

MINUTES OF THE MEETING  
LONG-RANGE PLANNING SUBCOMMITTEE  
MONTANA STATE  
HOUSE OF REPRESENTATIVES

January 22, 1985

The meeting of the Long-Range Planning Subcommittee was called to order by Chairman Robert Thoft on January 22, 1985 at 8:02 a.m. in Room 420 of the State Capitol.

ROLL CALL: All members were present.

DEPARTMENT OF JUSTICE, REGISTRAR'S BUILDING: Representative Joe Quilici (15:A:001), House District #71, spoke as a proponent of the maintenance project on the Registrar's Building in Deer Lodge. He said he has looked at the building and the fascia is falling off. He said he felt the building poses a safety hazard and if it is not repaired soon there will be further deterioration of the building.

Chairman Thoft (15:A:008) asked Phil Hauck, Administrator, Architecture and Engineering Division (A&E) to comment on the building in Deer Lodge. Mr. Hauck said A&E has made a study on the restoration of the building, but due to financial limitations the project was not budgeted for funds.

Mr. Bud Schoen (15:A:21), Chief, Registrar's Bureau, Division of Montana Motor Vehicles presented the committee with a report on the deterioration of the Registrar's building (EXHIBIT 1) and an appendix to the report (EXHIBIT 2). Mr. Schoen also provided written testimony (EXHIBIT 3).

Senator Van Valkenburg (15:A:089) asked Mr. Hauck if a second priority ranking was available on projects, such as the Registrar's Building, which did not make the final cut for the Long-Range Building Cash Fund. Mr. Hauck said no. Senator Van Valkenburg asked if this project is the next most important after those which made the first prioritized list. Mr. Hauck said yes and volunteered to make a second priority list of projects which were not included on the first list. Mr. Hauck also said A&E raised the original cost estimate from \$107,000 to \$120,000 for repair of the Registrar's Building.

DEPARTMENT OF STATE LANDS: Mr. Randy Mosley (15:A:124), Administrator, Field Operations, Department of State Lands presented a proposal which will replace fire-crew quarters at two fire stations (EXHIBIT 4).

Since the original request presented to A&E by the Department of State Lands included four projects and none of these made the priority list Chairman Thoft asked Mr. Mosley to submit a letter describing the project to the committee (15:A:156).

DEPARTMENT OF AGRICULTURE - LAB REMODELING PROJECT: Chairman Thoft (15:A:175) said he has received a letter from Representative Rex Manuel concerning funding of the Department of Agriculture's lab (EXHIBIT 5). Tom O'Connell, Chief, Facilities Planning Bureau, A&E said funds for the lab remodeling were originally requested as part of the department's operating budget. Representative Bardanouve said it was requested as part of the operating budget but, due to the size of the request it could be heard by the Long-Range Planning Subcommittee.

DALY MANSION AND UNIVERSITY OF MONTANA TOUR: Chairman Thoft (15:A:233) said the committee will be making a trip to visit the Business School at the University of Montana and to the Daly Mansion in the Bitterroot Valley on Saturday, January 26th.

MONTANA STATE UNIVERSITY, BRICK REPAIR ON JOHNSON AND WILSON HALLS: Mr. Craig Roloff (15:A:272), Acting Director, Administrative Services, Montana State University (MSU) gave an indepth presentation on the deterioration of bricks on Johnson and Wilson Halls at MSU. He said the three major problems with the bricks on these buildings are severe moisture damage, inadequate veneer anchorage or reinforcement and veneer movement, cracking and delamination. He used various diagrams and pictures to illustrate the existing problems and the remedies for them. He said proposed solutions to the problem are the following:

Solutions

1. Replace parapet walls on both buildings. The 1983 Legislature appropriated funding for this purpose and it is being done.
2. Replace brick, in bands on Johnson Tower at each floor beam.
3. Install several expansion joints at each floor of both buildings.
4. Install flashing and weep holes in bands at each floor of both buildings.
5. Selective replacement of badly deteriorating brick on both buildings.
6. Uniform reanchoring of bricks to the structure of both buildings.

Representative Ernst (15:A:576) asked how long the expansion joints will last. Mr. Roloff said it is possible the caulking in the expansion joints could lose some of its better qualities with time but he said he felt it will not be a problem to go back and add caulking. Representative Ernst asked if there had been discussion on replacing the brick back in the 1983 session. Mr. Hauck said A&E did not know the full extent of the problem at the time of the 1983 session.

Representative Bardanouve (15:A:670) said it appears there was poor engineering and architectural work on the buildings and he wondered if someone wasn't liable for the poor work. Mr. Hauck said D of A's legal department is looking into this but there are some problems with the litigation. He said he thought the general contractor on the job must be sued and the poor work was done by the brick mason who is a subcontractor. The subcontractor cannot be sued because he is no longer in business.

Senator Fuller (15:B:029) asked if the contractors didn't have to post bonding. Mr. Hauck said bonding is only in effect for 1 year and there is a question concerning the statute of limitations on this. Representative Bardanouve asked when the buildings were completed. Mr. Hauck said Johnson Hall was finished in 1973 and Wilson Hall in 1974.

Representative Ernst recommended Mr. Young from D of A's legal department make a presentation to the committee on what legal recourse the state has concerning this matter.

Senator Van Valkenburg (15:B:75) asked what it would cost to strip all the brick off and replace it. Mr. Hauck said it would cost about \$2.75 million to do this and he said he felt the proposed solution will take care of the problem for less money. He also said he felt the proposed solution will hold the brick on the buildings except in the event of a hard earthquake. Senator Tveit asked if there would be further deterioration of the bricks still on the building which will not be replaced by the repair process. Mr. Hauck said the aluminum caps on the parapets should take care of moisture getting to most parts of the buildings. Senator Tveit asked why expansion joints were not put in the buildings originally. Mr. Hauck said they were but not enough were installed or placed in the right spots.

Senator Tveit (15:B:184) asked where inspectors were during the construction of these buildings. Mr. Hauck said A&E had two full-time inspectors on the job, MSU had a part-time inspector present and the architect also had one inspector on the job. He said the fact that there were full-time inspectors present on the job clouds the litigation aspect of the problem.

LAW ENFORCEMENT ACADEMY FIRING RANGE: Representative Ernst (15:B:265) said he had called Dean Jim Welsh about the firing range which exists on the Agriculture Experiment Station property at MSU. He said Dean Welsh does have the authority to close the firing range with the concurrence of President Tietz, and would like to do so. There is a public relations factor involved with the Academy since it is tied very closely to the university system and this creates a delicate situation between MSU and the Academy. Representative Thoft suggested committee members write to MSU, the Academy and the Department of Justice requesting the closure of the firing range. Mr. Craig Roloff (15:B:311) said MSU has just signed a lease which puts all responsibility and liability concerning the firing range with the Attorney General's Office and suggested letters be directed there.

Senator Fuller (15:B:608) suggested President Tietz and the Attorney General's Office try to work out a solution to the safety hazard that exists at the present firing range. He asked if an alternative sight could be considered as a solution and asked President Tietz to report back to the committee with their findings. Chairman Thoft said he felt the committee should take a hard line approach to the closing of the firing range due to the concern of citizens owning homes in the immediate area.

EXECUTIVE SESSION: Madalyn Quinlan, Staff Analyst, Legislative Fiscal Analyst Office reviewed the Long-Range Building Fund cash requests from each state agency and the following action was taken on each department's funding requests.

#### University System

Chairman Thoft asked that the Johnson/Wilson Hall project be considered at a later date. Representative Ernst (16:A:176) moved that all five project requests, with the exception of the Johnson/Wilson Hall Brick Replacement, be approved for funding. The motion passed unanimously. \$2.072 million in total funding was approved.

#### Department of Administration

Senator Fuller (16:A:235) asked if the committee could wait to take action on the building modifications to the old Liquor Warehouse for the Publications and Graphics Division, due to concerns being expressed by local businessmen. He said the project should be looked into a little more..

Senator Fuller (16:A:334) moved the committee approve D of A's funding requests, excluding the building modifications for Publications and Graphics, and adding the Asbestos Abatement project. The motion passed by a majority. Senator Van Valkenburg wished to go on the record as voting no on this motion, because of his concerns about the Publications and Graphics proposal. \$1,428,335 in total funding was approved.

#### Historical Society

Senator Fuller (16:A:390) moved the committee approve the project request from the Historical Society. The motion passed unanimously. Authorization was given to spend \$425,000 in private funds.

#### School for the Deaf and Blind

Senator Ernst (16:A:404) moved the roof repair project for the School for the Deaf and Blind be adopted. The motion passed unanimously. \$67,700 in funding was approved.

#### Department of Highways

There was some discussion by the committee on the statewide maintenance project proposed by the Department of Highways. Representative Bardanoue asked if A&E had reviewed this project request. Tom O'Connell said this is the only project that A&E did not review. He said most of the funds are used in a variety of ways to energy retrofit highway buildings across the state. Senator Van Valkenburg said the committee is trying to encourage preventive maintenance and he said he felt the Highway Department is doing that with this proposal.

Representative Ernst (16:A:581) moved the committee approve all of the Highway Department's requests for funding. The motion passed unanimously. \$1,524,000 in funding from the highway gas tax account was approved.

#### Department of Justice

Chairman Thoft (16:A:661) suggested the committee wait to approve the request for a new Law Enforcement Academy until a solution to the firing range problem is resolved.

#### Department of Commerce

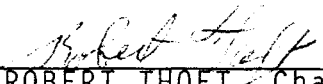
Mr. O'Connell gave the committee a handout on the Capital Land Grant Fund balance (EXHIBIT 6). The committee decided to postpone action on the \$25,000 funding request for planning of the Centennial Center to a later date.

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January 22, 1985  
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Representative Ernst (16:B:63) moved the committee approve funding for the roof replacement on the Yellowstone Airport in Gallatin County. The motion passed unanimously. \$50,000 of the airport's proprietary funds were approved for this project.

CULTURAL AND AESTHETIC PROJECTS: Madalyn Quinlan, Staff Analyst, Legislative Fiscal Analyst Office passed out the schedule of hearings for Cultural and Aesthetic projects for the remainder of the week (EXHIBIT 7).

There being no further business before the subcommittee the meeting was adjourned at 10:31 a.m.

  
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ROBERT THOFT, Chairman

DAILY ROLL CALL  
LONG RANGE PLANNING SUB COMMITTEE

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49th LEGISLATIVE SESSION -- 1985

Date January 22, 1985

NAME	PRESENT	ABSENT	EXCUSED
Rep. Robert Thoft, Chairman	X		
Sen. Fred Van Valkenburg, Vice Chair	X		
Sen. Dave Fuller	X		
Sen. Larry Tveit	X		
Rep. Francis Bardanoue	X		
Rep. Gene Ernst	X		

Exhibit #1

1-22-85

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ARCH. & ENGR. BUREAU

NOV 02 1984

HELENA, MONTANA



# CAST-STONE CONSERVATION REPORT

## REGISTRAR'S BUILDING



CAST-STONE CONSERVATION REPORT

REGISTRAR'S BUILDING  
925 MAIN  
DEER LODGE, MONTANA

PREPARED FOR:  
Department of Justice  
Helena, Montana

PREPARED BY:  
James R. McDonald  
James R. McDonald Architects P.C.  
210 North Higgins, Suite 343  
Missoula, Montana  
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JUNE 1984

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## INTRODUCTION

The Department of Justice and the Architectural and Engineering Department have been concerned about the deterioration of the cast-stone facade of the Registrar's Building in Deer Lodge, Montana. There has been considerable deterioration of the facade, especially on the west and south sides of the structure, which experience severe weather patterns.

An architectural analysis was required to assess the extent of deterioration of the stone, what is causing the deterioration and what should be done to conserve the stone. The following report assesses the cast-stone and its deterioration, and makes recommendations for conservation of the structure.

