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SAMPLES
OF THE
WORK IN DRAWING
OF THE STUDENTS OF
THE INTERNATIONAL CORRESPONDENCE SCHOOLS
SCRANTON, PA.

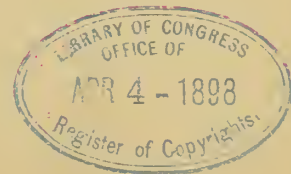
ARCHITECTURAL DRAWING

THE COLLIERY ENGINEER COMPANY
SCRANTON, PA.



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Photograph of Plate Drawn by
Wm. Huber, Jeweler, Age 23,
 584 Third Avenue,
 A. 389, NEW YORK CITY.

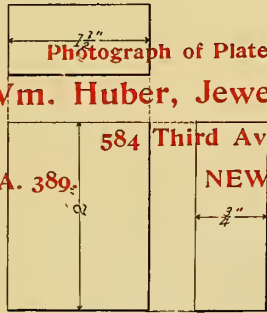


Fig. 1.

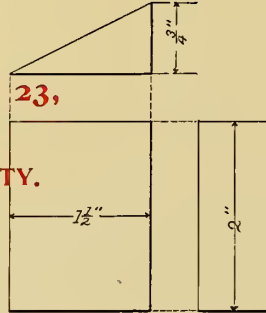


Fig. 2.

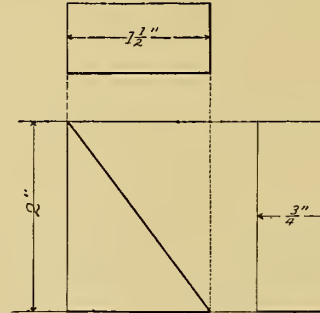


Fig. 3.

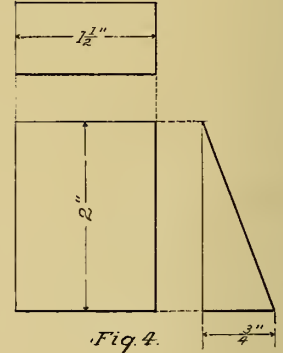


Fig. 4.

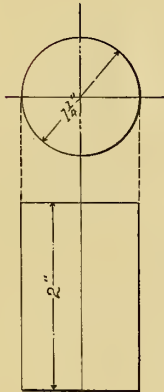


Fig. 5.

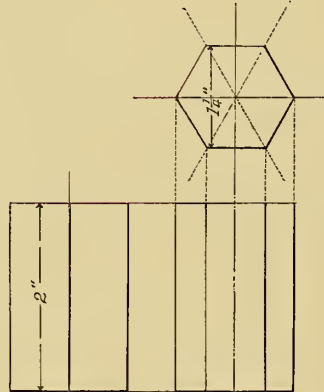


Fig. 6.

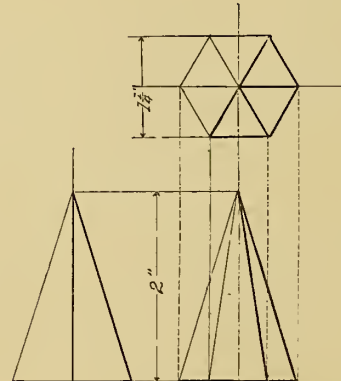


Fig. 7.

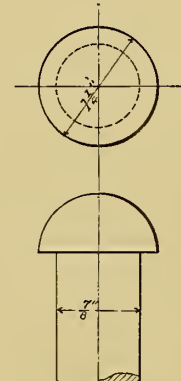


Fig. 8.

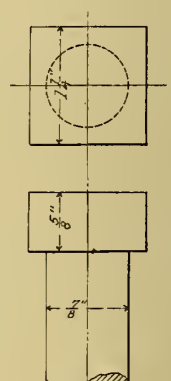


Fig. 9.

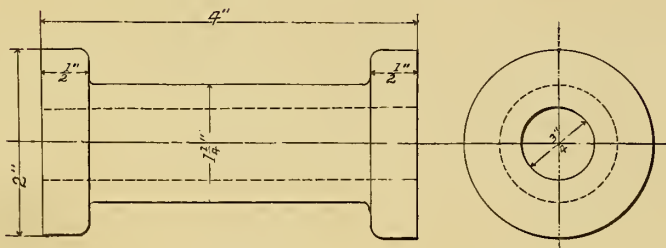


Fig. 10.

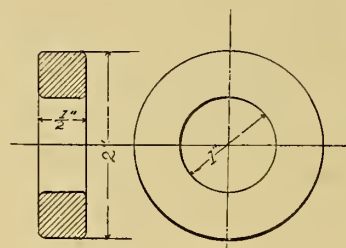


Fig. 11.

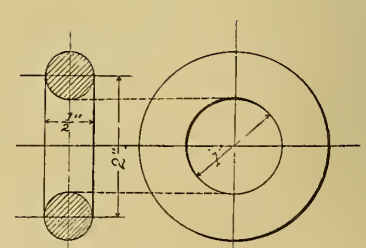


Fig. 12.

Photograph of Plate Drawn by
E. Gunther, Tin and Sheet Iron Worker, Age 19,
 3 West Montgomery Street,
BALTIMORE, MD.

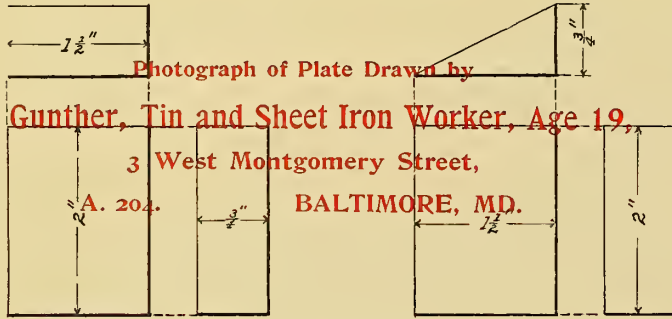


Fig. 1.

Fig. 2.

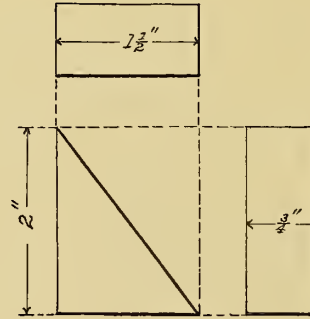


Fig. 3.

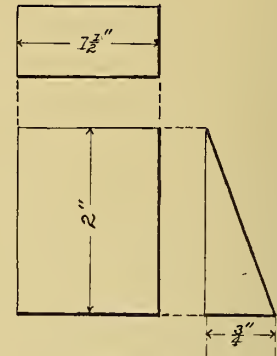


Fig. 4.

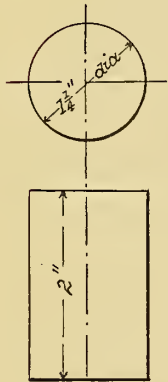


Fig. 5.

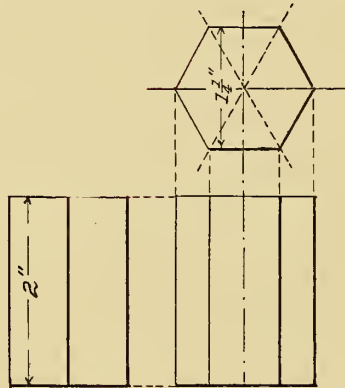


Fig. 6.

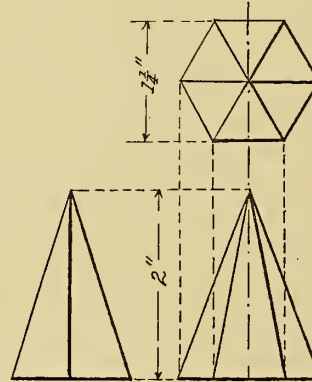


Fig. 7.



Fig. 8.

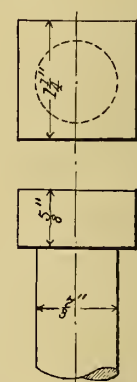


Fig. 9.

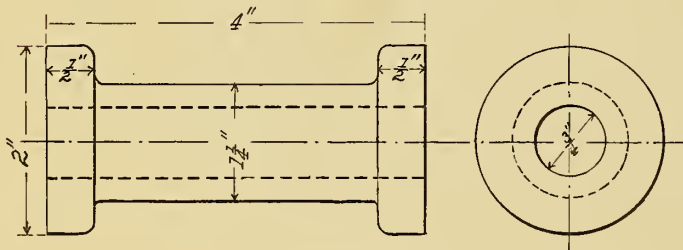


Fig. 10.

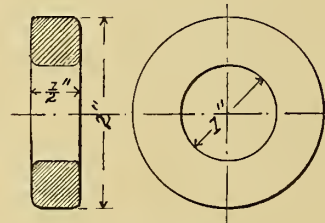


Fig. 11.

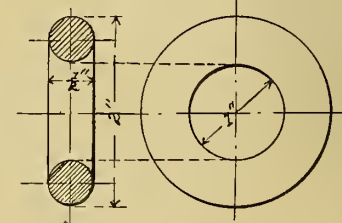


Fig. 12.

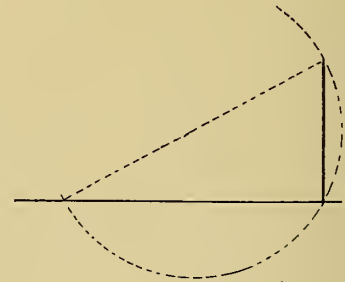
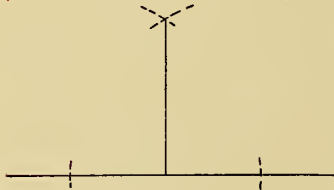
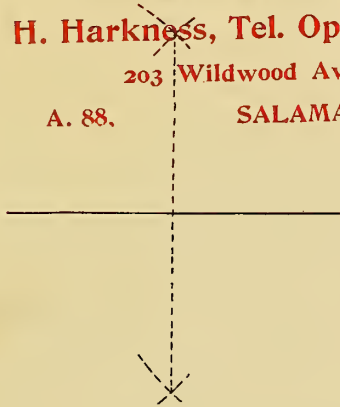
PLATE I.

PROBLEM 1: To bisect a straight line.

PROBLEM 2: To draw a perpendicular to a straight line from a given point in that line.
CASE I.

CASE II.

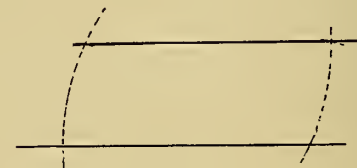
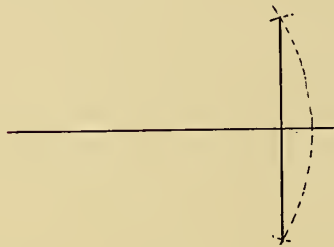
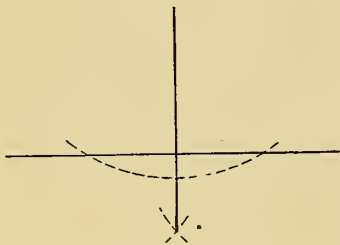
Photograph of Plate Drawn by
H. H. Harkness, Tel. Operator, Age 23,
203 Wildwood Avenue,
A. 88. SALAMANCA, N. Y.



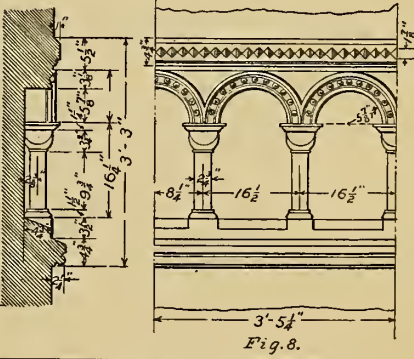
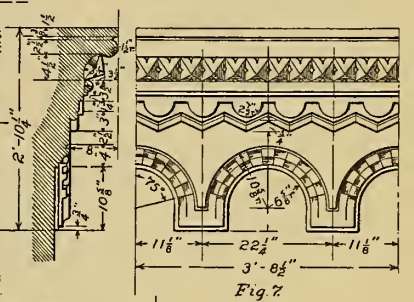
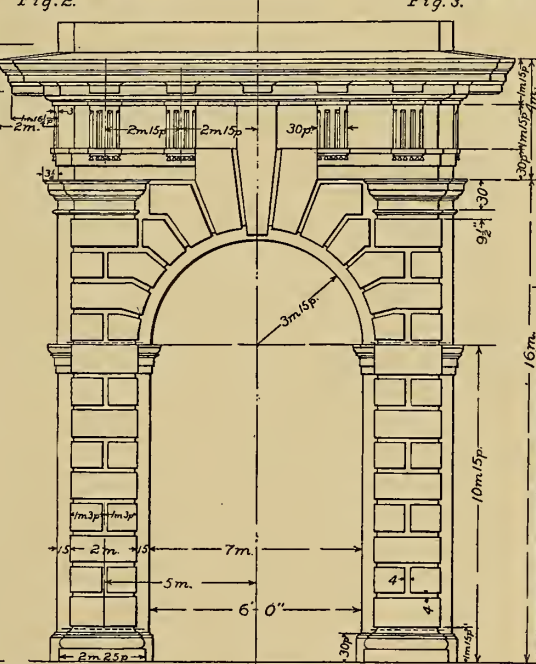
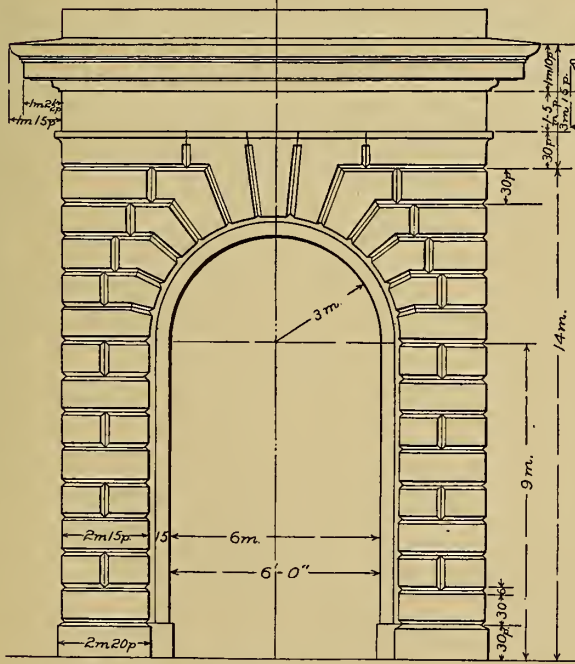
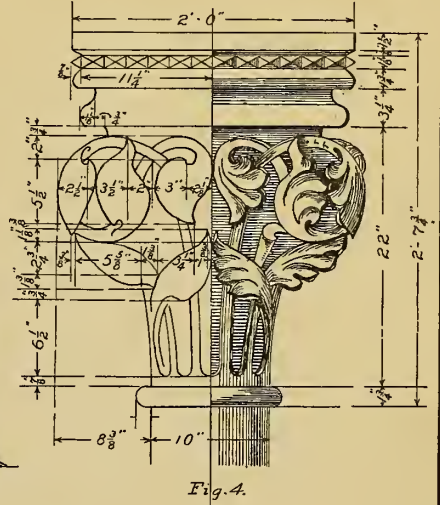
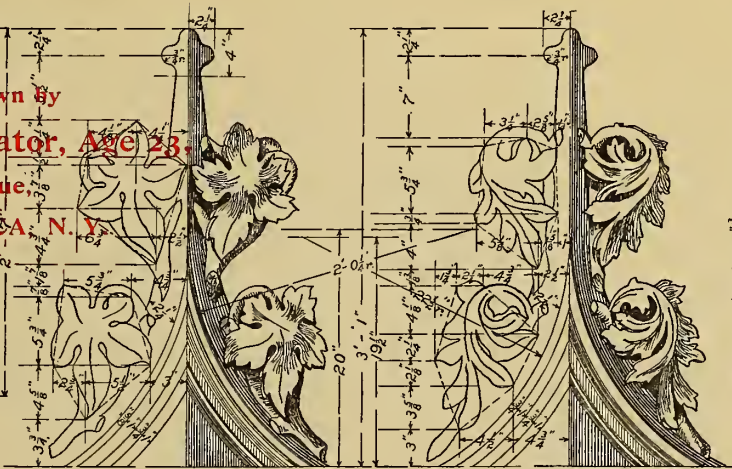
PROBLEM 3: To draw a perpendicular to a straight line from a point without it.
CASE I.

PROBLEM 4: Through a given point to draw a straight line parallel to a given straight line.

CASE II.



Photograph of Plate Drawn By
H. H. Harkness, Tel. Operator, Age 23,
 203 W. 42nd Street,
 A. 88 SALAMANCA, N. Y.

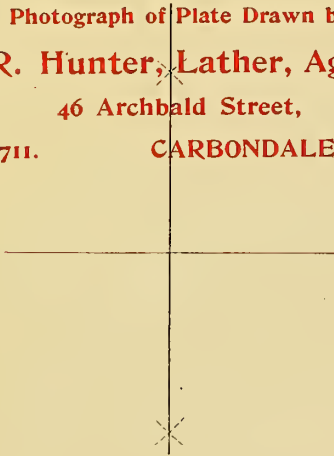


Scale Parts Modules. Fig. 5.

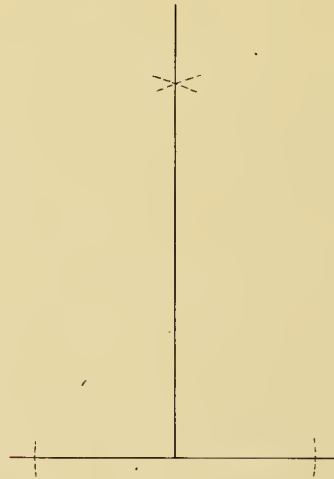
Scale Parts Modules. Fig. 6.

PROBLEM 1: - To bisect a straight line.

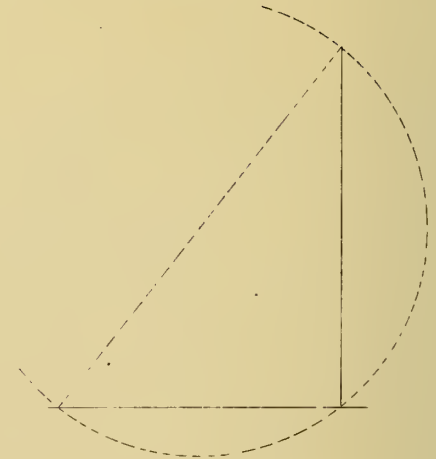
Photograph of Plate Drawn by
C. R. Hunter, Lather, Age 24,
46 Archbald Street,
A. 711. CARBONDALE, PA.



