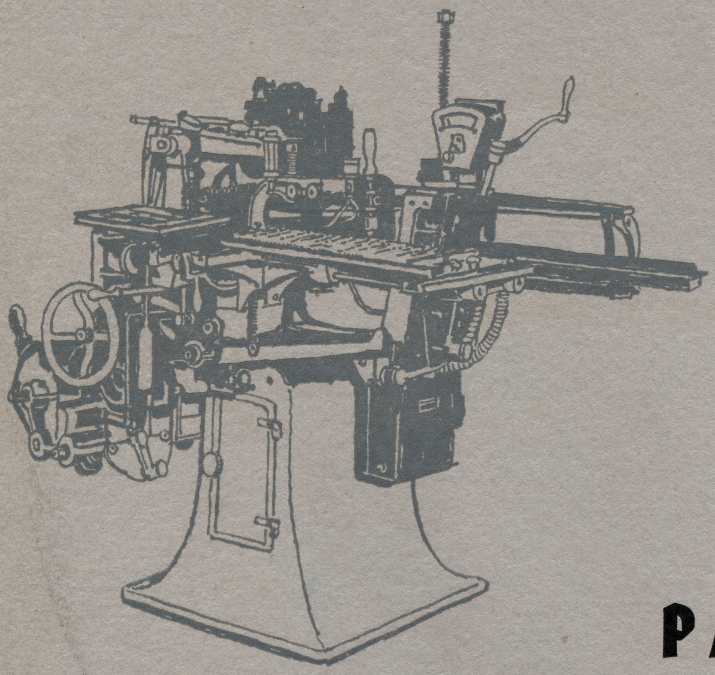


PARTS LIST

EFFECTIVE APRIL 1, 1952

MONOTYPE TYPESETTING MACHINE

THE COMPOSITION TYPE-CASTER

WITH A PREFACE *which gives directions for ordering parts and a simple explanation of our method of designating parts.*

THIS PARTS LIST *is for use with machines 5300 and following. For machines prior to 5300 consult Philadelphia.*

MONOTYPE KEYBOARD PARTS *are printed separately. A copy of this booklet will be sent on request.*

Lanston Monotype Machine Company, Philadelphia 3, Pennsylvania

Monotype Typesetting Machine

Lanston Monotype Machine Company

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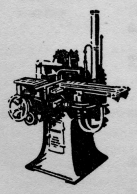
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PRINTED IN U. S. A.

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Lanston Monotype Machine Company

PHILADELPHIA

Parts List

Monotype
Typesetting Machine

THE COMPOSITION TYPE-CASTER

DIRECTIONS FOR ORDERING PARTS

(A Careful Reading Is Important)

All of these directions are essential. You will save time, trouble and money by reading them carefully before ordering any parts.

If you are not familiar with the Monotype terms here used, read "Designation of Parts" which follow these "Directions for Ordering Parts."

To enable us to fill orders correctly you must give us the following information:

(1) Give the number of the machine for which the part is required (stamped on the Name Plate and also on the Main Stand back of the Air Tower).

(2) Give the name of the part.

(3) Give the symbol of the part (give every character in the symbol exactly as printed—every one means something).

(4) Give the quantity required of each part.

To insure getting the correct name and symbol:

Use the Plate Book in conjunction with this Parts List.

To order a complete attachment for a machine give the number of the machine and the name of the attachment.

DESIGNATION OF PARTS

(Name)	(Quantity)	(Classification Number)	(Symbol)
Bridge-leg Screw (side)	(2).....	222	1A3

NAME: Shows that these Screws hold the "Leg" to the "Bridge" and go in from the side.

QUANTITY: Two of these Screws; where no quantity is given "1" is understood.

CLASSIFICATION NUMBER: Standard pieces which may be used in several places under different symbols are given classifying numbers; those numbers beginning with **"1"** are bolts, **"2"** screws, **"3"** nuts, **"4"** washers, **"5"** dowels, **"6"** springs, **"7"** rivets, **"8"** spring pins and posts, **"9"** cotters. All pieces having the same classification number are alike without regard to what their symbols may be.

SYMBOL: Identifies and locates the part. The letter "A" indicates that these Screws are in the "A" section (the entire machine being divided into eight sections lettered "A" to "H" inclusive). The figure 1 preceding the letter indicates that these Screws are in the first group of this section (the groups comprising each section being numbered consecutively from one up). The figure 3 following the letter indicates that these Screws are the third pieces of this group (the individual pieces comprising each group being numbered thus consecutively). If a lowercase letter precedes the first figure in the symbol (for example, Stud b1A11) it indicates there have been one or more changes in the piece and the new piece is not interchangeable with the superseded one without changing or altering other parts. If the section letter is repeated as the last character of the symbol (for example, a1AA) it indicates that this piece is furnished only assembled with one or more other pieces, in which case a reference mark and a note at the end of the group gives details for the assembly. When a cap "X" is the first character of a symbol (for example, X1A) it calls for the complete group as listed above it.

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Section A

Mechanism for carrying the Matrix and holding it accurately on the opening in the Mold while the type is being cast.

1A—Bridge (complete) consists of X1A, Xa2A, X3A, Xa4A, Xc6A, X7A, Xa9A, Xa10A, X12A, X13A, Xa14A, X16A, Xa17A, X18A, X19A, X20A, X21A, X22A, Xa23A, Xb24A, Xa25A, X28A, X30A, Xa31A, Xa33A, X35A, X42A a51A1, X52A. Order by complete symbol **a1AAA**

Bridge	a1AA	*
screw (2) .24..	1A1	
leg	1A2	*
" screw (side) (2) .222..	1A3	
" " (top) .228..	1A4	
" spring post (for 7A1)	1A5	
bushing (for 4A1) (2)	1A6	
" nut (hexagonal) (2)	1A7	
" adjusting screw (2)	1A9	
pin (for 7A) .7165..	1A10	
stud	b1A11	
" cotter .94..	a1A12	
Bridge group	**X1A**	

*a1AA is assembled with 1A2, 1A3, 1A4, 1A10, b1A11 and a1A12.

