
DIRECTORY OF IOWA CLAY WORKERS

BY

S. W. BEYER AND I. A. WILLIAMS.

DIRECTORY OF IOWA CLAY WORKERS.

ADAIR COUNTY.

FIRM NAME.	LOCATION OF PLANT.	MATERIAL USED.	PROCESS.	DRYER.	KILNS.	PRODUCTS.
C. H. Cass	Bridgewater	Loess	Soft and stiff mud.	.....	1 up and down draft.....	Common brick, hollow block, drain tile.
Ledman & Strong.....	Bridgewater	Loess .....	.....	.....	.....	Common brick.
J. W. Darby	Greenfield.....	Loess	Dry press ..	.....	2 round down draft and 1 up draft.	Front brick and drain tile.

ADAMS COUNTY.

Davy Burnt Clay Ballast Company.	Corning	Loess .....	.....	.....	.....	Burnt clay ballast.
W. Newcomb & Co.....	Corning	Loess	Soft mud.....	.....	5 Stewart down draft ..	Common brick.
A. C. Peter-on.....	Mount Etna	Loess	Soft mud.....	.....	Open	Common brick.
M. F. Trabert.....	Prescott.....	Loess	Soft mud.....	Pallet	3 clamp.....	Common brick.
E. W. & G. A. Gillet.....	Corning	Loess	Stiff mud.....	Rack and pallet.	3 clamp.....	Common brick and drain tile.

APPANOOSE COUNTY.

Centerville Brick and Tile Co.	Centerville.....	Coal measure shales.	Dry press	1 continuous kiln	Common and front brick.
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AUDUBON COUNTY.

L. E. Tramp & Tramp	Audubon.	Loess	Stiff mud	4 round down draft.....	Common brick and drain tile.
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BENTON COUNTY.

R. F. Smith.....	Belle Plaine.....	Loess	Soft mud.....	Up draft	Common brick.
Garrison Brick and Tile Company..	Garrison	Loess	Stiff mud	3 round down draft.....	Common brick and drain tile.
E. A. Peacock.....	Newhall.....	Loess	Stiff mud .....	.....	2 down draft.....	Drain tile.
Chas. Trojorsky	Norway.....	Loess	Soft and stiff mud.	.....	2 round down draft	Common brick and drain tile.
Samuel Shannon.....	Shellsburg	Loess	Dry press .....	.....	1 down and 1 up and down.	Common brick and drain tile.
David Aikley.....	Vinton	Loess	Soft mud.....	.....	2 clamp	Common brick and drain tile.

DIRECTORY OF IOWA CLAY WORKERS—CONTINUED.

BLACK HAWK COUNTY.

FIRM NAME.	LOCATION OF PLANT.	MATERIAL USED.	PROCESS.	DRYER.	KILNS.	PRODUCTS.
Waterloo & Cedar Falls Brick Co...	Cedar Falls	Kansan and Iowan drift.	Stiff mud	Phillips	Up draft and down draft.	Common brick.
Stead Brothers & Guenther.....	Waterloo	Loess	Stiff mud .....	.....	3 round down draft	Common brick.

BOONE COUNTY.

Boone Brick, Tile and Paving Co...	Boone	Coal measure shales.	Stiff mud	Tunnel dryer.	10 round down draft...	Common brick and drain tile.
A. E. Goldthwaite.....	Boone	Wisconsin drift.	Soft mud....	.....	Up draft.....	Paving brick and common brick.
McHose Brothers	Boone	Shale	Stiff mud	Tunnel dryer	5 round and 2 square down draft.	Common brick, drain tile and fire brick.
Fred Carlson	Madrid	Drift and wash.	Soft mud....	.....	2 up draft, 1 down draft.	Common brick.
John Slater.....	Moingona	Drift and wash.	Soft mud .....	.....	2 up draft, 1 down draft.	Common brick.
Scandia Brick and Tile Company..	Madrid	Shale	Stiff mud .....	.....	2 round down draft	Common brick and drain tile.

BREMER COUNTY.

Waverly Brick and Tile Company..	Waverly	Loess	Soft mud....	.....	Clamp.....	Common brick.
Henry Cretzmeier.....	Waverly	Loess	Soft mud .....	.....	Up draft.....	Common brick.

BUENA VISTA COUNTY.

Linn Grove Brick and Tile Co.	Linn Grove	Wisconsin drift and wash.	Stiff mud .....	.....	2 down draft.....	Drain tile and common brick.
Storm Lake Brick and Tile Works.	Storm Lake.....	Drift	Stiff mud .....	.....	3 round down draft	Common brick and drain tile.
Sioux Rapids Brick and Tile Factory	Sioux Rapids	Drift and wash.	Stiff mud .....	.....	2 round down draft	Drain tile.

BUTLER COUNTY.

L. M. Harris & Son.....	Clarkville...	Iowan drift.	Stiff mud	Scove No. 2	Common brick.
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CALHOUN COUNTY.

Lake City Clay Works.....	Lake City.....	Cretaceous shales.	Stiff mud	8 round down draft ...	Common brick, drain tile, and sidewalk brick.
Steinberger & Marriott.....	Rockwell City.....	Wisconsin drift.	Stiff mud ....	.....	8 down draft ..	Drain tile.
Manson Clay Works.....	Manson.....	Wisconsin drift.	Stiff mud	2 round down draft ...	Drain tile.

CARROLL COUNTY.

O'Neal & Kallenberg.....	Carroll.....	Loess.....	Common brick.
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CASS COUNTY.

C. L. Martin.....	Anita.....	Loess.....	Soft mud	4 up draft.	Common brick.
Chas. E. Taylor Brick Company.....	Atlantic.....	Loess.....	Stiff mud	8 down draft.....	Common brick.