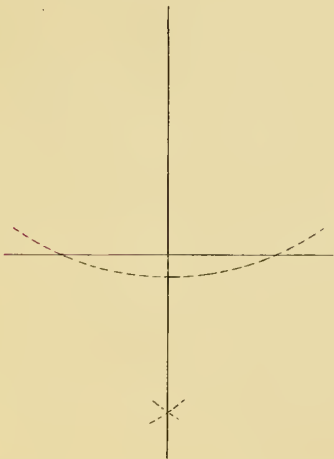
PROBLEM 2: - To draw a perpendicular to a straight line from a given point in that line
CASE I.



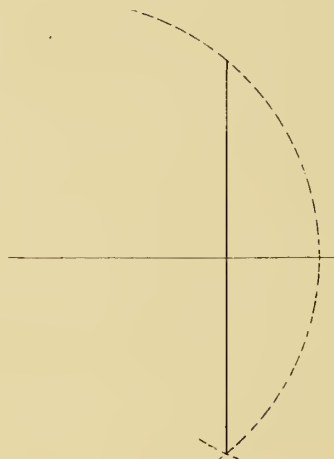
CASE II.



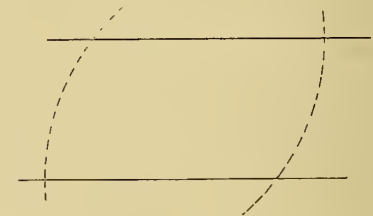
PROBLEM 3: - To draw a perpendicular to a straight line from a point without it.
CASE I.



CASE II.



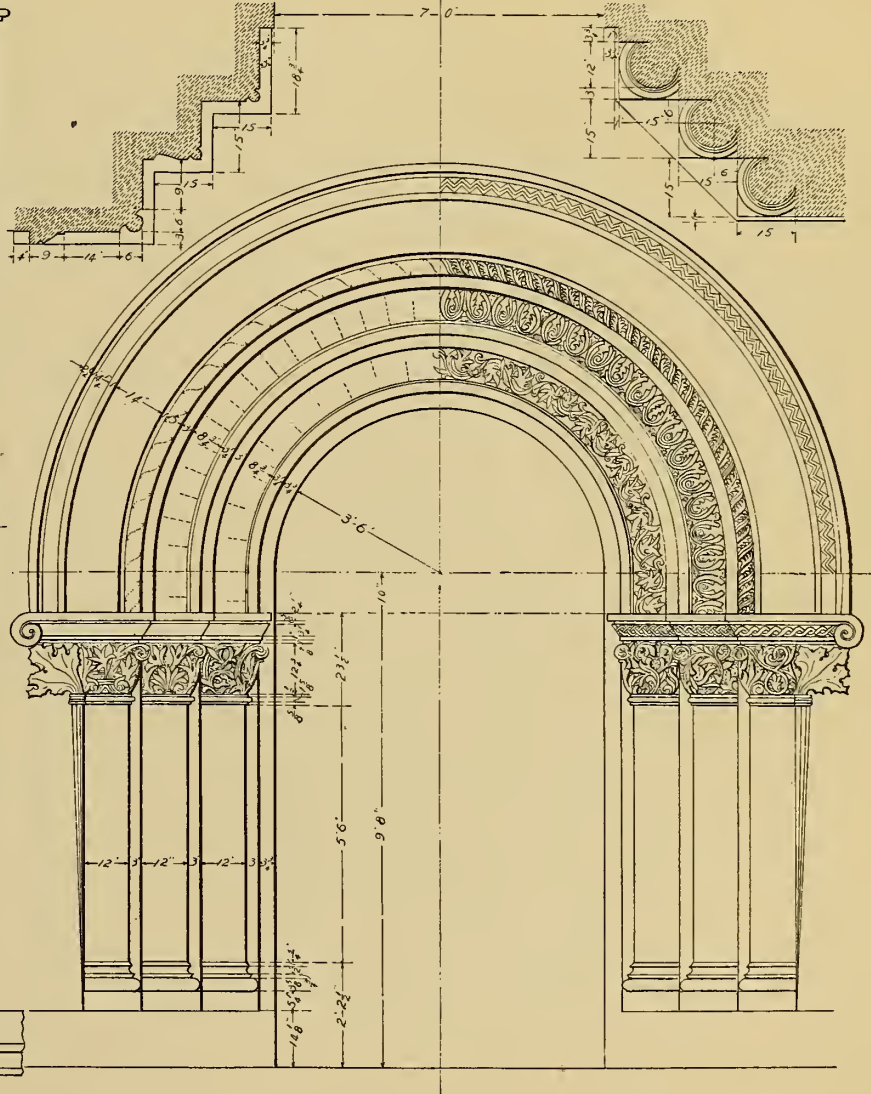
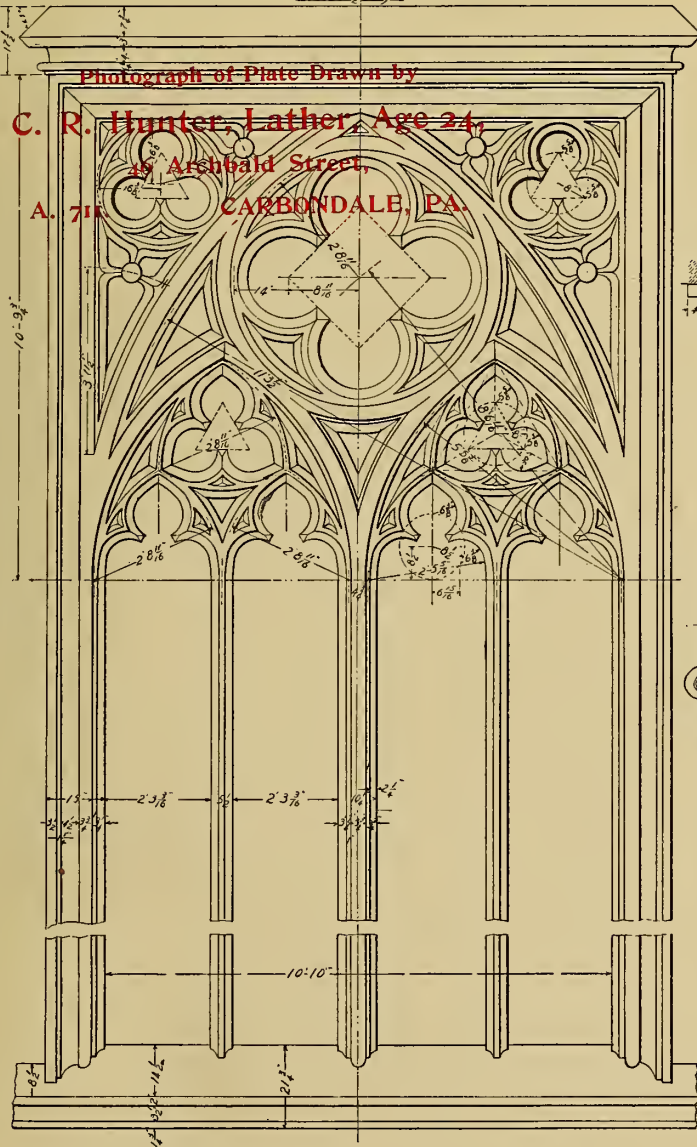
PROBLEM 4 - Through a given point to draw a straight line parallel to a given straight line.



GOTHIC TRACERY WINDOW
Scale $\frac{1}{2} = 1 ft$

MODERN ROMANESQUE DOORWAY
Scale $\frac{1}{2} = 1 ft$

Photograph of Plate Drawn by
C. R. Hunter, Father, Age 24,
49 Archbald Street,
A. 711 CARBONDALE, PA.

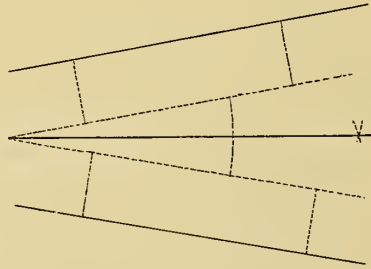


PROBLEM 5: To bisect a given angle.
CASE I.

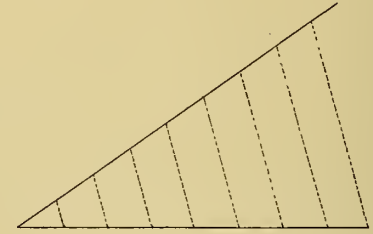
Photograph of Plate Drawn by
Lyle H. Olson, Draper, Age 21,
1200 Pabst Building,
A. 687. MILWAUKEE, WIS.



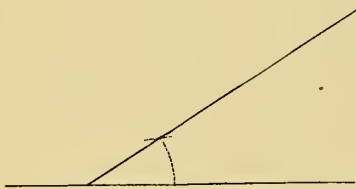
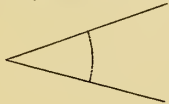
PROBLEM 5: To bisect a given angle.
CASE II.



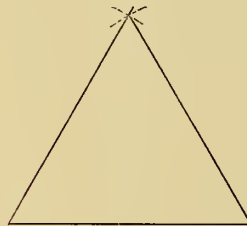
PROBLEM 6: To divide a given straight line
into any required number of equal parts.



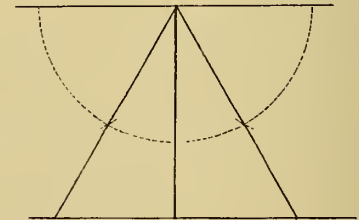
PROBLEM 7: To draw a straight line through
any given point on a given straight line to make
any required angle with that line.



PROBLEM 8: To draw an equilateral triangle one
side being given.



PROBLEM 9: The altitude of an equilateral
triangle being given, to draw the triangle.





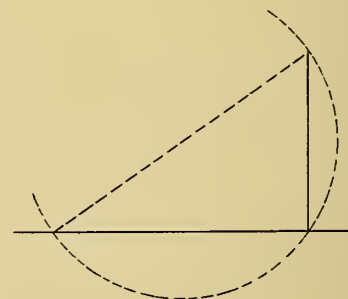
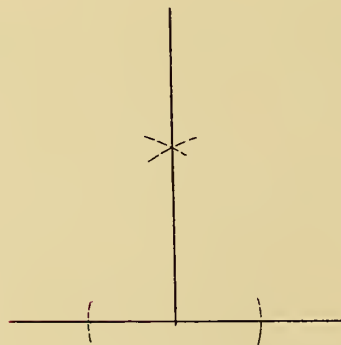
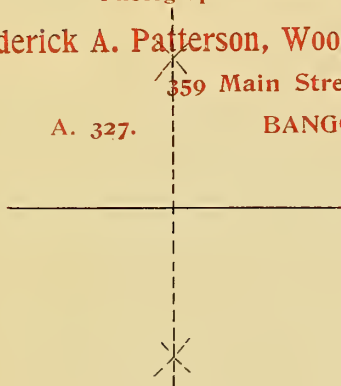
PROBLEM 1: To bisect a straight line

PROBLEM 2: To draw a perpendicular to a straight line from a given point in that line.
CASE I.

CASE II.

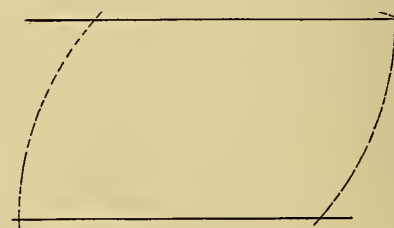
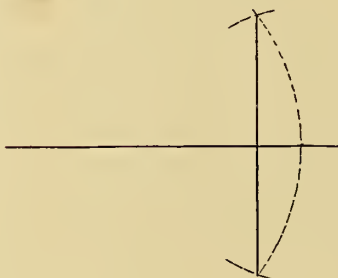
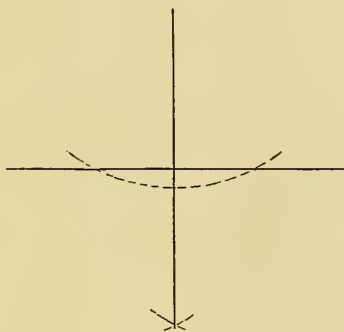
Photograph of Plate Drawn by
Frederick A. Patterson, Wood Worker, Age 28,

A. 327. 359 Main Street,
BANGOR, MAINE.



PROBLEM 3: To draw a perpendicular to a straight line from a point without it
CASE I.

PROBLEM 4: Through a given point to draw
a straight line parallel to a given straight line.



PROBLEM 1: To bisect a straight line.

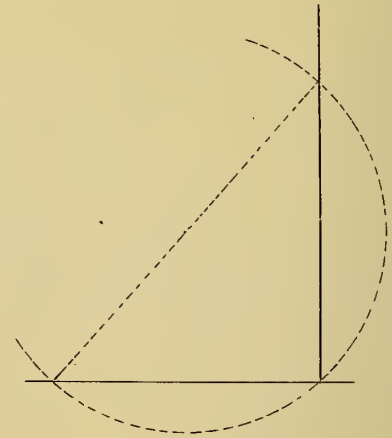
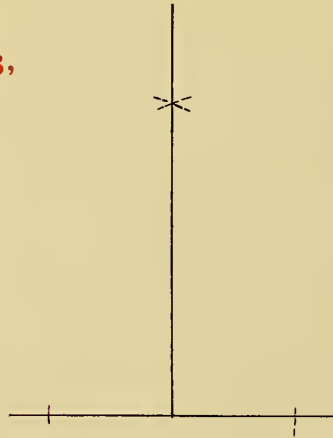
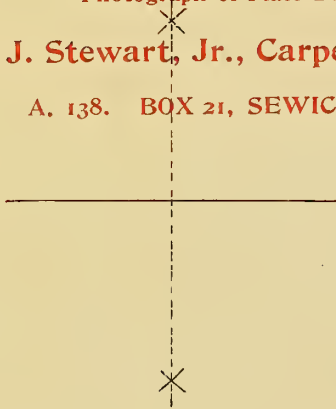
PROBLEM 2: To draw a perpendicular to a straight line from a given point in that line.
CASE I.

CASE II.

Photograph of Plate Drawn by

W. J. Stewart, Jr., Carpenter, Age 23,

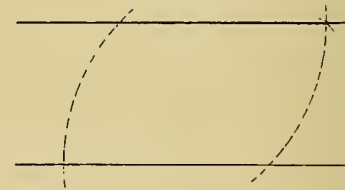
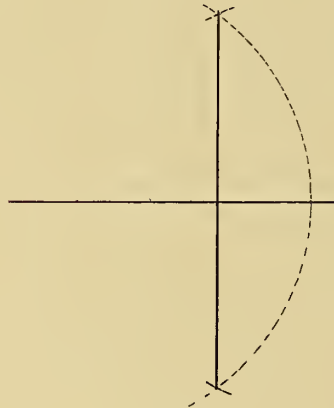
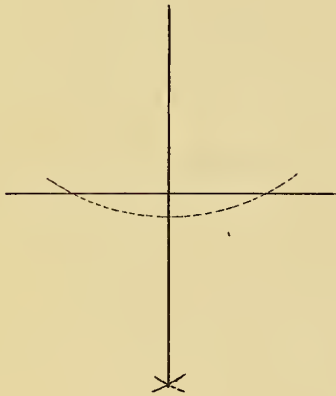
A. 138. BOX 21, SEWICKLEY, PA.



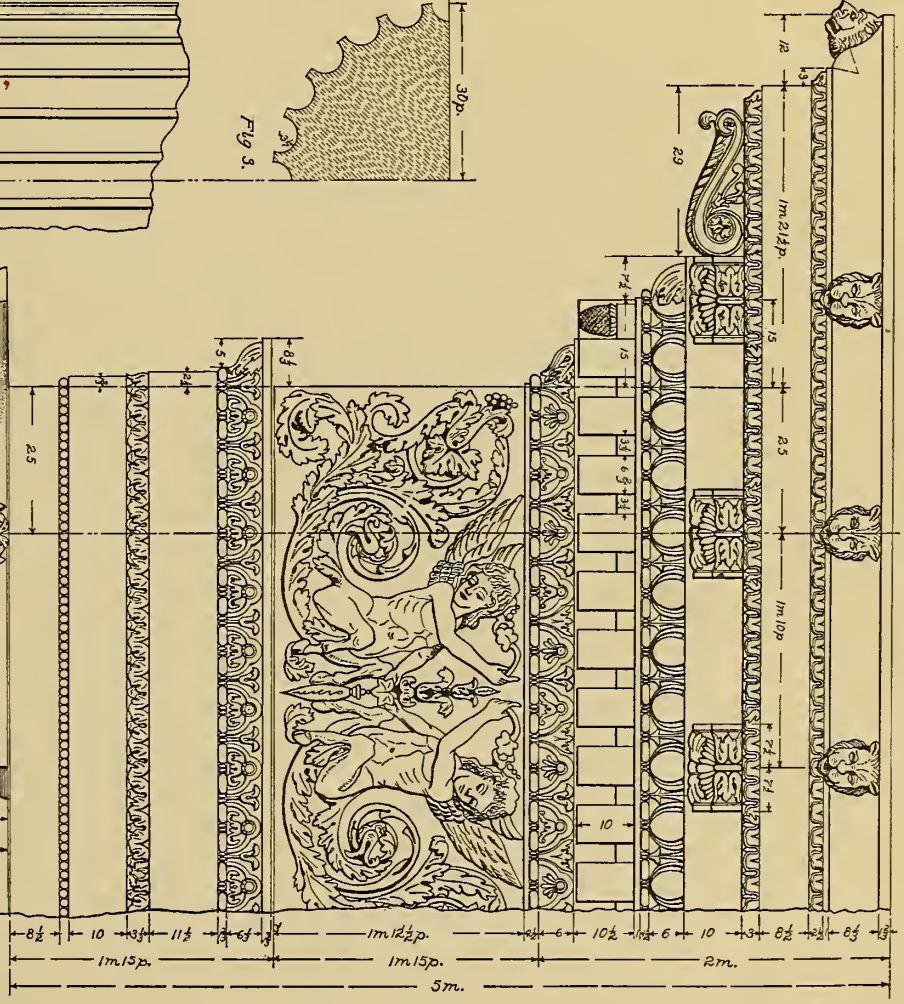
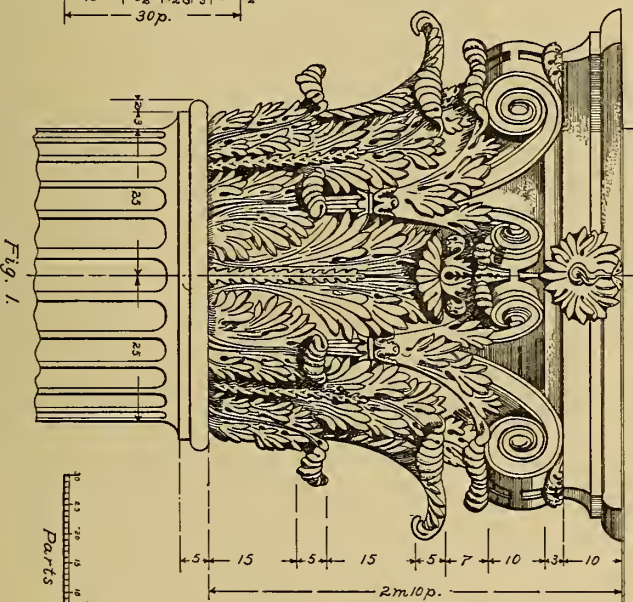
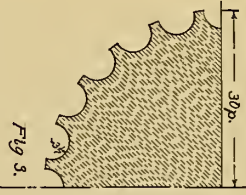
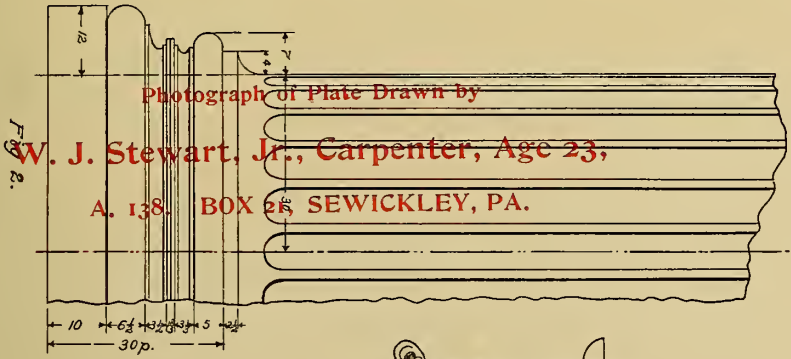
PROBLEM 3: To draw a perpendicular to a straight line from a point without it.
CASE I.