2A—Bridge Lever b2AA *

connecting link	2A1	
fulcrum rod	2A2	
" " forked eye	2A3	
" " nut (2) .314..	2A4	
" pin	2A5	
" " cotter .95..	2A6	
bushing (2) .459..	a2A7	
Bridge Lever group	**Xa2A**	

*b2AA is assembled with a2A7.

3A—Bridge-lever-link Pin a3AA *

spring	a3A1	
Bridge-lever-link Pin group	**X3A**	

*a3AA is assembled with a3A1. Order by complete symbol X3A.
For Cored Mold Attachment or Increased Pressure Attachment.
Bridge-lever-link Pin **Xa3A2**

4A—Carrying Frame 4A

guide rod (2)	4A1	
" " stop nut (2)	4A2	
" " " " lock nut (2) .326..	4A3	
" " oil cap (2)	a4A4	
" " " " screw (2)	a4A5	
" " cross beam	a4A6A	*
" " " " nut (2) .314..	4A7	
" " " " stud	a4A8	
" " " " " adjusting nut..	4A9	
" " " " " lock nut .323..	4A10	
" " " " " spring .61..	4A11	
raising spring (2) .63..	4A12	
Carrying Frame group	**Xa4A**	

*a4A6A is assembled with a4A8.

6A—Centering-pin Stand a6A

bolt (2) .19..	6A3	
" washer (2) .410..	6A4	
bushing	b6A5	
" adjusting sleeve	6A6	
" " nut	6A7	
" guide screw	6A8	
nut	a6A22	
Centering-pin Stand group	**Xc6A**	

7A—Fibre Stop 7A

spring .621..	7A1	
Fibre Stop group	**X7A**	

8A—Matrix Case (for Cellular Matrices†) b8AA *

bar	b8A4	
comb (13)	a8A3	
cover plate	8A1	
" " screw (4) .2237..	a8A2	
shoe (2)	a8A5	
" rivet (16) .7171..	a8A6	
spacing comb (right and left) (2)(side)..	b8A8	
" " (front and rear) (2)(end)..	a8A9	
Matrix Case group	**Xb8A**	

*b8AA is assembled with 8A1, a8A2, a8A3, b8A4, a8A5, a8A6, b8A8 and a8A9. Order by complete symbol Xb8A.
†*For 14 and 18 point Cellular Matrix Case, see 69A page 5.*
For 1517 machines see Extended Matrix Case Attachment 30CU page 20.
For 6 to 12 point English Side Hole matrices see 68A page 5.

8A—Matrix Case (continued)

Matrix Cases containing more than one row of .2" x .4" Matrices require:

Matrix Case Comb*	**a8A7**	

*These Combs have backs half as thick as regular Combs a8A3 so two may be placed back to back between rows of .2" x .4" Matrices. The number and location of rows of .2" x .4" Matrices determine the quantity required.

9A—Sliding Frame c9AA *

draw rod	9A1	
" " clamp	a9A2	
" " " screw (front) .2234..	b9A3	
" " " " (rear) .243..	9A4	
Sliding Frame group	**Xa9A**	

*c9AA is assembled with a9A2, b9A3 and 9A4.

10A—Bridge Bracket 10A1A *

dowel (2) .57..	10A2	
plunger (lock for 14A1)	10A3	
" spring .6176..	10A4	
" " abutment	10A5	
screw (3) .2198..	10A6	
stop screw (abutment for 22A1)	10A7	
" " lock nut .390..	10A8	
spring (2) .6123..	a10A10	
" pin .881..	a10A9	
Bridge Bracket group	**Xa10A**	

*10A1A is assembled with a10A9.

Machines prior to 7210 were equipped with the following parts:

11A—Bridge-bracket Latch (for 16A1A) (2) 11A1
fulcrum pin 11A2
Bridge-bracket Latch group* **X11A**

*Machines equipped with the Slide a51A1 do not require the Latches X11A.

12A—Bridge-bracket Spring Box 12A1

cap (upper abutment for 12A8)	12A2	
pin	12A3	
" cotter (2) .97..	12A4	
rod	12A5A	*
" adjusting nut .35..	12A6	
" " " lock nut .37..	12A7	
spring .6141..	12A8	
" abutment (lower)	12A9	*
Bridge-bracket Spring Box group	**X12A**	

*12A5A is assembled with 12A9.

13A—Bridge-bracket-spring-box Bell Crank 13A1
stud 13A2
" nut .310.. 13A3
Bridge-bracket-spring-box Bell Crank group **X13A**

14A—Bridge-bracket-spring-box Lifting Tube 14A1
nut .320.. 14A3
washer .457.. a14A4
Bridge-bracket-spring-box Lifting Tube group **Xa14A**

Machines prior to 7210 were equipped with the following parts:

Bridge-bracket-spring-box Lifting Tube Handle* 14A2

*Machines equipped with the Slide a51A1 should not be equipped with the Handle 14A2, for if the Handle is turned to cast high quads the effect of the spring on the Slide a51A1 is lost. To cast high quads in composition a bronze blank with a regular cone hole must be placed in the Matrix Case.

16A—Bridge-bracket Yoke 16A1A *

fulcrum pin	16A2	
" " cotter (2) .97..	16A3	
stud (for a17A1 and a17A2) (2) .876..	a16A4	*
" cotter (2) .97..	16A5	
Bridge-bracket Yoke group	**X16A**	

*16A1A is assembled with a16A4.

17A—Bridge-bracket-yoke Link (left).. a17A1
(right) a17A2
pin (for 24A8) 17A3
" nut (2) .33.. 17A4
" washer (2) .440.. 17A5
Bridge-bracket-yoke Link group **Xa17A**

18A—Centering-pin Spring .668.. 18A2
abutment (lower) 18A1
Centering-pin Spring group **X18A**

19A—Centering-pin-spring Abutment

(upper)	19A1A	*
rod	19A2	*
" nut	19A3	*
Centering-pin-spring-abutment group	**X19A**	

*19A1A is assembled with 19A2 and 19A3. Order by complete symbol X19A.

