APRIL 1984

HOLMES SAFETY ASSOCIATION

E PLURIBUS UNUM

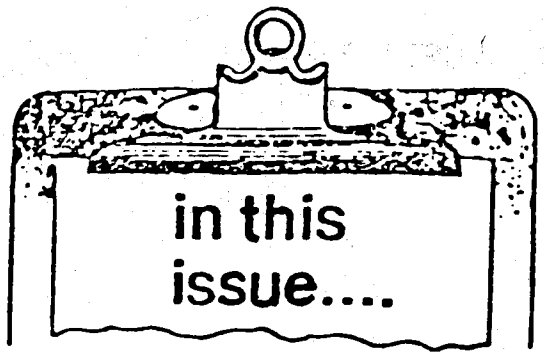
SAFETY EFFICIENCY

MINERAL INDUSTRIES

BULLETIN

ACCIDENTS: A GOOSE EGG SCORE IN '84

HOLMES SAFETY ASSOCIATION



April 1984

April 1984

HOLMES SAFETY ASSOCIATION MONTHLY SAFETY TOPIC

Standard Sand & Silica
Standard Sand & Silica
Davenport, FL

Continental Clay Co.
Continental
Kittanning, PA

Blackmon's Consulting
Blackmon
Clarksville, PA

Colt Resources, Inc.
Colt
Clarion, PA

Energy Fuels Nuclear
Pigeon
Fredonia, AZ

Energy Fuel Nuclear
Hack Canyon
Fredonia, AZ

Ebbco Mining
Ebbco Mining #1
Big Rock, VA

Dunbar Coal Co.
Dunbar
Dunbar, KY

Grayson County Stone
Grayson County
Leitchfield, KY

Ensley Sand & Gravel
Ensley Sand & Gravel
Grant, MI

S.F. Coal Corp.
Lee Ranch Mine
Grants, NM

Blum Coal Co.
Blum Coal
Carrollton, OH

Barrett Industries
Barrett
San Antonio, TX

Servtex Materials
Servtex Materials
New Braunfels, TX

Genwal Coal Co.
Genwal
Huntington, UT

Powell MTN Coal
MTN Top
Big Stone Gap, VA

International Anthracite
B & M Tunnel
Valley View, PA

Vega Mining Co. Inc.
Vega Mining
Denver, CO

Ludlow Stone Inc.
Ludlow Stone
Ludlow Falls, OH

Cumberland Mountain Sand Co.
Cumberland Mountain Sand
Hillsboro, TN

Eavers Bros. Exacavating
Eavers
Stuarts Draft, VA

Town of Catlin
Town of Catlin Highway
Catlin, NY

Pollard Sand Co.
Pollard Sand
Gadsden, AL

Vulcan Material Co
Vulcan Materials-SE
Atlanta, GA

Stevens Sand & Gravel
Stevens Sand & Gravel
Iowa City, IA

Quartzite Stone Co.
Wilson-Ryan Quarry
Lincoln, KS

Canyon Coal Co.
Canyon Coal Confederation
Providence, KY

Gemco
Gemco
Isom, KY

Eureka Sand & Gravel
Eureka
Eureka, MO

Dalrymple Gravel Co.
Chemung
Elmira, NY

Penn Glass Sand Corp.
Pennsylvania Glass Sand
Berkeley Springs, WV

H. Bumbarger & Son
Bumbarger
Morrisdale, PA

Cardi Co.
Cardi
Warwick, RI

Bear River S & G
Bear River
Bluffdale, UT

Concrete Nor'West
Concrete Nor'West
Mt. Vernon, WA

Antelope Coal Co.
Antelope
Douglas, WY

A.G. Durtz & Sons Inc.
A.G. Durtz & Sons
Denver, PA

Maryetta Coal Co.
Maryetta No. 2
Chapmanville, WV

Macjan
Macjan
Princeton, WV

Westmoreland Coal Co.
Hampton No. 4 Mine
Clothier, WV

Wharf Resources (USA)
Annie Creek
Lead, SD

Maumee Stone Co.
Maumee Stone
Oakwood, OH

Inspiration Consolidated Co.
Inspiration
Claypool, AZ

Clinchfield Coal Co.
Moss #3
Dante, VA

Keystone Portland Cement Co.
Keystone Portland Cement
Bath, PA

B.C. Company
B.C.
Eastland, TX

Rio Algom Corp.
Rio Algom
LaSal, UT

Colquest Energy Inc.
Mine #1
Clairfield, TN

Double Q Inc.
Angela #1
Clairfield, TN

Mankato AVTI
Mankato AVTI
North Mankato, MN

Basic Materials Corp.
Basic-Washburn
Washburn, IA

Basic Materials Corp.
Basic-Fertile
Fertile, IA

IMC
Lake
Mundelein, IL

Win-More Mining
Win-More
Midlothian, MD

Capeletti Bros. Inc.
Capeletti
Miami Lakes, FL

NYCO
NYCO
Willsboro, NY

Amenia Sand & Gravel Inc.
Amenia S & G
Amenia, NY

Blue Diamond Mining Inc.
Blue Diamond Mining-Prep Plt.
Ovenfork, KY

Blue Diamond Mining Inc.
Blue Diamond Mining-UG
Ovenfork, KY

Limestone Dust Corp.
Limestone Dust
Bluefield, VA

West Virginia Magnetite
West Virginia Magnetite
Princeton, WV

Pfizer Inc.
Pfizer
Canaan, CT

Rite Way Coal Inc.
Rite Way Coal
Wyco, WV

Basic Materials Corp.
Basic-Waterloo
Waterloo, IA

Basic Materials Corp.
Basic-Waterloo I
Waterloo, IA

Basic Materials Corp.
Basic-Fertile I
Fertile, IA

The Schundler Co.
Schundler
Metuchen, NJ

Silica Mining Inc.
Silica Mining
Grundy, VA

North End Quarry Land
North End Quarry Land
Sussex, WI

A A & W Coals Inc.
A A & W Coals Mine No. 12
Pikeville, KY

A A & W Coals Inc.
A A & W Coals Mine No. 10
Pikeville, KY

Louisville Cement Co.
Speed-Louisville Cement
Speed, IN

Valley Sand & Gravel Inc.
Valley Sand & Gravel
Rochester, NY

Kiel Sand & Gravel Inc.
Kiel Sand & Gravel
Kiel, WI

Independent Gravel Co.
Independent Gravel
Joplin, MO

Carey Salt
Carey Plant
Hutchinson, KS

Carey Salt
Carey Mine
Hutchinson, KS

Parker N.W. Paving Co.
Parker N.W. Paving
Oregon City, OR

Lynn Coal Co.
Lynn Coal
Madison, WV

Duncan Coal Corp.
Duncan Coal
Kopperston, WV

G & W Equip. Leasing Inc.
G & W Equip. Leasing
Bradley, WV

Kem Coal Inc.
Kem Coal No. 1 Sur.
Hazard, KY

Kem Coal Inc.
Kem Coal No. 2 Sur.
Hazard, KY

WV Dept. of Mines
Northern Div. WV
Morgantown, WV

B.R.C. Coal Inc.
Rock Spring Strip
Barbourville, KY

Parker Bros. & Co.
Parker Bros.
New Braunfels, TX

L & D Inc.
L & D
Ramage, WV

Sabine Mining Co.
South Hallsville #1
Hallsville, TX

Elmer's House Moving
Elmer's
Chapmanville, WV

O'Connor Bros.
O'Connor
Norfolk, CT

Maximum Bldg. Corp.
Maximum Bldg.
Naugatuck, WV

Master Mining Inc.
Master Mining