CASE II.

PROBLEM 4: Through a given point to draw a straight line parallel to a given straight line.



CORINTHIAN ORDER.

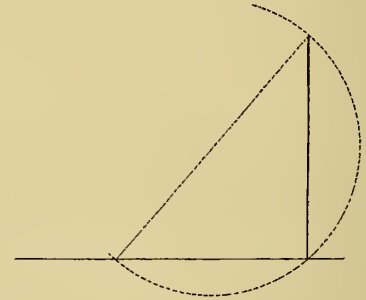
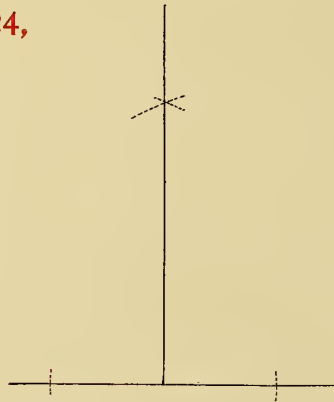
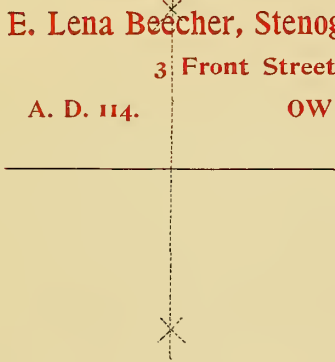


PROBLEM 1: To bisect a straight line.

PROBLEM 2: To draw a perpendicular to a straight line from a given point in that line.
CASE I.

CASE II.

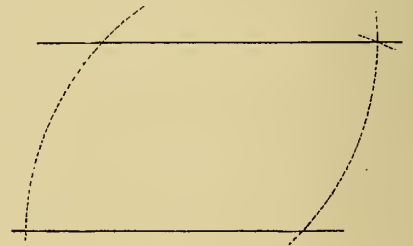
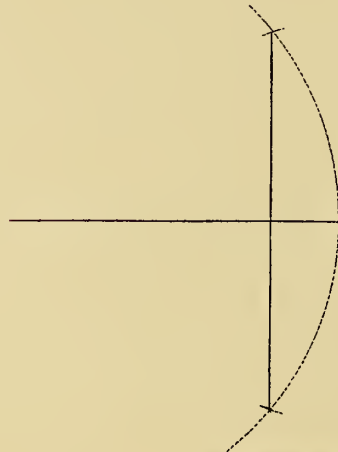
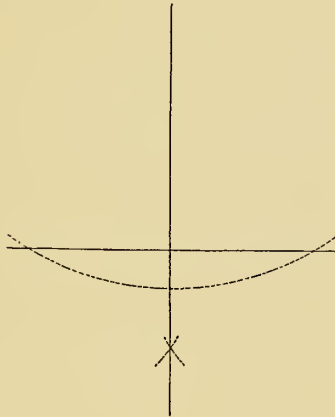
Photograph of Plate Drawn by
Miss E. Lena Beecher, Stenographer, Age 24,
3 Front Street,
A. D. 114. OWEGO, N. Y.



PROBLEM 3: To draw a perpendicular to a straight line from a point without it.
CASE I.

CASE II.

PROBLEM 4: Through a given point to draw a straight line parallel to a given straight line.



PROBLEM 1: To bisect a straight line

PROBLEM 2: To draw a perpendicular to a straight line from a given point in that line.
CASE I.

CASE II

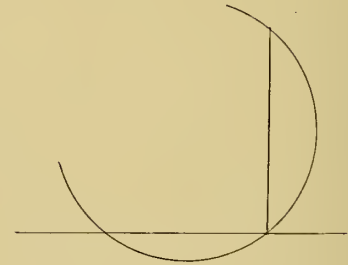
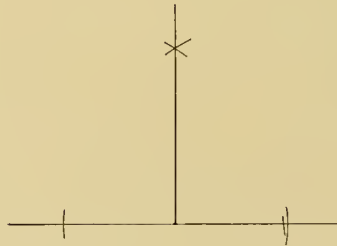
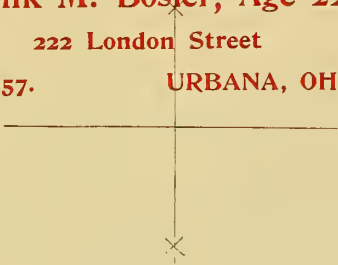
Photograph of Plate Drawn by

Frank M. Bosler, Age 22,

222 London Street

A. D. 57.

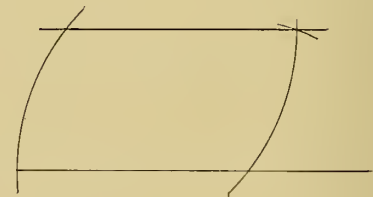
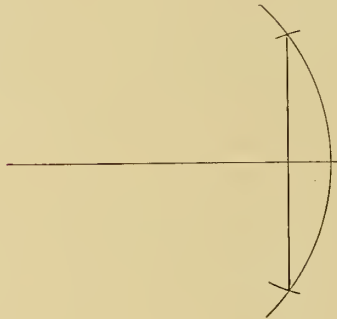
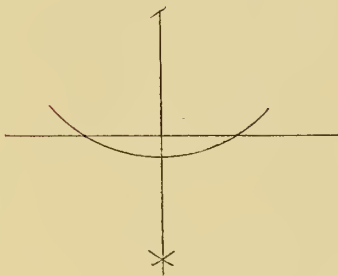
URBANA, OHIO.



PROBLEM 3: To draw a perpendicular to a straight line from a point without it.
CASE I.

CASE II.

PROBLEM 4: Through a given point to draw a straight line parallel to a given straight line.



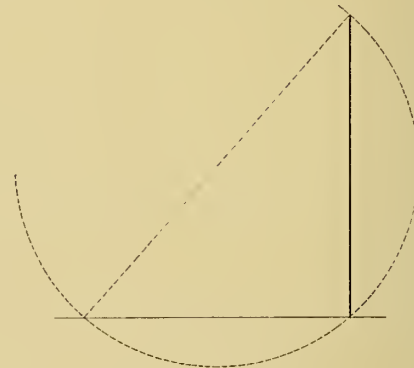
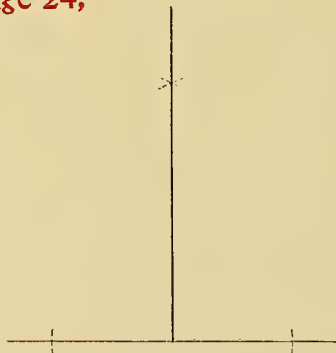
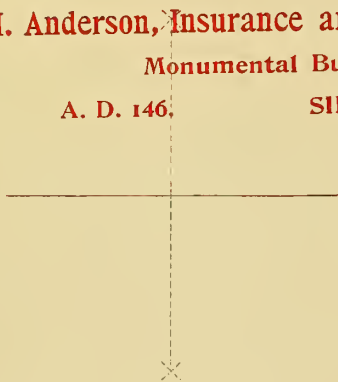


PROBLEM 1: To bisect a straight line.

PROBLEM 2: To draw a perpendicular to a straight line from a given point in that line.
CASE I.

CASE II.

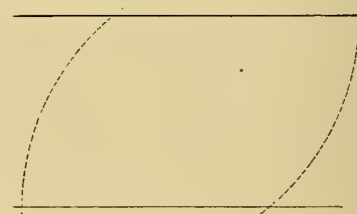
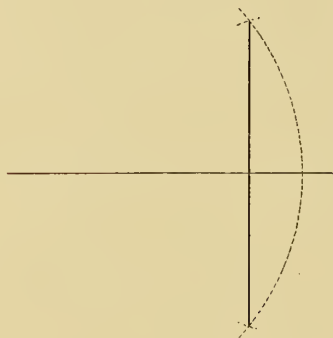
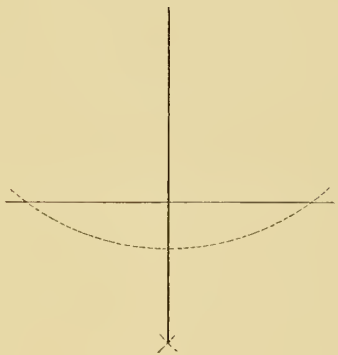
Photograph of Plate Drawn by
H. H. Anderson, Insurance and Drafting, Age 24,
Monumental Building,
A. D. 146, SIDNEY, OHIO.



PROBLEM 3: To draw a perpendicular to a straight line, from a given point without it:
CASE I.

CASE II.

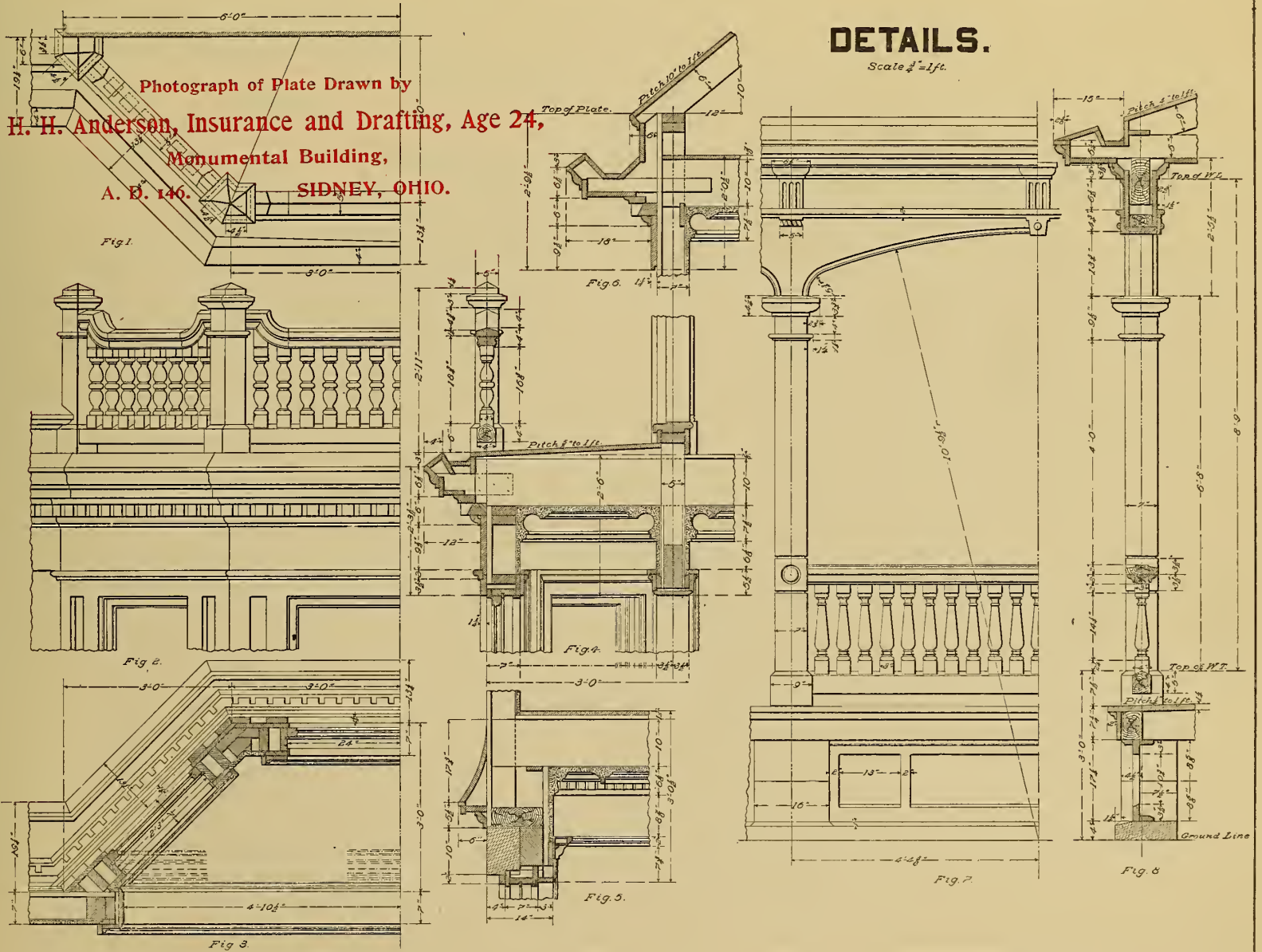
PROBLEM 4: Through a given point, to draw a straight line parallel to a given straight line.



DETAILS.

Scale $\frac{1}{4}'' = 1ft.$

Photograph of Plate Drawn by
H. H. Anderson, Insurance and Drafting, Age 24,
Monumental Building,
A. B. 146. **SIDNEY, OHIO.**



PROBLEM 22. To draw an egg-shaped oval.

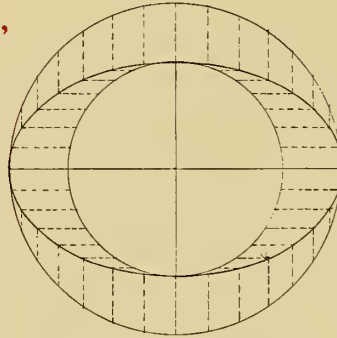
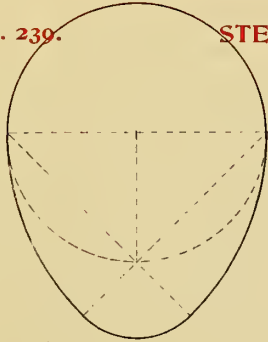
PROBLEM 23: To draw an ellipse, the diameters being given.

PROBLEM 26: To draw a helix, the pitch and the diameter being given.

Photograph of Plate Drawn by

S. M. Evans, Template-Maker, Age 31,

B. 239. STEELTON, PA.



PROBLEM 24: To draw an ellipse with circular arcs.

PROBLEM 25: To draw a parabola, the axis and longest double ordinant being given.

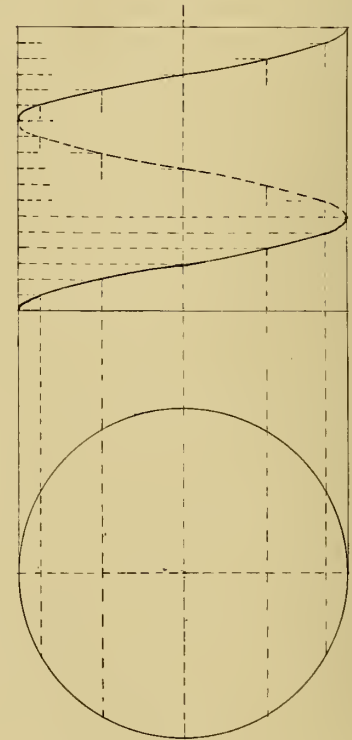
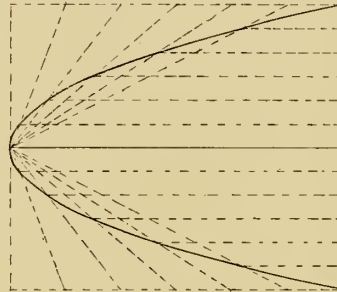
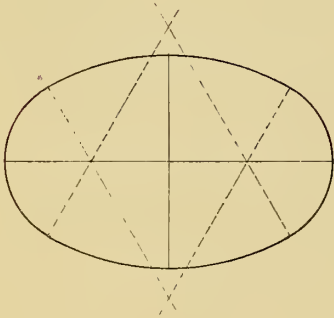


PLATE XVIII.