CEDAR COUNTY.

Geo. H. Kettell.....	Tipton.....	Loess.....	Stiff mud	2 Platt, 1 common.	Common brick and drain tile.
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CERRO GORDO COUNTY.

American Brick and Tile Company.....	Mason City.....	Devonian shales.	Stiff mud	Tunnel dryer.	10 down draft.	Common brick, drain tile hollow block.
Mason City Brick and Tile Company.....	Mason City.....	Devonian shales.	Stiff mud	Tunnel dryer.	18 down draft ..	Common brick, drain tile, hollow block, and radial stack block.
Mason City Clay Works.....	Mason City.....	Devonian shales.....	Stiff mud	Tunnel dryer	8 down draft.....	Common brick, drain tile, hollow block.

CHEROKEE COUNTY.

D. W. Townsend.....	Cherokee.....	Loess.....	Stiff mud	Iron clad.....	1 down draft, 3 clamp, 1 continuous.	Common brick and drain tile.
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DIRECTORY OF IOWA CLAY WORKERS—CONTINUED.

CLAY COUNTY.

FIRM NAME.	LOCATION OF PLANT.	MATERIAL USED.	PROCESS.	DRYER.	KILNS.	PRODUCTS.
Hilliard & Johnson	Spencer.....	Wisconsin ..	Soft mud....	.....	1 up draft 3 down draft..	Common brick.

CLARKE COUNTY.

Geo. Siegel.....	Osceola.....	Loess	Stiff mud....	Sheds	2 clamp.	Common brick.
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CLAYTON COUNTY.

Myron Mellen	Edgewood.....	Loess and Maquoketa shales.	Stiff mud....	1 down draft.....	Common brick and drain tile.
Matthias Burr.....	Guttenberg	Loess	Soft mud. ..	.....	Clamp.	Common brick.
Monona Brick Works....	Monona.....	Loess	Soft mud....	Sheds	2 up drafts. 2 down draft..	Common brick.

CLINTON COUNTY.

Chas. F. Capion.....	Spring Valley Twp....	Loess	Soft mud....	.....	2 clamp	Common brick.
James Taller.....	Clinton.....	Loess	Soft mud....	.....	3 clamp.....	Common brick.
W. E. McKinney & Company.	DeWitt.....	Loess	Stiff mud....	.....	2 down draft.....	Common brick and drain tile.

CRAWFORD COUNTY.

C. Green.....	Denison	Loess.	Stiff mud....	.....	2 clamp, 1 down draft..	Common brick.
Joe La Turno	Manilla.....	Loess	Soft mud....	.....	2 up draft..	Common brick.

DALLAS COUNTY.

E. O. Fenn.....	Adel	Loess.....	Soft mud.....	.....	1 up draft.....	Common brick.
S. J. Harris & Company.....	Adel	Loess and shale.....	Stiff mud.....	Hot floor and shed.....	1 up draft and 3 down draft.....	Common brick and tile.
Union Brick and Tile Company.....	Dawson.....	.....	Stiff mud.....	.....	1 Eudaly, 1 Stewart.....	Common brick and drain tile.
McKissick and Kiles.....	De Soto.....	Shale.....	Stiff mud.....	.....	6 down draft.....	Drain tile.
McFarland & Hill.....	Minburn.....	Surface.....	Stiff mud.....	.....	2 down draft.....	Brick and tile.
Rob't Goodwin, Jr.....	Redfield.....	Shales.....	Stiff mud.....	.....	7 down draft.....	Common brick and tile.
Platt Pressed & Fire Brick Company.....	Van Meter.....	Shales.....	Dry press and stiff mud.....	Steam.....	7 down draft.....	Front brick, common brick and tile.
Perry Brick and Tile Company.....	Perry.....	Drift.....	Stiff mud.....	.....	3 down draft.....	Common brick and tile.

DAVIS COUNTY.

M. L. Parker.....	Eldon.....	Loess.....	Soft mud.....	.....	1 clamp.....	Common brick.
A. P. Birchmier.....	Troy.....	Loess.....	Soft mud.....	.....	1 round down draft.....	Common brick.

DECATUR COUNTY.

G. C. Dilsaner.....	Garden Grove.....	Loess.....	Soft and stiff mud.....	.....	2 down draft.....	Common brick and tile.
W. H. Jenkins.....	Leon.....	Loess.....	Soft mud.....	.....	2 up draft.....	Common brick.

DELAWARE COUNTY.

Frank H. Stead.....	Hopkinton.....	Drift.....	Stiff mud.....	.....	2 round down draft.....	Common and face brick.
Chas. H. Mattox.....	Manchester.....	Drift.....	Soft mud.....	.....	Scove.....	Common brick.

DES MOINES COUNTY.

Burlington Pottery Company.....	Burlington.....	Kinderhook shales.....	.....	.....	1 down draft.....	Stoneware.
The Granite Brick Company.....	Cascade.....	Kinderhook shales.....	Stiff mud.....	Hot floor.....	5 Eudaly.....	Paving and common brick and front brick.
Mediopolis Tile and Brick Works.....	Mediopolis.....	Loess.....	Stiff mud.....	.....	3 round down draft.....	Common brick.

DIRECTORY OF IOWA CLAY WORKERS—CONTINUED.
DUBUQUE COUNTY.

FIRM NAME.	LOCATION OF PLANT.	MATERIAL USED.	PROCESS.	DRYER.	KILNS.	PRODUCTS.
Dietrich Bros	Dubuque	Loess	Soft mud.....	.....	3 up draft.....	Common brick.
Albert Gasser	Dubuque.....	Loess	Soft mud.....	.....	Clamp.....	Common brick.
Agatha Heim	Dubuque.....	Loess	Soft mud.....	.....	5 clamp.....	Common brick.
Augustus Klaas	Dubuque.....	Loess	Soft mud.....	.....	3 scove.....	Common brick.