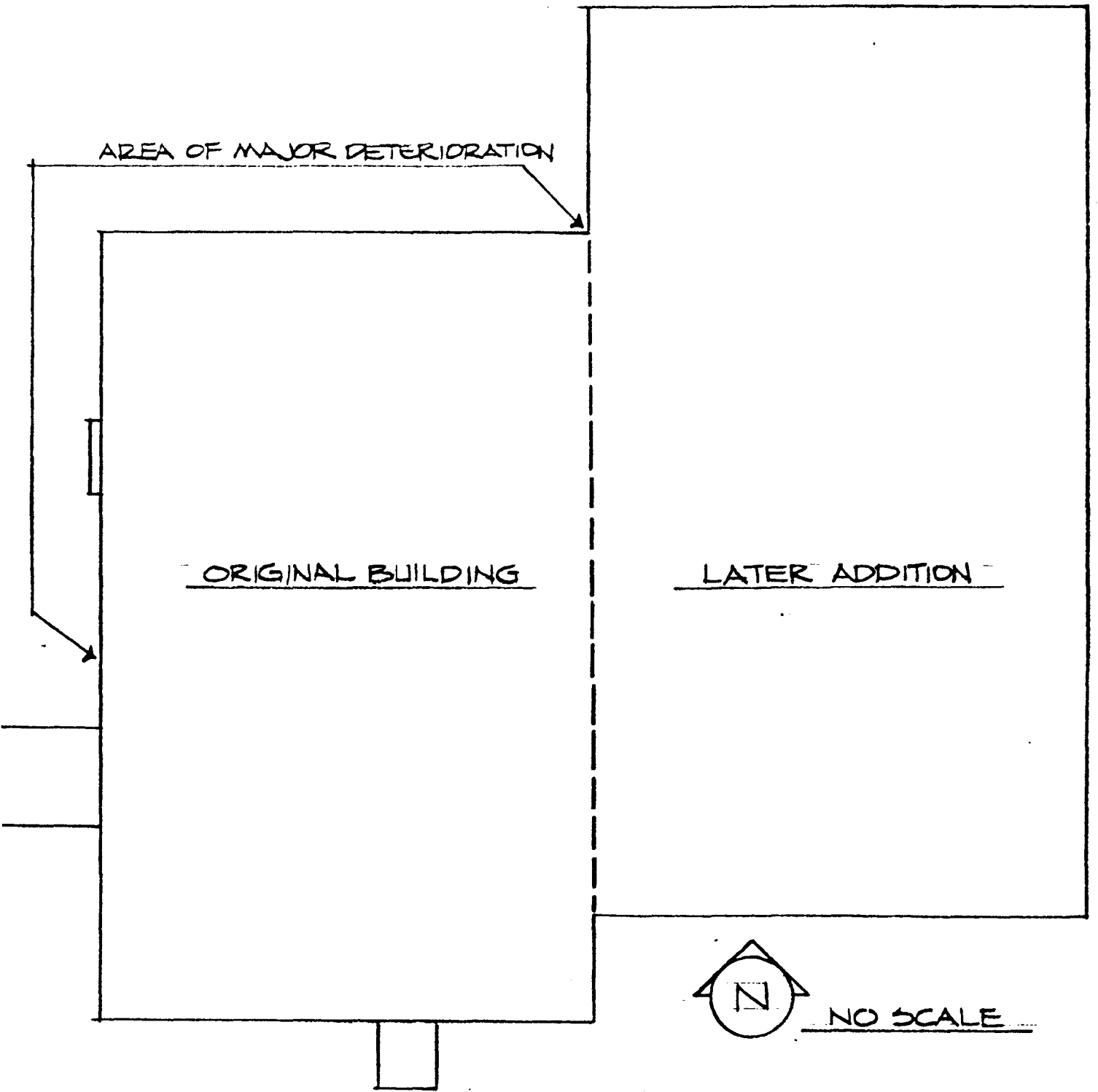


Figure 1: Plan of Registrar's Building, Deer Lodge, Montana.

## HISTORY

The Prison Administration Office (Registrar's Building) was built in 1918 to accommodate the warden and his staff outside the walls of the main prison. It was built at a time when people were looking for easier and less expensive ways to construct stone buildings, so they looked to "imitation stone" (cast-stone) rather than natural stone.

The Ideal Concrete Machinery Company of Cincinnati, Ohio and Sears, Roebuck Co. of Chicago, Illinois were two companies that created the cast-stone or sold machines for the contractor or homeowner to do his own building. (See Appendix A.) The cost was about a third of natural stone. This process was very popular from 1900 to the 1920s and was used around the City of Deer Lodge as well as the State of Montana.

The Registrar's Building was built in the Neo-Classical style and is an historically and architecturally significant building in Deer Lodge.

## ARCHITECTURAL ANALYSIS

### Introduction

In trying to determine the make-up of the cast-stone in the Registrar's Building and causes of deterioration, it was important to analyze the stone. The surface of the structure was analyzed to ascertain problem areas and samples were taken from the building to determine the make-up of the stone. The following photographs and written documentation reveal what was found on the building.

## SURFACE INVESTIGATION

The Registrar's Building is made up of a cast-stone material that was popular in the construction industry from around 1900 to the 1920s. It was the answer to what was considered the high cost of crating a natural stone building.

Cast-stone was used as a building material using the dry process, in which the mixture is dampened only enough to cause the cement and the aggregates to adhere or cling together under slight pressure. When the mixture is tamped into a machine mould it can be removed as soon as it is shaped into the desired form and set aside to dry and harden.

The blocks themselves are made up of a rich cement mixture with fine aggregate (in this case marble dust) on the face and the body mixture made up of a larger aggregate and as little cement as possible; thus the center is more of a filler. The outer surface provides the decoration and the finished appearance.

### Problems

The main problem with this type of block is that if there is any way for water to get into the center of the block the porous filler material will absorb water, and if there is any freezing of the surface it will cause spalling of the harder surface of the block. The following series of photos shows some of the problem areas.



The walls, pilasters, base, cornice and sills are all cast-stone.

Figure 2: Looking northwest at the front of the building.

The porch has been repaired within the past few years.



Figure 3: Looking east at main entrance to building.



Note masonry that was applied to the cornice and spalled block areas.

Figure 4: Looking southeast at the building





Joints at cornice have deteriorated.  
Note staining around joints suggesting  
water penetration.

Figure 5: Spalled area over personnel  
office entrance on the  
west side.

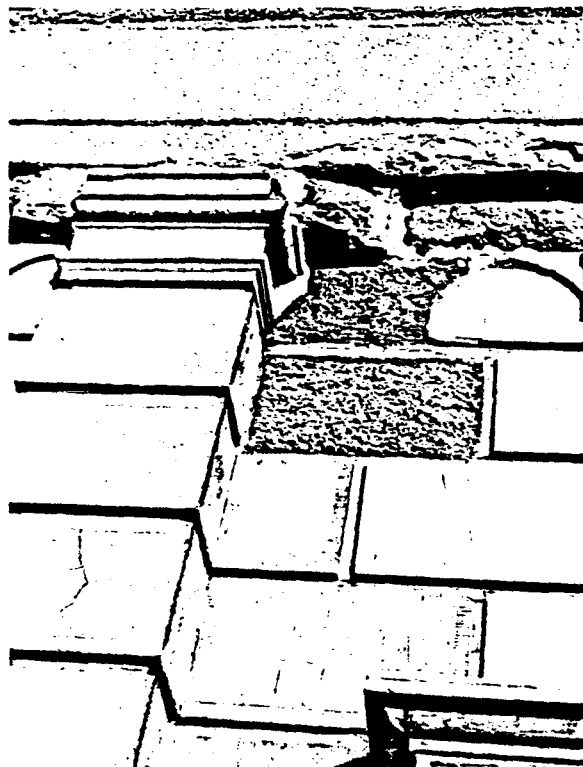


Figure 6: Detail of spalled area over entrance to personnel office.

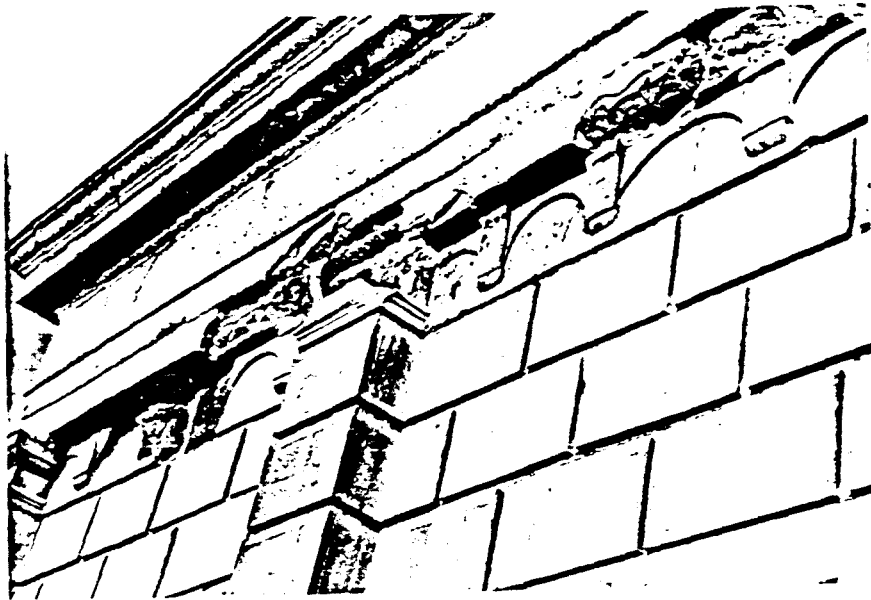


Figure 7: Detail at cornice showing extent of deterioration on west side.

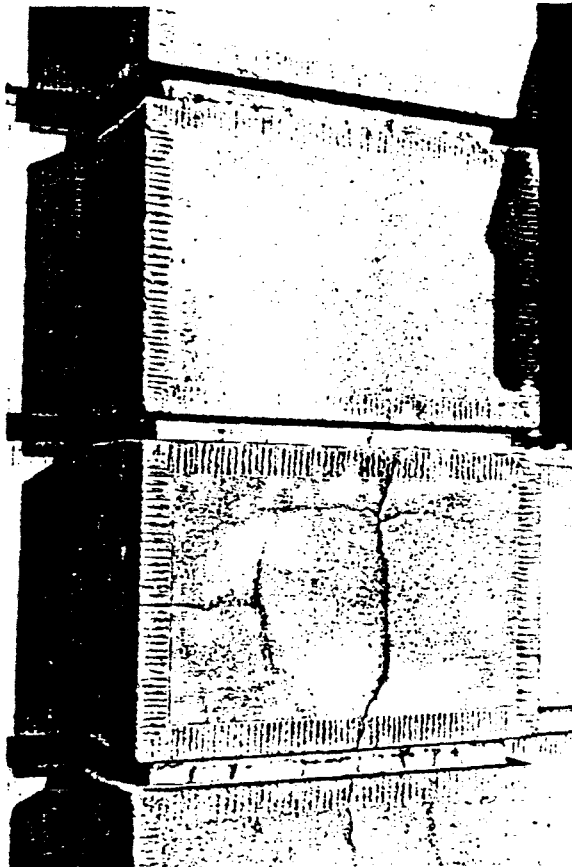


Figure 8: Detail of cracked face of stone suggesting pressure from behind the hardened surface.

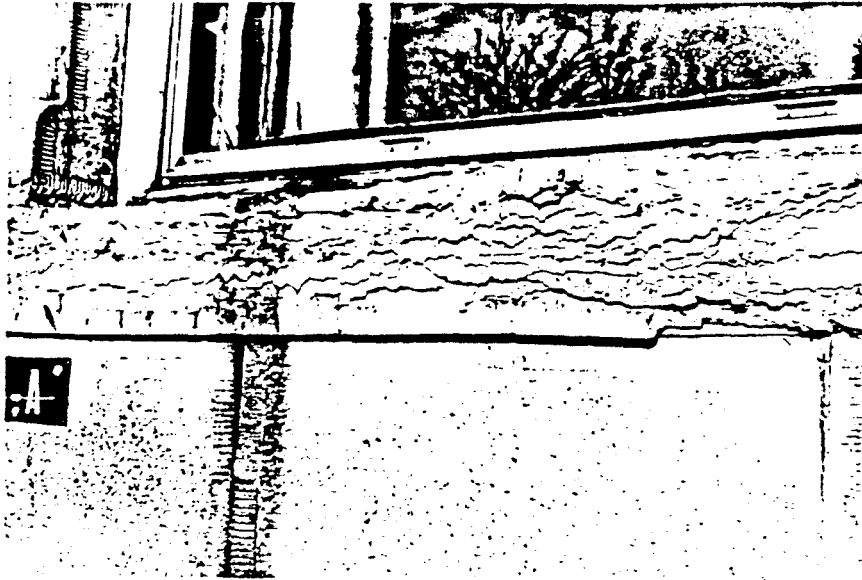


Figure 9: Detail of fissuring of sill below window on west side, caused by freezing of the material.



Figure 10: Looking east at north wall of main structure.



Note water penetration on the sill and base.

Figure 11: Looking at detail of spalled area on north side.

Note harder outer surface of block and inner filler surface.



Figure 12: Detail of spalled surface on north wall.



Note masonry wash on base below  
sills coming off.

Figure 13: Detail of sill under  
window. Discoloration  
of surface denotes water  
penetration from water  
above.