Photograph of Plate Drawn by
S. M. Evans, Template-Maker, Age 31,

B. 239. STEELTON, PA.

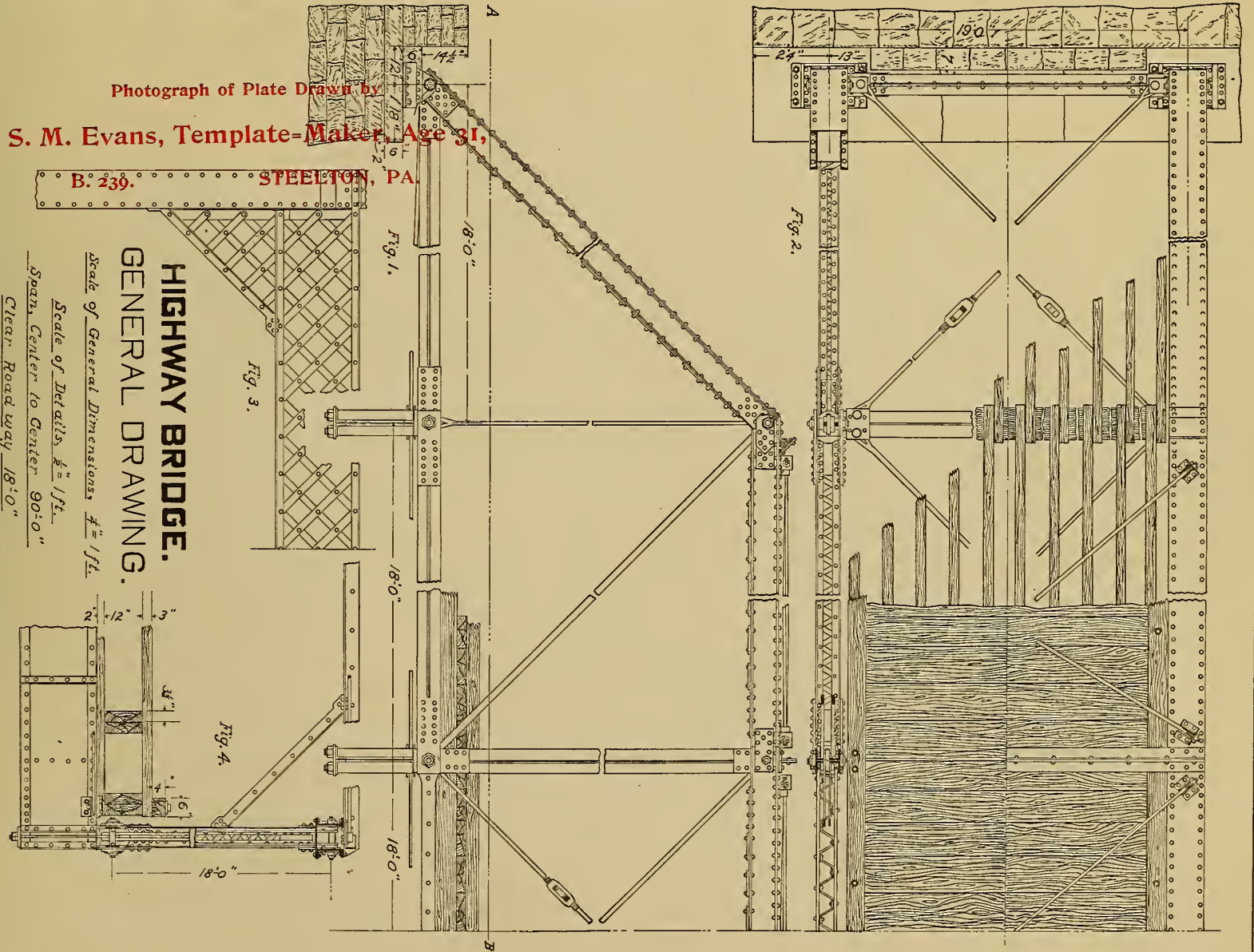
HIGHWAY BRIDGE. GENERAL DRAWING.

Scale of General Dimensions, $\frac{1}{4}'' = 1ft.$

Scale of Details, $\frac{1}{8}'' = 1ft.$

Span, Center to Center 90'-0"

Clear Road way 18'-0"



Photograph of Plate Drawn by
Chas. D. Boggess, Surveyor, Age 27,
B. 65. BOX 466, ASHLAND, KY.

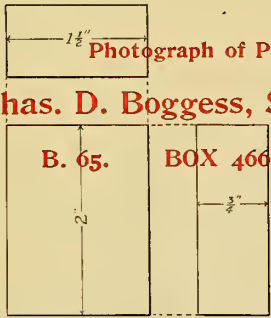


Fig. 1.

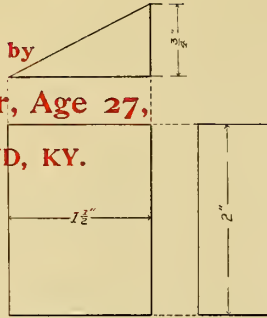


Fig. 2.

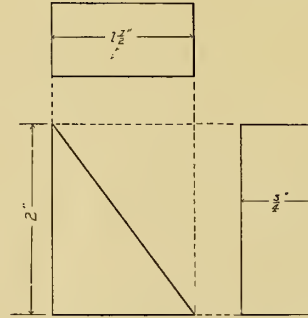


Fig. 3.

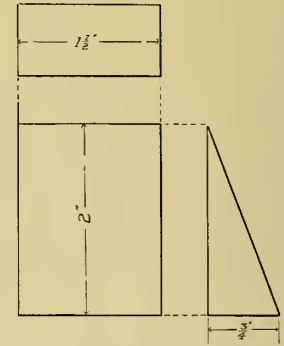


Fig. 4.

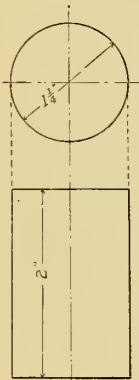


Fig. 5.

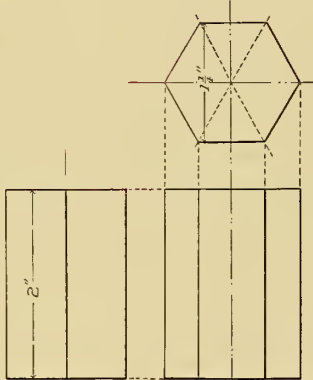


Fig. 6.

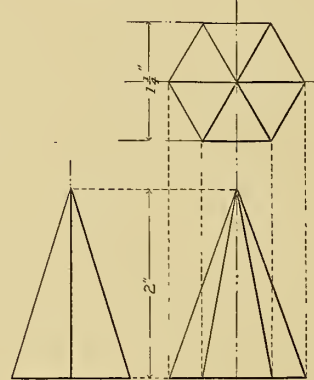


Fig. 7.

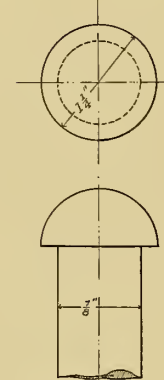


Fig. 8.



Fig. 9.

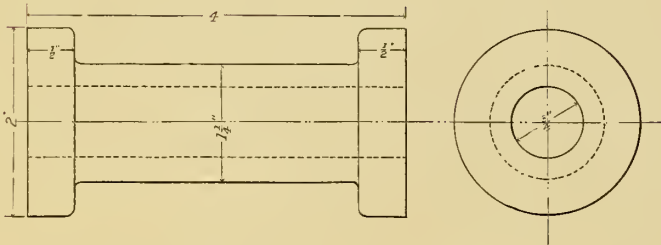


Fig. 10.

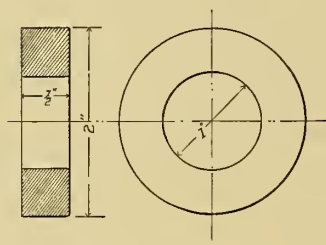


Fig. 11.

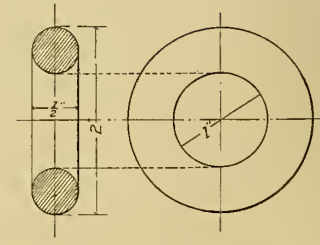
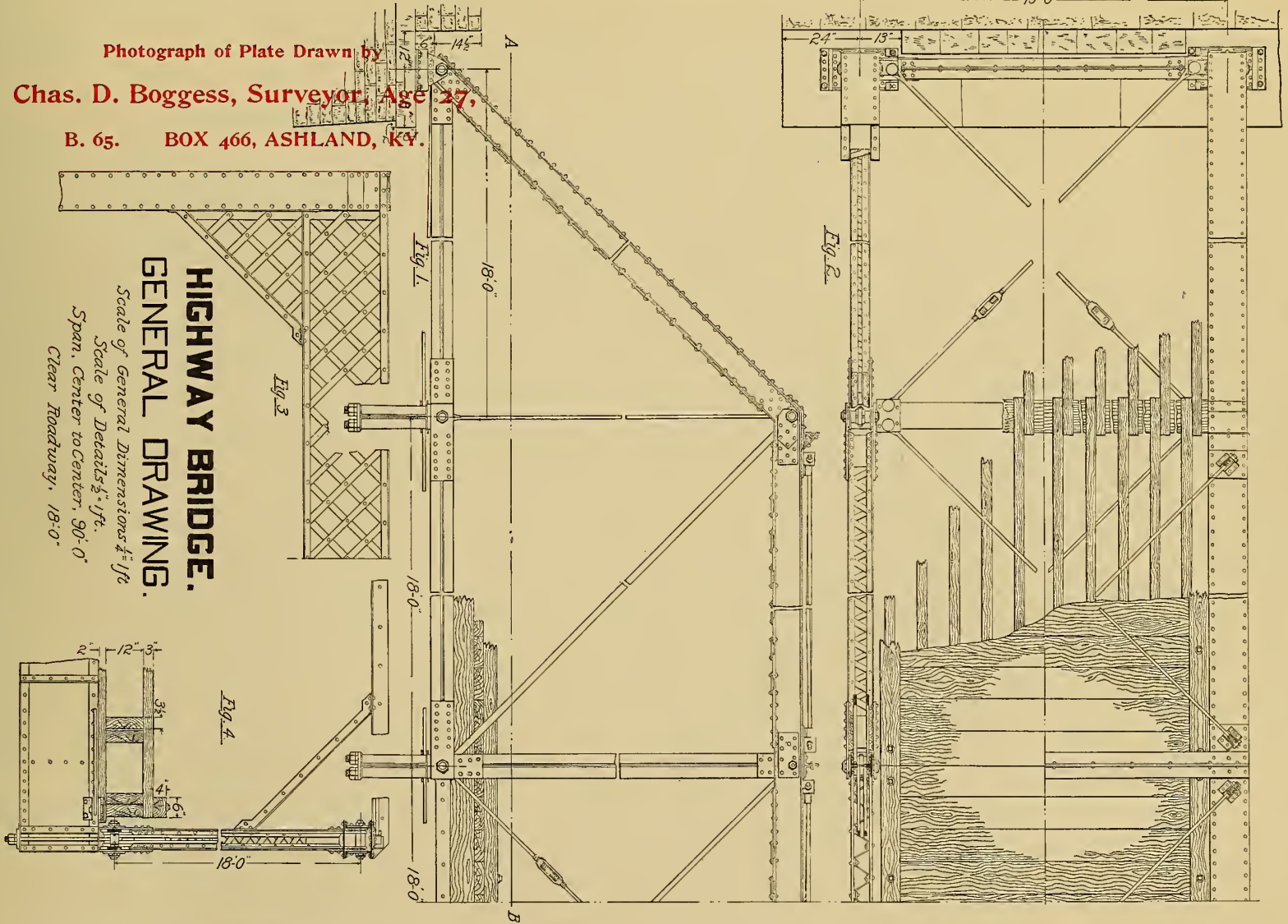


Fig. 12.

Photograph of Plate Drawn by
Chas. D. Boggess, Surveyor, Age 27,
B. 65. BOX 466, ASHLAND, KY.

HIGHWAY BRIDGE. GENERAL DRAWING.

Scale of General Dimensions $\frac{1}{4}$ " = 1 ft.
Scale of Details $\frac{1}{8}$ " = 1 ft.
Span, Center to Center, 90'-0"
Clear Roadway, 18'-0"



PROBLEM 1: To bisect a straight line.

PROBLEM 2: To draw a perpendicular to a straight line from a given point in that line.
CASE I.

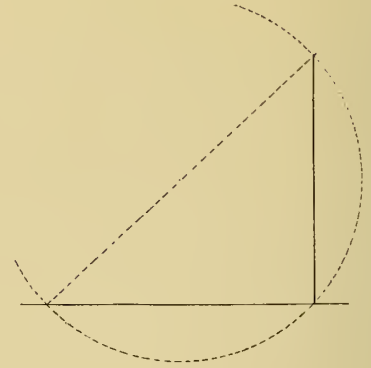
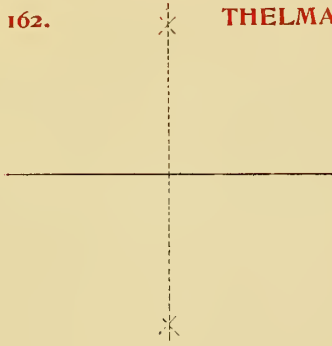
CASE II.

Photograph of Plate Drawn by

W. A. Clefford, Operator, Age 28,

R. 162.

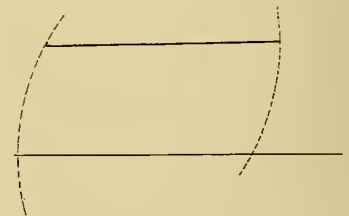
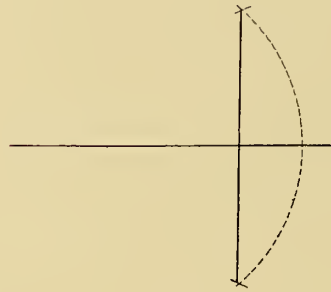
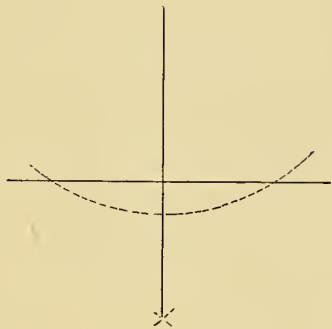
THELMA, IND.



PROBLEM 3: To draw a perpendicular to a straight line from a point without it.
CASE I.

CASE II.

PROBLEM 4: Through a given point to draw a straight line parallel to a given straight line.



90 FT. BRIDGE DETAILS.

Material:
Wrought Iron.

Note: All rivets are $\frac{3}{4}$ "
unless otherwise specified.

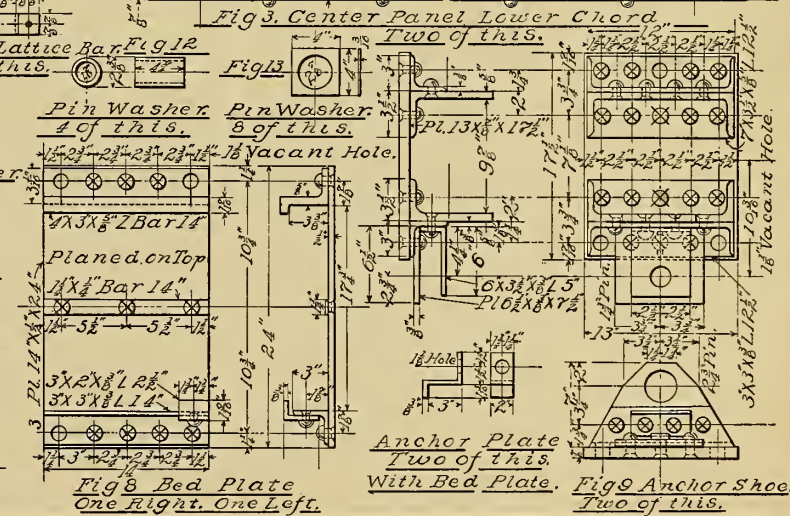
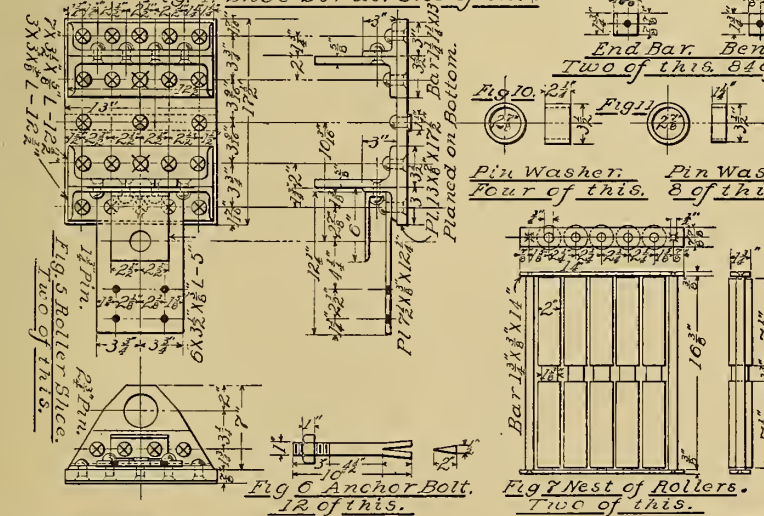
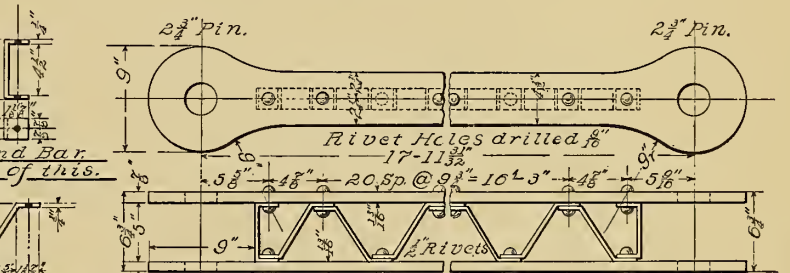
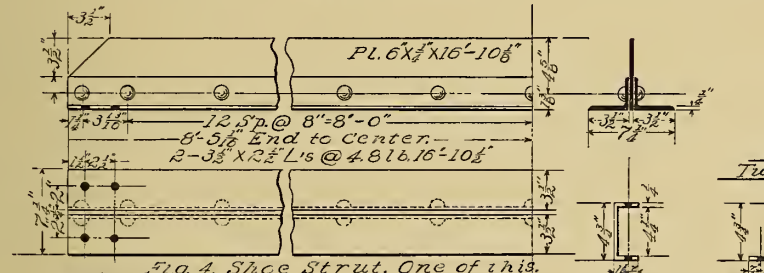
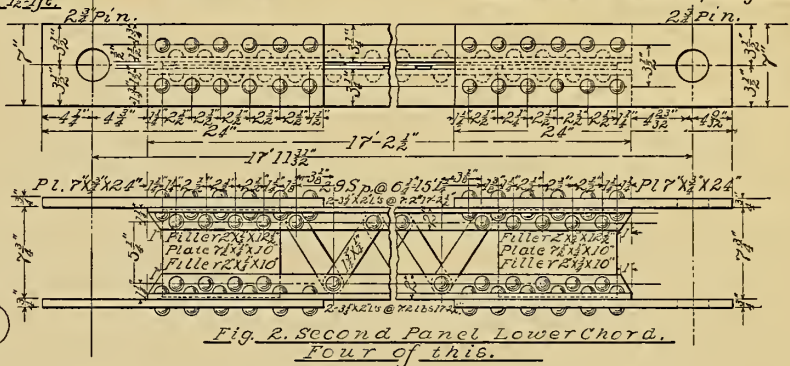
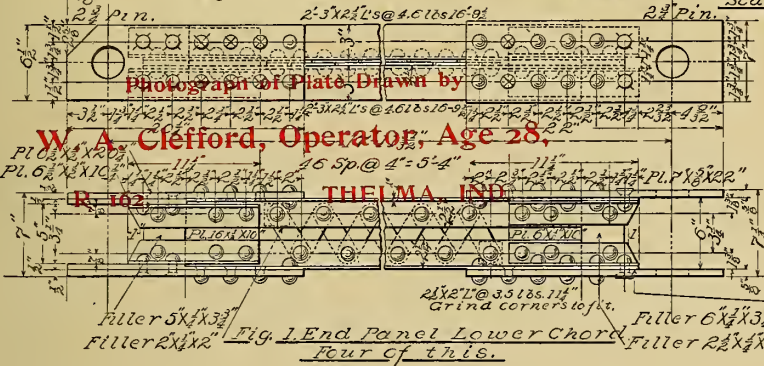


PLATE I.