EMMET COUNTY.

Armstrong Brick and Tile Company	Armstrong	Wisconsin drift.	Stiff mud....	Steam.....	Down draft.....	Drain tile.
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FAYETTE COUNTY.

C. Miller & Son	Clermont.....	Maquoketa shales.	Stiff mud....	Shed.....	4 down draft, 1 up draft.	Common brick, tile and hollow block.
L. A. Book	Hawkeve.....	Surface	Soft mud.....	.....	1 clamp.....	Common brick.

FLOYD COUNTY.

L. M. Harris	Rockford.....	Devonian shales.	Stiff mud.....	2 scove, 2 down draft...	Common brick and tile.
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FRANKLIN COUNTY.

E. P. Fox	Sheffield.....	Devonian shales.	Stiff mud....	1 down draft.....	Common brick and tile.
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FREMONT COUNTY.

C. W. Carman	Hamburg	Loess	Soft mud.....	Sheds.....	Up draft.....	Common brick.
Fred Johnson	Hamburg	Loess	Soft mud.....	.....	Up draft.....	Common brick.
Johnson Bros	Riverton.....	Loess	Soft mud.....	.....	2 up draft.....	Common brick.
New South Brick Works	Sidney.....	Loess	Stiff mud.....	.....	1 up draft.....	Common brick.
John Weatherhead.....	Tabor	Loess	Stiff mud.....	.....	3 up draft.....	Common brick.

GREENE COUNTY.

Goodwin Tile and Brick Company.	Grand Junction.....	Coal measure shales.	Stiff mud	5 down draft.....	Common brick and tile.
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GRUNDY COUNTY.

C. E. Smith	Grundy Center.....	Surface	Stiff mud	2 down draft.	Common brick.
Ady & Frerichs	Grundy Center.....	Surface	Stiff mud .....	.....	1 down draft, 1 up draft	Common brick and tile.

GUTHRIE COUNTY.

John Piner.....	Stuart.....	Surface	Stiff mud .....	.....	1 down draft, 1 up draft	Common brick and tile.
H. M. Pentecost	Panora.....	Coal measures	Stiff mud	Steam	4 down draft.	Common brick and tile.
W. D. Simons & Sons.....	Jamaica.....	Surface	Soft mud.....	.....	2 round down draft.....	Common brick and tile.

HAMILTON COUNTY.

Jewell Brick and Tile Company.....	Jewell Junction ..	Drift	Stiff mud	Pallet	1 down draft.....	Common brick and tile.
Webster City Brick and Tile Co....	Webster City.....	Coal measure shales.	Stiff mud	Iron clad.	Down draft.....	Common brick and tile.

HANCOCK COUNTY.

Interstate Drainage and Investment Company.	Britt.....	Wisconsin drift.	Stiff mud	2 down draft.	Common brick and tile.
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HARDIN COUNTY.

Eldora Pipe and Tile Co.....	Eldora.....	Shales.....	Stiff mud	Slat floor.....	5 down draft.....	Drain tile.
Eldora Tile Works.....	Eldora.....	Surface and shales.	Stiff mud	Sheds.....	3 down draft.....	Drain tile.
X. Y. Z. Brick and Tile Co	Eldora.....	Shales	Stiff mud .....	.....	2 down draft.....	Drain tile.
Gearhart & Mason.....	Gifford	Shales	Stiff mud .....	.....	2 down draft.....	Common brick and tile.
F. W. Heidenreich.....	Iowa Falls.....	Shales.....	Stiff mud .....	.....	Down draft.....	Common and face brick and drain tile.

DIRECTORY OF IOWA CLAY WORKERS—CONTINUED.

HARRISON COUNTY.

FIRM NAME.	LOCATION OF PLANT.	MATERIAL USED.	PROCESS.	DRYER.	KILNS.	PRODUCTS.
H. L. Wood.....	Dunlap	Loess	Soft mud.....	.....	4 up draft.....	Common brick.
J. W. Lawson.....	Dunlap.....	Loess.....	Soft mud.....	.....	Up draft.....	Common brick.
J. S. Vanseoy	Woodbine and Logan.	Loess.....	Soft mud.....	.....	Clamp	Common brick.
Elisha Mahoney.....	Near Magnolia R. R. o. 2	Loess.....	Soft mud.....	.....	Up draft	Common brick.
Chas. Smith.....	Missouri Valley	Loess.....	Soft mud.....	.....	Up draft	Common brick.
M. Analyser	Persia	Loess.....	Soft mud.....	.....	Up draft	Common brick.
Canfield & Cromie	Woodbine	Loess.....	Soft mud.....	.....	3 up draft.....	Common brick.

HENRY COUNTY.

August Brink.....	2½ miles south of New London.	Loess.....	Stiff mud.....	.....	1 up draft.....	Common brick and drain tile.
New London Brick and Tile Co....	New London.....	Loess.....	Stiff mud.....	Am. Blower.	Stewart.....	Common brick and tile.
L. B. Pierce.....	Winfield.....	Loess.....	Stiff mud.....	.....	3 down draft.....	Common brick and tile.
Jas. Brown.....	Mount Pleasant.....	Loess.....	Soft mud.....	.....	Clamp	Common brick.

HOWARD COUNTY.

Wheeler & Marshall.....	Cresco.....	Iowan Drift..	Stiff mud.....	S eds.....	3 down draft.....	Common brick, drain tile and hollow block.
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HUMBOLDT COUNTY.