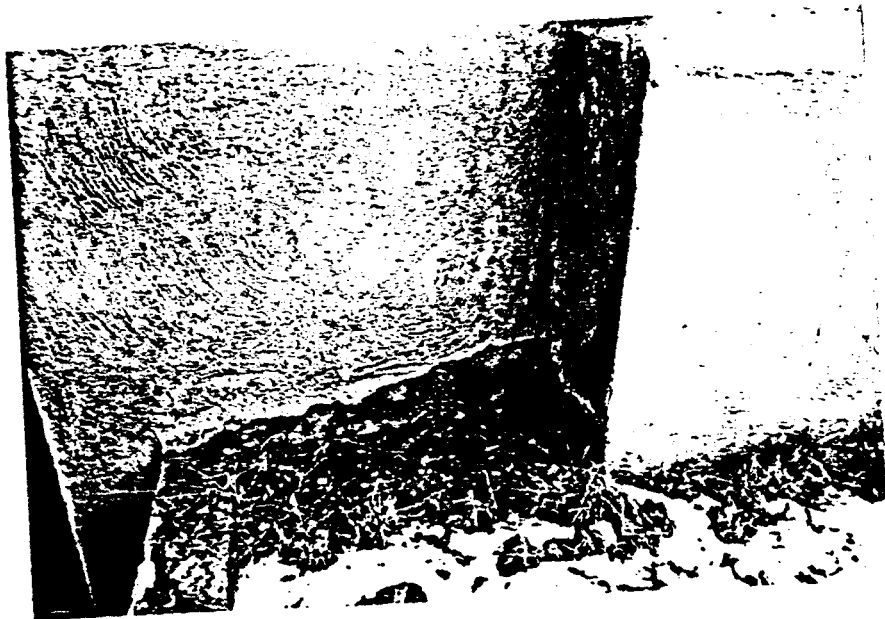
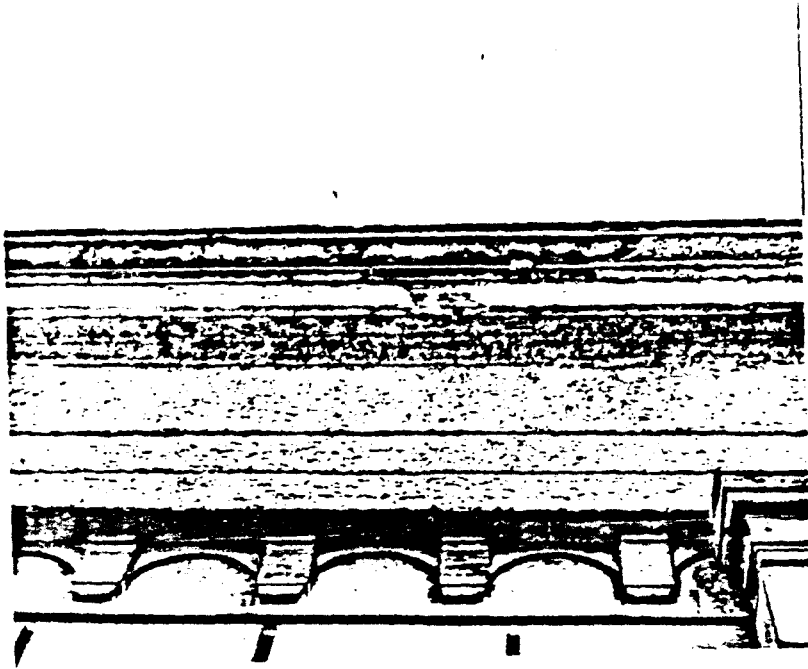


Figure 14: Detail of spalling of masonry wash from base of building.



Masonry wash is spalling because of absorbing moisture. The masonry joints and wash appear to have water penetration from above where the roof was in bad shape.

Figure 15: Detail of cornice with masonry wash.

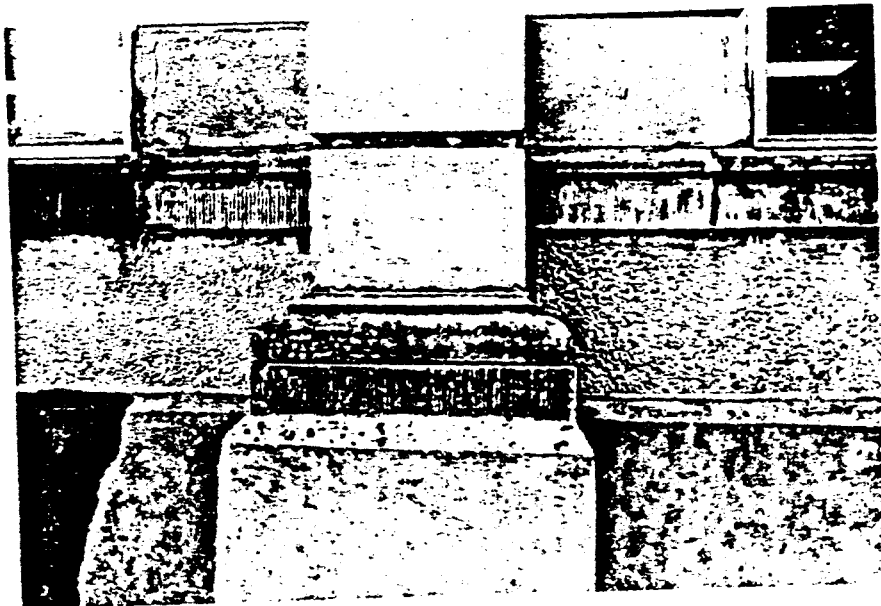


Figure 16: Detail of cast-stone base showing water penetration and cracking.

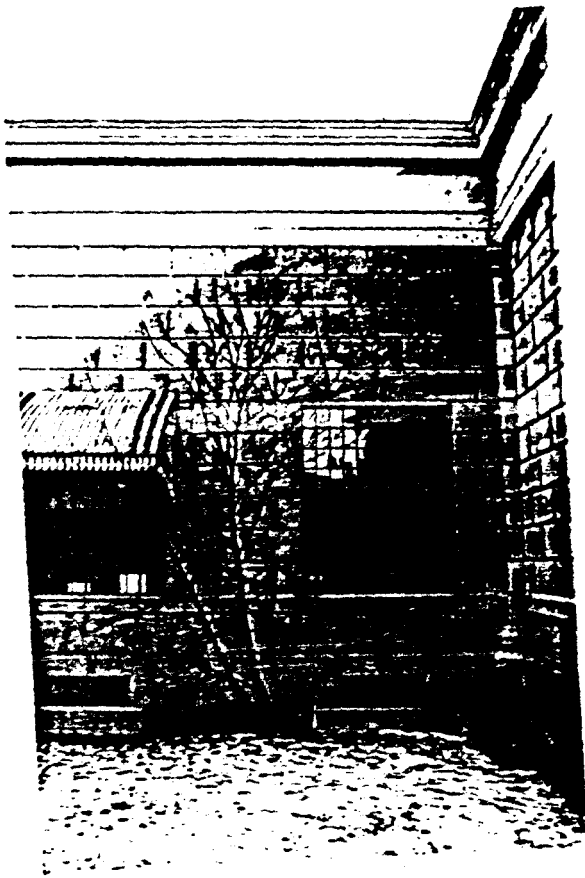


Figure 17: Looking north at intersection of old building and later addition.

This area appears to be in good shape except for minor repointing. The cornice has had some water penetration, i.e., staining and deteriorated joints, probably because of water penetration from the roof.

Wall is cast in place and appears to be in good condition.

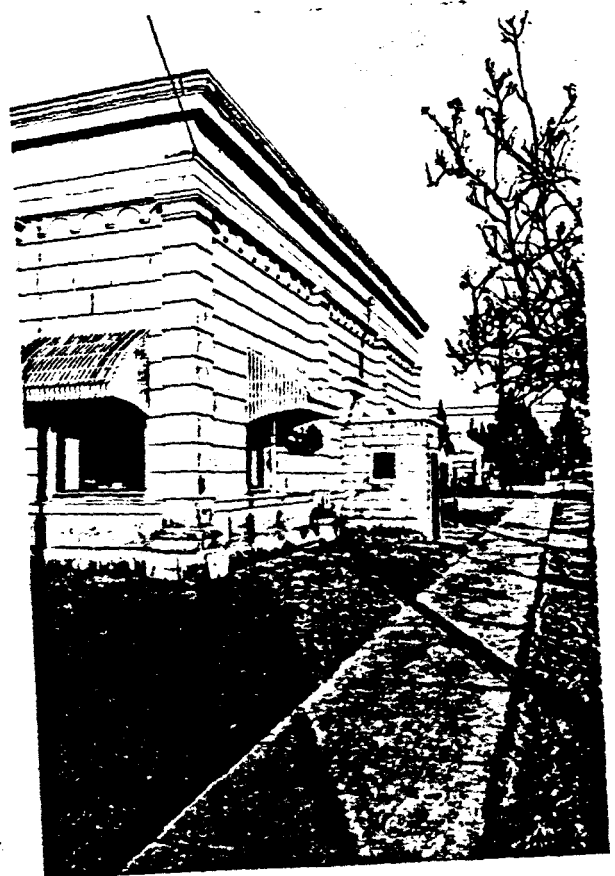
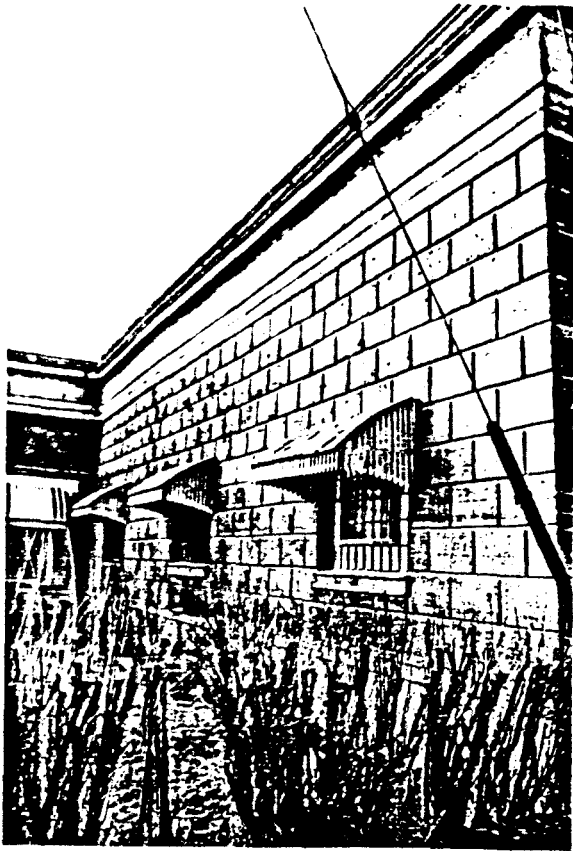
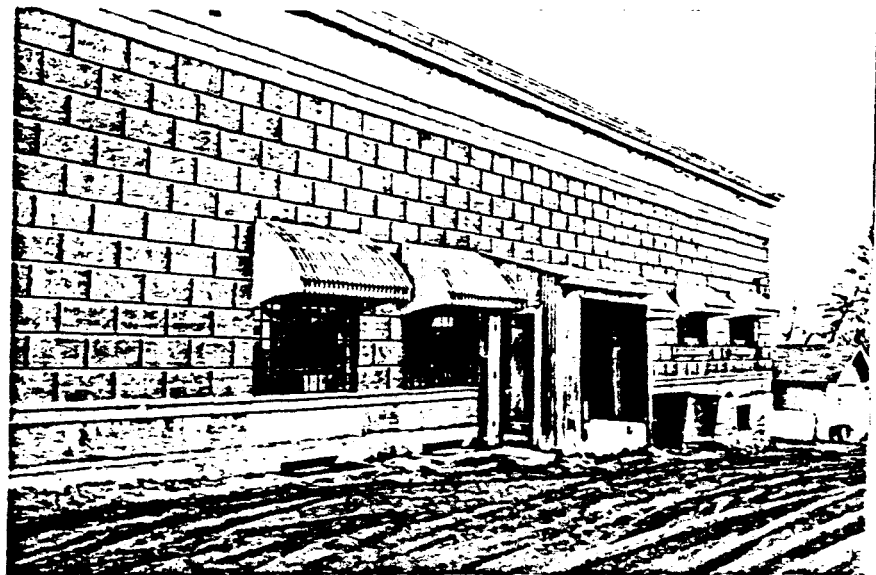


Figure 18: Looking northeast at wall of structure.



Caulking at cornice. Good condition.

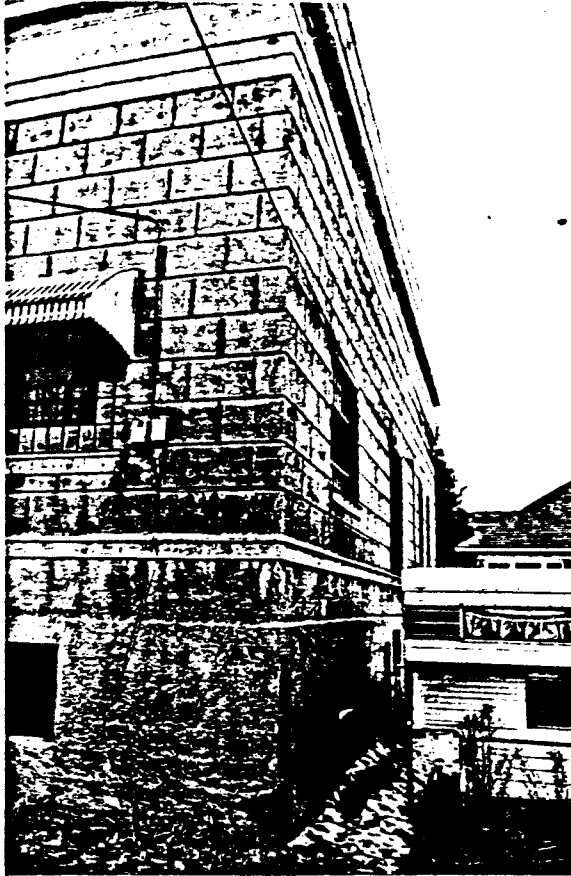
Figure 19: Looking at south side of addition.



Caulking at cornice.  
Good condition.

Figure 20: Looking at east side of later addition.





Caulking at cornice. Good condition.

Figure 21: Looking at north side of building.

## RECOMMENDATIONS

Analysis of the cast-stone reveals little else from whatever was known from the manufacturer's literature on make-up of the stone. The softer center portion can be scraped away fairly easily with the hand. Therefore, in making recommendations for the building it was determined to cast new stones or parts of the stone anchoring into the wall or adjacent stones.