PROBLEM 1: To bisect a straight line.

PROBLEM 2: To draw a perpendicular to a straight line from a given point in that line.
CASE I.

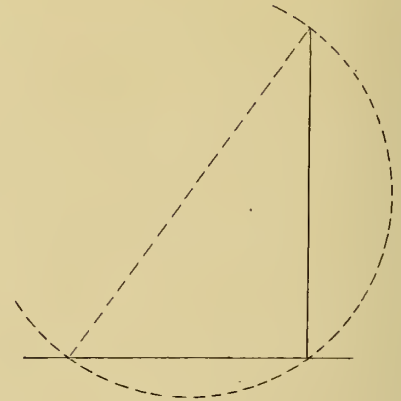
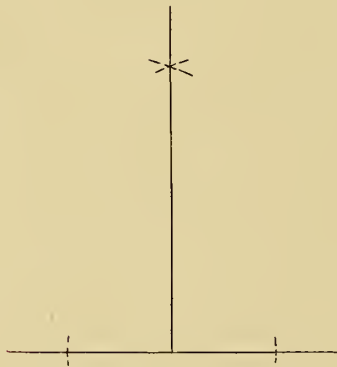
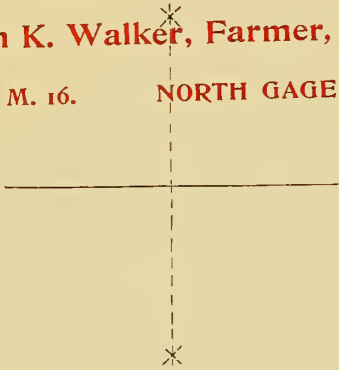
CASE II.

Photograph of Plate Drawn by

John K. Walker, Farmer, Age 38,

S. M. 16.

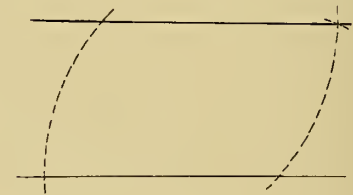
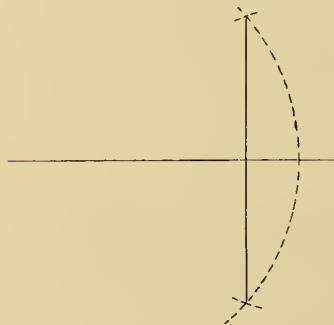
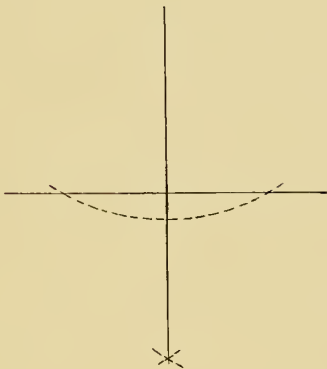
NORTH GAGE, N. Y.



PROBLEM 3: To draw a perpendicular to a straight line from a point without it.
CASE I.

CASE II.

PROBLEM 4: Through a given point to draw a straight line parallel to a given straight line.



MAP OF A VILLAGE.

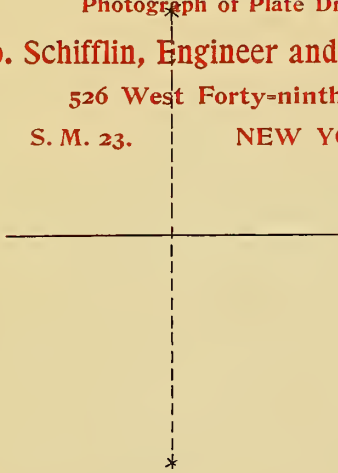
Scale 1 in. = 200 ft.

Photograph of Plate Drawn by
John K. Walker, Farmer, Age 38,

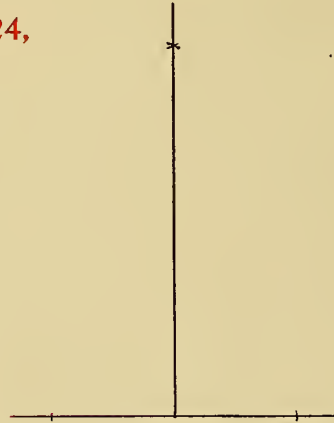


PROBLEM 1: To bisect a straight line.

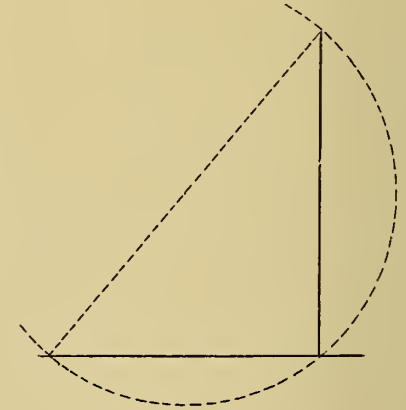
Photograph of Plate Drawn by
Theo. Schifflin, Engineer and Soldier, Age 24,
526 West Forty-ninth Street,
S. M. 23. NEW YORK, N. Y.



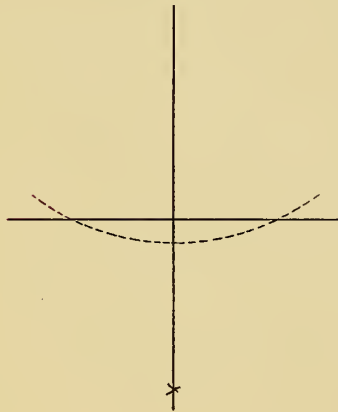
PROBLEM 2: To draw a perpendicular to a straight line from a given point in that line.
CASE I.



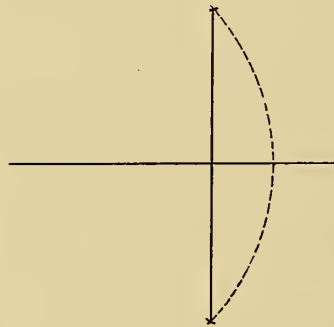
CASE II.



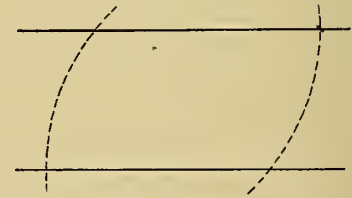
PROBLEM 3: To draw a perpendicular to a straight line from a point without it.
CASE I



CASE II

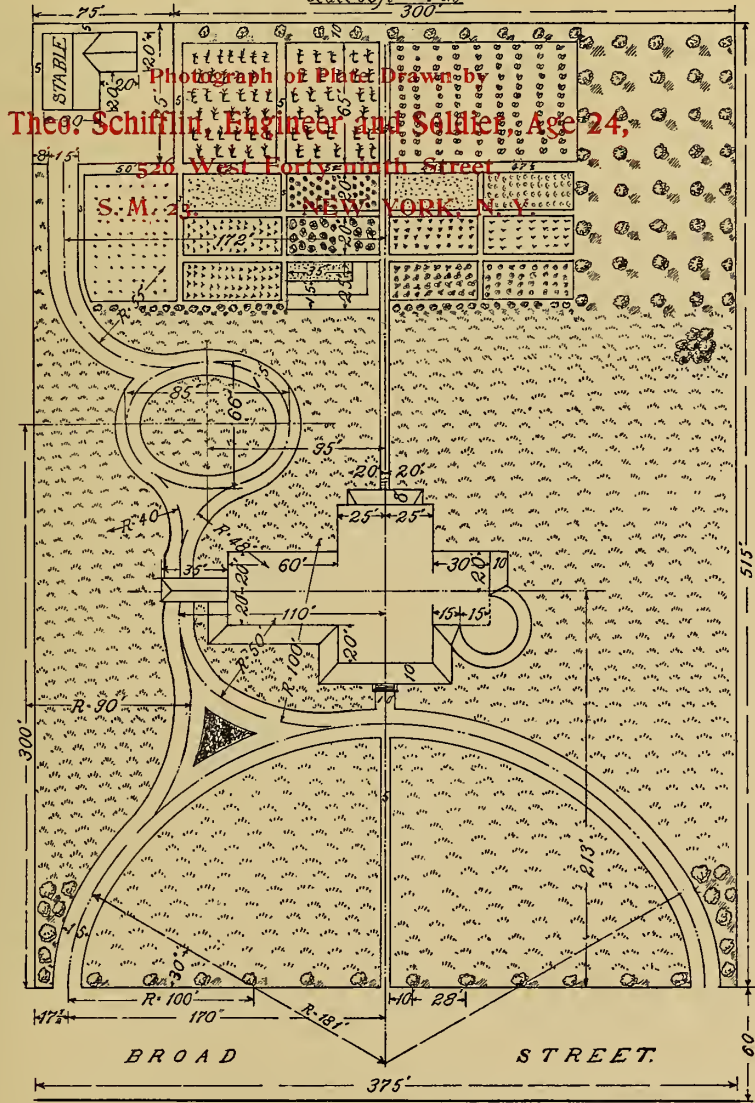


PROBLEM 4: Through a given point to draw a straight line parallel to a given straight line.



PLAT OF HOUSE, GROUNDS AND GARDENS.

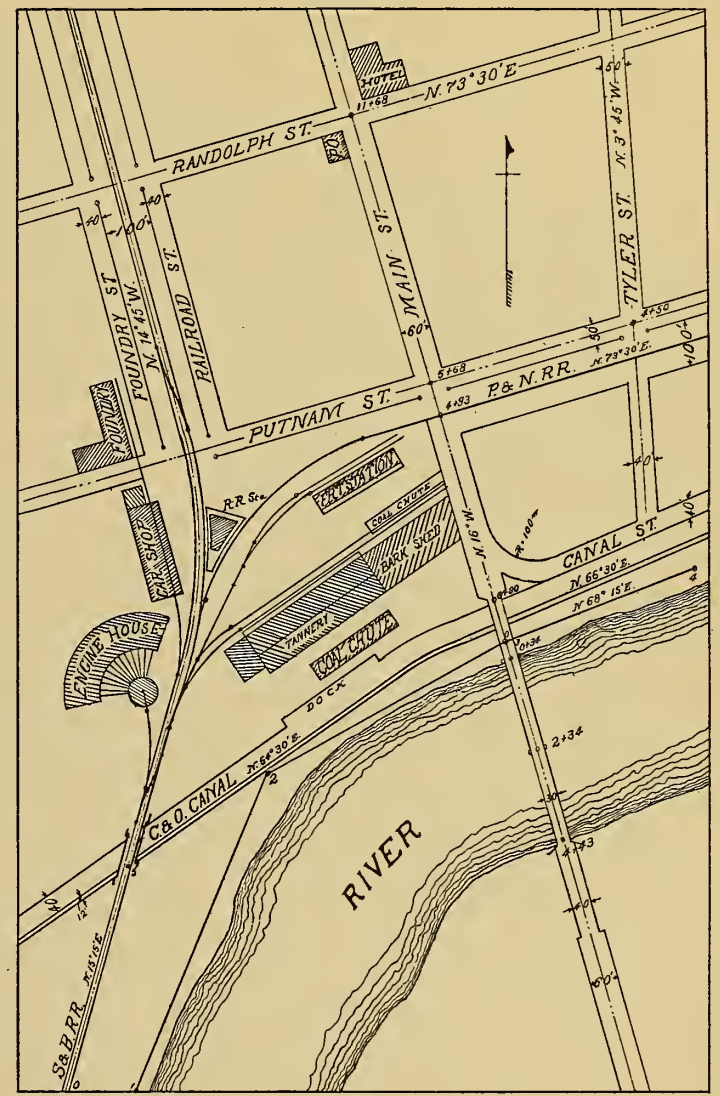
Scale 50ft = 1 in
300'



Photograph of Plat Drawn by
Theo. Schifflin, Engineer and Surveyor, A.S. 24,
520 West Forty-ninth Street
NEW YORK, N. Y.

PLAT OF A PORTION OF A TOWN

Scale 200ft = 1 in



PROBLEM 1: To bisect a straight line.

PROBLEM 2: To draw a perpendicular to a straight line from a given point in that line
CASE I.

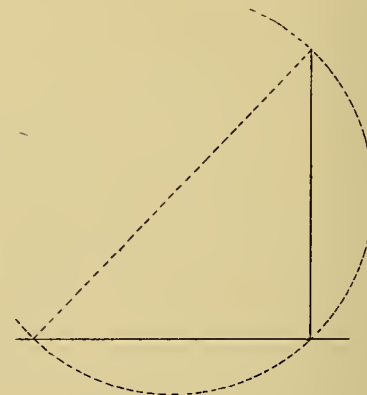
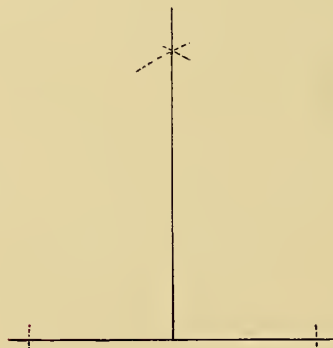
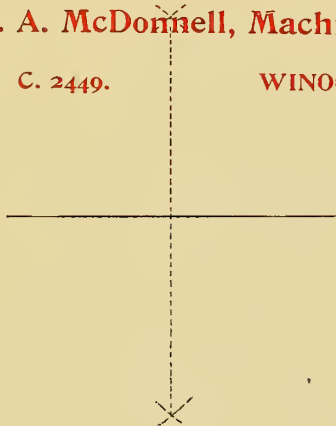
CASE II.

Photograph of Plate Drawn by

Geo. A. McDonnell, Machinist, Age 22,

C. 2449.

WINOOSKI, VT.



PROBLEM 3: To draw a perpendicular to a straight line from a point without it.
CASE I.

CASE II.

PROBLEM 4: Through a given point to draw
a straight line parallel to a given straight line.

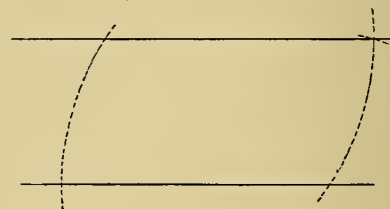
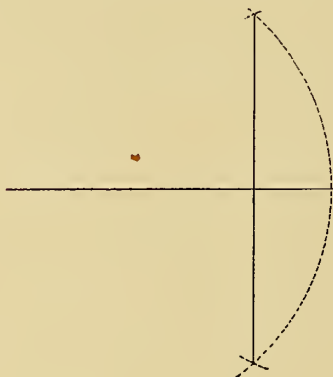
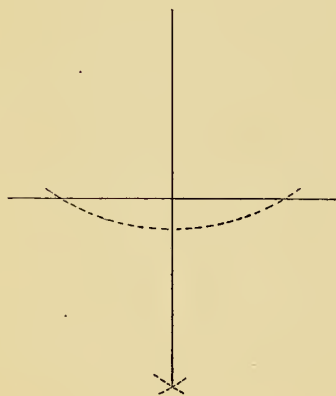


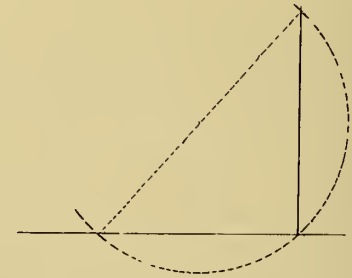
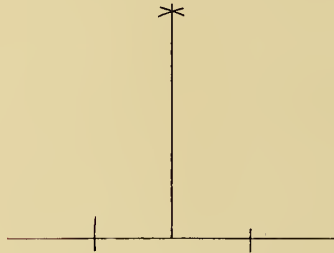
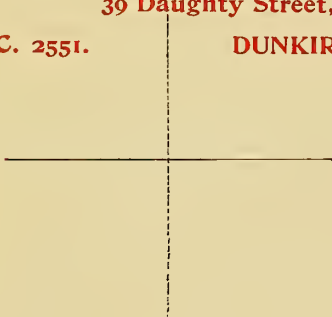
PLATE I.

PROBLEM 1. To bisect a straight line.

PROBLEM 2. To draw a perpendicular to a straight line from a given point in that line.
CASE I.

CASE II

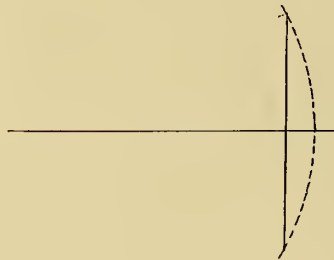
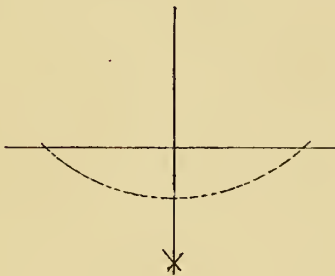
Photograph of Plate Drawn by
Theo. N. Graser, App. Mach., Age 16,
39 Daughty Street,
C. 2551. DUNKIRK, N. Y.



PROBLEM 3. To draw a perpendicular to a straight line from a point without it.
CASE I.

CASE II

PROBLEM 4. Through a given point to draw a straight line parallel to a given straight line.

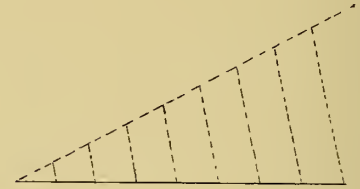
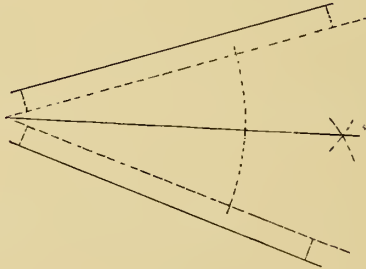
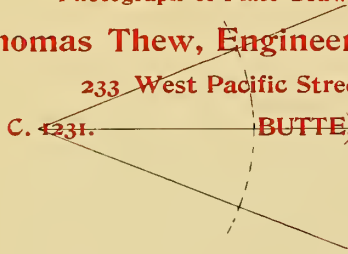


PROBLEM 5 To bisect a given angle:
CASE I.