Holden, WV

Natividad
Natividad
Salinas, CA

King Quarries
King Quarries
Cumberland, OH

Kentucky Stone Co.
Upton Quarry
Upton, KY

Sierra Ready Mix
San Pedro Pit
Sierra Vista, AZ

Westmoreland Coal Co.
Westmoreland Coal Const.
Andover, VA

Independent Gravel Co.
Independent Gravel
Joplin, MO

Rogers Group Inc.
Bloomington Quarry
Bloomington, IN

Rogers Group Inc.
Sieboldt Quarry
Bloomington, IN

Rogers Group, Inc.
Putnam County Quarry
Bloomington, IN

Rogers Group, Inc.
Morgan County
Bloomington, IN

HURRY....HURRY.....HURRY!

ANNUAL MEETING OF THE HOLMES SAFETY ASSN., WILL BE HELD AT QUALITY INN/CENTRAL, 1190 COURT-HOUSE ROAD, MAY 22, 1984, 10 a.m.

LODGING, FOOD, DRINKS, MEETING ROOM, ALL AT ONE LOCATION 4 BLOCKS FROM SUBWAY.

THERE WILL BE A HOSPITALITY BAR MAY 21, 1984 7-10 p.m.

NATIONAL SECRETARY

March 1984

HOLMES SAFETY ASSOCIATION MONTHLY SAFETY TOPIC

NOTICE OF MEETING

3rd ANNUAL WESTERN HOLMES SAFETY ASSOCIATION MEETING

Attention Holmes Safety Association Members:

You are invited to the 3rd annual Western Holmes Safety Association meeting to be held at the Jackson Lake Lodge, Jackson Hole, Wyoming, June 21, 1984, 2:00 p.m. You must make your hotel reservations as soon as possible, as rooms are limited.

If you plan to attend, please contact myself or William Hoover, Holmes Safety Association, 301 West Congress, Room 7K, Box FB53, Tucson, Arizona 85701.

Lets have safety and more in 1984.

Steve K. Lipe

Steve K. Lipe
Director of Safety and Health
Carbon County Coal Company
P. O. Box 830
Hanna, Wyoming 82327
307-325-9471

April 1984

HOLMES SAFETY ASSOCIATION MONTHLY SAFETY TOPIC

IMPROVED FIRE DOORS FOR NONCOAL UNDERGROUND MINES

OBJECTIVE

Prevent the propagation of a fire and control the spread of smoke and toxic gas in underground mines.

APPROACH

A fire door suitable for large openings in underground noncoal mines and providing protection for openings requiring 1-1/2 hours of fire resistance, a 250 F maximum temperature rise and high pressure differentials was designed, laboratory tested and in-mine tested.

HOW IT WORKS

The door is a double-acting swing type. Its two panels, connected by an overhead linkage, open in opposite directions. Consequently high pressure differentials across the door have little effect on the force required to open and close the door.

The door is constructed of 14-gauge sheet steel skins welded to both sides of a 5-inch-wide steel channel frame. The frame is reinforced with 5-inch-wide steel channels in a horizontal and diagonal pattern. The voids between the reinforcing members are filled with a ceramic fiber insulation material to limit the surface temperature rise of the unexposed side of the door during a fire. A fire-resistant neoprene-coated fabric is used to seal around the edges of the door panels. The door is opened and closed by an air cylinder, attached to the overhead linkage and operated by lanyards on either side of the door. The door design includes an optional airlock manway for drifts of adequate width.

TEST RESULTS

Two prototype doors were built. One door, 10 feet x 12 feet, was first pressurized in a plywood and sheet plastic "tent" to measure air leakage, then disassembled and shipped to Underwriters Laboratories (UL) for a fire resistance rating test. The door and frame assembly were fitted into a fire door test fixture and exposed to direct flame for 1-1/2 hours. After 30 minutes of fire exposure, the average surface temperature on the unexposed side was 158 F. During the fire test, the door panels bowed in toward the fire, reaching a maximum deflection of 3-5/8-inches. However, at no time was flaming observed on the

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unexposed surface of the door. Based on the results of this test, UL determined that the door demonstrated suitable protection for openings requiring 1-1/2-hours of fire resistance and a 250 F maximum temperature rise.

The other door, 12 feet x 14 feet, was installed in the Ozark Lead Company mine near Sweetwater, Missouri for long-term endurance tests. Despite being struck by a passing vehicle and being repaired on-site, the door showed no signs of undue wear or impaired operation after 15 months of mine use.

PATENT STATUS

The U.S. Dept. of Interior is not applying for a patent on this development.

FOR MORE INFORMATION

For construction drawings, a bill of materials and additional information, contact the principal investigator for this research, William H. Pomroy at the Bureau of Mines, Twin Cities Research Center, 5629 Minnehaha Ave. S., Minneapolis, MN 55417 or telephone him at (612) 725-3469.

