systems.

NILECJ-STD-0302.00, May 1974, Mechanically Actuated Switches for Burglar Alarm Systems.

NILECJ-STD-0303.00, May 1974, Mercury Switches for Burglar Alarm Systems.

NILECJ-STD-0308.00, July 1976, Sound Sensing Units for Intrusion Alarm Systems.

alarm only if it meets or exceeds NILECJ standards. Buy only from a reputable dealer who will back it with a warranty. If he installs the system, he should also warrant his work. (You determine an alarm dealer's reputability like any other merchant's. Check prior customers and the Better Business Bureau. If there is a consumer protection agency in your area, check it for previous complaints from unsatisfied customers.) Most alarm companies are entirely reputable, but there are a few who give the rest of the industry a bad name.

Remember also that alarm systems, like any other mechanical device, must be regularly maintained and inspected. Alarms must be tested periodically and often. False alarms can be a real nuisance, but the real danger is that an improperly maintained alarm will fail to detect a burglar when one does penetrate your home.

Biological Alarms

But before you rush out and spend good money on an electronic home alarm system, consider an alternative. The earliest "alarm systems" used by man to detect intruders were his animals. An alarm, after all, is basically a device to discover the presence of an interloper and sound a warning -- a variety of animals are ideal for this purpose. A noisy little dog can be a very inexpensive, very effective intrusion detection system. Almost nothing bothers a burglar like a yapping dog, or even the suspected presence of a yapping dog. The initial outlay for a dog can be very small -- the animal shelter probably has a nice selection right now which can be had for the price of a

license and a few inoculations. Food, water and a little affection will produce an alert, mobile, self-contained alarm system which is just as effective as the average electronic home alarm.

MARK YOUR PROPERTY

Burglars seldom steal for their own use. They want items they can fence and turn into ready cash. If they can't sell your goods, they usually won't take them. The surest way of making your property valueless to a burglar is to mark each item so that it's readily identifiable as stolen property. No fence in his right mind will touch marked property.

So join your community's Operation Identification program. It's one of the basic precautions you can take to reduce your risk of being victimized by a burglar. Even if he does get past your defenses and carries away your marked property, and even manages to sell it, the police will have an easier time catching and prosecuting him (and his fence). There is also a better chance that you will get your property back.

All you need is an electric engraver. Use it to mark your identifying number on all of your valuable property. This number may be your driver's license number, your social security number, or a special number you obtain along with the engraver (on loan) and appropriate forms from your police or sheriff's crime prevention unit. As you mark each item, record a description of the item and its serial number (if any) on your property record. Keep this record in a safe place. You will also probably receive some warning decals to

display on your doors and windows when you return the engraver. These will inform a potential burglar that there are no easy pickings in your household, so he might as well go away.

HOW ABOUT A STRONG ROOM?

Another step you can take to frustrate any burglar who may get inside your home is to have all (or most) of your valuables locked in a strong room. A residential strong room doesn't have to be anything fancy. Reinforce the inside walls of a closet with 3/4" plywood (when it's painted, you won't know it's there). Replace the door with a good, solid security door, or mount a sheet of steel to the inside of the existing door. Pin the hinges and bolt on a secure lock, and your strong room is complete. Use it to store anything portable and valuable that you aren't immediately using.

OTHER TIPS

Burglars are reluctant to break into homes that appear occupied. Knowing this is especially important if you plan to be away for an extended period of time. Newspapers and other deliveries piling up around your front door are a sure sign to the burglar that you're not home. Discontinue all deliveries before you leave. Constantly dark homes and unchanged curtains and blinds are also a sure clue. You can buy inexpensive 24-hour timers to turn lights on and off in the evening. Arrange with a trusted neighbor or friend to change the position of your blinds and drapes daily, and pick up mail, advertising circulars, newspapers and debris. Be sure your lawn is cared for in your absence.

ORGANIZE YOUR NEIGHBORHOOD TO FIGHT CRIME

Burglars (not to mention rapists, robbers and muggers) have a hard time operating in neighborhoods where everyone watches out for everyone else. Organize a neighborhood crime prevention council. Don't wait for someone else to do it. American neighborhoods have tended to lose their cohesiveness and become fragmented into individual households. Burglars like neighborhoods like this. They work best where everyone minds his own business. Check yourself. If moving men suddenly showed up and began loading all of your next door neighbor's furniture into a van in his absence, would you know if he is really moving, or is the van a burglar's ploy? Would you go over and ask, or consider it none of your business?