PROBLEM 5. To Bisect a given angle:
CASE II

PROBLEM 8. To divide a given straight line into any required number of equal parts:

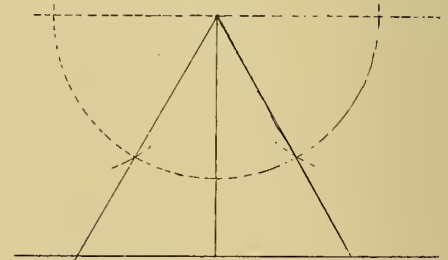
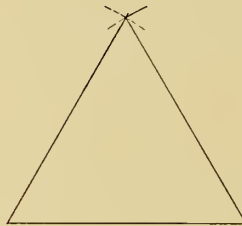
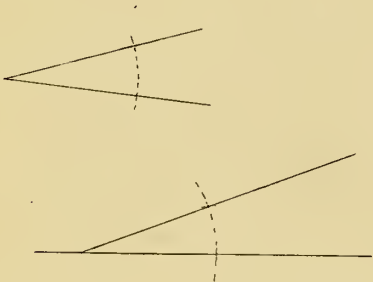
Photograph of Plate Drawn by
Thomas Thew, Engineer, Age 35,
233 West Pacific Street,
C. 1231. BUTTE, MONT.



PROBLEM 7 To draw a straight line through any given point on a given straight line to make any required angle with that line:

PROBLEM 8 To draw a equilateral triangle one side being given:

PROBLEM 9 The altitude of an equilateral triangle being given, to draw the triangle:



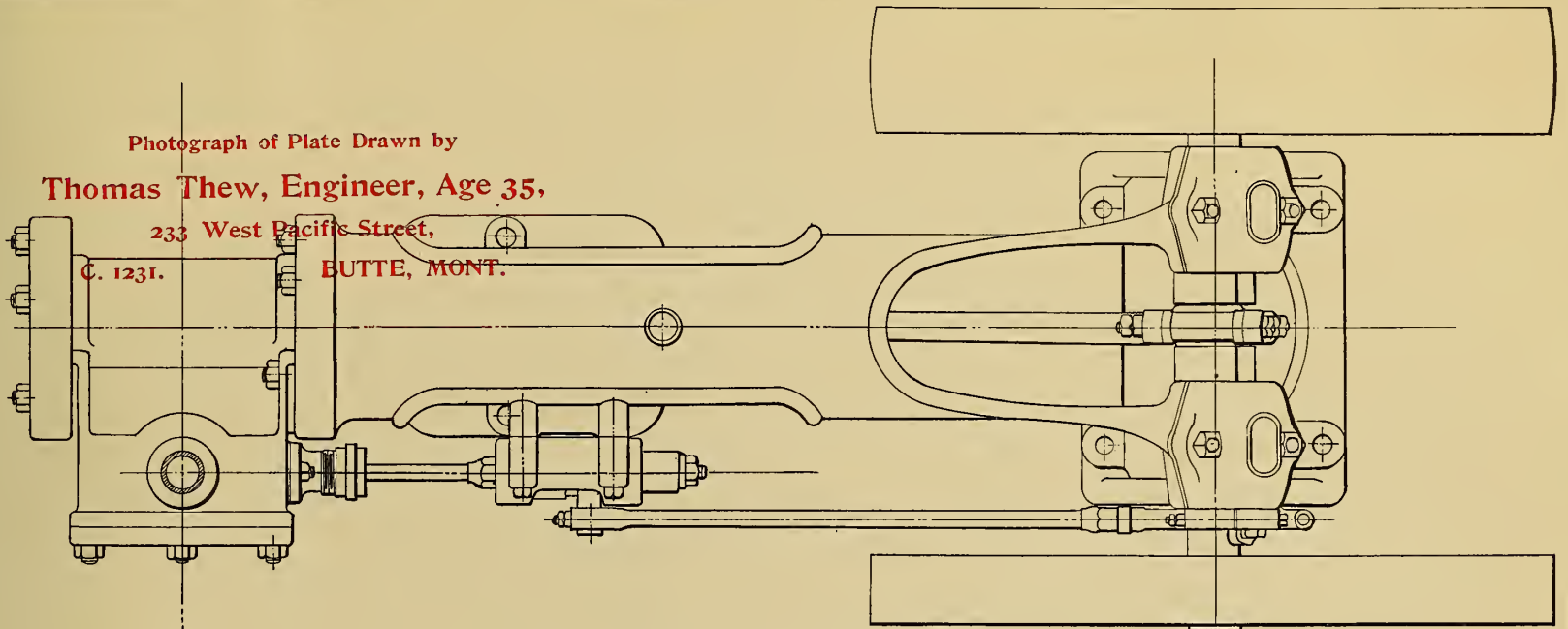
Photograph of Plate Drawn by

Thomas Thew, Engineer, Age 35,

233 West Pacific Street,

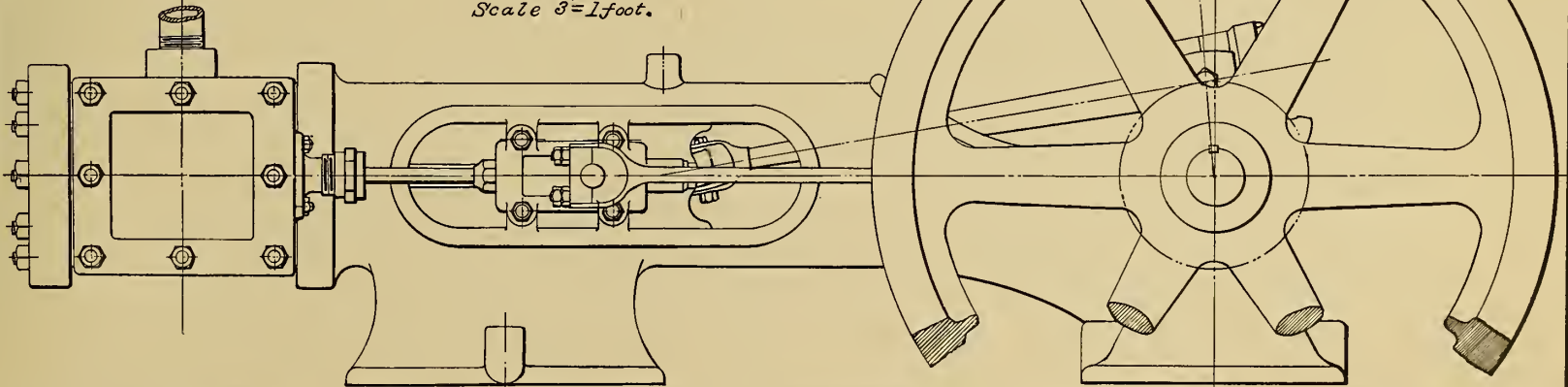
C. 1231.

BUTTE, MONT.



**SIX HORSE POWER
HORIZONTAL STEAM ENGINE.**

Scale 3"=1foot.



PROBLEM 1: To bisect a straight line.

PROBLEM 2: To draw a perpendicular to a straight line from a given point in that line.
CASE I.

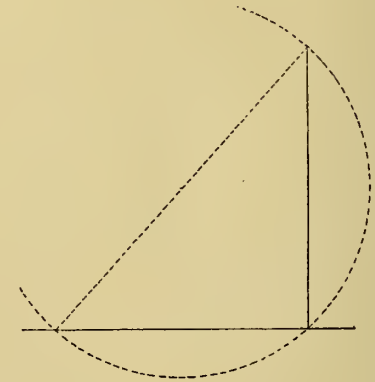
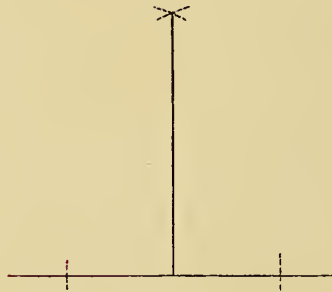
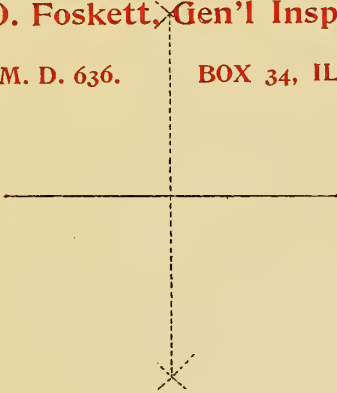
CASE II.

Photograph of Plate Drawn by

A. O. Foskett, Gen'l Inspector, Age 25,

M. D. 636.

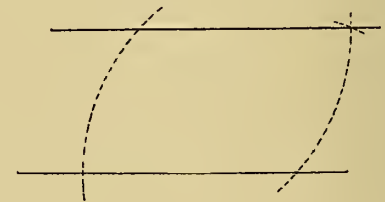
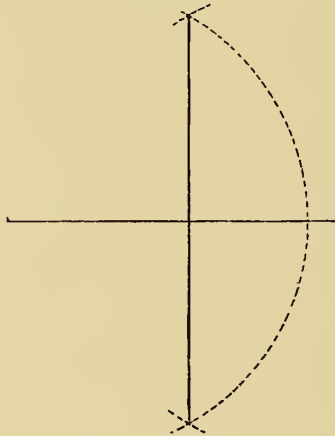
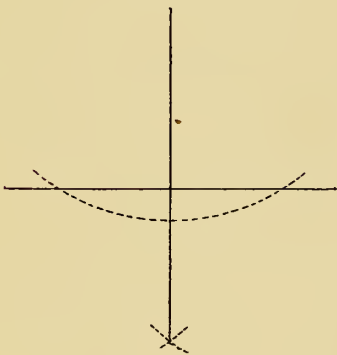
BOX 34, ILION, N. Y.



PROBLEM 3: To draw a perpendicular to a straight line from a point without it.
CASE I.

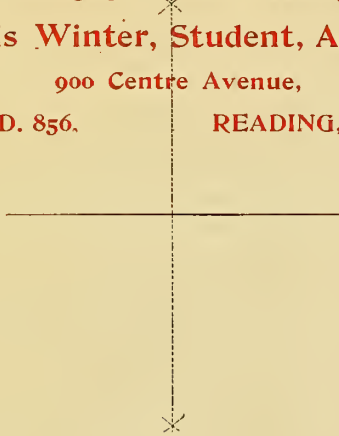
CASE II.

PROBLEM 4: Through a given point to draw a straight line parallel to given straight line.

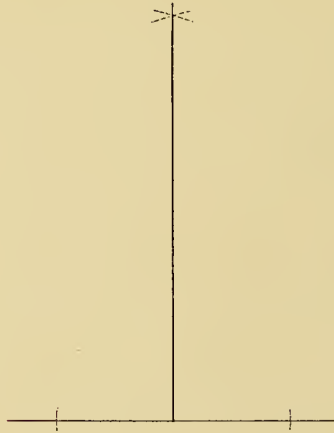


PROBLEM 1: To bisect a straight line

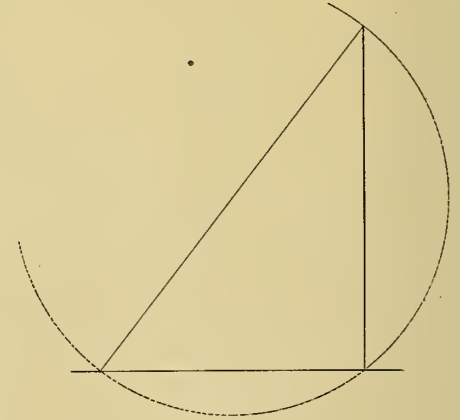
Photograph of Plate Drawn by
Louis Winter, Student, Age 19,
900 Centre Avenue,
M. D. 856. READING, PA.



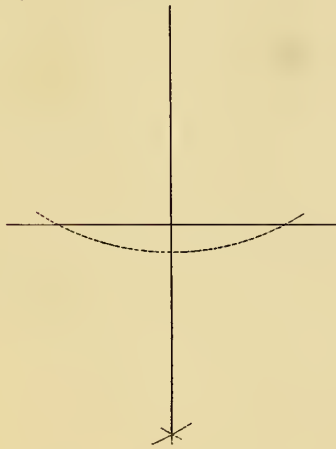
PROBLEM 2: To draw a perpendicular to a straight line from a given point in that line.
CASE I.



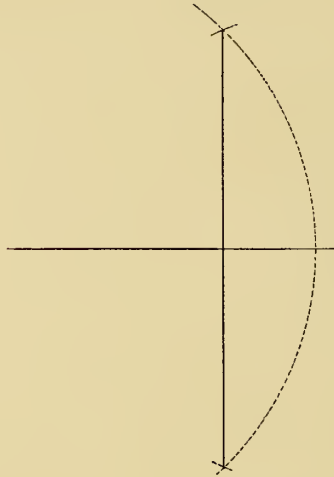
CASE II.



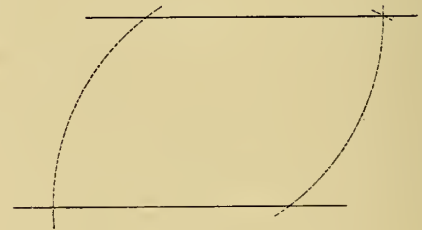
PROBLEM 3: To draw a perpendicular to a straight line from a point without it
CASE I.



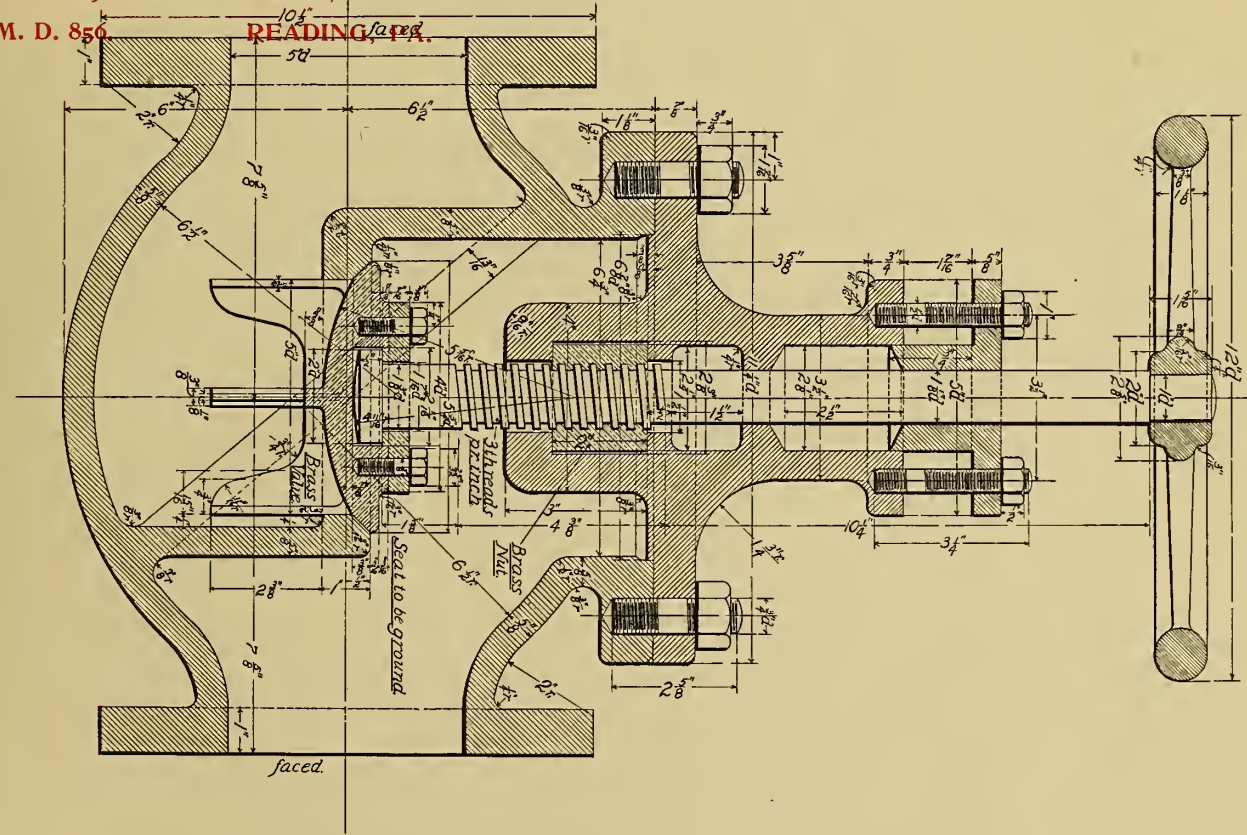
CASE II.



PROBLEM 4: Through a given point to draw a straight line parallel to a given straight line.



Photograph of Plate Drawn by
Louis Winter, Student, Age 19,
900 Centre Avenue,
M. D. 856 **READING, Pa.**



5-INCH GLOBE VALVE.
Cast Iron Half Size

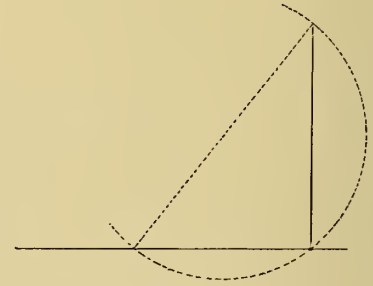
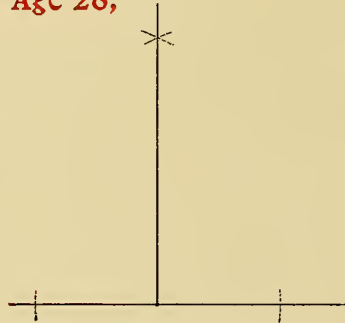
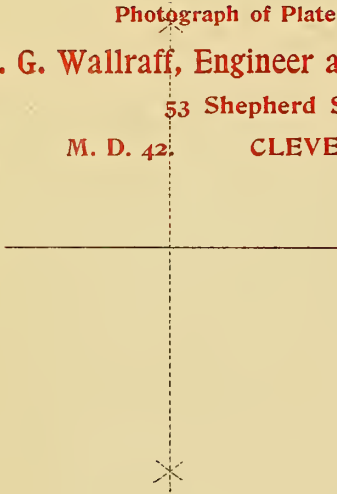
PLATE I.

PROBLEM 1: To bisect a straight line.