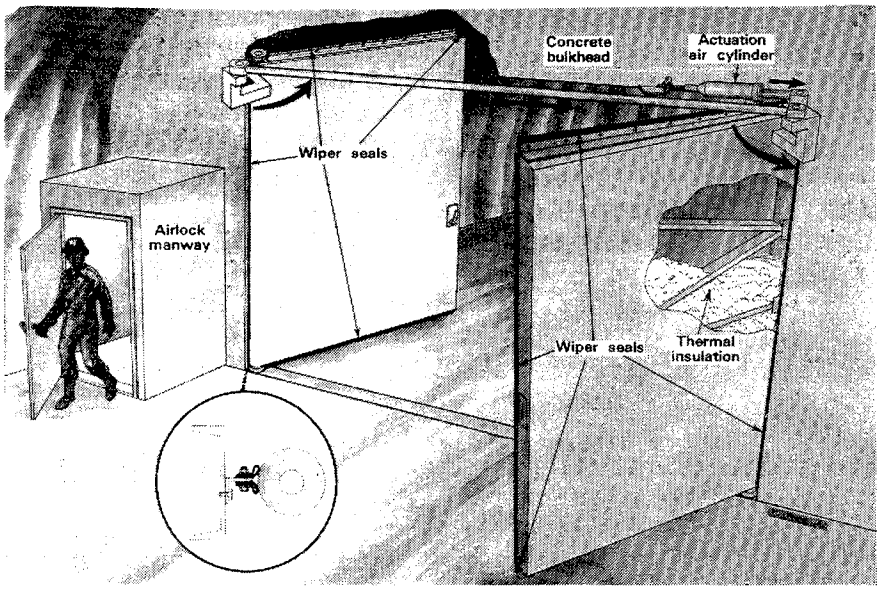


Illustration shows new mine fire door and its components.

April 1984

HOLMES SAFETY ASSOCIATION MONTHLY SAFETY TOPIC

MY WAY

How many times have you heard that expression used? Many persons use this phrase to explain a particular performance. In preventing accidents and promoting safety, a task must be performed the safe way, even though it may not be "My Way" of performing the task.

When told, "This is the right way to perform this job", you should carefully consider why it is the right way before rejecting it for "My Way". The particular method or procedure in question may not be completely accident-proof, but -- years of checking accident records and weighing statistics have proven that fewer accidents or injuries are caused by performing tasks a certain way.

Let's consider the "My Way" method of doing a job. Your way may not have cause injury to yourself and may have proven effective for a long period of time but your way is not necessarily correct for every person. Some person with less experience watching you could easily pick up the wrong way and that could result in a tragedy.

Those of us with experience should assume the responsibility to not only learn better methods but to teach the safest way possible to the less experienced miners.

It is only human nature to possibly become irritated when hearing from other people about mining rules, laws and correct methods but consider this thought. Every rule or regulation that you are asked to follow was developed as a result of some individual's misfortune. When you are told how to correctly perform a task, it is usually because others have become injured doing it the wrong way. A look at mining regulations is in fact a history of unfortunate accidents or tragedies.

The next time you are tempted to perform a task "My Way" consider the following:

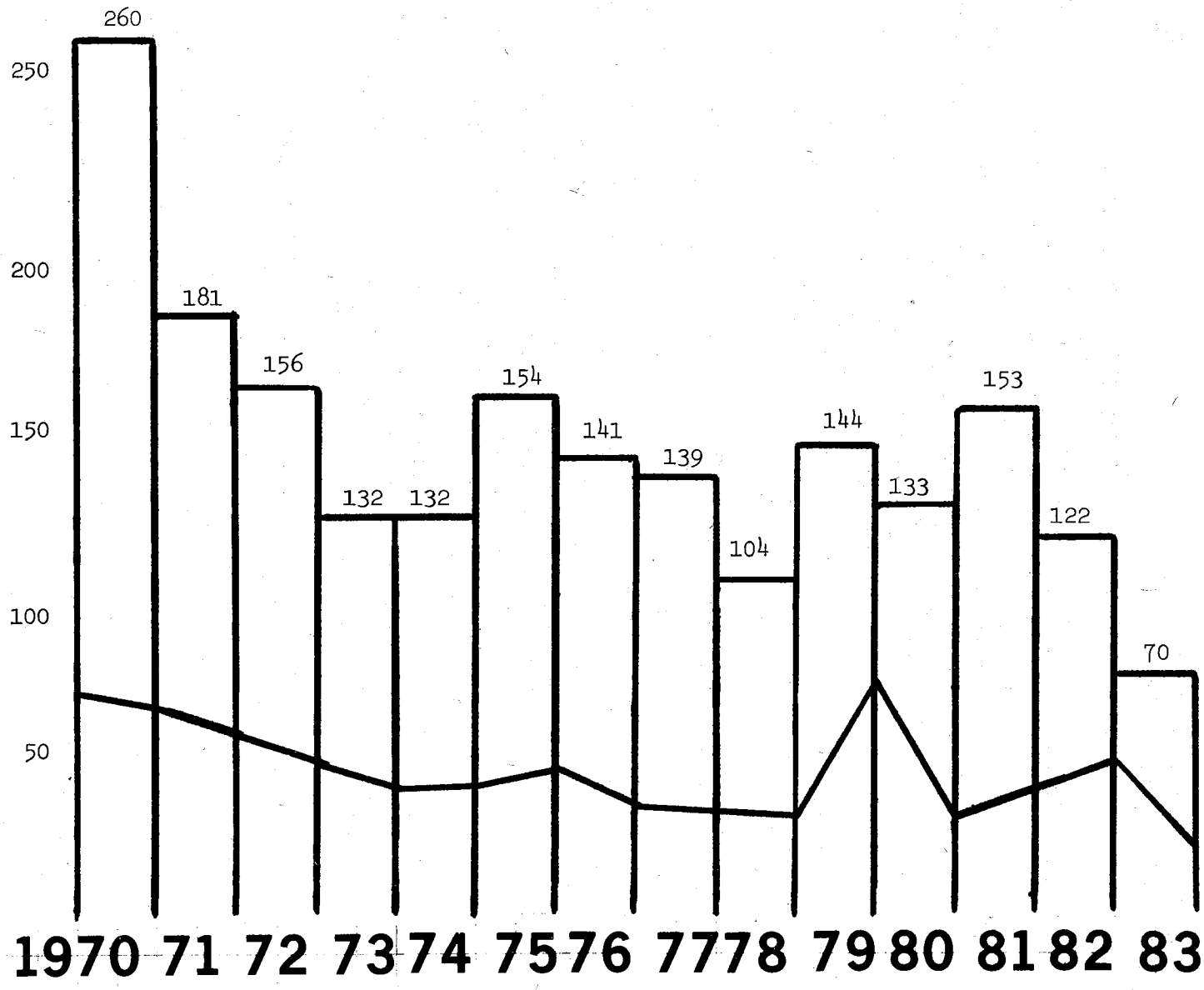
1. Is someone observing me that may learn "My Way" which for them might be the wrong way?