20A—Centering-pin-spring-abutment Lever (lower, left) 20A1A *
(lower, right) 20A2A †

fulcrum pin	20A3	
" " nut (2) .35..	20A4	
" " " washer (2) .419..	20A5	
stud (for a17A1) .876..	20A6	
" (for a17A2) .876..	20A8	
" cotter (2) .97..	20A7	
Centering-pin-spring-abutment Lever group	**X20A**	

*20A1A is assembled with 20A6.
†20A2A is assembled with 20A8.

21A—Centering-pin-spring-abutment Lever (upper, left) 21A1A *
(upper, right) 21A2A †

fulcrum pin	21A3	
" " nut (2) .35..	21A4	
" " " washer (2) .419..	21A5	
stud (in 21A1A)	21A6	
" (in 21A2A)	21A7	
Centering-pin-spring-abutment Lever group	**X21A**	

*21A1A is assembled with 21A6.
†21A2A is assembled with 21A7.

22A—Centering-pin-spring-abutment-lever Adjusting Screw 22A1
knurled wheel 22A2
" " key .7176.. 22A3
lock nut (upper) .35.. 22A4
" " (lower) .310.. a22A5
Centering-pin-spring-abutment-lever Adjusting Screw group **X22A**

23A—Lifting-tube Operating Fork b23A1
spring .6101.. a23A3
" hook b23A2
Lifting-tube-operating Fork group **Xa23A**

24A — Lifting - tube - operating - fork Block 24A3
pin 24A4
rod b24A5
" eye 24A8
Lifting-tube-operating-fork Block group **Xb24A**

25A—Lifting-tube-operating-fork Stop b25A1A *
spring hook c25A2
" " rivet (2) .7199.. a25A3
Lifting-tube-operating-fork Stop group **Xa25A**

*b25A1A is assembled with c25A2 and a25A3. Order by the complete symbol Xa25A.

28A—Centering Pin 28A1A *
key .7176.. 28A2
nut .310.. 28A3
Centering Pin group **X28A**

*28A1A is assembled with 28A2.
Note: On account of the trouble experienced in plants using reground Centering Pins it has been recommended by our mechanical men that the practice of regrinding Centering Pins be abolished. Accordingly, reground Centering Pins will no longer be furnished.

29A—Centering Pin† for 14 and 18 point new style American and all English composition matrices. a29A1A *
key .7176.. 29A3
nut .310.. 29A4
Centering Pin group **Xa29A**

*a29A1A is assembled with 29A3.
†See Note under X28A.

30A—Centering-pin Auxiliary Lever (2) 30A1A *

fulcrum link (2)	30A2	*
" " eye bolt	30A3	*
" " " " nut (2) .310..	30A4	
" " pin (2)	30A5	*
operating link (2)	30A6	*
" " pin (lower)	30A7	*
" " " (upper)	30A8	*
trunnion block	30A9	*
Centering-pin Auxiliary Lever group	**X30A**	

*We cannot furnish separate parts of these Levers except the nut 30A4.

31A—Centering-pin Lifting Link (2)... 31A1A *
yoke... 31A2 *
adjusting screw (outer)... 31A5
" " lock nut.....323.. 31A6
CENTERING-PIN LIFTING LINK group....Xa31A
*31A1A is assembled with 31A2.

32A—Carrying-frame Adjusting Gage. 32A1

33A—Centering-pin Micrometer Screw (2)... 33A1
differential screw (right)... 33A2
" " bell crank... a33A3
" " " " plunger... 33A4
" " " " stud... a33A5
" " (left)... 33A6
" " key screw (2)... 33A7
plunger (2)... 33A8
" spring.....6176.. 33A9
CENTERING-PIN MICROMETER SCREW group....Xa33A

35A—Centering-pin Aligning Lever
(left)... 35A1
plunger... 35A2
stud... 35A3
" nut.....310.. 35A4
(rear)... 35A5
plunger... 35A6
spring.....6175.. 35A7
CENTERING-PIN ALIGNING LEVER group. X35A

40A—Matrix Holder (for casting sorts from cellular Matrices)... 40A1A *
cover plate... 40A2 *
" " rivet (7).....7197.. 40A3
slide (for .2" x .2" Matrices)... a40A4A †
" face plate... 40A5 †
" " " rivet (5).....7198.. 40A6
" latch... a40A8
" " rivet (2).....7199.. 40A9
" matrix support... 40A7 †
MATRIX HOLDER group... X40A
*40A1A is assembled with 40A2 and 40A3.
†a40A4A is assembled with 40A5, 40A6, 40A7, a40A8 and 40A9.
NOTE: For special SLIDES for this HOLDER see the following:

For casting sorts from .2" x .4" Cellular Matrices order the following for use with the above Holder 40A1A:

MATRIX-HOLDER SLIDE (for .2" x .4" Mats) b40A10A *
face plate... a40A11 *
" " rivet (5).....7198.. 40A6
latch... a40A8
" rivet.....7199.. 40A9
matrix support... a40A12 *
*b40A10A is assembled with 40A6, a40A8, 40A9, a40A11 and a40A12.

For casting sorts from .2" x .6" Cellular Matrices order the following for use with the above Holder 40A1A:

MATRIX-HOLDER SLIDE (for .2" x .6" Mats) b40A13A *
face plate... a40A14 *
" " rivet (5).....7198.. 40A6
latch... a40A8
" rivet.....7199.. 40A9
matrix support... a40A15 *
*b40A13A is assembled with 40A6, a40A8, 40A9, a40A14 and a40A15.

41A—(*See page 15*)

42A—Cross-beam Lifting Lever..... 42A1
fulcrum stud... 42A2
" " nut.....310.. 42A3
rocker arm... 42A4
stand... 42A5A *
" cap (2)... 42A6 *
" " screw (4).....232.. 42A7
" screw (2).....223.. 42A8
CROSS-BEAM LIFTING LEVER group X42A
*42A5A is assembled with 42A6 and 42A7

48A—(*See page 17*)

50A—Mold Oiler
bracket... 50A1 †
" handle... 50A2 †
" " stud... 50A3 †
" " pin... 50A4 †
" plate... 50A5 †
cup... 50A6 †
" cover... 50A7 †
" " bracket... 50A8 †
" " stud... 50A9 †
" " " pin... 50A10 †
sight feed... 50A11 †
" " lock nut... 50A12 †

50A—Mold Oiler (continued)
sight feed pipe (front)... 50A13 †
" " " (rear)... 50A14 †
wick... 50A15 *
" tube... 50A16A *
MOLD OILER group... X50A
*50A16A is assembled with 50A15.
†No parts of this OILER are furnished separately except 50A16A.