The recommendations for restoration and conservation of the cast-stone are as follows:

1. Remove all deteriorated stone at least halfway into the block to get a good solid surface.
2. Remove all masonry wash from cornice area.
3. Cast new concrete blocks to match color, texture, shape, and form. Replace with mechanical anchors and point.
4. Pressure wash building with mild cleaner.
5. Repoint all loose and missing mortar.
6. Cover wall with a water-repellent seal.
7. Continue to check flashing and roofing on top of wall for leaks. Possibly look at EPDM surface in future.
8. Paint all windows and doors.

## COST ESTIMATE

The following costs were established based on material to be removed, casting stone, cleaning, pointing and sealing of all surfaces. The costs are as follows:

1. Removal of deteriorated stone	\$ 9,000.00
2. Removal of masonry wash from cornice	5,400.00
3. Cast new stones	29,900.00
4. Clean building	16,700.00
5. Repoint 50% of mortar	16,700.00
6. Water-repellent seal	5,400.00
7. Paint windows and doors	1,080.00
8. Miscellaneous expenses	<u>1,000.00</u>
SUBTOTAL	\$ 85,180.00
CONTINGENCY 10%	<u>8,518.00</u>
SUBTOTAL	\$ 93,698.00
A/E FEES, PERMITS, ETC.	<u>14,000.00</u>
TOTAL PROJECT COST	\$107,698.00

Exhibit #2

1-22-85

APPENDIX A

CAST-STONE MACHINES AND BLOCKS  
FROM 1908 SEARS CATALOGUE

# CONCRETE BUILDING BLOCK MACHINES

**OUR CONCRETE BLOCK MACHINES ARE THE BEST IN THE WORLD. THEY WILL MAKE MORE BLOCKS PER DAY THAN ANY OTHER MACHINES, THEY WILL MAKE BETTER PROPORTIONED AND BETTER FINISHED BLOCKS THAN ANY OTHER MACHINES AND THEY WILL MAKE MORE MONEY FOR YOU. OUR PRICES ARE LESS THAN ONE-HALF THE PRICES ASKED FOR OTHER MACHINES NOT HALF SO GOOD AS OUR MACHINES.**

**THERE IS BIG PROFIT IN MAKING CONCRETE BUILDING BLOCKS.**

**THIS REMARKABLY PROFITABLE BUSINESS** has been wonderfully developed in the past few years until now it is one of the leading industries of the country. It is of great interest to the property owner because concrete building blocks are better and cheaper than either lumber, brick or stone, and by their use his buildings can be erected cheaper, better and more artistic in design than with other building materials, at the same time insuring warmth in winter, coolness in summer, more substantial construction and protection against fire. It is beneficial to the contractor and builder because of the cheapness of concrete building blocks compared with other building materials and because of its adaptability to all building purposes. It is a boon to the village lumber and building material dealer because it enables him to build up his business by adding concrete products to his line with most satisfactory profits to himself and with still greater profits if he makes blocks to sell in his own yards. He can purchase either a simple or a very complete outfit from us at wonderfully low prices.

## WE PUBLISH A SPECIAL CONCRETE BUILDING BLOCK MACHINERY CATALOGUE

which will be sent free to anyone who will write and ask for it. This valuable book contains large and handsome illustrations of our complete line of concrete building block machinery, the highest grade and very best concrete block machines, and in plain, simple and complete descriptions of everything. It explains to you why our machines are better, faster and more perfect than any other machines and quotes the machines at prices below all competition. This big free book gives a world of information about the concrete industry and the past and present uses of concrete in its various forms. It contains illustrations of the products which can be made with our machinery, such as sidewalks, curbs, steps, cotecases, benches, etc., which can be built from these products. It gives many reasons why concrete is superior to all other building materials, and treats at length upon the concrete building block branch of industry, in which the farmer, the village building material dealer, the small contractor or builder, and the ordinary property owner is most interested. It tells you what cement is made of, what kind of cement and other material to use for different purposes, how to proportion and mix the cement and other material for successful concrete block work, how to make the blocks, how to color the face of the blocks, what kind and how much coloring to use, how to mix and use the coloring, how to mix the mortar for laying the blocks, how to lay the blocks, how and when to plaster directly on the blocks, how to apply pebble dash or any other finish and how to waterproof the blocks. In fact, this free book tells you almost everything about concrete block making, and how to secure the best results and the biggest profit by using our low priced, high grade, up to the minute concrete block machines.

It tells you what cement is made of, what kind of cement and other material to use for different purposes, how to proportion and mix the cement and other material for successful concrete block work, how to make the blocks, how to color the face of the blocks, what kind and how much coloring to use, how to mix and use the coloring, how to mix the mortar for laying the blocks, how to lay the blocks, how and when to plaster directly on the blocks, how to apply pebble dash or any other finish and how to waterproof the blocks. In fact, this free book tells you almost everything about concrete block making, and how to secure the best results and the biggest profit by using our low priced, high grade, up to the minute concrete block machines.

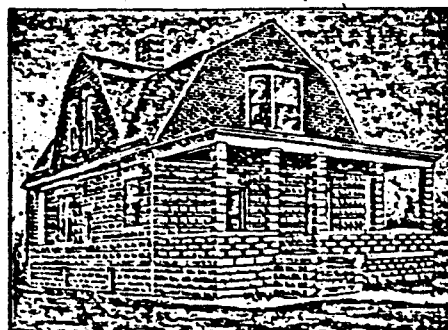
**CONCRETE IS A BUILDING MATERIAL** made of cement, mixed in varied proportions with coarse materials called aggregates, and dampened with water. The aggregates may consist of either sand, gravel or crushed stone, or all of these combined, the proportions of the cement and the aggregates and the amount of water used being regulated by the required strength of the concrete product, the method by which the mixture is made into form, and the manner in which it is to be used. There are two methods of making concrete. One is known as the wet process, in which the mixture is made wet enough so that it can be poured into a specially prepared mould, in which it remains until it has set and hardened. The other is known as the dry process, in which the mixture is dampened only enough to cause the cement and the aggregates to adhere or cling together under slight pressure so that when the mixture is tamped into a machine mould or flask it can be removed as soon as it is made into the desired form and set to one side to dry and harden.

**GROUTING, WHICH IS THE WET PROCESS MIXTURE,** has been thousands of years. It has been determined that the pyramids of Egypt were made by this process. These are concrete buildings in Rome which have been in use for over 1,400 years; in England and Ireland these are castles and towers which were built of this material hundreds of years ago, proving conclusively that concrete is the most durable of all building materials. The United States Government has adopted this material for building extensive public improvements, such as harbor walls, breakwaters, etc., and the great railroad companies, contractors, and public corporations use it in building bridge piers, culverts and foundations for buildings of all kinds. The wet process is not generally used except in extensive building operations because the form or mould must be built especially for every part of the constructive work, but the invention of machines for making building blocks places the farmer, the material dealer, the small builder and the ordinary property owner in position to make use of this wonderful building material and at a cost far below that of any of the other materials now in use.

**HOLLOW CONCRETE BUILDING BLOCKS** are made by the dry mixture process, the only process by which concrete products can be made in a machine allowing the formed block to be removed immediately from the mould or flask and the machine to be used continuously for making additional blocks. Any form, shape or design of block may be made by machinery depending only on the adjustment of the machines, and anyone either with or without skill or previous experience can make perfect blocks with our concrete building block machines, because our machines are both simple and perfect and the instructions which we provide are so simple and complete that no one can fail to obtain satisfactory results with them. Concrete blocks for building purposes are generally made hollow, to permit air circulation in the walls of the building while still allowing the blocks to be made of the correct size and with the smallest amount of material consistent with the required strength. The mixture is tamped into the mould or flask of the machine and when the block is completed it is taken out of the machine on its pallet and set away to undergo the curing process, which takes from ten to twenty days. During the curing the block crystallizes until it becomes hard enough to be laid in the wall, and this crystallization continues from year to year until the block finally becomes almost like flint in hardness and durability.

## ANYONE, ANYWHERE, CAN MAKE MONEY

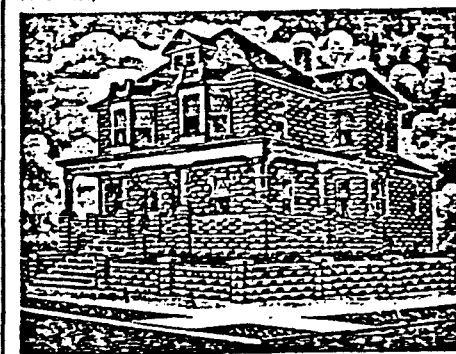
and lots of it by engaging in this new and attractive business. There is a big demand for concrete building blocks and this demand is increasing with wonderful strides. Concrete blocks are now being universally used for buildings on the farm, in the villages and in cities. The market for making the blocks aside from the cement, that is, sand and gravel, can be found anywhere and costs almost nothing, and the cement can be bought very cheaply. No experience is necessary because the work is simple and our instructions are thorough, and at our extremely low prices you can purchase a very complete concrete building block machine and outfit for a very small amount of money. No matter whether you engage in the business extensively or only to fill in on rainy days and idle hours, you will find it profitable, and if you are a farmer the blocks you would use in your own buildings will more than save you the price of a good machine.



A Cottage built of Hollow Concrete Building Blocks.

**FARMERS AND SMALL LAND OWNERS** who have gravel pits or sand banks on their property are the ones who can reap the greatest benefits and make the most money in the use of concrete building block machines, because, aside from the cement used, which is only about one-fifth of the whole, their material costs absolutely nothing, while they can sell the blocks for as much as the man who is compelled to buy his sand and gravel. The farmer can employ men to make concrete blocks all the time and at other idle periods, or he can make the blocks alone on rainy days and at other idle periods, or he can make the blocks alone if he employs no help. He can build his own house, his barn and other farm buildings all with material of his own making, and he can sell his surplus products at a large profit. A modest concrete block making outfit of our make costs but very little and every farmer who can use one to advantage should not hesitate in making the investment. The saving you would make on one building alone would more than pay for a good outfit, aside from the profit you would make by selling the blocks.

## OUR CONCRETE BUILDING BLOCK MACHINES



House, porch columns, balustrade and retaining wall all built of Hollow Concrete Building Blocks.

and the special concrete block moulds, concrete brick machines, concrete mixers, etc., which are shown on the following pages, are the very highest type and highest grade of concrete working machines which it is possible to manufacture. This is particularly true in relation to our Wizard Concrete Building Block Machines, which are the best designed and best made building block machines on the market. They are the only strictly automatic concrete block machines made so far as we know, and they will give you better proportioned, better made and better finished blocks than any other machines and at about twice the speed of the average machines. This perfection has been reached through the efforts of our manufacturers, who are thoroughly practical concrete machine designers and builders employing the highest class of mechanics and the most up to date methods of manufacture combined with the practical and theoretical knowledge of the expert whom we employ continuously for the sole purpose of improving our concrete machinery and keeping it in the lead of all other machines.

## OUR PRICES ARE EXTREMELY LOW.

While the quality and efficiency of our concrete working machinery is as high as the highest,

## OUR THIRTY DAYS' FREE TRIAL AND TEST OFFER

our prices are very much lower than others ask for machines of inferior grade and only about one-half the prices you would be compelled to pay for machines which would where near approach ours in quality, and we honestly believe that you cannot buy elsewhere at any price machines as efficient and satisfactory as ours. We can afford to make low prices because we have our machines manufactured in large quantities under special contracts. The manufacturers have no selling or collection expenses, as we take their output directly to the user. Our method of selling direct to the user is far more economical than that of the ordinary dealer; there are no jobbers', wholesalers', agents' or middlemen's profits of any kind to pay; our prices are based on the actual cost of the material and labor with but our one small profit added, allowing us to sell to our customers at prices which are really as low or lower than the biggest jobbers would have to pay for the same class of goods. We furnish you the best concrete working machinery which can be made, and we effect a big money saving for you in our wonderfully low prices.

## WE GUARANTEE OUR CONCRETE MACHINERY

against all defects in material and workmanship for one year from date of shipment, by which guarantee we agree that should any piece of defect in material or workmanship during the term of the guarantee we will make it good by furnishing free new parts to take the place of the defective parts.

## WE GUARANTEE SAFE DELIVERY.

Our concrete machines are prepared and protected for shipment in the best possible manner. Breakage or loss of parts in transit is very rare but should any part be damaged, broken or lost while in transit, we will promptly send you such parts as are necessary to replace the damaged, broken or lost parts, free of charge, and will prepay the transportation charges so that you will not incur any expense.

## ABOUT THE FREIGHT CHARGES.

Our concrete working machines are shipped direct from the factory and at a very low rate of freight, only about 40 cents per 100 pounds for 200 miles, about 75 cents per 100 pounds for 300 miles and about \$1.20 per 100 pounds for 400 miles. The freight charges on the Wizard Concrete Building Block machine with full outfit, weighing about 220 pounds to Auburn, Indiana, would be about \$1.72, or to Lewiston, Maine, about \$2.86, or to Manhattan, Kansas, about \$6.60. The freight charges which you must pay are, as you will note, very small, almost nothing compared with the saving you will make by sending your order to us. Don't let the freight question worry you; we will save you money no matter where you live.



A Small Store Building made of Concrete Building Blocks.