2. Is "My Way" the wrong way and is it about to catch up with me?

3. Maybe the right way isn't so hard or difficult after all. Keep these things in mind when a better way of performing a task is suggested. An enormous amount of time and money is spent each year to promote mine safety. In return, you can do your part by doing away with the "My Way" of doing things, just because it is "My Way".

FATALITIES—COAL

ROOF—FACE—RIB



April 1984

ABSTRACT FROM FATAL ACCIDENT

April 1984

HOLMES SAFETY ASSOCIATION
MONTHLY SAFETY TOPIC

FATAL POWERED-HAULAGE ACCIDENT

GENERAL INFORMATION: A mine maintenance mechanic was fatally injured when a shuttle car he was working on rolled off the support blocks and pinned him. The victim had driven the car up on blocks to gain access to the underside. He had completed a 3-year apprenticeship program as a mine maintenance mechanic. The shuttle car was a dc electric-powered shuttle car that weighed about 20,000 pounds empty. At the time of the accident, the car had about 14,000 pounds of trona ore in the cargo space. The shuttle-car had a single disc brake located on the transmission drive line. During the investigation the braking system was inspected and found to be in good working order. The brake was set at the time of the accident.

DESCRIPTION OF ACCIDENT: The victim was assigned to repair the shuttle car per a work order which stated "conveyor would not unload when car got hot." The victim changed a conveyor clutch head but when the unit was tested, it still would not dump. It was indicated the problem with the conveyor was due to a hang up under the car. The victim then looked for an area where he could park the car over a low spot in the floor so there would be additional room under the car after it was raised up on blocks. Two 8- by 8- by 30-inch blocks were placed in front of the rear wheel next to the operators cab and a 4- by 8- by 15-inch block was placed in front of the wheel. After the car was up on the positioned blocks an additional 8- by 8- by 36-inch block was placed in front of the two blocks supporting the back end. Two 4- by 4- by 15-inch blocks, one in front and one in back of the left rear tire, served as chock blocks.

CAUSE OF ACCIDENT: The cause of this accident could not be determined. It is surmised that the shuttle car brake was set and for some unknown reason the car rolled forward off the blocks pulling through the brakes and over the chock blocks. In reconstructing the accident, the car was placed on the blocks but no amount of pushing or prying with a bar moved the car.

RECOMMENDATIONS: The practice of running vehicles up on blocks to raise the unit high enough to work under should be discontinued. A jack should be used to raise the car and cribbing installed under the car frame to support the unit and provide safe access to the bottom of the car.

The possibility of constructing a portable ramp so that shuttle cars could be driven up on the ramp and permit work on the bottom to be accomplished should be considered.

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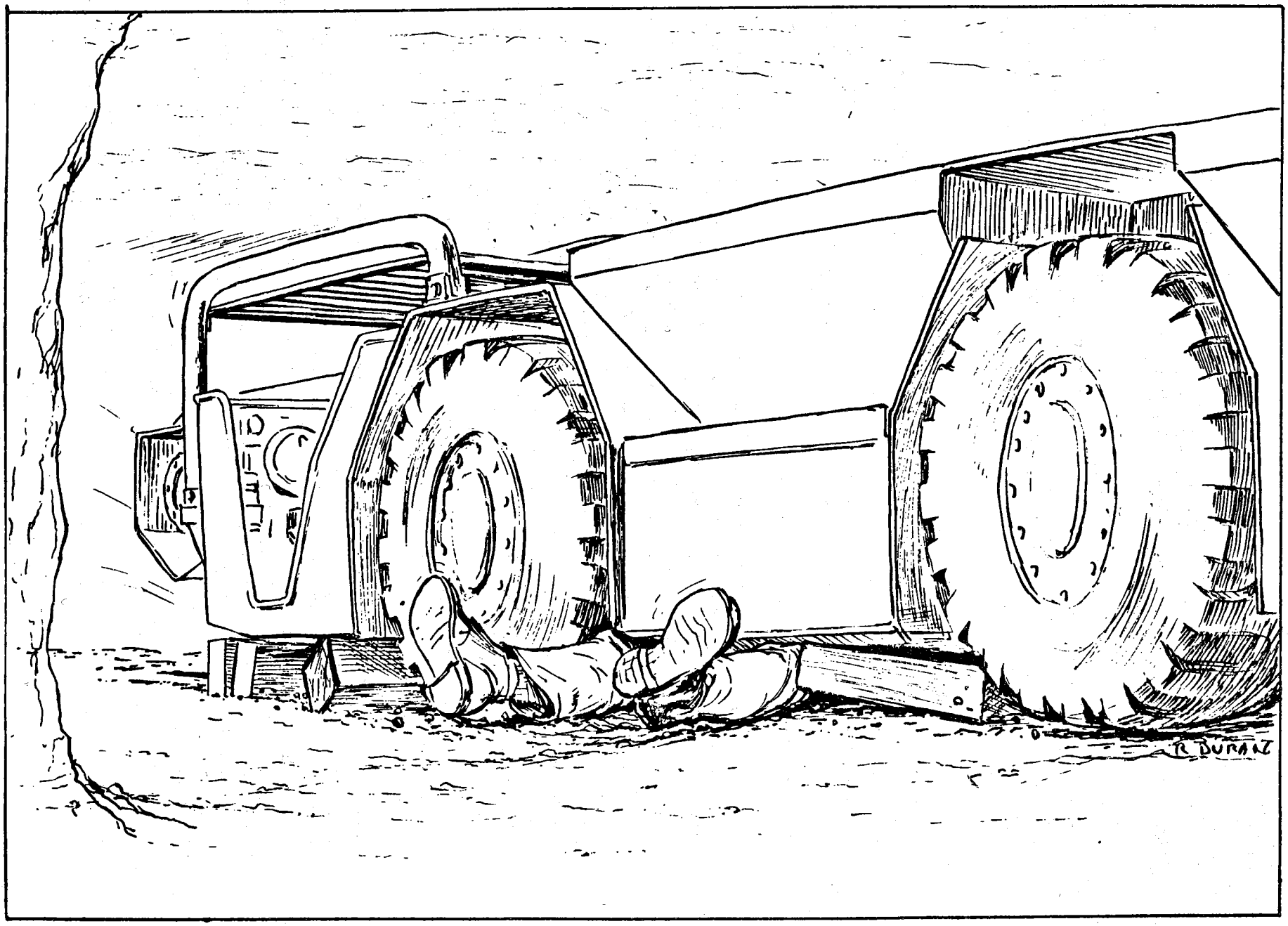
R DURAN