51A—Bridge-bracket-yoke-link Slide.. a51A1

52A—Bridge-bracket-yoke-link-slide Spring (2).....6131.. 52A1
eye (4)... 52A2
BRIDGE - BRACKET - YOKE - LINK - SLIDE SPRING group (2) each... X52A*
*Machines prior to 5540 were not equipped with X52A.

67A—(*See page 19*)

68A—Matrix Case for (2"x2" English side hole matrices)... 68A *
cover plate... 68A2
" " rivets (4).....7226.. 68A7
spring plate... 68A1
matrix case rod (15)... 68A3
" " spacing bar (thin) (2)..... 68A5
matrix case spacing bar (14)... 68A4
MATRIX CASE group... X68A
*68A is assembled with 68A1, 68A2, 68A3, 68A4, 68A5 and 68A7. Order by complete symbol X68A.

69A—Matrix Case (for .2"x.4" and .4"x.4" Matrices†)... 69A1A *
cover plate... 69A2
" " rivets (4).....7226.. 69A3
spring plate... 69A4
matrix case rod (15)... 69A5
MATRIX CASE group... X69A
*69A1A is assembled with 69A2, 69A3, 69A4 and 69A5. Order by the complete symbol X69A.
†MATRIX CASE for 14 and 18 Point Composition.

Section B

Mechanism for moving the Matrix Case right and left, positioning the Normal Wedge and Justification Wedges and removing the type after it has been ejected from the Mold.

1B—Air Pin (14)... 1B
spring (14).....69.. 1B1
AIR PIN group (14) each... X1B
NOTE: For use with machines on which the AIR PIN BLOCKS are worn we furnish:
AIR PIN (.0015" oversize)... a1B2

2B—Air Pin (fixed, stop for 18-unit row). a2B
spring.....6119.. a2B1
AIR PIN group... Xa2B
NOTE: For use with machines on which the AIR PIN BLOCKS are worn we furnish:
AIR PIN (.0015" oversize)... a2B2

3B—Air-pin Block (front)... d3BB *†
dowel (left).....51.. 3B1
" (right).....53.. 3B2
screw (5-16" x 1 5-8") (2).....212.. 3B3
" (5-16" x 15-16").....215.. 3B4
" (1-4" x 1 7-16").....218.. 3B5
" (1-4" x 1 1-4").....219.. 3B6
" (1-4" x 7-8").....222.. 3B7
plug screw (2).....2235.. a3B10
AIR-PIN BLOCK group... Xc3B †
*d3BB is assembled with a3B10.
†This AIR-PIN BLOCK can be applied only in our factory.

4B—Air-pin Plate... a4B
dowel (2).....56.. 4B1
screw (4).....223.. 4B2
AIR-PIN PLATE group... Xa4B

5B—Matrix Jaw (left)... a5B

6B—Matrix Jaw (right)... a6B

7B—Matrix-jaw Latch (in a5B, for 21D) a7BB *
pin... a7B1
nut... 7B3
spring.....6182.. a7B2
MATRIX-JAW LATCH group... X7B
*a7BB is assembled with a7B1

8B—Matrix-jaw Shoe... 8B
screw (top) (2).....218.. 8B1
" (rear).....219.. 8B2
MATRIX-JAW SHOE group... X8B

9B—Matrix - jaw - shoe Packing Block
(left, large)... b9B
dowel.....55.. 9B2
screw (top).....220.. a9B3
shoe... a9B4
clamp (lower)... a9B5
" (upper)... a9B6
" screw.....231.. a9B7
screw (rear).....221.. a9B8
" (front).....227.. a9B9
MATRIX - JAW - SHOE PACKING BLOCK group... Xb9B

10B—Matrix-jaw-shoe Packing Block
(left, small)... 10B

11B—Matrix-jaw-shoe Packing Block
(right)... 11B
bolt.....123.. 11B1
cover... 11B2
" screw.....235.. 11B3
MATRIX - JAW - SHOE PACKING BLOCK group... X11B

12B—Matrix-jaw Stop Rack (front).... b12B1B *
lug... b12B2 *
pin... a12B5 *
plug... b12B6 *
spring.....6194.. b12B7
" abutment (left)... a12B3 *
" " (right)... b12B4 *
MATRIX-JAW STOP RACK group.....Xd12B
*b12B1B is assembled with b12B2, a12B3, b12B4, a12B5, b12B6 and b12B7. Order by complete symbol Xd12B.

13B—Matrix - jaw - stop - rack Locking Bar (front)... d13B
connecting bar... a13B4
spring.....6180.. a13B5
MATRIX-JAW-STOP-RACK LOCKING BAR group.....Xd13B

14B—Normal-wedge Locking Pin..... b14B
adjusting nut.....310.. 14B1
" " lock nut.....312.. 14B2
bushing... a14B3
" adjusting sleeve... 14B4
" " nut... 14B5
" guide screw... a14B6
shank... a14B7
spring.....669.. b14B8
" abutment (upper)... 14B10
NORMAL-WEDGE LOCKING PIN group....Xb14B
Machines equipped with Display Type Attachment also use Normal-wedge-locking-pin Lifting Handle a14B12.

15B—Normal-wedge-locking-pin Stand c15B
bolt (3-16" x 9-16").....124.. 15B1
dowel (2).....55.. 15B2
screw (1-4" x 7-8").....222.. 15B3
" (1-4" x 5-8").....223.. 15B4
" (3-16" x 1-2") (2).....233.. 15B6
NORMAL - WEDGE - LOCKING - PIN STAND group.....Xc15B
Machines 4658 to 9842 inclusive were equipped with the following:
NORMAL-WEDGE-LOCKING-PIN STAND..... b15B
This STAND can be altered to make c15B.