PROBLEM 2: To draw a perpendicular to a straight line from a given point in that line.
CASE I.

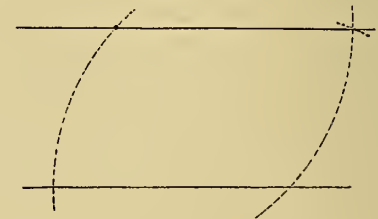
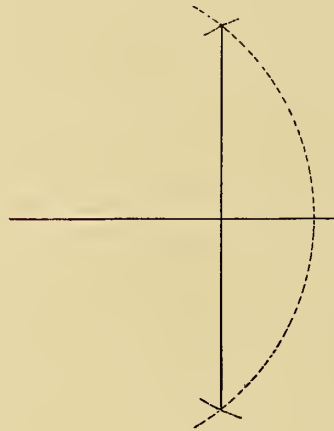
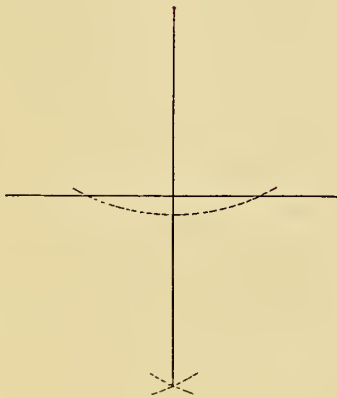
CASE II.

Photograph of Plate Drawn by
Chas. G. Wallraff, Engineer and Machinist, Age 28,
53 Shepherd Street,
M. D. 42: CLEVELAND, OHIO.



PROBLEM 3: To draw a perpendicular to a straight line from a point without it.

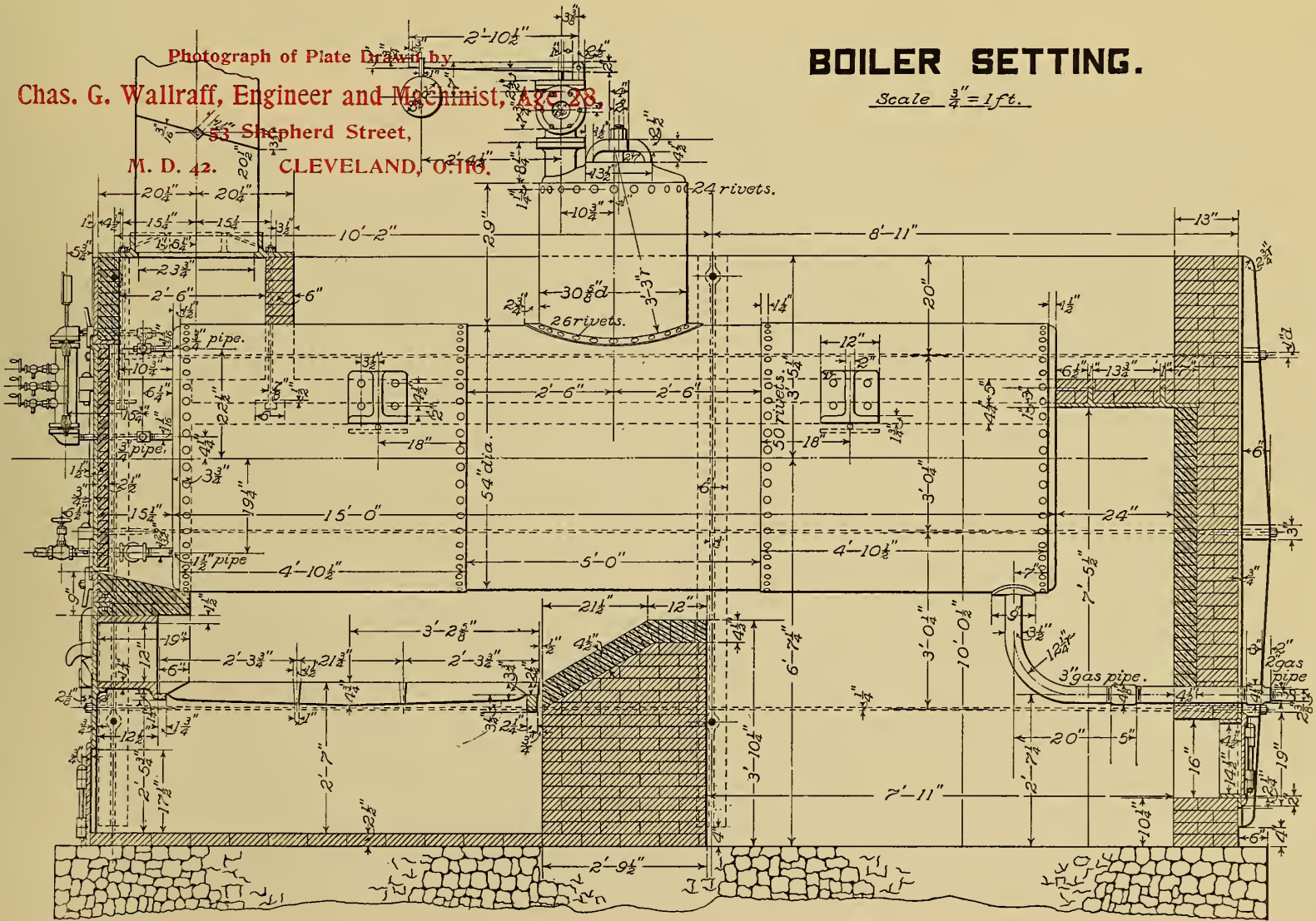
PROBLEM 4: Through a given point to draw a straight line parallel to a given straight line.



BOILER SETTING.

Scale $\frac{3}{4}'' = 1 \text{ ft.}$

Photograph of Plate Drawn by
Chas. G. Wallraff, Engineer and Machinist, A.G.C. 28,
 53 Shepherd Street,
 M. D. 42. CLEVELAND, O. 113.



PROBLEM 1: To bisect a straight line.

PROBLEM 2: To draw a perpendicular to a straight line from a given point in that line

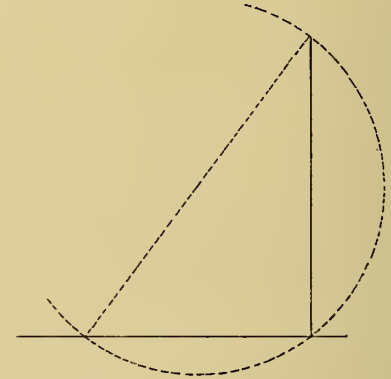
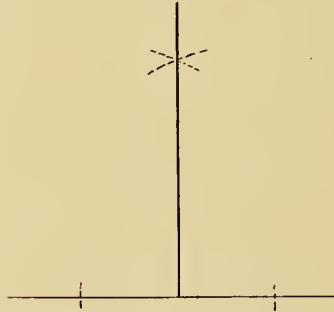
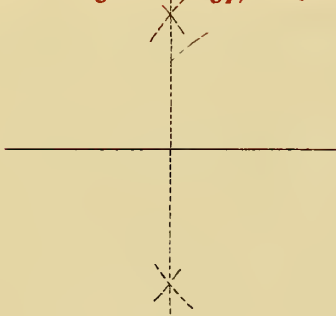
CASE I

CASE II

Photograph of Plate Drawn by

Fred G. Waring, Laborer, Age 17,

M. E. 1013. BOX 57, JERMYN, PA.



PROBLEM 3: To draw a perpendicular to a straight line from a point without it

PROBLEM 4: Through a given point to draw a straight line parallel to a given straight line.

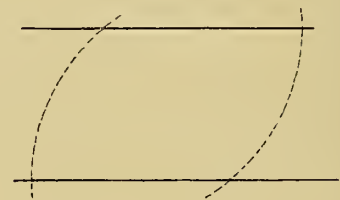
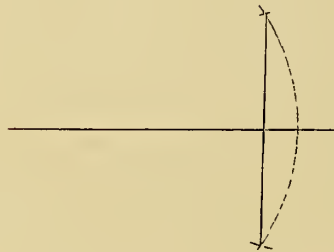
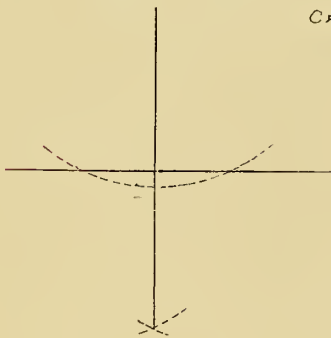
CASE I

CASE I

CASE I

CASE I

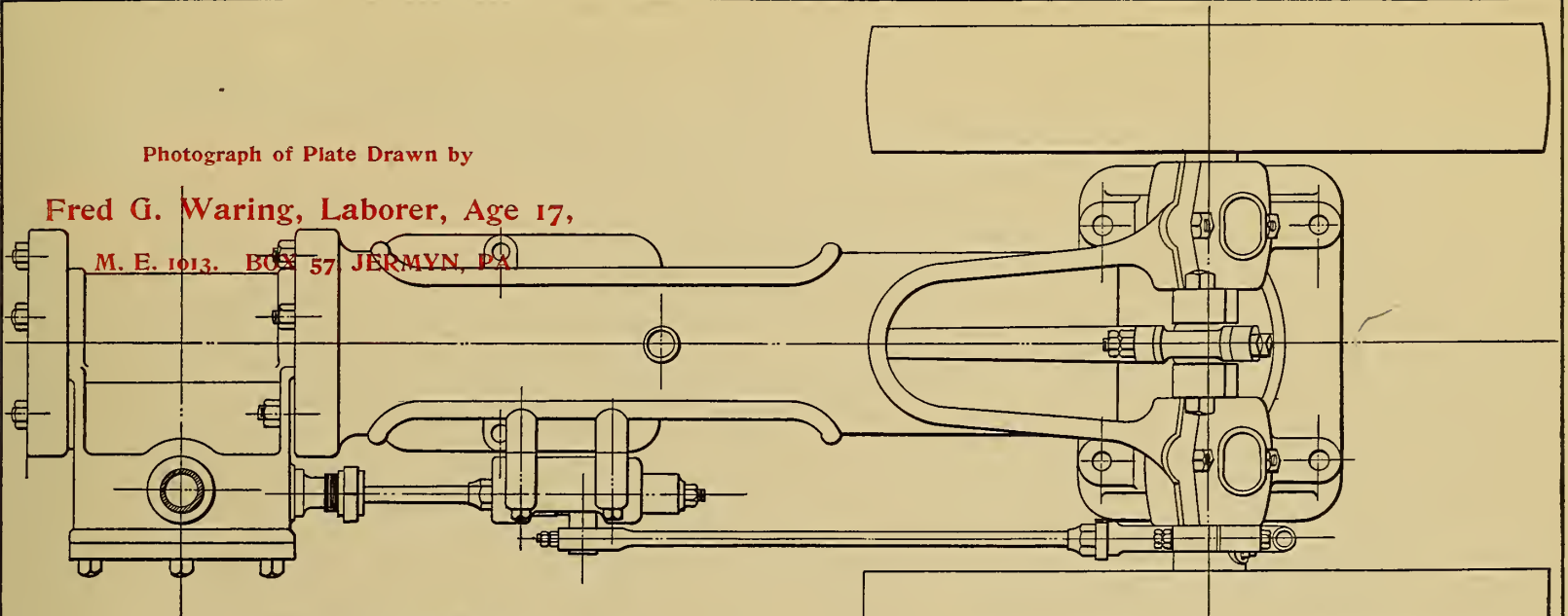
CASE II



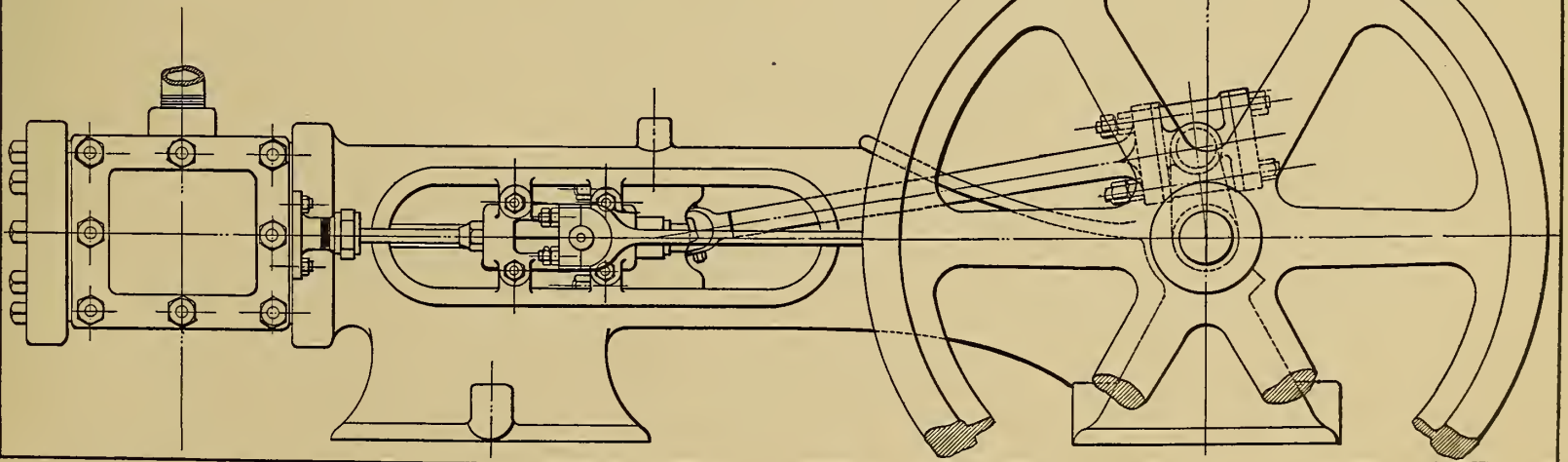
Photograph of Plate Drawn by

Fred G. Waring, Laborer, Age 17,

M. E. 1013. BOX 57 JERMYN, PA



**SIX HORSE POWER
HORIZONTAL STEAM ENGINE.**



AUGUST 12, 1897.

FRED G. WARING CLASS N^o M. E. 1013.

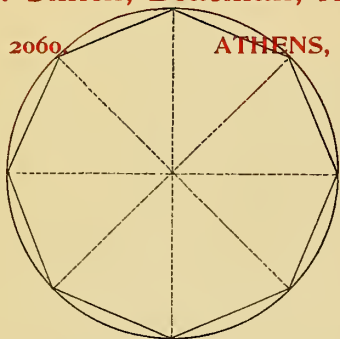
PROBLEM 16 To inscribe a regular octagon in a given circle.

Photograph of Plate Drawn by

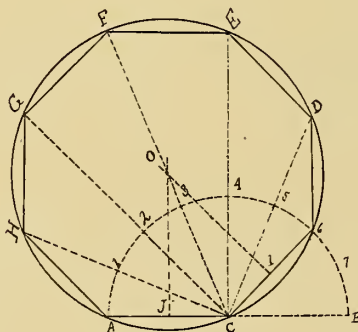
C. J. Smith, Boatman, Age 30,

H. 2060.

ATHENS, N. Y.

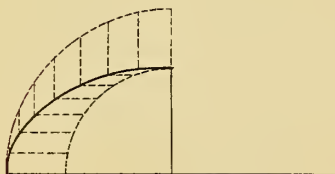


PROBLEM 17 The side of a regular polygon being given to construct the polygon.

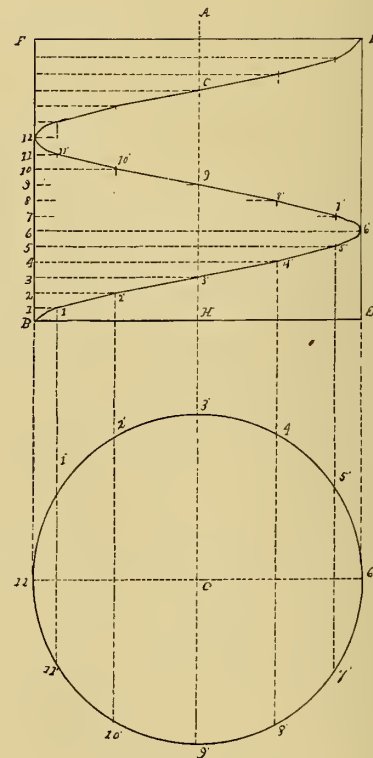
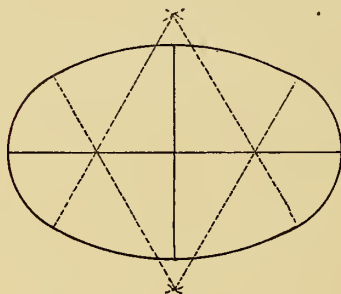


PROBLEM 20 To draw a helix the pitch and the diameter being given.