April 1984

HOLMES SAFETY ASSOCIATION MONTHLY SAFETY TOPIC

METHANE

Methane, the most common explosive gas in mines, is found to some degree in almost all mines at some time or another during their life. This is important to remember, as there have been several mines which have been considered nongaseous but in which gas had later been ignited with serious results. The properties of methane are:

Chemical symbol	CH_4
Specific gravity	0.555
Source	From coal & adjoining strata
Effect on life	Nonpoisonous
Explosive range	5 percent to 15 percent
How detected	Safety lamps and electrical detectors

Colorless, odorless, tasteless

This gas occurs in the coal and in the faults, slips and bedding planes of the seam. It escapes from the coal by coming through very small fissures or cracks, called "feeders." As working faces are advanced, fresh feeders are being encountered in each fall of coal; consequently, places in new works will have more gas than in old works where the gas has had a chance to "bleed" off. A working section "on the move" or "in a squeeze" will also liberate more gas due to the squeezing and bursting effect on the pillars. Also, some coal measures have methane in the rock above or below the coal and a squeeze will force out or release this gas. Methane may also be found in a region of faults, slips, or rolls as the gas follows these structures through the coal seam. By the same token, faults and slips may have bled off the gas from the strata. As mentioned before, speedy extraction of coal by modern mining machines releases methane gas in greater quantities than occurred in the slower, handloading method.

Methane is the only significant flammable gas issuing from coal in U.S. mines. A proper mixture of methane and air is explosive and can be ignited when there is 5 percent of methane present in the air. The maximum explosibility of a methane and air mixture is reached when the methane present is about 10 percent of the volume. If there is more than 15 percent of methane present, the mixture is not explosive due to insufficiency of oxygen. Five percent, the lowest explosive limit, 10 percent the maximum explosive limit and 15 percent the limit beyond which the gas is not explosive, are points that should be remembered.

Methane, having a specific gravity of 0.555, is lighter than air and will accumulate in the face of advance workings, in pockets in

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the roof and other places where there is not enough air circulation to carry it out. Methane, once mixed with air below the explosive limit, will not again separate or stratify to an extent that it can be ignited unless the air is completely stagnant for a long, long time.

Being colorless, odorless, and tasteless, methane cannot be detected by sight, taste or smell. On-the-job method of detecting methane is usually with an approved portable methane detector. It should be noted before leaving this subject, that while methane is not explosive until 5 percent is reached, it has been proved that less than this amount will help generate an explosion if mixed with fine coal dust. In other words, both agencies being explosive, less methane is needed for the explosive mixture. For this reason methane in airways as well as working faces should be kept to a low and safe level.

* * * * * * * * * * * * * * * * * * *

NEWS YOU CAN USE

Due to the increasing demand for all types of safety articles, bulletins, topic materials, safety posters, instruction guides, state and district council reports, decals, etc., the National Headquarters established a justifiably needed service department providing accommodations requested by its members.

Please feel free to call or write the HSA for these requests.

The HSA has a limited supply of "Methane" safety posters. These posters measure 3-1/2'x 5' and are printed in color on heavy stock paper. Requests for these will be honored on a first come, first serve basis.

Contact:

Donna
Holmes Safety Association
4800 Forbes Ave., Rm. A268
Pittsburgh, PA 15213
(412) 621-4500 Ext. 650 or 649

April 1984

HOLMES SAFETY ASSOCIATION MONTHLY SAFETY TOPIC

LONGWALL ACCIDENTS 1978 - 1982*

In 1978, there were 62 mines in the United States engaged in longwall mining; 63 mines in 1979; 74 mines in 1980; 69 mines in 1981; and 80 mines in 1982. During these years, there were 3,320 accidents reported, both injury and non-injury in longwall mining. Of these 3,320 accidents, there were six fatalities. The number of accidents was decreasing after reaching a peak in 1980. This may be due partially to increased experience in longwall operation and partially to better training.

Table 1 shows where the accidents occurred on the longwall section. As can be expected, most of the accidents (55 percent) occurred at the face. Most (39.6 percent) of the remaining accidents occurred at intersections, along haulageways or in shop areas.

Table 2 shows the accidents by classification. The handling of materials resulted in over 34 percent of the accidents. The handling of mineral items such as coal and rock; metal items such as pipe, wire, nails, I-beams and timbering items such as posts, caps, headers and timbers, was the leading source of this accident class. The most common parts of the body injured were fingers, back, hands, ankles and feet.

Machinery accidents were the second highest class of accidents. Longwall jacks, ram jacks, shields and chocks are the leading sources of machinery accidents. Two machinery fatalities occurred at the face; the first when a plow guide struck a jack and crushed a miner and the second when a rock fouled the shear and struck the miner who was lying across the machine.

Roof fall injuries were primarily caused when pieces of coal or rock fell between the chocks or shields, striking the miner. One of the three roof fall fatalities occurred in this manner. Of the other two, one occurred in a roofbolted area and the other at the longwall face during preparation for a move.