Livermore Brick and Tile Company	Livermore.....	Wisconsin....	Stiff mud.....	2 down draft.....	Drain tile and brick.
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IDA COUNTY.

A. S. Wert.....	Ida Grove.....	Surface	Soft mud.....	1 down draft. 3 up draft.	Common brick.
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IOWA COUNTY.

Dauskin & Wagner.....	2½ miles southwest of Marengo.	Surface.....	Stiff mud.....	Down draft.....	Common brick.
H. A. Cheney.....	Millersburg.....	Loess.....	Soft mud.....	Shed.....	1 down draft.....	Common brick.
E. J. Smith & Sons.....	North English.....	Loess.....	Stiff mud.....	.....	4 down draft.....	Common brick and tile.
Williamsburg Brick and Tile Co....	Williamsburg.....	Loess.....	Stiff mud.....	Steam.....	3 down draft.....	Common brick and tile.
Preston Tile Works.....	Preston.....	Loess.....	Stiff mud.....	.....	1 down draft.....	Drain tile.

JASPER COUNTY.

Henry Harrington.....	Colfax.....	Loess.....	Soft mud.....	.....	3 up draft.....	Common brick.
Holdsworth Brothers.....	Kellogg.....	Loess.....	Stiff mud.....	.....	.....	Brick and tile.
Newby & Macy.....	Lynnville.....	Loess.....	Stiff mud.....	Shed.....	1 down draft, 1 Stewart.	Common brick and tile.
G. H. Orcutt.....	Monroe.....	Loess.....	Stiff mud.....	.....	3 down draft.....	Common brick and drain tile.
William Henning.....	¼ mile west of Newton	Loess.....	.....	.....	2 up draft, 2 Cooke.....	Common brick.

JEFFERSON COUNTY.

Batavia Brick and Tile Company....	Batavia.....	Loess.....	Stiff mud.....	.....	1 down draft.....	Brick and tile.
Raney Brothers.....	Fairfield.....	Loess and shales.	Stiff mud.....	.....	Down draft.....	Common brick and tile.
W. E. Supernois.....	Packwood.....	Loess.....	Stiff mud.....	.....	2 down draft.....	Drain tile.

JOHNSON COUNTY.

Frendale Brick and Tile.....	Frendale.....	Loess.....	Stiff mud.....	Pallet and sheds.	1 down draft, 1 up draft.	Common brick and drain tile.
Christ Gauchoer.....	Iowa City.....	Loess.....	Soft mud.....	.....	3 clamp kilns.....	Common brick.
Michael Goss.....	Iowa City.....	Loess.....	Soft mud.....	.....	2 clamp kilns.....	Common and front brick.
Oakes Brothers.....	Iowa City.....	Loess.....	Stiff mud.....	.....	3 down draft.....	Common brick and drain tile.
P. H. Katzemeyer.....	River Junction.....	Loess.....	Soft mud.....	.....	1 up draft.....	Common and front brick.
Tiffin Tile Company.....	Tiffin.....	Loess.....	Stiff mud.....	2 Stewart.....	Common brick, drain tile and hollow block.

JONES COUNTY.

B. F. Smith.....	Anamosa.....	Loess.....	Soft mud.....	Scove.....	Common brick.
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DIRECTORY OF IOWA CLAY WORKERS—CONTINUED.
KEOKUK COUNTY.

FIRM NAME.	LOCATION OF PLANT.	MATERIAL USED.	PROCESS.	DRYER.	KILNS.	PRODUCTS.
F. W. Heidenreich	Hedrick	Loess	Stiff mud ...	Steam heated shed.	Down draft	Drain tile.
S. K. Leacox	Keota	Loess	Stiff mud ...	.....	Down draft: 2 round, 1 Stewart.	Common brick and drain tile.
U. R. Harvey & Son	Martinsburg	Loess	Stiff mud ...	Sheds	2 down draft.	Common brick and drain tile.
Jas. L. Hill	Sigourney	Loess	Stiff mud ...	.....	Down draft: 1 round, 1 square.	Common brick and drain tile.
Lawler Brothers & Co.	South English	Loess	Stiff mud ...	.....	2 down draft.	Common brick and drain tile.
G. G. Nicholson	What Cheer	Loess	Stiff mud ...	Sheds	2 down draft.	Common brick and drain tile.

KOSSUTH COUNTY.

A. P. Ostrum	Algona	Wisconsin drift.	Stiff mud ...	Sheds.	2 up draft.	Common brick.
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LEE COUNTY.

J. B. Helling & Son	Fort Madison	Loess	Stiff mud.	1 up draft	Common brick.
Ben Kotzenstette & Company	$\frac{1}{2}$ mi. out Fort Madison	Loess	Soft mud. ....	.....	1 down draft.	Common brick.
Gate City Brick Works	Keokuk	Loess	Soft mud. ....	.....	Scove	Common brick.
Julius Reichelt	Fort Madison	Loess	Stiff mud. ....	.....	1 down draft.	Common brick, front brick and drain tile.
McCutcheon & Swanson	Keokuk	Loess	Stiff mud. ....	.....	1 down draft.	Common brick and front brick.

LINN COUNTY.