# THE WIZARD

# CONCRETE BUILDING BLOCK MACHINES

AUTOMATIC IN THE REAL SENSE OF THE WORD

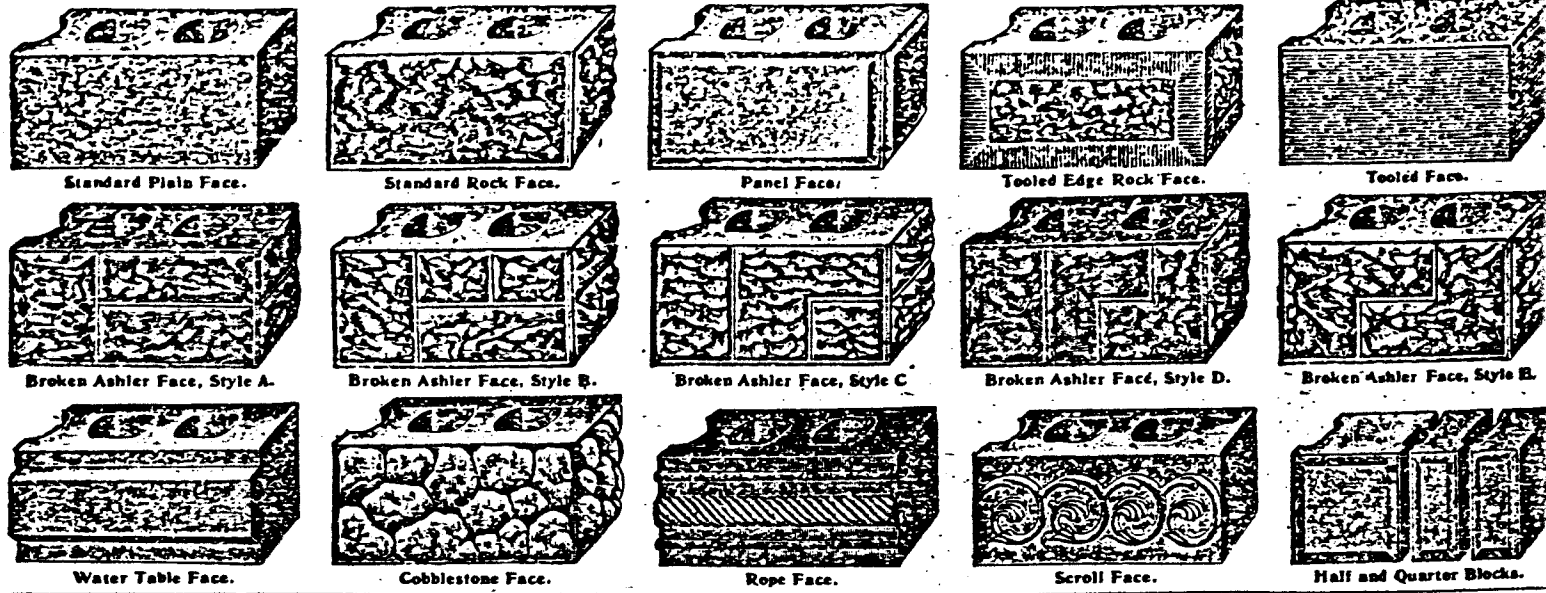
THE RAPID BLOCK PRODUCERS—THE BIG MONEY MAKERS

OUR WIZARD CONCRETE BUILDING BLOCK MACHINES which are described and priced on the following three pages represent the very latest type of development in concrete building block machinery, and so far as we know they are the only strictly automatic block machines on the market at the present time. They are automatic in opening and closing, they are locked automatically, the cores are drawn automatically and just the pressure of the foot lever causes the cores to enter and take their places instantly. These machines produce a perfect block because they square up perfectly, lock rigidly and open without jarring, and because the shape of the cores is such that no tamping is required before the cores are entered into the mould, consequently there is no hard tamped parting line below the cores to cause the block to crack, as there is in blocks made in other machines. It is the hard tamped parting line and the jarring of the machine when turning and closing the mould which breaks the blocks and causes the greatest trouble for the block maker who uses the usual type of machine. There is none of this trouble in the Wizard.

**THE WIZARD BLOCK MACHINE** is made in various sizes, to meet all requirements. In the standard length of block, namely 16 inches long, we can furnish separate machines for making blocks 8 inches high by either 8 inches, 9 inches, 10 inches or 12 inches wide, and in the 4-inch length of block we can furnish separate machines for making blocks 8 inches high by either 9 inches or 12 inches wide. You can purchase a separate machine for each size of block, or you can purchase one or more separate machines and as many of the different interchangeable moulds as you wish, depending upon the completeness of the outfit you want, because all of the different sizes of moulds fit onto the same frame or stand and each is complete with all the parts necessary to make the change, which change can be made easily and quickly. In height and in length blocks made with our concrete building block machines are  $\frac{1}{4}$  inch less than the measures given. This is to allow for the mortar joint.

THE WIZARD IS THE MOST RAPID BLOCK MAKER on the market and it is strictly a one-man machine; that is, one man can operate it as easily and we believe as rapidly as two men can operate an ordinary machine costing twice as much as we ask for the Wizard. This is what the automatic features accomplish for you; in other words, we furnish you a machine at about one-half the price others ask, with which you can make blocks about twice as fast as on other machines.

**THE FOLLOWING ILLUSTRATIONS** show fourteen different designs of blocks which can be made on either size of Wizard Building Block Machine, with the face plates and end doors for which we now have patterns and whenever a new design becomes popular we shall add it to our list. The illustrations show blocks with two cores, as made on the 16-inch machine. The blocks made on the 24-inch machine have three cores, otherwise their general appearance is the same as in these illustrations. Blocks made on the Wizard machines have about 33% per cent of air or core space and 66% per cent concrete material, this being the standard of proportion recognized as requisite for proper strength in the block and economy in materials. Face plates for making one-half block and two quarter blocks at the same time, as shown in the last of these fifteen illustrations, can be furnished for either size of machine in any of the different designs. The regular outfit with each machine includes a set of face plates and end doors for making standard plain face blocks and a set of face plates and end doors for making standard rock face blocks, there being a face plate for whole blocks and a face plate for half and quarter blocks in each set. You can order your machine fitted with sets of face plates and end doors for any two of the different designs in place of the two standard designs without extra charge, and you can order as many sets of face plates and end doors of the other designs as you wish, allowing our catalogue price for each additional set ordered.



**OUR MACHINES MAKE THE BLOCKS FACE DOWN.** This is the only perfect block can be made, using fine material for the face and coarse material for the body of the block. You can make the face mixture as rich as you wish and the body mixture with the smallest amount of cement allowable, thus producing a high class beautifully faced block at the least possible cost. You can make blocks of any desired color in the face mixture without wasting coloring matter in the body of the block; and with as perfect a machine as the Wizard is, using a correct mixture and tamping it properly, you are assured of a perfectly made and perfectly finished block every time.

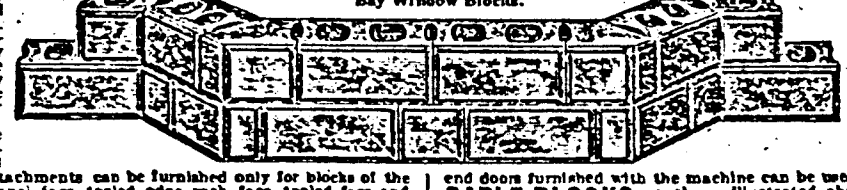


**THE SHAPE OF THE CORES** in blocks made with the Wizard Block Machines, as shown in this illustration, is radically different from that in general use. Most machines make blocks with square cornered cores, compelling the operator to tamp the mixture next to the face of the block before the cores are inserted in the mould, thus leaving a hard tamped parting line in the core line of the block which makes it weak and liable to crack or separate. This parting line and the square core corners are the causes which result in cracked blocks and only a very slight jar is required to crack the blocks under these circumstances. The cores of the Wizard blocks are elliptical. This allows you to lay the face material, insert the cores and fill the mould with coarse material before starting to tamp, because in the tamping the tamper follows the core sides and the mixture is tamped in the face of the block and under the cores just as hard as in any other part of the block and without any tamped parting lines. There are no square corners to start cracks and the arched form of the core sides adds greatly to the strength of the block. If your mixture is right, and it is very easy to secure the proper mixture, every block made in the Wizard machine will be a perfect block.

**THE REGULAR OUTFIT** furnished with our Wizard Building Block Machines enables you to make standard plain face and standard rock face blocks (or any other two designs you select instead of these) in whole, half and quarter blocks (or any other two designs you select instead of these) with return ends, whole blocks for return or inside corners, joint blocks and gable blocks. We make attachments for these machines, which are not included in the price of the machines, but which can be ordered at the time the machine is ordered or at any other time, at the prices shown in our catalogue. These attachments and extras are as follows:

**BAY WINDOW BLOCK ATTACHMENTS.** Bay windows are generally made at an angle of 45 degrees but they can be made at any angle desired.

This illustration shows how to lay up bay window blocks so as to break joints and make the bay as large or as small as you wish. We can furnish with either Wizard or Buckley building block machines adjustable bay window block attachments which will make both inside and outside angle blocks. A bay window block attachment consists of a face plate having an adjustable end piece for forming the angle end of the block, and a side from making bay window blocks. This attachment can be used for making three-quarter blocks with square ends which will often be found very convenient. These attachments can be furnished only for blocks of the following designs: Plain face, rock face, panel face, tooled edge rock face, tooled face and cobblestone face. When ordering you must be careful to tell us which design of face you want and to allow our catalogue price for the attachment.



**FOUR-INCH COURSE BLOCK ATTACHMENTS.** While any of the different face designs a full height blocks (8 inches) can be used for belt courses and while the water table face is most generally used for this purpose, it is frequently desirable to use blocks only 4 inch in height for belt and trimming courses. These 4-inch blocks can also be used in connection with 8-inch blocks to obtain a broken ashler effect in the wall. We can furnish 4-inch course block attachments with either Wizard or Buckley building block machines. A 4-inch course block attachment consists of a face plate for making two whole blocks, a face plate for making two half and four quarter blocks, a pair of return end doors, four dividing pallets for making the half and quarter blocks, and two dividing pallets for the length of the block. As you will note we only furnish dividing pallets with the attachment, but you will require as many dividing pallets as you wish to make moulds per day, and these should be ordered when you order the attachment; however, the same dividing pallets can be used with attachments for different designs of blocks. These attachments can be furnished only for blocks of the following designs: Plain face, rock face, panel face and tooled face. When ordering you must be careful to tell us which design of face you want and to allow our catalogue price for the attachment and for such extra dividing pallets as you see fit to order.



**CIRCLE BLOCK ATTACHMENTS.** Circular bay windows, or swell fronts or circular corners, require blocks having circular faces. We can furnish with either Wizard or Buckley building block machines two of the two standard designs, 10-foot radius and 12-foot radius circle block attachments in the water table design, but it requires separate attachment for each different radius and face design. A circle block attachment consists of a face plate for making whole blocks and a pair of core end doors with dividing pallets for the fractional blocks. When ordering be careful to tell us which design of face and which radius you want and to allow our catalogue price for the outfit.

**SPECIAL FACE DESIGNS.** The regular outfit of our Wizard Building Block Machines includes the face plates and end doors for making whole, half and quarter blocks, with plain ends, core ends and return ends, a standard plain face and standard (medium) rock face design, or your choice of any two of the designs illustrated on this page. If you wish any of the other designs or a shallow rock face or a heavy rock face be sure to tell us which design you want and to allow our catalogue price for the extra which you order. We list the face plates for making whole blocks, the face plates for making fractional blocks, and the right hand and left hand doors separately, so that you need order only such face plates and end doors as you wish; but for a complete set of face plates and end doors for any machine you would require one face plate for whole blocks, one face plate for half and quarter blocks, one right hand and one left hand end door. The plain end doors and end doors furnished with the machine can be used in making blocks of any face design.

**GABLE BLOCKS,** signs which you have with your machine, the dividing plates and this work being furnished with the machine.

# \$ 42<sup>50</sup> WIZARD CONCRETE BUILDING BLOCK MACHINE

## THE WIZARD IS THE BEST

CONCRETE BUILDING BLOCK MACHINE MADE

It contains all up to date scientific improvements known to this class of machinery. In offering you this high grade machine, we claim it has no equal and that it is superior to concrete block machines which are sold as high as from \$100.00 to \$200.00.

**THIS ILLUSTRATION** shows a Wizard Concrete Building Block Machine closed and ready to receive the concrete material for making the block. Observe its compact construction and note that every part is mechanical in detail; that is, it will automatically accomplish the work itself with but little assistance from the operator. These machines should not be confused with many concrete block machines of other makes, which are no more than mould boxes, flasks and forms. The Wizard is made to perform practically all the work and not you, and such a valuable consideration, together with many other superior qualities, places the Wizard in a higher class than so called concrete block machines which are only mere contrivances made to assist hand labor. We give you a machine which will do the work in greater proportion and much faster than it can be accomplished by any other method.

**THE FRAME** is well proportioned and supported the flask or mould from jarring, sagging or shifting when the block is being made. A large percentage of blocks are broken during the process of their making in other machines because the frame or stand of the machine they are made on is too weak to prevent the jarring of the flask. A mere glance at the Wizard will show the substantial construction of the frame of our machine, which eliminates all possibility of blocks becoming cracked or broken by jarring of the flask or mould.