Hammers, sledges, scaling bars, axes and other small handtools were most commonly involved in the handtool accidents.

Most slip and fall accidents occurred while walking or running; climbing up, down, or over equipment; carrying materials or using hand tools.

Powered haulage accidents on longwall sections were primarily attributed to belt conveyors and longwall conveyors and to a much lesser extent, locomotives, shuttle cars and rail cars.

*Report submitted from Health Safety Analysis Center, Denver, CO

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One fatality involved a collision between a moving locomotive and a stalled locomotive.

Table 3 shows the occupations of the miners injured. Most of the injuries were to jacksetters (21.2 percent); shear/plow operators (11.4 percent); laborers, face and non-face (14.8 percent); mechanics, face and non-face (8.0 percent); and section supervisors (3.2 percent).

Jacksetters were most commonly injured by material falling off shields or chocks. Rocks, cribs and headers became dislodged when the hydraulically powered supports were being repositioned. In low coal, hands were often crushed between the roof and the ascending chock or shield.

The work station for shear operators is normally very close to the face where they are vulnerable to injuries from flying coal caused by pressure bumps, or by the shear picking up and throwing loose coal and debris. Other operators were struck by rock or coal falling between roof supports.

The most common cause of injuries to laborers was the fall of face or rib. These injuries involved activities such as timbering operations, clean-up of coal from alongside longwall conveyors, advancing longwall supports, assisting mechanics and moving equipment outby the face.

Mechanics were primarily injured while lifting, dragging and pulling heavy objects while in cramped quarters. Applying too much pressure on tools caused either the tool to break or the mechanic's grip to slip resulting in a fall.

Maintenance and servicing of equipment by mechanics and laborers has resulted in numerous loss-of-finger injuries. When changing a jack piston, some miners stick their fingers in the hole to check pin alignment. If the piston slips, part of a finger is amputated. Other cases involve miners putting shear pins into shear hubs. This action may allow a glove to be caught pulling their fingers into the hub.

Section supervisors were usually injured by flying debris while observing operations in close proximity to the operating shear or plow or while performing non-supervisory work.

Table 4 shows the activities engaged in by the miners at the time of their injury.

Rock and crib material falling between roof supports cause a large number of injuries in all occupational categories. However, over half of the injuries involved jacksetters and timbersetters. The most common activities are erecting cribs over shields or chocks and raising, lowering and advancing roof support. In most cases roof conditions and type of roof support govern the location and position the employees take while working these areas. Placing the hydraulic pressure control valves in a protected area, where the miner can control roof support movement, would remove the miner from exposure to falling debris. A proper examination of the working place and of overhead conditions by the supervisor and employees before work duties are started would reduce the number of accidents.

Shear and plow operators are often injured by flying coal due to pressure bumps and the shear picking up loose coal or other material and striking the operator or anyone close by. Maintaining a safe distance from the shear or plow should be a standard policy for all employees. In the case of the operator, a protective shield should be situated on the longwall machine between the operator and shear to stop or deflect flying debris. Face shields are available to longwall operators and their use should reduce the incidence of face and head injuries from falling and flying debris.

To avoid some injuries to laborers from falls of rib and roof while timbering and cleaning up loose coal, it may be necessary for the supervisor to inspect these areas more frequently and improve temporary supports.

Back injuries doubled in the five-year period covered by this report. These injuries could be reduced by using hand hoists or powered equipment for transporting material and where space permits, using additional employees. When the conveyor system is designed to run in reverse it could be used to transport material along the entire length of the longwall face.

Properly maintained hand tools, powered and non-powered, suitable for the job, should be procured and used. Not having the right tools for the job may be a contributing factor in many handtool injuries.

The data on file show that between 1978 and 1982 section supervisor accidents totalled 104, including two fatalities. On several occasions, supervisors were performing non-supervisory work. These injuries may be due to a shortage of miners with the necessary longwall skills or due to supervisors assisting new longwall employees with on-the-job training. However, the number of supervisors injured on longwall sections has declined since 1980. This may be because of an increase in the level of miner

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training which has reduced the amount of non-supervisory work that supervisors must do.

Timbersetters and roof bolters are most often exposed to injuries from falls of roof and rib. These work areas should be examined frequently before other work is started. Loose material should be taken down or adequately supported.

To insure safety before work is performed by electricians on electrical equipment, all power circuits should be de-energized and disconnecting devices tagged and locked out, except where circuit testing requires energized equipment.

TABLE 1
Longwall Accidents * 1978-1982
By Location

	1978	1979	1980	1981	1982	Total	Percent
Face	280	363	490	370	332	1835	55.3
Face Support	34	59	67	38	27	225	6.8
Not Stated	26	26	38	32	48	170	5.1
Other	160	210	238	270	212	1090	32.8
Total	500	658	833	710	619	3320	100.0

*Includes fatalities, nonfatal days lost, no days lost, non-injuries and occupational illnesses.

TABLE 2
Longwall Accidents * 1978-1982
By Accident Classification

	1978	1979	1980	1981	1982	Total	Percent
Handling Materials	177	256	268	226	214	1141	34.4
Machinery	81	111	154	108	86	540	16.3
Fall of Roof	46	58	102	78	59	343	10.3
Handtools	48	49	97	59	66	319	9.6
Slip or Fall	37	56	69	83	66	311	9.4
Powered Haulage	30	41	41	56	54	222	6.7
Fall of Face, Rib	12	10	22	15	11	70	2.1
Falling, Sliding Material	17	9	12	6	12	56	1.7
All other classifications	52	68	68	79	51	318	9.5
Total	500	658	833	710	619	3320	100.0

*Includes fatalities, nonfatal days lost, no days lost, non-injuries and occupational illnesses.