16B—Pin Jaw (left)... 16BB *
stud (for Xa55E).....835.. 16B1
" nut.....35.. 16B2
" washer.....417.. 16B3
PIN JAW group... X16B
*16BB is assembled with 16B1.

17B—Pin Jaw (right)... 17BB *
stud (for Xa55E).....835.. 17B1
" nut.....35.. 17B2
" washer.....417.. 17B3
PIN JAW group... X17B
*17BB is assembled with 17B1.

18B—Pin-Jaw Guide Rod... 18B
screw... a18B1
PIN-JAW GUIDE ROD group.....Xa18B

19B—Pin-jaw-guide-rod Stop..... 19B

For Short Type Attachment see page 19.

20B—Type Carrier... d20BB *
bushing.....458.. a20B10
lever (for b31B)... d20B3
" pin... b20B4
" " cotter.....95.. a20B9

20B—Type Carrier (continued)
lever stand b20B1
" " rivet (2) ..... **7104**.. a20B2
" (for d26B) a20B11
" pin ..... **7161**.. a20B12
shield a20B5
" screw (2) ..... **252**.. 20B6
TYPE CARRIER group, including EYE 21B1B, CLAMP Xd26B, SHOE Xc27B and SPRING Xc31B **Xd20B**
*d20BB is assembled with b20B1, a20B2, d20B3, b20B4, a20B5, 20B6, a20B9, a20B10, a20B11, a20B12, 21B1B, Xd26B, Xc27B and Xc31B. Order by complete symbol Xd20B.

21B—Type-carrier Connecting Rod 21B
forked eye (Carrier end) ..... 21B1B *
" " lock nut (L. H.) ..... **317**.. 21B2
" " pin ..... 21B3 *
" " dowel ..... **58**.. 21B4
" " (Cam Lever end) a21B5
" " lock nut ..... **316**.. 21B6
" " pin 21B7
" " " cotter ..... **93**.. 21B8
spring ..... **615**.. 21B9
" abutment 21B10
sleeve 21B11
TYPE-CARRIER CONNECTING ROD group . **Xa21B**
*21B1B is assembled with 21B3 and 21B4.

22B—Type-carrier Extension a22B
lock nut ..... **310**.. 22B1
sleeve a22B2
spring ..... **616**.. 22B4
TYPE-CARRIER EXTENSION group **X22B**

23B—Type-carrier Shoe (long) ..... b23BB *
screw (right and center) (2) ..... **222**.. 23B1
" (left) ..... **227**.. 23B2
cam (front) ..... a23B3 *
" (rear) ..... a23B4 *
" rivet (lower) ..... **7206**.. a23B5
" " (right) ..... **721**.. a23B6
" " (center, left) (2) ..... **7207**.. a23B7
TYPE-CARRIER SHOE group **Xb23B**
*b23BB is assembled with a23B3 to a23B7 inclusive.

24B—Type-carrier Shoe (short) b24B
screw (2) ..... **221**.. 24B1
plate (trip for d26B) a24B2
TYPE-CARRIER SHOE group **Xb24B**

25B — Type-carrier-spring-abutment Stand a25B
screw (front) (2) ..... **221**.. 25B1
" (top) ..... **223**.. 25B2
TYPE-CARRIER-SPRING-ABUTMENT STAND group **Xa25B**

For Short Type Attachment see page 19.

26B—Type Clamp d26B
extension b26B1
spring ..... **6109**.. a26B2
TYPE CLAMP group **Xd26B**

For Short Type Attachment see page 19.

27B—Type-clamp Shoe c27B
screw (3) ..... **260**.. a27B1
TYPE-CLAMP SHOE group **Xc27B**

For Short Type Attachment see page 19.

28B—Type-pusher Guide a28B
screw ..... **236**.. 28B1
cover a28B2
" screw (2) ..... **250**.. a28B3
TYPE-PUSHER GUIDE group **Xa28B**

For Short Type Attachment see page 19.

29B—Type Pusher ..... b29BB *
blade ..... b29B1 *
" rivet (head end) (2) ..... **732**.. 29B2
" " (eye end, long) ..... **7104**.. 29B3
" " (" " short) ..... **732**.. 29B4
eye ..... a29B5 *
" pin 29B6
" " cotter ..... **94**.. 29B7
TYPE PUSHER group **Xb29B**
*b29BB is assembled with b29B1, 29B2, 29B3, 29B4 and a29B5.

For Short Type Attachment see page 19.

31B—Type Support Spring b31B
bar ..... f31B1B *
" rivet (2) ..... **7208**.. a31B2
" spring ..... **6110**.. a31B6
" yoke c31B4
" extension a31B7
TYPE SUPPORT SPRING group **Xc31B**
*f31B1B is assembled with b31B and a31B2.

36B—Pin-jaw-guide-rod Stand (right) .. 36B1
nut ..... **310**.. 36B2
PIN-JAW-GUIDE-ROD group **X36B**

51B to 53B inc.—*(See page 17)*

Section C

Mechanism for moving the Matrix Case forward and back, drawing the Mold Blade back for the proper size type body, and ejecting the type from the Mold.

1C—Air Pin (14) 1C
spring (14) ..... **69**.. 1C1
AIR PIN group (14) each **X1C**
NOTE: For use with machines on which the AIR PIN BLOCKS are worn we furnish:
AIR PIN (.0015" oversize) a1C2

2C—Air Pin (fixed, stop for front row) ... a2C
spring ..... **6119**.. a2C1
AIR PIN group **Xa2C**
NOTE: For use with machines on which the AIR PIN BLOCKS are worn we furnish:
AIR PIN (.0015") oversize a2C2

For 1517 machines see Extended Matrix Case Attachment 30CU page 21.

3C—Air-pin Block (rear) ..... b3C †
dowel (No. 6 x 2 1-2") ..... **51**.. 3C1
" (No. 6 x 2") ..... **52**.. 3C2
" (No. 5 x 1 1-4") ..... **56**.. 3C3
screw (5-16" x 1 5-8") (2) ..... **212**.. 3C4
" (5-16" x 2 1-2") (2) ..... **211**.. 3C5
" (1-4" x 5-8") (2) ..... **223**.. 3C6
spring post ..... **896**.. b3C7
AIR-PIN BLOCK group ..... **Xb3C** †
†This AIR-PIN BLOCK can be applied only in our factory.