Organize. You watch out for your neighbor and he'll watch out for you. Question strangers. Note the license number of unfamiliar cars. Be suspicious. Call the police when you see something odd. The stranger "just cutting through" your backyard may be on his way from a burglary he just committed on the next street. Nothing is as discouraging to a would-be burglar than to be constantly asked what he's doing — especially if it's a cop doing the asking.

Invite your neighbors to an informal meeting. Acquaint them with the risk of their being victimized and propose a neighborhood crime prevention council. The police in most localities will be glad to provide a crime prevention officer to address your group. They can help you get started, and after you are organized, help you to develop and implement neighborhood crime

prevention programs. They can give you many more tips about what you can do in your community to protect yourself, your home and your neighborhood against crime than can possibly be included in these booklets.

Once you are organized, there are a number of proven effective crime prevention programs which you can begin in your community.

FORMAL HOME SECURITY SURVEYS: In Book Two of this series we show you how to think and act like a burglar to assess the vulnerability of your home to burglary. This is one way in which you can conduct a security survey of your own home. But the police can conduct a more formal, much more complete survey for you. A trained crime prevention officer can give you professional advice about how to secure your particular home with its particular security problems. At the same time, he can train selected members of your neighborhood council to perform formal security surveys. These can then be used as a means to attract new members to the council.

OPERATION IDENTIFICATION: We have already mentioned the effectiveness of marking your property to discourage the burglar. Operation Identification can be just as effective for your neighbors, and it provides another incentive for more of your neighbors to join the crime prevention council. The council itself can provide engravers, record forms, and advice on where to mark property.

WHISTLE-STOP: Any criminal hates to have attention drawn to his activities. Loud whistles and compressed gas-powered horns can

quickly draw that attention. These are used to spread the alarm around the neighborhood whenever one of the residents witnesses a crime. As soon as the witness is physically safe, he or she runs to the middle of the street and sounds the horn or whistle. Each resident hearing the alarm also blows his whistle or horn and (if near a telephone) calls the police. The resulting din is likely to scare a would-be criminal enough to make him fervently wish he were somewhere else.

The neighborhood crime prevention council can provide the whistles and horns at a discount to members. Whistles usually cost less than \$2.00 — horns a little more, but they are louder. Discounts for bulk purchases are usually available. This is a very simple program, but if properly implemented, it is very effective.

NEIGHBORHOOD WATCH: This national program, funded by the Law Enforcement Assistance Administration and administered by the National Sheriff's Association encourages members to watch out for their neighbors and report crimes to the police. It also includes free literature on Operation Identification and home security. Many local police and sheriff's departments sponsor Neighborhood Watch programs. If yours doesn't, write to the National Sheriff's Association, 1250 Connecticut Avenue, N.W., Washington, D.C. 20036 for literature and more information.

BLOCK WATCHER: Block watcher programs are also widely sponsored by local police and sheriff's departments. A block watcher is a volunteer who agrees to become the eyes and ears of the police by watching out for crimes and re-

porting them. Usually block watchers are trained by the police to recognize crimes and suspicious activities which should be investigated. Often, each block watcher is given an identification number to be used when making a report. This program is particularly appropriate for neighborhoods where there is some fear of reprisal for reporting crimes since the block watcher can remain anonymous by using only his ID number to make reports. His identity is known only to a few high ranking officers in the police department. Where there is little fear of recrimination, the ID numbers are still often used since they serve to verify the identity of the watcher to police personnel when a report is made. Every member of your neighborhood council is a potential block watcher, but the program is especially appropriate for retired persons, housewives and others who can arrange to have periods of free time to observe uninterrupted by other duties.

RADIO WATCH: Radio watch is a variation of neighborhood watch and block watcher programs in which owners of Citizen Band radios watch for and report crimes to a central station which then alerts the police.

BLOCK PARENTS: Children are often the victims of crimes — not only sex offenses but extortion, robbery, and other offenses committed by other children and by adults. Block parents serve as a temporary refuge for children in trouble. Each block parent home or store is identified with a large block parent sign. Children are taught to run to the nearest block parent when they encounter any hint of trouble or need any assistance.

COMMUNITY PATROLS: If the neighborhood is faced with a serious crime problem, a community patrol may be the answer. This should never be tried, however, without the full cooperation of the police, and then only as a last resort after other programs have proved unsuccessful in curbing crime. There are many variations on the program ranging from very informal efforts to community-wide organized patrols with marked vehicles and radios. Civilian patrols report all violations to the police. They are never armed. They never investigate possible offenses on their own and are not intended to be substitute police.

Any of these programs are possible once your neighborhood is organized. They require little in the way of funds — one good bake sale or paper drive will raise all you need. All they demand is some effort and sustained interest. These programs have proven effective in many communities across the nation and they can work for you.

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