Chas. L. Besler	Cedar Rapids	Loess	Soft mud.	Standard. ...	Clamp kiln.	Common brick.
G. W. McBride	Cedar Rapids	Loess	Soft mud. ....	.....	2 up draft.	Common brick.
D. W. Stooky	Cedar Rapids	Loess	Stiff mud. ....	.....	2 down draft.	Drain tile.
P. A. Wolf	Cedar Rapids	Loess	Soft mud. ....	.....	4 up draft.	Common brick.
C. W. Johnson	Center Point	Loess	Stiff mud. ....	.....	1 up and down draft and 1 clamp.	Common brick and drain tile.
Central City Brick and Tile Co. ...	Central City	Loess	Stiff mud. ....	.....	2 down draft.	Common brick and drain tile.
McBride & Snyder	Marion	Loess	Stiff mud. ....	.....	1 up draft.	Common brick and drain tile.
H. E. Mason	Mt. Vernon	Loess	Soft mud. ....	.....	1 open kiln.	Common brick.

LOUISA COUNTY.

G. W. Oakes.....	Columbus Junction...	Loess.....	Stiff mud...	.....	.....	Common brick and drain tile.
McClurkin, Ochiltree & Company..	Morning Sun.....	Loess.....	Stiff mud.....	1 Stewart.....	Common brick and drain tile.

LUCAS COUNTY.

S. Bailey.....	Chariton.....	Loess.....	Soft mud.....	2 open.....	Common brick.
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MADISON COUNTY.

Clark Bros.....	Winterset.....	Loess.....	Soft and stiff mud.	2 down draft.....	Common brick and drain tile.
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MAHASKA COUNTY.

Ollie Wilson.....	Barnes City.....	Loess.....	Stiff mud...	Sheds.....	2 down draft.....	Common brick and drain tile.
John Dawson & Co.....	Fremont.....	Loess.....	Stiff mud.....	.....	2 square down draft.....	Common brick and drain tile.
Chas. Stark.....	Muscatine.....	.....	.....	.....	.....	Clay pipes, common brick.
Martin & Younkin.....	New Sharon.....	Loess.....	Stiff mud.....	Steam.....	3 down draft.....	Drain tile, hollow block
Peter Meyer.....	New Sharon.....	Loess.....	Stiff mud.....	.....	.....	Drain tile, common brick.
M. N. Logue.....	Oskaloosa.....	Loess.....	Soft mud.....	.....	3 clamp.....	Common brick.
Oskaloosa Paving Brick Company..	Oskaloosa.....	Shales.....	Stiff mud.....	Standard dry kiln.	.....	Common brick, front brick, paving brick.

MARION COUNTY.

King Bros.....	Knoxville.....	Loess.....	Stiff mud.....	.....	1 down draft.....	Common brick and drain tile.
Dillon Wright.....	Knoxville.....	.....	.....	.....	.....	.....
Otis J. Penton.....	Otterbein.....	Loess.....	Stiff mud.....	.....	1 clamp.....	Common brick and drain tile.
Pella Drain Tile Company.....	Pella.....	Loess.....	Stiff mud.....	.....	5 down draft.....	Common brick and drain tile.

DIRECTORY OF IOWA CLAY WORKERS—CONTINUED.

MARSHALL COUNTY

FIRM NAME.	LOCATION OF PLANT.	MATERIAL USED.	PROCESS.	DRYER.	KILNS.	PRODUCTS.
Bromley Brick and Tile Works.....	Bromley.....	Loess.....	Stiff mud ..	.....	3 down draft.....	Drain tile.
W. H. Vosburg & Co.....	Gilman.....	Loess.....	Stiff mud.....	.....	1 up draft, 1 down draft.	Common brick and drain tile.
Liscomb Brick and Tile Company ..	Liscomb.....	Loess.....	Stiff mud.....	.....	5 down draft.....	Drain tile.
Anson Company.....	Marshalltown.....	Loess.....	Dry press.....	.....	3 up draft.....	Common brick.
Buchwald & Cummings.....	Marshalltown.....	Loess.....	Stiff mud.....	.....	2 down draft clamp.....	Common brick and drain tile.
Size & Carpenter.....	Marshalltown.....	Loess.....	Soft and stiff mud.	Rack and pallet.	6 up draft.....	Common brick.
Marshalltown Pottery Company....	Marshalltown.....	.....	.....	.....	4 down draft.....	Stoneware.
Melbourne Brick and Tile Company	Melbourne.....	Loess.....	Stiff mud.....	.....	1 down draft, 2 Stewart	Common brick and drain tile.
A. J. Bonham.....	Rhodes.....	Loess.....	Stiff mud.....	.....	2 down draft.....	Common brick and drain tile.

MILLS COUNTY.

J. W. McMullin.....	Emerson.....	Loess.....	Soft mud.....	.....	Open.....	Common brick.
Iowa Institution for Feeble-Minded Children.	On State Grounds.....	Loess.....	Soft mud.....	.....	2 up draft.....	Common brick.
E. A. Stone & Son.....	Malvern.....	Loess.....	Stiff mud.....	Sheds.....	2 up draft.....	Common brick.

MONONA COUNTY.

Ira C. Ray.....	Moorhead.....	Loess.....	Soft mud.....	Temporary.....	Common brick.
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MONROE COUNTY.

Davy Burnt Clay Ballast Company	Selection.....	Loess.....	Burnt clay ballast
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MONTGOMERY COUNTY.

H. F. Lenneke	Elliott	Loess	Soft mud	2 clamp	Common brick.
R. E. Cook	Red Oak	Loess	Stiff mud .....	.....	1 down draft, 3 up draft.	Common brick and drain tile.
J. C. Curtis	Red Oak	Loess and shale	Stiff mud, dry press. ....	.....	2 down draft, 2 up draft.	Common, front and fire brick.
Villisca Brick and Tile Company	Villisca	Loess	Stiff mud	Bucyrus	3 up draft, 1 down draft.	Common brick and drain tile.
Weatherhead & Giveuspiel	Red Oak	Loess	Soft mud and dry press. ....	.....	2 up draft	Common, pressed brick.
J. C. Curtis	Red Oak	Shale .....	.....	.....	2 up and 2 down draft. ..	Red earthenware and stoneware.