**THE FLASK OR MOULD** is constructed according to the face down principle. All parts of the flask or mould swing from perfect centers which gives the mould a perfectly square shape when it is closed and completely releases the block when the mould is opened. The face down feature of the mould gives the block a sharp and compact face, enables you to obtain a better proportioned mixture and makes it necessary to use coloring only for the face of the block. It also makes it possible to use a fine quality of mixture for the face of the block and a coarser mixture for the body of the block. The mould is proportioned so as to permit the proper percentages of air space and bearing area, making them about 33% per cent air space or cores and 66% per cent bearing surface. All parts of the mould which are put into action during the process of making a block, work automatically in opening and closing the form; this is produced by their connection to levers which are moved by the operator.

### THE LEVERS

are two in number and are used by the operator in turning the mould forward in the course of releasing the block. The end doors are separated from the block when the levers are pressed and the face plate is withdrawn by a straight away release when the levers are lifted; also the entire mould is swung back and away from the block with the same operation which is used in withdrawing the face plate. These three actions completely release the block so that it can be carried away on its pallet. In closing the mould the same levers are used and the same number of operations are required. The time required for all operations both in releasing and in closing the mould is only a small fraction of a minute and the work is all performed by the two levers and does not require the handling of any other part of the machine. This is one of the automatic features of our Wizard machine.

### THE CORES ARE TWO IN NUMBER

on the 16-inch machine and three of them are used on the 24-inch machine. They are spaced in such a manner as to allow the concrete while being tamped sample operation directly under the center of the cores. This shape of core is very superior to all others because it gives the blocks strength directly under the cores and sufficient strength to the top floor, which eliminates the possibility of the blocks cracking or breaking while being removed from the machine. The cores are attached to the automatic core extractor by a steel rod which swings between a yoke. This prevents binding when they are being withdrawn by the extractor.

8x8x16 INCHES

COMPLETE WITH BIG OUTFIT

As listed and described on page 577.

**OUR AUTOMATIC CORE EXTRACTOR** is a wonderful improvement on modern concrete block machinery. The old way of extracting the cores by hand, weights and levers has been overcome by this our modern method. It takes a great deal of time to insert and extract the cores by hand and it is hard work, considering the way the concrete material is tamped around the cores. **OUR WIZARD CONCRETE BLOCK MACHINE** is provided with this automatic core extractor which extracts the cores automatically when the flask is turned over to release the stone and the simple act of stepping on the foot treadle inserts the cores when the mould is turned back for the tamping of the concrete mixture for a new block.

**THE REGULAR OUTFIT** such as is most generally used in making a standard variety of blocks. Special attachments, such as Bay Window, Circle Block and 4-Inch Course Block Attachments, are extra and are furnished only when ordered and proper price allowed. The regular outfits furnished with the machines are illustrated and described on the following page.

**THE SHELF** adds a valuable feature to our Wizard machine. The operator in making a block can use only one tool at a time and the shelf is a most convenient place upon which to place the remaining tools and keep them within easy reach when he wants to use them, otherwise they would be thrown on the floor and kick about, making it necessary to look for them when they are wanted. All of this takes time and you can easily see the great amount of time and stooping that is saved by this shelf.

**THE PALLET** is an important part of a concrete block machine because much depends upon it. Weak and uneven pallets will crack the blocks. Wood pallets will warp and get out of shape and they become too expensive. We have provided our Wizard machine with cast iron pallets of proportionate weight and strength. These pallets have handles on them so that the operator needs no carrying device to lift the block out of the machine and carry it away. Twenty-five pallets are furnished with each machine, but you should have as many pallets as you wish to make blocks per day.

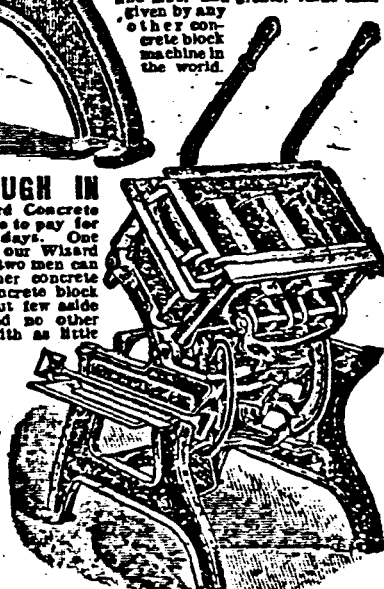
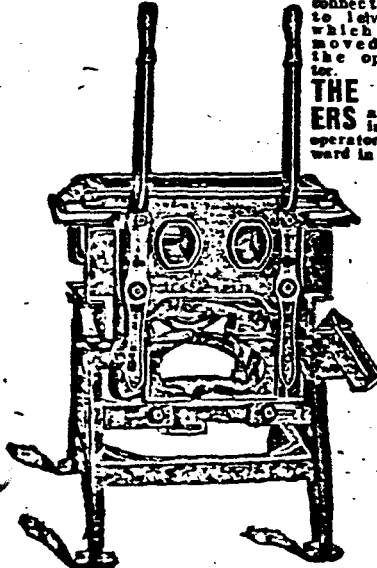
### THE WIZARD HAS NO COMPLICATED ADJUSTMENTS

such as are found on concrete block machines of other makes. There are no gears, sprockets, ratchets, springs, screws or slides to get out of order or clog up with concrete mixture when you are at work. In order to obtain the full capacity from any concrete block machine, it is necessary that the machine shall work smoothly and without a hitch, for should you have to stop in the midst of your work to adjust complicated parts and clean gears, ratchets or slides which become clogged up with concrete mixture that spills over the side of the mould during the tamping of the block, you cannot receive the full capacity of the machine. It is well to consider that your profit depends upon the quality and number of blocks your machine makes in a fair day's work and when you own a Wizard Concrete Building Block Machine you receive the full benefit from your investment and labor and greater value than is given by any other concrete block machine in the world.

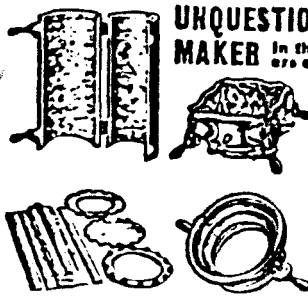
### YOU SAVE ENOUGH IN LABOR

on our Wizard Concrete Block Machine to pay for the machine in sixty days. One man can make blocks on our Wizard machine about as fast as two men can make them on any other concrete block machine. All concrete block machines make blocks, but few aside from the Wizard make perfect blocks and so other

machines will make them so rapidly and with as little exertion and expense on the part of the operator as the Wizard. We know of several instances where one man has made a perfect block on the Wizard in one minute's time. We do not mean to say that every one under all conditions can make a block for every minute of the working day, but we simply mean to illustrate the speed of which the machine is capable and the great amount of work it is possible for you to do alone on this machine. If it takes two men to operate other makes of concrete block machines in order to get a fair product for one day's work and the cost of labor to do the work is approximately \$2.00 per day for each man, add \$2.00 a day for every day you use a man to assist you to the price of the machine and you will find that it will make the machine an expensive one. You buy our Wizard Concrete Block Machine and you operate it alone and you can make a better block and about as many blocks as two men could make on the other machine. You save that \$2.00 a day that you would have to pay for the extra man had you the other machine; deduct that \$2.00 saved every day from the price paid for the Wizard and you will find that this saving of \$2.00 a day will in a very short time pay for your Wizard machine and all over that can be applied to your net profit. Should you choose to operate the Wizard Concrete Block Machine with two men you can do so and by so doing you will double its capacity.



# UNIQUE PORCH COLUMN, PIER, RAIL AND BALUSTER MOULDS

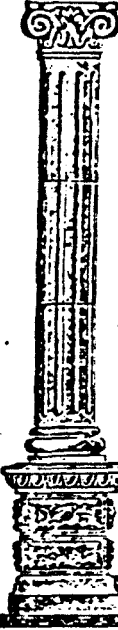


**UNQUESTIONABLY THE BEST MONEY**

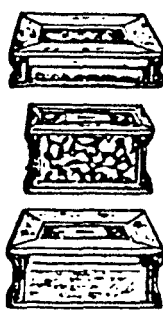
**MAKER** in the business, because 90 per cent of the owners of concrete block machines are not equipped with an outfit for making porch materials, and the demand for such materials for use with concrete block houses and frame buildings is becoming greater every day. Porch materials command big prices on account of their scarcity and it depends upon the design of the materials as to the price you receive. We believe that an outfit, such as we describe and illustrate on this page, will not only bring you the best prices but bring you 95 per cent of the trade for these materials.

**YOU WILL HAVE NO TROUBLE IN DISPOSING** of the products of this outfit at

enormously large profits, because of the artistic designs and the complete form in which they are made, and their comparatively small cost will attract the attention of every builder. No residence is complete without a porch, and no concrete block plant is complete without our Unique Porch Mould Outfit. Why not be up to date if you are a concrete block manufacturer and complete your line by adding this big profit making outfit to your list? You will have to show the customer what you make before he buys from you. Perhaps he thinks that such a complete and artistic line of porch materials cannot be made of concrete? If so, it is up to you to show him that it can be made, and the only way to do so is to convince yourself first by purchasing an outfit from us at our astonishingly low prices.

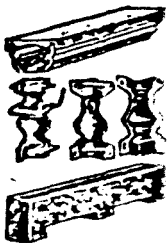


Fluted Column with Gothic Capital, Rock Face Pier, and Egg and Dart Pier Cap and Rail.



**\$150.00 OUTFIT FOR \$57.25**

**WE ARE OFFERING** our Unique Porch Column, Pier, Rail and Baluster Mould Outfit complete in either of two designs for about one-third what others ask for an outfit not half as complete as this one. The outfit consists of 12-foot Plain Column Mould with fluted attachment for making plain and fluted columns; 1 Ornamental Column Capital in either Ionic or Gothic design; 1 O. G. Round Column Base Mould; 1 O. G. Square Pier Base Mould; 1 Pier Body Mould in choice of design; 1 Pier Cap Mould in either Plain or Egg and Dart design; 1 Plain Bottom Rail Mould; 1 Set of Four Half Baluster Moulds; and 1 Top Rail Mould in either Plain or Egg and Dart design. The ten small illustrations on this page show the complete outfit of moulds and the two column and rail illustrations on each side of the page show the products which can be made with the moulds. Every column mould is complete for making plain or fluted columns, so that it makes no difference how you order this part, because it is furnished complete, so that you can make a fluted column with or without ornamental pier or rail, or you can make a fluted column with or without ornamental pier or rail. Be sure to state the size column wanted, and design of capital, pier and rail wanted.



**THE VARIOUS DESIGNS** of moulds for the Pier Body are as follows: Rock Face, Panel Face, Tooled Face, Tooled Margin Rock Face, and Bush Hammer Face designs. The design of Pier Cap is Plain and Egg and Dart Moulding. The design of Top Rail is Plain and Egg and Dart Moulding. The design of Column Capitals are Gothic and Ionic. In ordering your outfit or separate moulds, state the size of column wanted and the design of various moulds wanted.

**WE GUARANTEE EVERY OUTFIT** or mould to be perfect in construction and material and, if not found satisfactory after ten days' trial, you may return the outfit at our expense and we will refund all money paid, together with freight charges.

## PRICE LIST OF UNIQUE OUTFITS AND SEPARATE MOULDS, SHIPPED FROM FACTORY IN CENTRAL WISCONSIN.

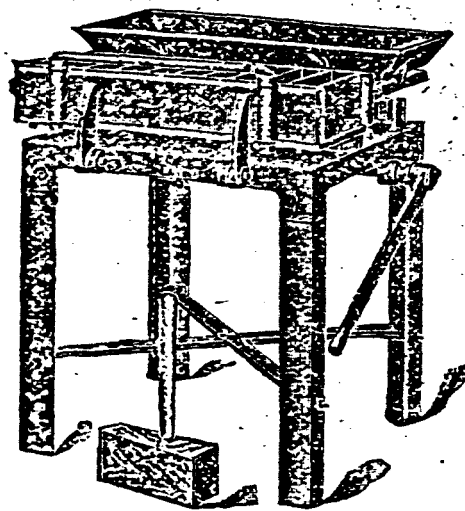
No. 32K5830 10-inch Unique Porch Column, Pier Rail and Baluster Mould Outfit, complete. State design wanted. Shipping weight, 632 pounds. Price.....\$57.25  
 No. 32K5831 12-inch Unique Porch Column, Pier Rail and Baluster Mould Outfit, complete. State design wanted. Shipping weight, 757 pounds. Price.....\$65.50

SEPARATE MOULDS	FOR 10-INCH COLUMN			FOR 12-INCH COLUMN		
	Catalogue No.	Wt. lbs.	Price	Catalogue No.	Wt. lbs.	Price
O. G. Round Column Base Mould	32K5834	40	\$ 4.32	32K5844	60	\$ 5.18
Combination Plain and Fluted Column Mould	32K5835	130	11.25	32K5845	155	13.40
Ornamental Cap Mould (Gothic or Ionic)	32K5836	80	8.62	32K5846	100	10.35
O. G. Pier Base Mould (State design wanted)	32K5837	70	6.92	32K5847	70	8.04
Pier Body Mould (State design wanted)	32K5838	60	6.92	32K5848	85	8.22
Pier Cap Mould (Plain or Egg and Dart)	32K5839	60	8.25	32K5849	76	9.45
No. 32K5854 Porch Bottom Rail Mould. Shipping weight, 65 pounds.						Price.....\$5.22
No. 32K5855 Baluster Half Mould. Shipping weight, 13 pounds.						Price.....1.04
No. 32K5856 Porch Top Rail Mould. (Plain or Egg and Dart.) Shipping weight, 70 pounds.						Price.....6.05

Plain Column with Ionic Capital, Panel Pier, and Plain Pier Cap and Rail.