TABLE 3
Longwall Accidents * 1978-1982
By Occupation

	1978	1979	1980	1981	1982	Total	Percent
Jacksetter	133	146	165	157	102	703	21.2
Shear/Plow Operator	54	64	108	79	74	379	11.4
Laborer (Non-face)	38	58	72	51	55	274	8.3
Laborer (Face)	26	49	52	53	37	217	6.5
Mechanic (Face)	21	32	53	27	35	168	5.1
Section Supervisor (Face)	15	18	41	20	12	106	3.2
Mechanic (Non-Face)	16	21	21	20	19	97	2.9
Timbersetter/Prop-setter (Face)	24	17	16	12	17	86	2.6
Roofbolter (Face)	8	14	19	27	10	78	2.3
Belt Conveyor Oper.	11	12	11	22	17	73	2.2
Labor Supervisor (Non-face)	5	21	18	10	10	64	1.9
Electrician	9	15	13	12	13	62	1.8
Timbersetter (Non-face)	11	6	9	16	9	51	1.5
Shuttle Car Oper.	1	15	13	14	6	49	1.5
Utility person	9	3	10	14	13	49	1.5
Motorman	3	17	7	12	6	45	1.4
Unknown	14	6	8	10	17	55	1.7
Other	77	116	131	116	125	565	17.0
Not Coded	25	28	66	38	42	199	6.0
Total	500	658	833	710	619	3320	100.0

*Includes fatalities, nonfatal days lost, no days lost, non-injuries and occupational illnesses.

-MORE-

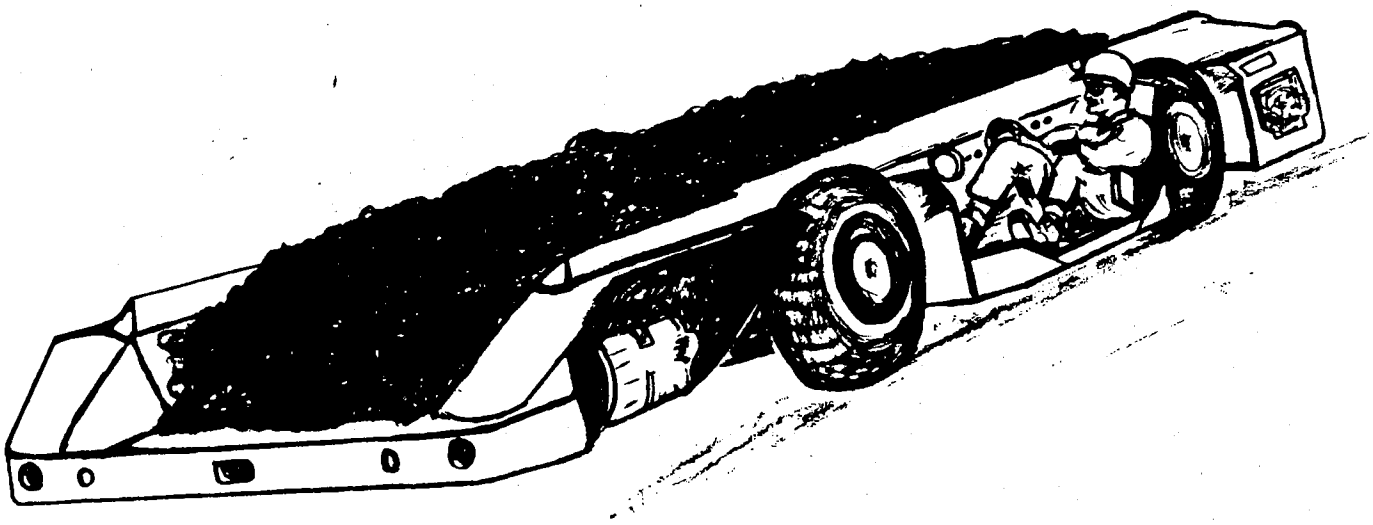
TABLE 4
Longwall Accidents * 1978-1982
By Activity

	1978	1979	1980	1981	1982	Total	Percent
Handling, Load-unload materials	75	117	157	147	122	618	18.6
Walking/Running	23	53	78	64	55	273	8.2
Operate Longwall Shear, Plow	40	51	69	61	45	266	8.0
Machine Maintenance/ Repair	50	54	63	43	50	260	7.8
Advancing Longwall Roof Support	34	37	69	48	39	227	6.8
Non-powered Handtools	31	32	50	43	49	205	6.2
Handling Timber	21	35	28	40	28	152	4.6
Moving Equipment	22	16	31	18	9	96	2.9
Handload/Shovel/ Muck	12	14	24	20	15	85	2.6
Handling Coal	10	16	26	9	16	77	2.3
Cleaning	10	10	11	5	4	40	1.2
Unknown	13	8	4	4	4	33	1.0
Other	134	187	157	170	141	789	23.8
Not Coded	25	28	66	38	42	199	6.0
Total	500	658	833	710	619	3320	100.0

*Includes fatalities, nonfatal days lost, no days lost, non-injuries and occupational illnesses.

HOLMES SAFETY ASSOCIATION

SAFETY TIP



A MUST-face direction of travel

with positive control.

ACCIDENTS:
A GOOSE EGG
SCORE IN '84

April 1984

HOLMES SAFETY ASSOCIATION MONTHLY SAFETY TOPIC

SPRING!

Home Safety

Spring has been officially here for almost one month now and with the season comes spring cleaning, an old American custom. This is the time to repair winter's ravages to our lawns and gardens and for discarding the winter-long accumulations of odds and ends. It's also the time to review the family's safety thinking.

Before beginning your outside activities, you should inspect the lawn and garden tools to be sure they are in good condition. Give extra-special attention to the power mower, a potential source of injury to every member of the family. The mower should be sharp, properly adjusted and adequately guarded. If you are shopping for a new mower, give special consideration to safety features of the various models that are on the market.

The following safety precautions for power mowers should be considered by yourself and also discussed with your families:

1. Know how to disengage clutch or stop engine quickly.

2. Don't fill the fuel tank to top; overflow could result in possible fire or explosion.

3. Don't refill when engine is hot and always refill out-of-doors.

4. Stand firmly when starting mower and make certain your feet are in a safe position.

5. Inspect lawn for stones, sticks, wire, or other debris. Keep by-standers and pets away while mowing.

6. Keep in step with mower.

7. Cut hills and banks sideways, not up and down.

8. Disconnect spark plug or electric plug when working on underside of mower.

9. Don't use electric mower when grass is wet. Make certain power cord is safe and motor is grounded.

10. Don't allow children or inexperienced persons to operate the power mower.

-MORE-

Remember to check your garage, basement, attic and closets for old newspapers, magazines, books, clothing and other odds and ends. Areas cluttered with these items are fire hazards and should be cleaned. Resist your "string-saver" tendencies and don't collect or save quantities of combustible materials. If you must keep such items, limit the quantity and store them neatly in the safest possible places to minimize the hazard of fires.