MUSCATINE COUNTY.

Jno. Schellhorn	Fairport .....	.....	.....	.....	1 muffle	Red earthenware.
G. E. Feustel	Fairport .....	.....	.....	.....	1 semi-muffle, 1 up draft.	Red earthenware.
J. Koetting & Sons	Muscatine	Loess	Soft mud .....	.....	2 up draft	Common brick.
Carl Hagemeister	Muscatine	Loess	Soft mud .....	.....	3 up draft	Common brick.
Muscatine Pressed Brick Company	Muscatine	Loess	Soft mud .....	.....	4 clamp	Common brick.
Nyenhuis Brothers	Muscatine	Loess	Soft mud .....	.....	Clamp	Common brick.
Samuel Brothers	Muscatine	Loess	Soft mud .....	.....	3 square up draft	Common brick.
Fred Beenk	Wheatland	Loess	Stiff mud .....	.....	1 down draft	Common brick and drain tile.
O'Brien Sheldon Brick Company	Sheldon	Wisconsin drift	Soft mud .....	.....	2 down draft	Common brick.

PAGE COUNTY.

J. M. Crabill	Clarinda	Loess	Soft mud	Back and pallet .....	.....	Common brick.
F. A. Cook & Sons	Clarinda	Loess	Stiff mud .....	.....	2 down draft	Drain tile.
Rankin Brothers	Shenandoah	Loess	Stiff mud .....	.....	6 up draft	Common brick

PLYMOUTH COUNTY.

John A. Leonard	Le Mars	Loess	Soft mud	2 up draft	Common brick.
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POCAHONTAS COUNTY.

Straight Bros	Fonda	Wisconsin drift	Stiff mud	5 down draft	Drain tile.
Nelson & Dawson	Rolfe	Wisconsin drift	Stiff mud .....	.....	2 down draft	Drain tile.

DIRECTORY OF IOWA CLAY WORKERS—CONTINUED.
POLK COUNTY.

FIRM NAME.	LOCATION OF PLANT.	MATERIAL USED.	PROCESS.	DRYER.	KILNS.	PRODUCTS.
Des Moines Co-operative Brick Co.	Des Moines	Modified loess	Soft mud		2 up draft, 1 down draft, 1 clamp.	Common brick.
Bridge Bros.	Bondurant	Surface	Stiff mud		1 clamp, 1 Stewart.	Drain tile.
W. H. Brereton	Des Moines	Modified loess				Common brick.
Barber Asphalt Paving Company	Des Moines	Shales	Stiff mud	Direct heat	5 round, 1 long, 1 continuous.	Common brick and paving brick.
Dale Brick Company	Des Moines	Shale and loess.	Dry press, stiff mud.	Wolf	4 clamp, 4 down draft.	Common brick, front brick and hollow block.
Flint Brick Company	Des Moines	Shale	Stiff mud		6 Eudaly.	Common brick, front brick and paving brick.
J. T. Fredregill	Des Moines	Modified loess	Soft mud	Sheds	2 down draft.	Common brick.
Iowa Brick Manufacturing Co.	Des Moines	Shale	Stiff mud	Standard	7 square, 1 round down draft.	Common brick, paving brick and hollow block.
Iowa Pipe and Tile Company	Des Moines	Shale	Stiff mud	Stat floor		Drain tile and sewer tile.
Likes Improvement Company	Des Moines	Shale	Stiff mud		8 down draft.	Common and paving brick.
James Maine	Des Moines	Modified loess	Soft mud		4 down draft, 2 clamp.	Common brick.
Pixley Conduit Company	Des Moines	Shale	Stiff mud		5 down draft.	Hollow block and electrical conduits.
Shackelford Brick Company	Des Moines	Surface and shale.	Stiff mud	Freese	4 down draft, 4 clamp.	Common brick.
Star Brick Company	Des Moines	Surface	Soft mud		3 up draft.	Common brick.
Granite Brick Company	Hastie	Shale	Dry press, stiff mud.		3 down down draft, 2 up draft, 1 continuous.	Common brick and front brick.
E. Woodworth	Mitchellville	Loess	Stiff mud		2 up draft, 1 down draft.	Common brick.
Hug & Harman	Polk City	Surface	Stiff mud		2 down draft.	Drain tile.
Des Moines B. & T. Company	Des Moines	Shale	Stiff mud	Tunnel	Round down draft.	Drain tile.
Goodwin Tile and Brick Company	Des Moines	Shale	Stiff mud		5 down draft.	Drain tile.

POTTAWATTAMIE COUNTY.

Avoca Pressed Brick Co.....	Avoca	Loess	Soft mud.....	.....	Down draft	Common brick.
Karl Anderson.....	Council Bluffs.....	Loess.....	Soft mud.....	.....	2 clamp.....	Common brick.
L. C. Besley.....	Council Bluffs.....	Loess.....	Stiff and soft mud.	Pallet	2 up draft, 3 down draft..	Common brick.
John P. Weaver.....	Council Bluffs.....	Loess.....	Soft and stiff mud.	.....	4 up draft, 1 down draft.	Common brick, paving brick.
Wickham Bros.....	Council Bluffs.....	Loess.....	Soft mud.....	.....	4 up draft.....	Common brick.
C. C. Norgaard	Council Bluffs.....	Loess.....	Soft mud.....	.....	Clamp.....	Common brick.
Willoughby, Dye & Co.....	Meceдонia.....	Loess.....	Stiff mud.....	.....	4 clamp.....	Common brick, drain tile

POWESHIEK COUNTY.