For 1517 machines see Extended Matrix Case Attachment 30CU page 21.

4C—Air-pin Plate a4C
dowel (2) ..... **56**.. 4C1
screw (4) ..... **223**.. 4C2
AIR-PIN PLATE group **Xa4C**

5C—Cross Slide ..... d5CC *
draw rod b5C1
" " clamp screw ..... **223**.. a5C2
extension ..... c5C3 *
" rivet (long) ..... **7228**.. 5C4
" " (short) ..... **7179**.. a5C7
plate (stop for Matrix Case) ..... b5C9 *
" rivet (long) (2) ..... **7207**.. a5C10
" " (short) ..... **721**.. a5C11
CROSS SLIDE group **Xe5C**
*d5CC is assembled with a5C2, c5C3, 5C4, a5C7, b5C9, a5C10 and a5C11.

6C—Cross-slide-extension Shoe ..... a6CC *
screw (4) ..... **234**.. 6C1
spring post ..... **851**.. 6C2
CROSS-SLIDE-EXTENSION SHOE group **Xa6C**
*a6CC is assembled with 6C2.

7C—Cross-slide Guide a7C
cover plate 7C1
screw (4) ..... **233**.. 7C2
CROSS-SLIDE GUIDE group **Xa7C**

For 1517 machines see Extended Matrix Case Attachment 30CU page 21.

8C—Matrix Jaw (front) **b8C**

For 1517 machines see Extended Matrix Case Attachment 30CU page 21.

9C—Matrix Jaw (rear) **b9C**

For 1517 machines see Extended Matrix Case Attachment 30CU page 21.

10C—Matrix-jaw Stop (front) b10C
rivet (2) ..... **7224**.. a10C1
MATRIX-JAW STOP group **Xb10C**

11C—Matrix-jaw Stop (rear) b11C
screw (2) ..... **219**.. 11C1
MATRIX-JAW STOP group **Xb11C**

For 1517 machines see Extended Matrix Case Attachment 30CU page 21.

12C—Matrix-jaw Stop Rack (rear) ..... c12C1C *
lug ..... c12C2 *
pin ..... a12C5 *
plug ..... b12C6 *
spring ..... **6194**.. b12C7
" abutment (rear) ..... a12C3 *
" " (front) ..... b12C4 *
MATRIX-JAW STOP RACK group **Xd12C**
*c12C1C is assembled with c12C2, a12C3, b12C4, a12C5, b12C6 and b12C7. Order by complete symbol Xd12C.

13C — Matrix-jaw-stop-rack Locking Bar (rear) c13C
connecting rod a13C4
" " adjusting nut a13C5
" " lock nut ..... **316**.. a13C6
" " washer ..... **410**.. a13C7
spring ..... **6179**.. a13C8
" abutment pin a13C9
stop washer ..... **457**.. a13C10
yoke a13C11
MATRIX-JAW-STOP-RACK LOCKING BAR group **Xc13C**

14C—Mold-blade Abutment Slide ..... d14CC *
adjusting screw b14C1
" " lock spring a14C10
" " nut a14C12
" " spring (spiral) .... **6174**.. a14C13
anvil a14C3
" plunger 14C5
" " spring (3) ..... **699**.. 14C6
" screw (2) ..... **247**.. 14C7
pin (for a14C10) a14C11
spring post 14C8
MOLD-BLADE ABUTMENT SLIDE group ... **Xd14C**
*d14CC is assembled with b14C1, a14C3, 14C5 to 14C8 inclusive, a14C10 to a14C13 inclusive. Order by complete symbol Xd14C.

15C — Mold-blade-abutment-slide Spring ..... **612**.. **15C**

16C—Mold-blade Operating Rod a16C
distance sleeve (between 16C3 and 16C13) a16C1
ejecting spring (long) ..... **6186**.. a16C2 †
" " (short) ..... **6187**.. a16C17
" " abutment 16C3
" " sleeve b16C4
fork b16C5
" pin a16C6
" " spring b16C7
" " " screw (2) ..... **2212**.. a16C8
nut (rear) ..... **310**.. 16C9
" lock nut ..... **312**.. a16C15
" (front) a16C16
sizing spring ..... **613**.. 16C10
" " sleeve (inside) a16C11
" " " (outside) a16C12
" " abutment (front) 16C13
" " " (rear) 16C14
MOLD-BLADE OPERATING ROD group **Xb16C**
†*For Cored Mold Attachment or Increased Pressure Attachment.*
Mold-blade Operated Rod Ejecting Spring ..... **6191**.. a16C21

17C — Normal-wedge Abutment (on b3C) 17C
dowel (2) ..... **57**.. 17C1
screw (2) ..... **236**.. 17C2
NORMAL-WEDGE ABUTMENT group **X17C**

For 1517 machines see Extended Matrix Case Attachment 30CU page 21.

18C—Pin Jaw (front) ..... a18CC *
stud (for X56E) ..... **835**.. 18C1
" nut ..... **35**.. 18C2
" washer ..... **417**.. 18C3
PIN JAW group **Xa18C**
*a18CC is assembled with 18C1.

19C—Pin Jaw (rear) ..... 19CC *
stud (for X56E) ..... **835**.. 19C1
" nut ..... **35**.. 19C2
" washer ..... **417**.. 19C3
PIN JAW group **X19C**
*19CC is assembled with 19C1.

20C—Pin-jaw Guide Rod a20C
screw a20C1
PIN-JAW GUIDE ROD group **X20C**

21C—Pin-jaw-guide-rod Stop .... **456**.. **a21C**

22C—Pin-jaw-guide-rod Stand (front) . a22C
nut ..... **310**.. 22C1
PIN-JAW-GUIDE-ROD STAND group **Xa22C**

23C—Pin-jaw-guide-rod Stand (rear) .. 23CC *
clamp screw ..... **232**.. 23C1
nut ..... **310**.. 23C2
PIN-JAW-GUIDE-ROD STAND group **X23C**
*23CC is assembled with 23C1.