# OUR \$57.25-HANDY TWO-WAY TEN-BRICK SIZE BRICK MACHINE



**IT IS THE ONLY TWO-WAY BRICK MACHINE MADE THAT WILL MAKE FACE DOWN AND ROUGH WALL BRICK FACE UP. ONE MAN CAN MAKE 3,000 PERFECT CONCRETE BRICK IN ONE DAY.**

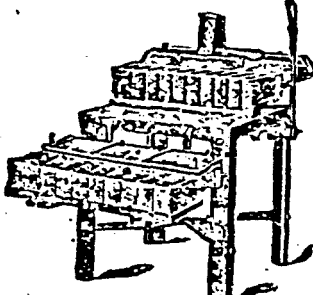
**CONCRETE BRICK IS JUSTLY POPULAR** because it replaces the common clay brick and is just as nicely finished and more durable than the clay brick. Concrete brick costs the same as the clay blocks. They become harder by age and cannot be destroyed by fire. Concrete brick buildings together with concrete block and grout buildings, have lived through severe fires, such as the Baltimore and San Francisco fires, in which buildings of clay brick and stone have been totally destroyed.

**NO CONCRETE BLOCK PLANT IS COMPLETE** without our Handy Two-Way Ten-Brick Size Machine, because, if you are in the concrete building material business, you are sure to have frequent calls for concrete brick by people who want concrete building material other than concrete blocks. This has been the experience of many of our customers who did not possess a good concrete brick machine, and as they had no facilities for making concrete brick they lost some large and profitable orders for concrete brick. We recommend that you be prepared for such emergencies by possessing one of our Handy Two-Way Ten-Brick Size Machines.

**THE COST OF CONCRETE BRICK** is about 30 per cent less than common clay brick and about 65 per cent less than pressed clay brick. It takes about \$4.50 worth of material to make 1,000 concrete brick, and if the cost of labor on our Handy Two-Way Ten-Brick Size Machine is \$1.20 per 1,000 brick, the cost of 1,000 concrete brick made on the Handy machine, including material and labor, would be \$5.70. The average cost of common clay brick is \$8.00 per 1,000 and the average cost of pressed clay brick is \$17.00 per 1,000. These figures, which are taken as an average cost in different localities, would make the cost of concrete brick \$2.30 per 1,000 less than common clay brick and \$11.30 per 1,000 less than pressed clay brick.

**YOU RECEIVE TWO MACHINES IN ONE** when you buy our Handy Two-Way Ten-Brick Size Machine, that is, a machine that will make bricks on either the face down or face up principle. Brick machines which are sold by others make brick only one way, either on the face down principle or face up principle, and even then they ask over twice the price we ask for our Handy Two-Way Ten-Brick Size Machine.

**A PERFECT IMITATION OF THE FINEST PRESSED BRICK** can be made on our Handy Two-Way Ten-Brick Size Machine, because you can use a colored and better quality facing on this machine when the bricks are made on the face down principle, the same as concrete blocks are made on our Wizard Concrete Block Machine, and almost any style ornamental design brick can be made on this machine, because it is on the face down principle. You can make a common concrete brick that is not finished on the face down principle. Bricks of this character are used for filling in purposes or the building of back walls, or walls which do not require a finished face brick. This style of brick is made on the face up principle and they are made directly face brick. This method of making the brick increases the output about 1,000 brick more than the face down principle way, because it is less work than the face down method and does not require the turning of the machine over to relieve the brick, as is required when the machine is operated on the face down principle.



**THE QUALITY AND FINISH** of our Handy Two-Way Ten-Brick Size Machine is of the very best. Every part that comes in contact with the forming of the brick is machine planed and milled; every piece of steel used for the division plates and ends are of the best quality steel known, and they are ground by high speed grinders to exact dimensions and are polished to a high finish so that they deliver the brick smoothly and with a finish like that of pressed brick. Our Handy Two-Way Ten-Brick Size Machine is put together by the best mechanics obtainable, and every part of the form that goes to shape a brick is exact in dimensions, so that when the ten concrete bricks are delivered from the machine they are all of uniform and standard size and the edges are sharp and solid.

**THE SAME GUARANTEE** is given with our Handy Two-Way Ten-Brick Size Machine as is given with our concrete block machine. If it is not as described by us and you are not satisfied after ten days' trial, you may return it to us and we will cheerfully refund you the money paid for it, together with the transportation charges.

**YOU DO NOT WANT TO FILL AN ORDER** with faced brick when it calls for common brick and when you have only been paid the price for common brick and your customer would not feel satisfied if you filled his order with common brick when he ordered faced brick and he paid you for face brick quality. Well, that is what you would have to do if you possessed the brick machine sold by others, because it would be one of the two principles, either face down or face up or you would have to own two different machines at an investment equal to the price of four of our Handy Two-Way Ten-Brick Size Machines. With our Handy Two-Way Ten-Brick Size Machine, you can fill an order for any quality, faced or common brick and ornamental design brick also, and your investment will be in but one machine which will cost you less than one-half the price asked by the others for our two-way principle machines.

**THE OUTFIT CONSISTS** of one of our Handy Two-Way Ten-Brick Size Machines, one hopper, one mallet, one float, one steel strike, and two sample wood pallets. Shipped from the factory in Central Wisconsin. No. 32K5830 Handy Brick Machine, complete with regular outfit. Shipping weight, 430 pounds. Price.....\$57.25  
 No. 32K5831 Special Ornamental Face Plates. Weight, 3 pounds. Price, each, per brick.....4.00



1-22-85

REGISTRAR'S BUILDING  
Deer Lodge  
January 18, 1985

The original building was built in 1918 using cast-stone material. The cast-stone blocks are made up of a rich cement mixture with marble dust on the face. The body mixture is made up of a larger aggregate and as little cement as possible so the center of the block is more of a filler.

The problem with this type of block is that the porous filler material absorbs water and when the surface freezes it causes chipping and crumbling of the harder surface of the block. This is the problem we are experiencing.

Many of the blocks are literally falling apart. It was becoming so dangerous for people entering or leaving the building that we had a contractor remove the loose material in July of 1983. He hauled away about a half-pickup full of rubble. Refer to page 7 of the enclosed report. A part of one of the blocks that probably weighed about 20 pounds was lifted from the wall above the doorway of the Personnel Office. If the door had been slammed enough times the jarring would have eventually worked the broken part loose and it could have fallen on someone's head.

On page 8, figure 7, you can see where the masonry on the cornice is falling off. Some pieces are as big as my hand and someone could be injured if the piece went flying through the air during a strong wind. Figure 8 shows the cracking of the stone surface caused by the absorbent filler after freezing. Page 9, figure 9 shows fissuring of the sill. Page 10, figure 12 shows an example of the inner filler. More damage on pages 11 and 12.

Page 16 and 17 lists the architect's recommendations and cost estimate. The building is an historical one and would have to be restored to its original appearance. The cost of the restoration could be less than a lawsuit if someone were injured by falling debris.



OFFICE (406) 846-1423

**DARYLL E. (BUD) SCHOEN**  
CHIEF, REGISTRAR'S BUREAU  
DIVISION OF MOTOR VEHICLES

2

925 MAIN  
DEPARTMENT OF JUSTICE DEER LODGE, MONTANA 59722

1/21/85

Exhibit #4  
1-22-85

BUILDING PROGRAM REQUESTS  
DEPARTMENT OF STATE LANDS  
1985-1987 BIENNIUM

The Department of State Lands has requested \$263,183 for the biennium to carry out four projects. We understand that our projects did not have a high enough priority to be funded from available funds.

The Department of State Lands asks that this committee consider a request of \$44,000. This request would allow the Department to replace fire-crew quarters at two of our fire stations. These quarters are currently excess federal property house trailers which were pretty well worn out when we received them from the federal government. These trailers are exceptionally dangerous due to outdated wiring and the rapid flammability of mobile homes.

With the assistance of the Swan River Youth Camp carpentry crew handling the woodworking and commercial contractors handling plumbing and wiring, we estimate the crew quarters can be replaced for \$44,000.

We appreciate your support.

Exhibit #5  
1-22-85



*The Big Sky Country*

MONTANA STATE HOUSE OF REPRESENTATIVES

January 21, 1985

Representative Robert Thoft  
Chairman  
Long Range Planning Subcommittee  
State Capitol Building  
Helena, MT 59601

Representative Thoft,

The Natural Resources Subcommittee received a request for \$100,000 from the Department of Agriculture for remodeling of their lab in Bozeman. \$80,000 of this would come out of the General Fund and \$20,000 would come out of Feed and Fertilizer.

The Natural Resources Subcommittee thinks this is a high priority as the current lab poses a threat to human health.

As this is a building project, we feel this should be handled by the Long Range Planning Subcommittee.

Sincerely,

Rex Manuel, Chairman  
Natural Resources Subcommittee

RM/ss

Exhibit #6

1-22-85

O'Connell

CAPITAL LAND GRANT  
Funds Flow Analysis  
January 1985

	<u>FY 1985</u>	<u>FY 1986</u>	<u>FY 1987</u>
Cash Beginning Balance	\$681,149	\$621,551	\$531,553
Less obligations for:			
Debt Service	(734,598)	(734,998)	(732,998)
General Services Division	( 50,000)	( 55,000)	( 58,000)
Centennial Center Planning	-0-	( 25,000)	-0-
Plus estimated receipts from:			
Land rentals, royalties, leases	<u>725,000</u>	<u>725,000</u>	<u>725,000</u>
Cash Balance at Fiscal Year End	\$621,551	\$531,553	\$465,555

Exhibit #7  
1-22-85

RECEIVED

MONTANA ARTS COUNCIL

JAN 22 1985

LEGISLATIVE  
FISCAL ANALYST  
35 SOUTH LAST CHANCE GULCH



TED SCHWINDEN, GOVERNOR

STATE OF MONTANA

(406) 444-6430

HELENA, MONTANA 59620

DATE: January 18, 1985

TO: Project Directors- Applicants for Cultural and  
Aesthetic Project Grants

FROM: Bill Pratt, Director of Organizational Services

RE: Legislative Hearings on Cultural and Aesthetic  
Project Grant Applications

A handwritten signature in cursive, appearing to read "Bill Pratt", written in dark ink.

The Long Range Planning Committee of the Montana Legislature will be holding hearings on Cultural and Aesthetic Project Grants at the State Capitol Building in Helena on:

Wednesday- January 23, 1985, 8am-noon, Room 420  
6pm-10pm, Room 108

Thursday- January 24, 1985, 8am-noon, Room 420  
January 24, 1985, 6pm-10pm, Room 108

Friday- January 25, 1985, 8am-noon, Room 420

The date on which you are scheduled to testify is specified on the attached sheet. If you plan to testify regarding your grant, please confirm your participation in the hearing with: Madelyn Quinlan-Legislative Fiscal Analyst Office-406-444-2986.

You will have ten to fifteen minutes to present information about your grant. Please bring any published materials you think will help the legislative committee in its deliberations. If you wish to present audio-visual material, you will be responsible for obtaining, setting up and running the equipment.

If you have applied for more than one grant, you will be able to testify on all of them at one time if it is your preference.

JAN 23 1985

MONTANA ARTS COUNCIL

LEGISLATIVE  
FISCAL ANALYST

35 SOUTH LAST CHANCE GULCH



TED SCHWINDEN, GOVERNOR

STATE OF MONTANA

(406) 444-6430

HELENA, MONTANA 59620

HEARING SCHEDULE FOR THE FOLLOWING GRANT APPLICANTS:

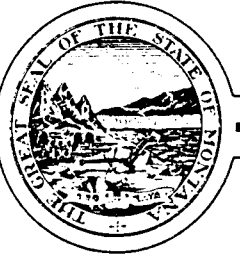
-----TESTIMONY WILL BE HEARD-----

WEDNESDAY - JANUARY 23, 1985 - 8:00 a.m. to 12 Noon - State Capitol Bldg.