When planning the family's summer recreation activities, keep safety in mind. This includes instructing all members of the family in specific rules they need to know to prevent accidents and injury. Action on the following suggestions will help insure a safer summer for the entire family:

1. Instruct bicycle riders in elementary traffic rules.

2. Arrange for swimming lessons for nonswimmers in the family.

3. Know water safety rules before boating or water skiing.

4. Teach family to recognize poisonous plants.

5. Emphasize controlled exposure to sun.

If you put this springtime program into effect, everyone will benefit through the coming spring and summer months.

April 1984

HOLMES SAFETY ASSOCIATION MONTHLY SAFETY TOPIC

GOOD HOUSEKEEPING MAKES SAFETY SENSE

Remember the fundamental rule in good, safe housekeeping: A place for everything and everything in its place. Good housekeeping means cleanliness, order and safety. Watch where you place working materials and items you are finished with. Keep them out of corridors, paths, stairs and ledges. Bookcase doors should be kept closed. File cabinet and desk drawers should be kept closed. Pileups on top of cabinets and bookcases could fall off and injure someone.

Telephone and extension cords can be tripping hazards. Take care to keep them out of walkways. But don't put them under rugs - this can be a fire hazard.

When rearranging furniture please don't move it yourself. Get someone with the proper equipment to move it for you.

If you have broken glass to dispose of, put it into a container, mark it clearly - Broken Glass - and then put it into the trash. This could save injury to the person who empties the trash. Be sure to vacuum well in areas where glass has broken.

Good housekeeping also has its health benefits. Sugar and creamer around coffee pots should be kept in sealed containers so they won't attract bugs and rodents.

You spend a good share of your life in your working environment. The condition of that environment has an effect on how you feel about your job. Good housekeeping helps your outlook on the job and helps insure your safety. This is true in the home as well as in the workplace.

April 1984

HOLMES SAFETY ASSOCIATION MONTHLY SAFETY TOPIC

SAFETY IN THE OFFICE

Some of the basic accident prevention items that must be considered in offices are as follows:

Do not lay extension cords across walkways. Remove all extension cords, if possible.

Open one file cabinet drawer at a time.

Load heaviest items in the lower drawers of file cabinets.

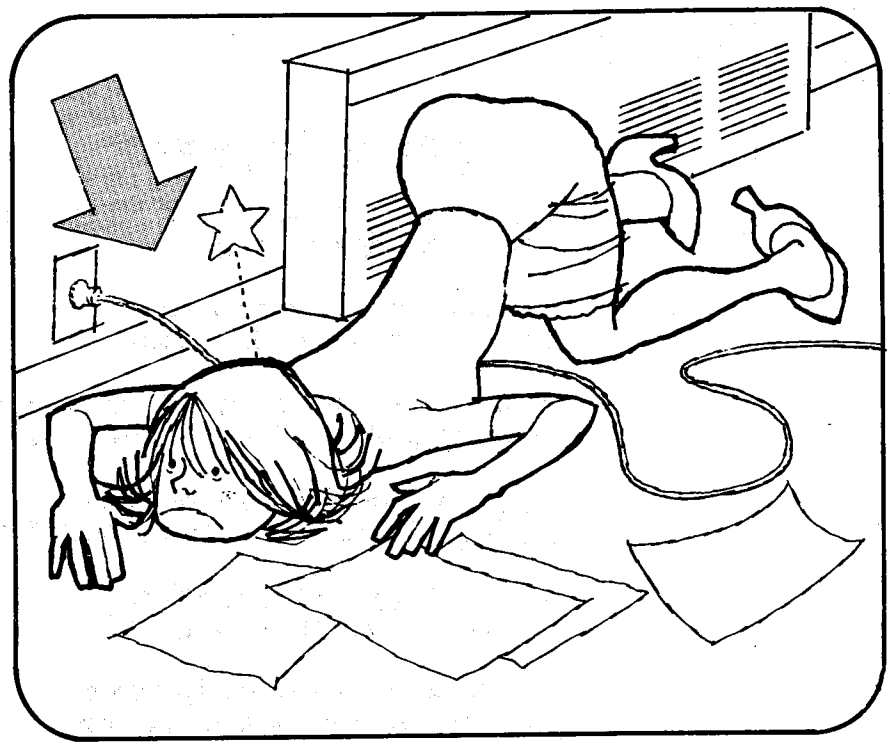
If plastic mats curl, reverse once each week.

Do not leave boxes of materials in walkways.

Pick up paper clips, rubber bands and other small items that fall on the floor.

This is often due to slips, trips and falls over extension cords, plastic mats and inattention to surroundings. Although the office environment is generally considered the safest work environment, many individuals suffer injury every year.

Accident Prevention



April 1984

THE LAST WORD

IN CONTROL

Mechanical contraptions whether developed through combustion, electricity, or atomic energy, carry out the will of the operator, never their own will.

The machines themselves cannot learn from teaching or experience, neither do they act with conscience; they produce results that are destructive or wholesome, depending on the understanding and conscience of those in control. The person behind the machine is wholly responsible for whatever the machine does.

SOUND FAMILIAR?

In the course of accident investigations, how often have you heard this said: "I don't know how it could have happened--he was one of the most careful people I ever worked with!"

If that is true of a careful person, then what of the worker who is lukewarm regarding safety and accident prevention?

* * * * * * * * * * *

The following poem was submitted by:

Robert B. Layton
Mine Foreman
Viking Coal Company
Kingwood, WV

"ODE TO COAL MINERS"

They enter beneath, Mother Earth
Each and every day;

Denies the law of gravity
Just to earn their pay;

With tons and tons of rock above
They complete their tasks with labor, not love;

For each and every moment
Mother Earth may shift and fall;

And for the so unlucky
Destiny may be the call;

So Oh Dear Lord help them
Who labor among the moles;

For today they might never escape the doom
Of their dark, dark, holes.