24C—Wedge Cover 24C
screw ..... **250**.. 24C1
WEDGE COVER group **X24C**

32C—*(See page 15)*

40C—*(See page 21)*

Section D

Mechanism for bringing the Space Transfer Wedge into position when casting Justifying Spaces, disconnecting the Pump while the Justifying Wedges are shifted, and starting the Galley Mechanism into action.

1D—Air Pin (justification, right and left) (2), each **1D**
NOTE: For use with machines on which the AIR PIN BLOCKS are worn we furnish:
AIR PIN (justification) (.0015″ oversize)... a1D1

2D—Air Pin (space, center)..... **2D**
NOTE: For use with machines on which the AIR PIN BLOCKS are worn we furnish:
AIR PIN (space) (.0015″ oversize) a2D1

3D—Air-pin Block (justification) c3D
cover plate..... a3D1
" " screw.....**233**.. 3D2
" " " (long) (2)..... 3D3
dowel (2).....**55**.. 3D4
screw (4).....**216**.. 3D5
set screw (for 7D).....**249**.. a3D12
shoe (for d13B)..... b3D6
" screw (2).....**233**.. a3D7
stud..... 3D8
" nut.....**310**.. 3D9
" washer.....**414**.. 3D10
AIR-PIN BLOCK group..... **Xb3D**

4D—Bell Crank (center, for 57D)..... 4DD *
abutment screw (for 2D).....**2185**.. 4D1
" " lock nut.....**33**.. 4D2
stop screw.....**2184**.. 4D3
" " lock nut.....**33**.. 4D4
BELL CRANK group..... **X4D**
*4DD is assembled with 4D1 to 4D4 inclusive. Order by complete symbol X4D.

5D—Bell Crank (left, for 15D)..... 5DD *
abutment screw for (1D).....**2185**.. 5D1
" " lock nut.....**33**.. 5D2
stop screw.....**2184**.. 5D3
" " lock nut.....**33**.. 5D4
BELL CRANK group..... **X5D**
*5DD is assembled with 5D1 to 5D4 inclusive. Order by complete symbol X5D.

6D—Bell Crank (right, for 15D)..... 6DD *
abutment screw (for 1D).....**2185**.. 6D1
" " lock nut.....**33**.. 6D2
stop screw.....**2184**.. 6D3
" " lock nut.....**33**.. 6D4
BELL CRANK group..... **X6D**
*6DD is assembled with 6D1 to 6D4 inclusive. Order by complete symbol X6D.

7D—Bell-crank Fulcrum Pin.....**888**.. **7D**

8D—Galley Trip Rod..... a8D
nut.....**310**.. 8D1
GALLEY TRIP ROD group..... **Xa8D**

9D—Galley-trip-rod Arm..... a9D
rock lever..... 9D1
" " fulcrum pin..... 9D2
" " " " nut.....**35**.. 9D3
GALLEY-TRIP-ROD ARM group..... **Xa9D**

10D—Justification Wedge (front or .0075″)..... **10D**
Worn wedges may be returned for regrinding.

(For machines equipped with Display Type Attachment see page 15)

11D—Justification Wedge (rear or .0005″) **11D**
Worn wedges may be returned for regrinding.

12D — Justification - wedge Centering Tooth..... 12D
screw (2).....**241**.. 12D1
JUSTIFICATION-WEDGE CENTERING TOOTH group..... **X12D**

13D—Justification-wedge Lever (for 11D)..... a13DD *
bearing button ..... a13D5 *
pin (for 15D).....**838**.. 13D1
" cotter.....**95**.. 13D2
plate..... 13D3
" screw.....**245**.. 13D4
JUSTIFICATION-WEDGE LEVER group.... **X13D**
*a13DD is assembled with 13D1 to 13D4 inclusive, and a13D5. Order by complete symbol X13D.

14D—Justification-wedge Lever (for 10D)..... a14DD *
bearing button ..... a14D5 *

pin (for 15D).....**838**.. 14D1
" cotter.....**95**.. 14D2
plate 14D3
" screw.....**245**.. 14D4
JUSTIFICATION-WEDGE LEVER group..... **X14D**
*a14DD is assembled with 14D1 to 14D4 inclusive, and a14D5. Order by complete symbol X14D.

15D—Justification-wedge-lever Arm (2) 15D
adjusting nut (2)..... 15D1
" " lock nut (2).....**33**.. 15D2
rod (2).....**839**.. 15D3
JUSTIFICATION-WEDGE-LEVER ARM group (2) each..... **X15D**

16D—Justification - wedge - lever - arm Spring
(2) each.....**614**.. **16D**

17D—Justification - wedge - lever - arm-spring Plate..... **17D**

18D—Justification - wedge - lever Fulcrum Pin..... **18D**

19D—Justification-wedge Stop Block... 19D
screw.....**219**.. 19D1
JUSTIFICATION-WEDGE STOP BLOCK group **X19D**

20D—Micrometer Wedge..... 20D
adjusting screw..... a20D2
" " spring..... a20D3
" " " screw (2)....**248**.. 20D4
shank..... a20D1
" nut.....**35**.. a20D5
" spring.....**635**.. 20D7
MICROMETER WEDGE group.....**Xa20D**

(For machines equipped with Display Type Attachment see page 15)
For machines equipped with Short Type Attachment see page 19.

21D—Normal Wedge* (regular, any set). **21D**
*When ordering a NORMAL WEDGE to replace a WEDGE give, in addition to the set, the symbol stamped on the left end (operating position) of the WEDGE; for example, S5, S15, etc.
NOTE: If a regular NORMAL WEDGE 21D becomes worn so that it does not give the correct width type bodies in all positions, it should be returned to our factory to be reground.

48D—Pump-trip Operating Lever (2)... 48DD *
fulcrum pin..... 48D1
" cotter.....**95**.. 48D2
separating Pin (2)..... 48D3
PUMP-TRIP OPERATING LEVER group..... **X48D**
*48DD is assembled with 48D3.

49D—Pump-trip Tube..... a49DD *
collar..... 49D1
" set screw.....**122**.. 49D2
spring post.....**840**.. 49D3
PUMP-TRIP TUBE group.....**Xa49D**
*a49DD is assembled with 49D3.