McHose Bros.....	Grinnell.....	Loess.....	Stiff mud.....	.....	3 down draft.....	Common brick, drain tile, hollow block.
B. J. Broadston	Montezuma	Loess.....	Stiff mud.....	.....	Down draft.....	Common brick, drain tile.

RINGGOLD COUNTY.

Diagonal Brick and Tile Co.....	Diagonal	Loess.....	Stiff mud.....	Shed.....	2 up draft.....	Common brick.
Kellerton Brick and Tile	Kellerton	Loess.....	Stiff mud.....	Sheds	1 up draft, 2 down draft.	Common brick.

SAC COUNTY.

George Hicks	Grant City.....	Loess.....	Soft mud.....	.....	Open	Common brick.
Wm. Pellersels.....	Sac City.....	Loess.....	Soft mud.....	.....	Up draft.....	Common brick

SCOTT COUNTY.

Bettendorf Brick and Tile Co	Bettendorf.....	Loess.....	Soft mud.....	.....	2 open.....	Common brick.
Davenport Paving Brick and Tile Co	Buffalo	Shale.....	Stiff mud.....	.....	8 down draft.....	Paving brick, drain tile, hollow block.
Black Hawk Brick Co	Davenport	Loess.....	Soft mud.....	.....	4 clamp.....	Common brick.
Otten & Pohlmann.....	Davenport	Loess.....	Soft mud.....	.....	4 clamp.....	Common brick.
H. D. Pohlmann's Sons.....	Davenport	Loess.....	Soft mud.....	.....	.....	Common brick.

SHELBY COUNTY.

Harlan Brick and Tile Company.....	Harlan	Loess.....	Soft mud.....	.....	3 clamp.....	Common brick and drain tile.
					1 Holman	

DIRECTORY OF IOWA CLAY WORKERS—CONTINUED.

SIoux COUNTY.

FIRM NAME	LOCATION OF PLANT.	MATERIAL USED	PROCESS.	DRYER.	KILNS.	PRODUCTS.
G. W. Orton	Maurice	Loess	Stiff mud ...	.....	4 open	Common brick.
A. H. Kuhne	Rock Valley	Loess	Soft mud ...	.....	Open	Common brick.

STORY COUNTY.

Chas. E. McHose	Maxwell	Shale	Stiff mud ...	.....	3 down draft	Common brick, paving brick and drain tile.
R. C. Stark	Kelly	Loess	Stiff mud ...	Shed	Down draf	Common brick.
S. M. McHose	Nevada	Surface	Stiff mud ...	.....	.....	Common brick and drain tile.
F. Hennaman	State Center	Loess	Soft mud ...	Sheds	2 square	Common brick.
Cambridge Brick and Tile Works	Cambridge	Loess	Stiff mud ...	.....	1 down draft	Common brick and drain tile.

TAMA COUNTY.

Dysart Brick and Tile Company	Dysart	Surface	Stiff mud ...	.....	5 down draft	Common brick and drain tile.
Gethmann Bros	Gladbrook,	Surface ...	Dry press	.....	4 down draft	Common brick and front brick.
Gladbrook Dry Pressed Brick Co.	Gladbrook	Surface	Dry press .....	.....	Down draft	Common and front brick.
C. B. Bently & Son	Tama	Loess	Stiff mud ...	.....	1 up draft	Common brick.
John Wild & Son	Toledo	Modified loess	Stiff mud ...	.....	2 open	Common brick and drain tile.
					1 down draft	

TAYLOR COUNTY.

G. S. McKinley	Bedford	Surface ...	Soft mud ...	.....	Open	Common brick.
Miles E. Watson	Blockton	Surface	Soft mud ...	.....	2 up draft	Common brick.
W. B. Cunningham	Brooks	Surface	Soft mud .....	.....	2 clamp	Common brick.
Geo. Lewellen	Gravity	Loess	Soft mud .....	.....	2 clamp	Common brick.

UNION COUNTY.

D. J. Spencer	Afton	Loess	Stiff mud .....	.....	1 Stewart	Common brick and drain tile.
Tramp Brothers.....	Creston	Loess	Stiff mud .....	.....	8 down draft	Common brick, drain tile and hollow block.

VAN BUREN COUNTY.

H. A. Whitmore.....	Bonaparte.....	Surface	Stiff mud .....	.....	Open	Common brick.
Vansgen Brickyard.....	Farmington.....	Surface .....	.....	.....	Open	Common brick.
C. W. Baird	Milton.....	Surface	Soft mud .....	.....	1 up draft.....	Common brick.
Hangler & Kirchart	Milton.....	Surface	Stiff mud	Pallet	Down draft	Common brick.

WAPELLO COUNTY.

H. B. Ostdiek	Ottumwa	Surface	Soft mud.....	.....	8 Swift	Common brick and front brick.
Ottumwa Brick and Construction Company.	Ottumwa	Shale	Stiff mud.....	Steam	1 continuous, 5 down draft.	Common brick, paving brick, drain tile and hollow block.
Swift & Campbell Brick Company..	East Ottumwa.....	Surface	Stiff mud	Sheds	4 up draft, 1 continuous.	Common brick.

WARREN COUNTY.

W. G. Kurtz.....	Hartford.....	Up draft	Common brick.
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WASHINGTON COUNTY.

H. L. Swift	Riverside	Surface	Stiff mud	5 down draft	Common brick and drain tile.
Jas. Eckels	Washington	Surface	Stiff mud .....	.....	.....	Drain tile.
E. A. Swift	Washington	Surface	Stiff mud .....	.....	3 round, 1 square down draft, 4 up draft.	Common brick and drain tile.

WAYNE COUNTY.