PROBLEM 18 To draw an eclipse, the diameters being given;



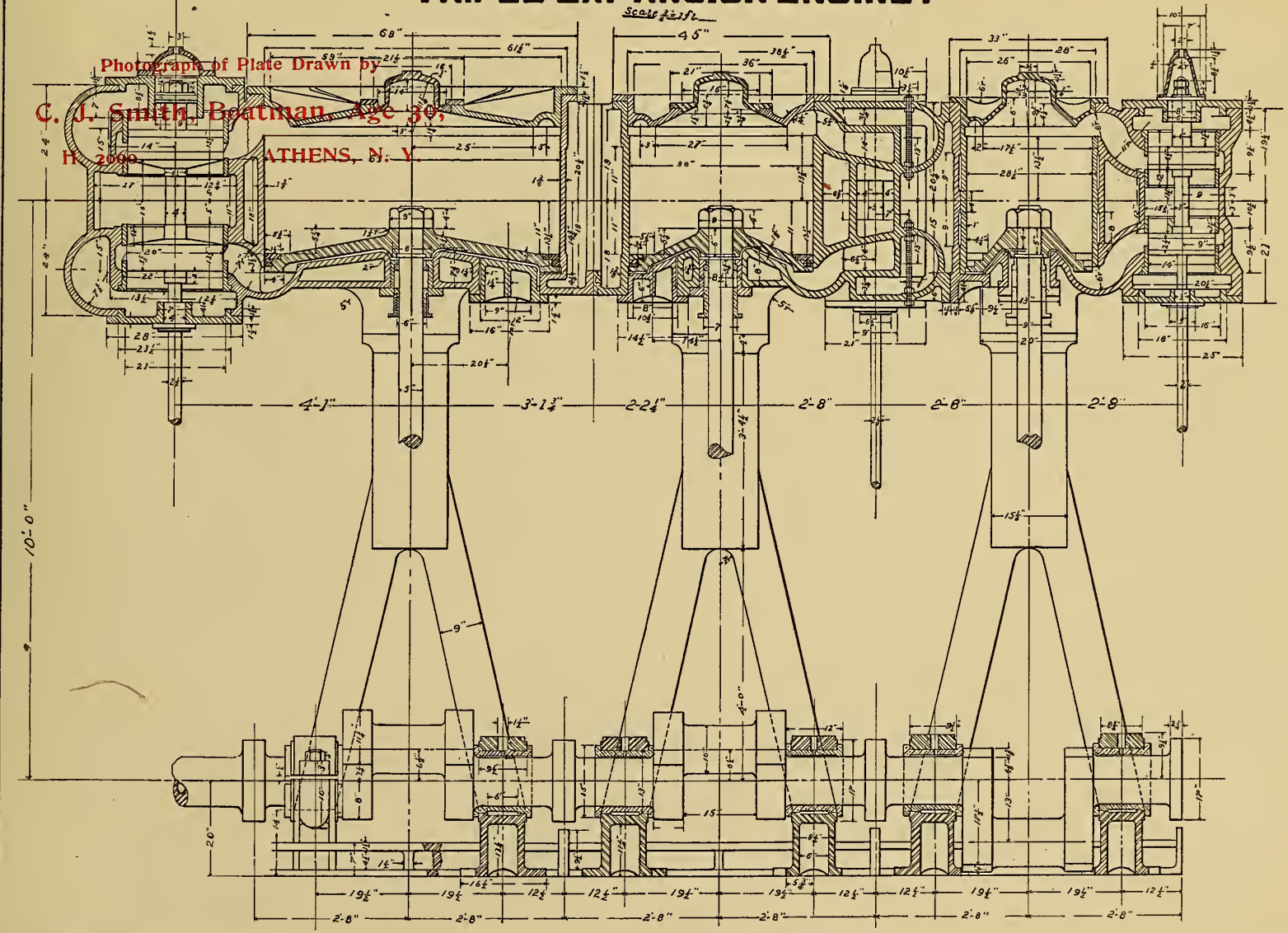
PROBLEM 19 To draw an ellipse with circular arcs;



TRIPLE EXPANSION ENGINE.

Scale 3/4" = 1"

Photograph of Plate Drawn by
C. J. Smith Boatman, Age 30,
H 2000
ATHENS, N. Y.



Photograph of Plate Drawn by
 Peter E. Zink, Coal Miner, Age 19,
 H. 1319. BOX 764, BELLEVILLE, ILL.

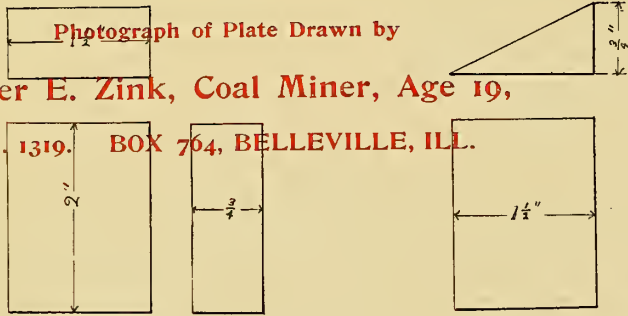


Fig. 1.

Fig. 2.

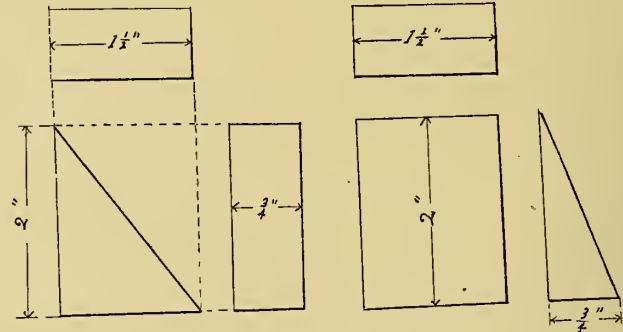


Fig. 3.

Fig. 4.

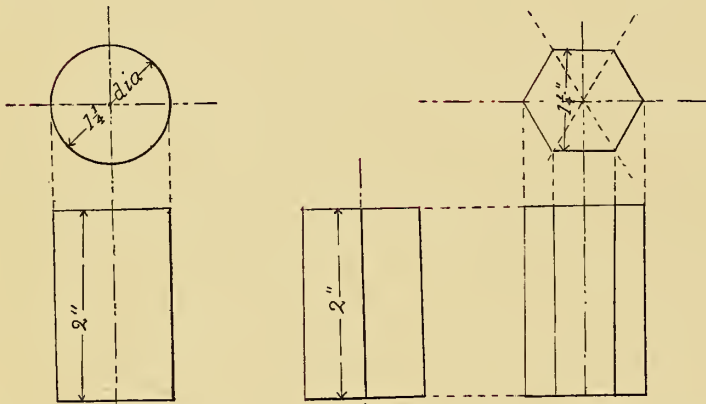


Fig. 5.

Fig. 6.

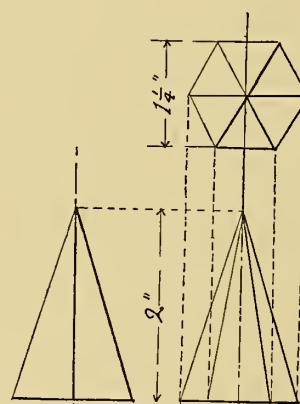


Fig. 7.

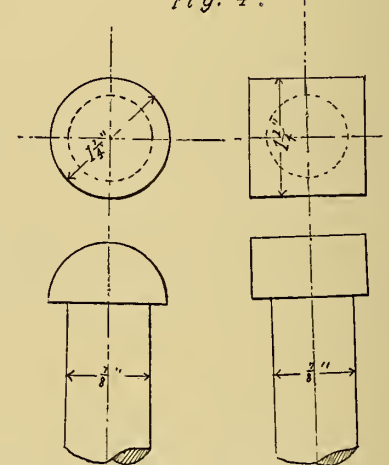


Fig. 8.

Fig. 9.

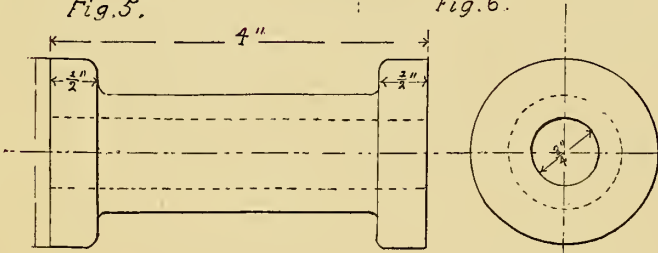


Fig. 10.

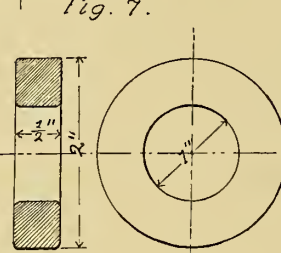


Fig. 11.

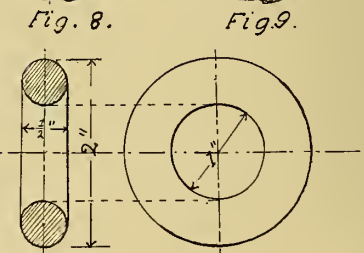


Fig. 12.

BOILER SETTING. Scale $\frac{1}{4}$ " = 1 ft.

Photograph of Plate Drawn by

Peter E. Zink, Coal Miner, Age 19,

H. 1319. BOX 764, BELLEVILLE, ILL.

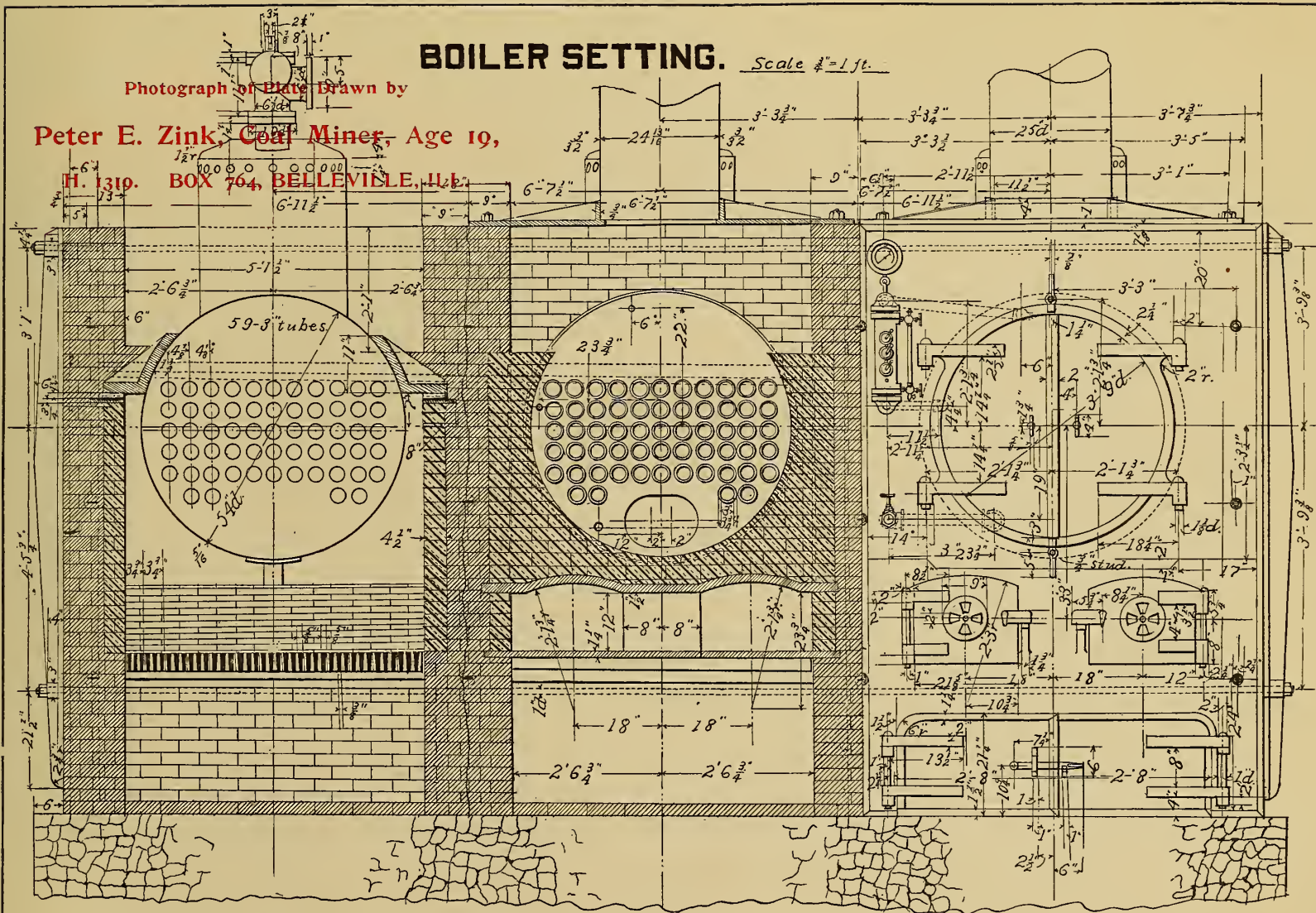


Fig. 3.

Fig. 2.

Fig. 1.

PLATE I.

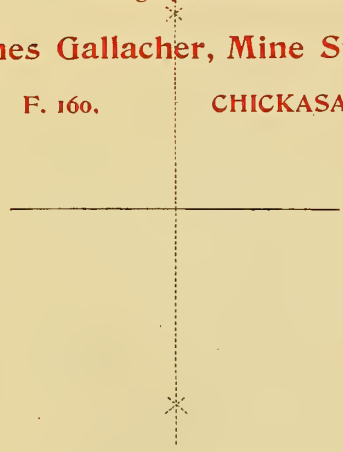
PROBLEM 1: To bisect a straight line

Photograph of Plate Drawn by

James Gallacher, Mine Sup't, Age 34,

F. 160.

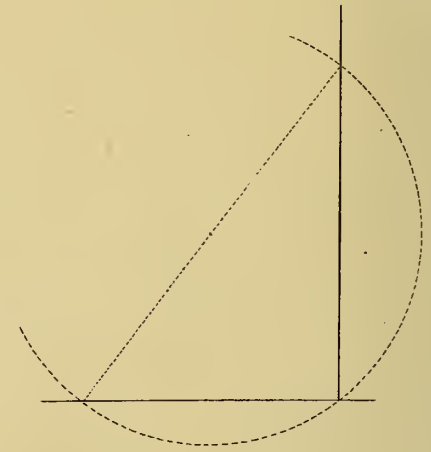
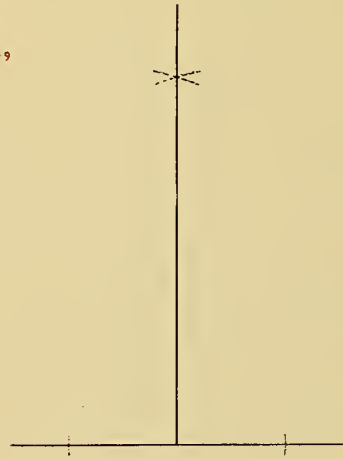
CHICKASAW, ALA.



PROBLEM 2: To draw a perpendicular to a straight line from a given point in that line.

CASE I.

CASE II

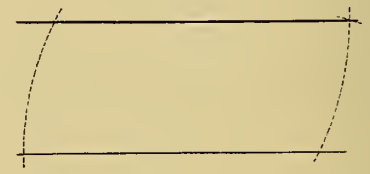
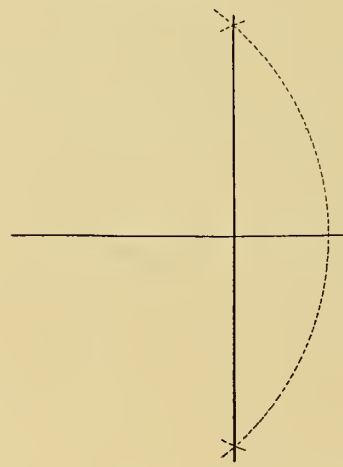
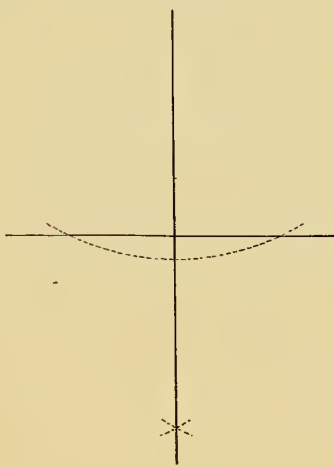


PROBLEM 3: To draw a perpendicular to a straight line from a point without it.

CASE I

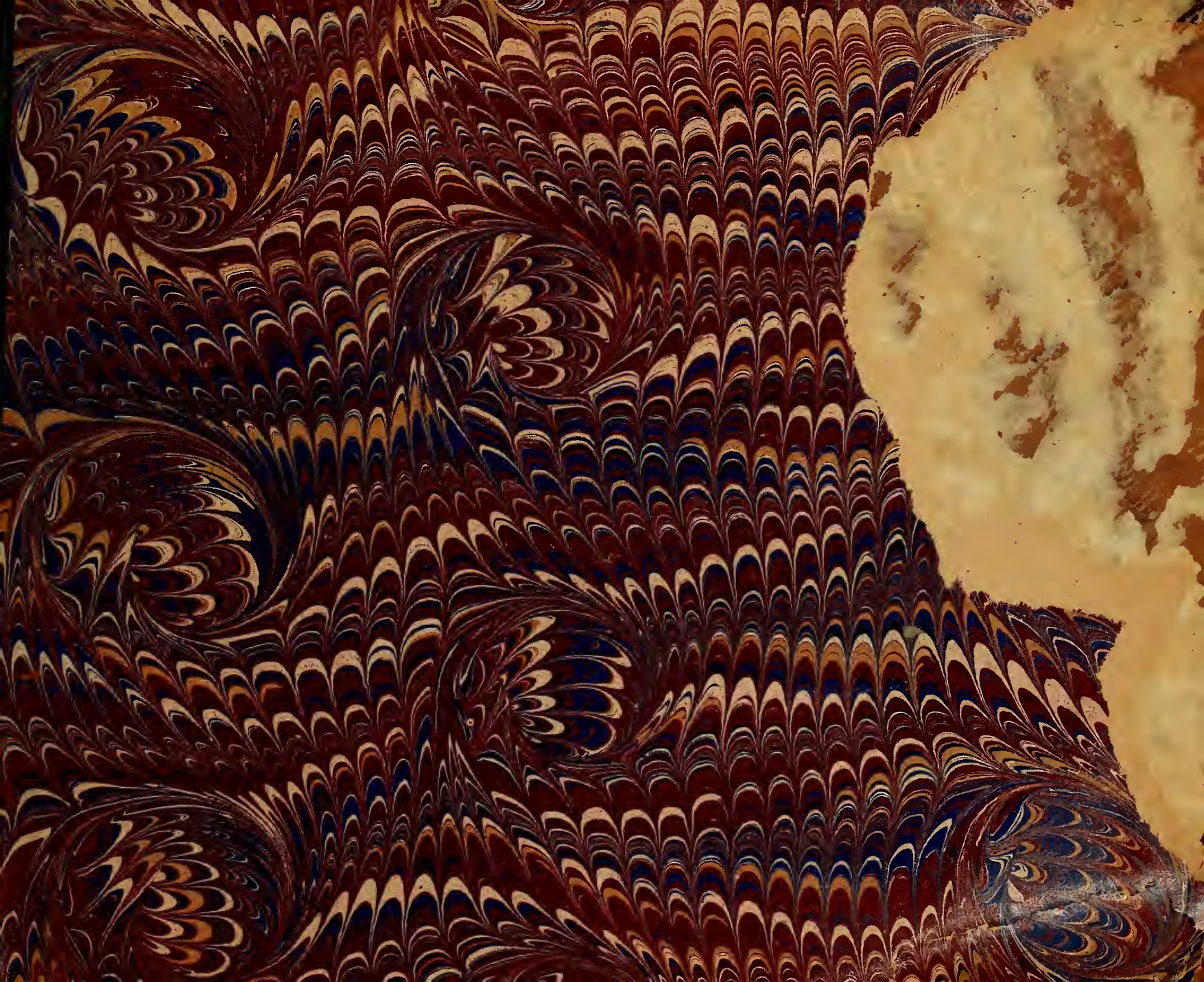
CASE II.

PROBLEM 4: Through a given point to draw a straight line parallel to a given straight line.









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