ROOM 420

APP	ORGANIZATION	PROJECT TITLE	A-ART B-ART & HISTORY	H-HISTORY & HISTORY	AMOUNT RECOMMENDED	ORGANIZATION C
100	SHAKESPEARE IN THE PARKS	SUMMER OF 85 & 86 TOUR	A		40000	BOZEMAN
143	DEPT. OF DRAMA DANCE	MONTANA REPERTORY THEATRE	A		82400	MISSOULA
147	WATERSHED FOUNDATION	FROM BUTTE TO TOKYO: MT'S MIKE MANSFIELD	H		25000	MISSOULA
114	MONTANA PERFORMING ARTS CNSRT	RURAL & EMERGING PERFORMING SPONSOR DEVL	A		20930	HELENA
107	AD HOC FOR MT WRITER ANTHOLOGY	MONTANA WRITERS ANTHOLOGY	B		33920	BONNER
116	KUFM	MONTANA GALLERY	A		21965	MISSOULA
162	VIGILANTE PLAYERS, INC.	PROFESSIONAL TOURING THEATRE TROUPE	A		25600	BOZEMAN
166	DEPT OF THEATRE ARTS	MONTANA PLAY CREATION PROJECT	B		24300	BOZEMAN
113	MONTANA ART GALLERY DIR ASSOC	A MONTANA SHOWCASE: EXHIBITIONS/CATALOGS	A		35000	BILLINGS
141	LOGON	TECHNOLOGY & AESTHETICS IN CHANGING CULT	A		10000	BOZEMAN
167	RESERVATION-WIDE ED COMMITTEE	MONTANA INDIAN ARTIST PROJECT	A		10000	HARLEM
138	CENTER FOR PUBLIC VISION	MONTANA'S LIVING HISTORY	B		40000	BOZEMAN
132	KGLT-FM	CORPS OF DISCOVERY: LEWIS & CLARK IN MT	H		8968	BOZEMAN
139	DEPT OF DRAMA/DANCE	MAGIC MOVERS	A		7500	MISSOULA
121	HOWARD, STANLEY W.	HISTORY OF IRRIGATION PRACTICE IN MT	H		2500	HELENA
110	MONTANA HISTORICAL SOCIETY	PLAN FOR MONTANA MUSEUM OF AGRICULTURE	H		35500	HELENA

# MONTANA ARTS COUNCIL



TED SCHWINDEN, GOVERNOR

35 SOUTH LAST CHANCE GULCH

## STATE OF MONTANA

(406) 444-6430

HELENA, MONTANA 59620

### HEARING SCHEDULE FOR THE FOLLOWING GRANT APPLICANTS:

-----TESTIMONY WILL BE HEARD-----

WEDNESDAY - JANUARY 23, 1985 - 6:00 p.m. to 10:00 p.m. State Capitol Bldg.

ROOM 108

APP	ORGANIZATION	PROJECT TITLE	A-ART B-ART & HISTORY	H-HISTORY	AMOUNT RECOMMENDED	ORGANIZATION CITY
107	VERY SPECIAL ARTS MONTANA	VERY SPECIAL ARTS MONTANA		A	10000	MISSOULA
122	MONTANA ASSOC OF SYMPH ORCH	STATEWIDE LEADERSHIP TRAINING CONFERENCE		A	7000	BILLINGS
098	OWL CREEK PRESS	THE WESTERN HERITAGE SERIES		B	0	MISSOULA
125	MONTANA INTER-TRIBAL POLICY BD	HIST CONTRIB OF MT INDIANS TO AMER SOC		H	0	BILLINGS
094	FOX THEATRE CORP.	RENOVATION OF THEATRE		A	103900	BILLINGS
142	UPPER MUSSELSHELL HIST SOCIETY	RESTORE ENTRYWAYS OF TIMES BUILDING		H	2000	HARLOWTON
165	ARCHIE BRAY FOUNDATION	CONVERT WAREHOUSE TO STUDIO SPACE		A	8000	HELENA
158	YELLOWSTONE ART CENTER	CONTEMPORARY MONTANA ARTISTS		A	42000	BILLINGS
108	CULBERTSON LIBRARY BOARD	CULBERTSON LIBRARY RENOVATION		B	3747	CULBERTSON
118	LAURIE HILL LIBRARY	BOOK PURCHASES		B	3000	HERON
089	H EARL CLACK MUSEUM	WAHKPA CHU'GN KILL PRES & MUSEUM EXPAN		H	30000	HAVRE
131	HAVRE-HILL COUNTY LIBRARY	ONE LIBRARY FOR HILL COUNTY		B	42000	HAVRE
111	HELENA CIVIC CENTER	AUDITORIUM ACOUSTICAL IMPROVEMENT PROJ.		A	37000	HELENA
091	GARFIELD COUNTY MUSEUM	ADDITION TO THE BUILDING		H	5000	BRUSETT
103	COPPER VILLAGE MUSEUM/ART CNTR	ANACONDA CITY HALL RESTORATION & REUSE		B	42000	ANACONDA
124	STACEY HIST, CULT & MEM HALL	STACEY HIST, CULTURAL, & MEMORIAL HALL		B	15000	VOLBORG

# MONTANA ARTS COUNCIL



TED SCHWINDEN, GOVERNOR

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## STATE OF MONTANA

(406) 444-6430

HELENA, MONTANA 59620

### HEARING SCHEDULE FOR THE FOLLOWING GRANT APPLICANTS:

-----TESTIMONY WILL BE HEARD-----

THURSDAY - JANUARY 24, 1985 - 8:00 a.m. to 12 Noon State Capitol Bldg.

ROOM 420

APP	ORGANIZATION	PROJECT TITLE	A-ART	H-HISTORY	AMOUNT RECOMMENDED	ORGANIZATION CITY
			B-ART & HISTORY			
117	BROADWAY 215, INC.	BROADWAY 215	B		42000	BUTTE
149	CARBON COUNTY ARTS GUILD	VITAL ACCESS	A		6000	RED LODGE
133	POWELL CNTY MUSEUM & ARTS FNDN	RENOVATE OLD PRISON ADMN BLDG FOR MUSEUM	H		35000	DEER LODGE
154	BEALL PARK ART CENTER	ENERGY CONSERVATION	A		15000	BOZEMAN
102	GARNET PRESERVATION ASSOC.	DAHL CABIN AND SALOON RESTORATION	H		20000	MISSOULA
146	BLAINE COUNTY PUBLIC TV, INC.	PUBLIC TV FOR BLAINE COUNTY	B		0	CHINOOK
161	FAMILY BILLINGS PUBLIC LIBRARY	SECURITY FOR RUSSELL & SHARP PAINTINGS	A		0	BILLINGS
123	MADISON CNTY - WATKINS MUSEUM	SAVING HERITAGE FOR FUTURE GENERATIONS	H		0	VIRGINIA CITY
119	LEWISTOWN ART CENTER	COMPLETE & IMPROVE LEWISTOWN ART CENTER	B		0	LEWISTOWN
297	EASTERN MONTANA COLLEGE	CAMPUS GALLERY EXPANSION & RENOVATION	A		0	BILLINGS
128	BIGFORK SUMMER PLAYHOUSE	A NEW PERFORMING ARTS COMPLEX	A		0	BIGFORK
120	BROADWATER PRODUCTIONS	GRANDSTREET THEATRE RENOVATION	A		0	HELENA
160	SUNNYSIDE LIBRARY	CULTURE, COMPUTERS AND LIBRARIES	B		0	WORDEN
155	BEALL PARK ART CENTER	COMPLETION OF RENOVATION	A		0	BOZEMAN
157	BUTTE-SILVER BOW PUB LIBRARY	PUBLIC MEETING ROOM IN THE LIBRARY	A		0	BUTTE
163	GOLDEN VALLEY HIST SOCIETY	BUY LOT FOR FUTURE BUILDING SITE	H		0	LAVINA



# MONTANA ARTS COUNCIL



TED SCHWINDEN, GOVERNOR

35 SOUTH LAST CHANCE GULCH

## STATE OF MONTANA

(406) 444-6430

HELENA, MONTANA 59620

### HEARING SCHEDULE FOR THE FOLLOWING GRANT APPLICANTS:

-----TESTIMONY WILL BE HEARD-----

THURSDAY - JANUARY 24, 1985 - 6:00 p.m. to 10:00 p.m. State Capitol Bldg.

ROOM 108

APP	ORGANIZATION	PROJECT TITLE	A-ART B-ART & HISTORY	H-HISTORY REQUESTED	AMOUNT	
151	WESTERN HERITAGE CENTER	MT UNDERGROUND COAL MINING COMMUNITIES	H		8172	BILLINGS
136	RATTLESNAKE PRODUCTIONS, INC.	VISIONS OF 20TH-CENTURY WARRIOR	B		33960	MISSOULA
095	HELENA FILM SOCIETY	OPERATIONAL SUPPORT	A		25000	HELENA
096	EASTERN MONTANA COLLEGE	CONSERVATION: CHARLES BARSTOW COLLECTION	B		14770	BILLINGS
135	UNIVERSITY OF MONTANA	CONSERVE & PREPARE PERMANENT ART COLLECT	B		30000	MISSOULA
144	MINERAL CNTY MUS & HIST BOARD	PIONEER PRINTS	H		3900	SUPERIOR
126	FINE ARTS GALLERY	A MONTANA COLLECTION: A PUBLIC TRUST	B		30000	BOZEMAN
140	POLSON CITY LIBRARY	MONTANA & LOCAL HISTORY COLLECTION	H		1000	POLSON
150	ROCKY BOY TRIBAL HIGH SCHOOL	VOICES & IMAGES OF THE ROCKY BOY ELDERS	H		20000	BOX ELDER
130	HOCKADAY CENTER FOR THE ARTS	RENOVATION OF HOCKADAY CENTER	B		42000	KALISPELL
129	CUSTER COUNTY ART CENTER	THE NATIVE AMERICAN VISUAL ARTS & MT	A		13620	MILES CITY
093	PARIS GIBSON SQUARE	THE ORGINS OF MODERNIST ART IN MONTANA	A		17000	GREAT FALLS
127	BOZEMAN WOMEN'S HISTORY GROUP	VIDEO; LIFE OF ELDER WOMEN ALONE ON FARM	H		15773	BOZEMAN
112	YOUNG AUDIENCES OF WEST. MT	PERFORMING ARTS PROGRAM FOR KIDS	A		15000	MISSOULA
104	MONTANA SCHOOL OF CREATIVE ART	OPERATIONAL COSTS	A		13300	HELENA
148	HUNTLEY PROJECT SCHOOLS	HISTORY OF THE NORTH WEST: MONTANA	H		1000	WORDEN

# MONTANA ARTS COUNCIL

TED SCHWINDEN, GOVERNOR

35 SOUTH LAST CHANCE GULCH



## STATE OF MONTANA

(406) 444-6430

HELENA, MONTANA 59620

### HEARING SCHEDULE FOR THE FOLLOWING GRANT APPLICANTS:

-----TESTIMONY WILL BE HEARD-----

FRIDAY - JANUARY 25, 1985 - 8:00 a.m. to 12 Noon - State Capitol Bldg.

ROOM 420

APP	ORGANIZATION	PROJECT TITLE	A-ART B-ART & HISTORY	H-HISTORY HISTORY	AMOUNT REQUESTED	
115	CARBON CNTY HISTORICAL SOCIETY	PLANS FOR ETHNIC, HIST., CULTURE CENTER	B		7690	RED LODGE
159	FORT PECK TRIBAL ARCHIVES	FORT PECK RESERVATION CENTENNIAL	B		24680	WOLF POINT
105	FORT PECK TRIBES	ORAL TRADITIONAL CEREMONIAL SIGNIFICANCE	B		5000	POPLAR
099	ARTS CHATEAU	EXPANSION AND RESTORATION	H		10000	BUTTE
106	GROWTH THRU ART	OPERATIONAL SUPPORT	A		10800	BILLINGS
152	RENNE LIBRARY	MONTANA VERTICAL FILE IN MICROFICHE	H		10000	BOZEMAN
090	YELLOWSTONE CHAMBER PLAYERS	YELLOWSTONE CHAMBER PLAYERS CNCT SERIES	A		3500	BILLINGS
145	MONTANA CHORALE	GLACIER CHORAL ARTS FESTIVAL - SUMMER 86	A		0	GREAT FALLS
137	HUNTLEY PROJECT MUSEUM	PRES. THE ART OF EARLY CULT. ON THE LAND	H		0	BALLANTINE
153	FLATHEAD VALLEY COMM COLLEGE	NORTHWEST MONTANA PERFORMING ARTS CENTER	A		0	KALISPELL
092	HELENA TRADITIONAL JAZZ SOC.	HELENA JAZZ FESTIVAL	A		0	HELENA
164	STERLING RESTORATION, INC.	RESTORATION OF THE STERLING SETTLEMENT	H		0	NORRIS
156	BEALL PARK ART CENTER	EXHIBITION & EDUCATION PROGRAM	A		0	BOZEMAN
088	UNIVERSITY OF MONTANA	MONTANA HUMOR	B		0	MISSOULA
134	LIVINGSTON MIDDLE SCHOOL	INTRODUCE PHOTOGRAPHY TO SCHOOL CHILDREN	A		0	LIVINGSTON
101	LAMBRECHT, RICHARD	CATALOGING ANCIENT INDIAN PETROGLYPHS	H		0	BILLINGS

VISITORS' REGISTER

LONG-RANGE PLANNING SUBCOMMITTEE

BILL NO. \_\_\_\_\_

DATE JANUARY 22, 1985

SPONSOR \_\_\_\_\_

NAME (please print)	RESIDENCE	SUPPORT	OPPOSE
SUD SCHON	DEER LODGE	✓	
Tom Connell	Helena	✓	
Randy Mosley	Helena	✓	
PHIL HAUCK	HELENA	✓	
Clarence Hester	Helena	✓	
Mauri Euköly	Helena	✓	
CRAIG RAOFF	BOZEMAN	✓	

IF YOU CARE TO WRITE COMMENTS, ASK SECRETARY FOR WITNESS STATEMENT FORM.

PLEASE LEAVE PREPARED STATEMENT WITH SECRETARY.