A. L. Wigert	Allerton	Surface	Soft mud.....	.....	3 up draft	Common brick.
Alex Mardis.....	Corydon	Surface	Soft mud	Sheds	3 clamp	Common brick.
Logan & Gann	Lineville	Surface	Soft mud .....	.....	.....	Common brick.
Brown Brothers.....	Crawfordsville	Surface	Stiff mud .....	.....	2 down draft	Common brick and drain tile.

DIRECTORY OF IOWA CLAY WORKERS—CONTINUED.

WEBSTER COUNTY.

FIRM NAME.	LOCATION OF PLANT.	MATERIAL USED.	PROCESS.	DRYER.	KILNS.	PRODUCTS.
Fort Dodge Stoneware Company	Fort Dodge	Shale . . . . .	.....	.....	2 up draft,	Stoneware.
Bradshaw & Company.....	Fort Dodge.....	Shale.....	Stiff mud.....	.....	4 down draft.....	Drain tile, hollow block.
Fort Dodge Brick and Tile Company	Fort Dodge.....	Shale.....	Stiff mud.....	Steam.....	2 square, 4 round down draft.	Common brick and hollow block.
Fort Dodge Clay Works.....	Fort Dodge.....	Shale.....	Stiff mud.....	Wolff & Andrews.	1 continuous and 3 down draft.	Common brick.
Kalo Brick and Tile Company.....	Kalo.....	Shale.....	Stiff mud.....	.....	7 down draft.....	Common brick, drain tile, hollow block.
Johnston Bros.....	Kalo Junction.....	Shale.....	Stiff mud.....	.....	5 down draft.....	Common brick, drain tile, hollow block.
Corey Pressed Brick Company.....	Lehigh.....	Shale.....	Dry press.....	.....	5 down draft, 1 muffle up draft.	Front brick.
Lehigh Clay Works.....	Lehigh.....	Shale.....	Stiff mud.....	.....	8 down draft.....	Drain tile, hollow block.
Jas. Campbell.....	Lehigh.....	Shale.....	Stiff mud.....	.....	6 down draft.....	Common brick, drain tile, hollow block.
Lehigh Brick and Tile Company....	Lehigh.....	Shale.....	Stiff mud.....	.....	8 down draft.....	Drain tile, hollow block.

WINNESHIEK COUNTY.

Kornmeyer Bros.....	Decorah.....	Surface.....	Soft mud.....	.....	1 down draft, 1 scove....	Common brick.
Henry Schulz.....	Decorah.....	Surface.....	.....	.....	.....	Common brick.

WOODBURY COUNTY.

Cherry Red Pressed Brick Co.	Correctionville	Loess	Dry press .....	.....	2 down draft.	Front brick.
Leeds Brick Works	Leeds	Surface	Stiff mud. ....	.....	3 up draft.	Common brick.
Lower Brick Company	Riverside, Sioux City.	Shale	Stiff mud. ....	.....	1 Radford, 1 Hoffman, continuous.	Common and front brick.
Sioux City Brick and Tile Co.	Springdale, North Riverside	Shale	Stiff mud. ....	.....	1 Haigh, continuous	Common and front brick, drain tile, hollow block.
Sioux Paving Brick Company	Riverside, Sioux City.	Shale	Stiff mud. ....	.....	.....	Common brick, hollow block.
C. J. Holman & Brother.	Sargents Bluffs	Shale	Stiff mud.	Tunnel.	12 Ho'man	Common and paving brick, hollow block.
C. W. Ritz	Sargents Bluffs	Shale	Stiff mud. ....	.....	1 continuous	Common brick.

WRIGHT COUNTY.

C. A. Quasdorf	Dows	Surface	Stiff mud. ....	.....	4 down draft.	Drain tile.
David Morgan	Eagle Grove	Surface	Stiff mud. ....	.....	1 down draft.	Drain tile.
John Floyd and Son	Eagle Grove	Surface	Stiff mud. ....	.....	2 down draft.	Common brick, drain tile.
Star Brick and Tile Works	Goldfield	Surface	Stiff mud.	3 down draft.	Common brick, drain tile.

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The writers of this report desire to express their appreciation and obligation to the clay workers of the state who have so generously co-operated in the carrying forward of the work. In fact, anything like a satisfactory report would have been impossible without their assistance.

Most of the chemical work was done by Dr. J. B. Weems, Chemist of the Survey, and the chapter entitled "Chemistry of Clays" included in this report, dealing with the methods of rational and ultimate analyses, was prepared by Dr. Weems, and will undoubtedly prove to be a welcome contribution to chemists generally.

The laboratory work on the physical properties of clays was done by Mr. I. A. Williams, and the chapter on technology bearing upon these properties, and the descriptions of clay working machinery and processes were almost wholly prepared by him. Nearly all of the cuts illustrating the various types of clay working machinery were generously loaned by the manufacturers of the most approved types in the country, and to them due acknowledgment is made herewith.

The chapter on "Power Plants" prepared by Professor Bissell is timely and will undoubtedly be appreciated by all progressive clay workers.

It was the intention of the writers to include an elaborate report on clay testing but owing to the press of other work Professor Marston was unable to complete his work on the tests of paving brick. Fairly complete reports are submitted on common brick and dry press brick, and synopses on hollow block and paving brick.

In the preparation of the chapter on "The Geology of Clays" published articles and, in some instances, the unpublished notes of members of the Survey, to which the completeness of this chapter is largely due, were freely used and without special acknowledgment in the text.

The increasing scarcity of good lumber gives any treatise on structural materials, which may be used as substitutes for lumber, greater interest than it would otherwise deserve, and it is hoped that the present volume may be of service to contractors, builders and prospective as well as active clay workers.