50D—Pump-trip Spring.....**628**.. 50D
plate (2)..... 50D1
PUMP-TRIP SPRING group..... **X50D**

51D—Pump-trip-tube-spring Post (in a36EE).....**893**.. **51D**

52D—Space Transfer Wedge..... a52D
adjusting screw..... 52D1
" " lock nut..... 52D2
SPACE TRANSFER WEDGE group.....**Xa52D**
Worn wedges a52D should be returned with 62D for regrinding in pairs.

53D—Space-transfer-wedge Operating Rod..... a53DD *
nut.....**33**.. 53D1
" lock nut.....**34**.. 53D2
washer (rawhide)..... 53D3
yoke..... a53D4
SPACE-TRANSFER-WEDGE OPERATING ROD group.....**Xa53D**
*a53DD is assembled with a53D4.

54D — Transfer - wedge - operating - rod Guide..... 54D
cap..... 54D1
" screw (2).....**247**.. 54D2
screw (2).....**223**.. 54D3
TRANSFER-WEDGE-OPERATING-ROD GUIDE group **X54D**

55D—Transfer-wedge Shifter..... 55D
spring (inside).....**64**.. 55D1
" (outside).....**65**.. 55D2
" abutment (lower)..... 55D3
" " (upper)..... 55D4
nut.....**310**.. 55D5
TRANSFER-WEDGE SHIFTER group..... **X55D**

56D—Transfer-wedge-shifter Lever.... 56D
fulcrum screw..... 56D1
TRANSFER-WEDGE-SHIFTER LEVER group. **X56D**

57D—Transfer-wedge-shifter-lever Arm 57D
adjusting nut..... 57D1
" " lock nut.....**33**.. 57D2
fulcrum pin (for 56D)..... 57D3
rod.....**839**.. 57D4
TRANSFER-WEDGE-SHIFTER-LEVER ARM group..... **X57D**

58D—Transfer-wedge-shifter-lever-arm Spring.....**614**.. **58D**

59D—Transfer Tongs
cam lever extension..... 59D1D *
lower connecting link (2)..... 59D2 *
" " " bushing (2)..... 59D3 *
upper connecting link (2)..... 59D4 *
" " " pin (in 59D1D)... 59D5 *
" " " separating block.. 59D6 *
" " " " " bush. 59D7 *
" " " " " rivet (2)..**735**.. 59D8 *
space wedge lever (2)..... a59D9 *
" " " bushing (2)..... a59D18
" " " crosshead..... a59D10 *
" " " eye (on 60D6D)..... 59D11 *
" " " separating pin (3) **742**. 59D12 *
type wedge lever (2)..... a59D13 *
" " " bolt (for 59D4)..**120**.. 59D14
" " " " nut.....**310**.. 59D15
" " " bushing (2)..... a59D19
" " " crosshead..... a59D16 *
" " " separating pin (2)**742**.. 59D17 *
TRANSFER TONGS group..... **X59D**
*We cannot furnish separate parts of these TONGS, except 59D14, 59D15, a59D18 and a59D19.

60D—Transfer-wedge Spring Box
tube..... 60D1
cap..... 60D2
forked eye..... 60D3
" " pin..... 60D4
" " " cotter (2).....**95**.. 60D5
rod ..... 60D6D *
" head..... 60D7 *
" adjusting nut (for 60D12 and 60D13) [redacted]
.....**310**.. 60D8
rod adjusting nut lock nut.....**312**.. 60D9
lock nut (for 59D11).....**310**.. 60D10
spring abutment (2)..... 60D11
" (inside).....**618**.. 60D12
" (outside).....**617**.. 60D13
TRANSFER-WEDGE SPRING BOX group... **X60D**
*60D6D is assembled with 60D7.

61D—Transfer-wedge-spring-box Stand 61D
screw (2).....**215**.. 61D1
TRANSFER-WEDGE-SPRING-BOX STAND group..... **X61D**

62D—Type Transfer Wedge..... **62D**
Worn wedges 62D should be returned with a52D for regrinding in pairs.

63D — Type - transfer - wedge Operating Rod..... 63DD *
nut.....**33**.. 63D1
" lock nut.....**34**.. 63D2
pin..... 63D3
washer (rawhide)..... 63D4
TYPE-TRANSFER-WEDGE OPERATING ROD group..... **X63D**
*63DD is assembled with 63D3.

69D—*(See page 15)*

Section E

Mechanism for receiving power from the belt and transmitting it to the various portions of the machine (includes also the piping in the Main Stand and the piping for the control mechanisms on certain attachments).

1E—Base..... a1E
hinge (for Door) (2)..... a1E1
" nut (2).....**319**.. a1E2
button "ON"..... a1E3
" "OFF"..... a1E4
BASE group..... **Xa1E**

2E—Belt Shifter Arm (front) 2E
clamp screw ..... **213** .. 2E1
BELT SHIFTER ARM group **X2E**

(For machines equipped with Display Type Attachment, see page 16)

3E—Belt Shifter Arm (rear, carrying 4E) 3E
clamp 3E2
" bolt ..... **118** .. 3E3
set screw ..... **116** .. 3E1
BELT SHIFTER ARM group **X3E**

4E—Belt Shifter Eye **4E**

(For machines equipped with Display Type Attachment, see page 16)

5E—Belt Shifter Ring 5E
clamp screw ..... **213** .. 5E1
guide pin 5E2
BELT SHIFTER RING group **X5E**

(For machines equipped with Display Type Attachment, see page 16)

6E—Belt-shifter-ring Rod 6E
fibre washer 6E1
spring ..... **620** .. 6E2
BELT-SHIFTER-RING ROD group **X6E**

7E—Cam-lever Shaft (front, for 72EE, 67EE and 70EE) **7E**

8E—Cam-lever Shaft (rear, for 53EE, 44EE and 76EE) 8E
cotter ..... **92** .. 8E1
set screw 8E2
washer ..... **41** .. 8E3
CAM-LEVER SHAFT group **X8E**

9E—Cam-lever-shaft Stand
(for a14EE and a24EE) a9E
bolt (4) ..... **14** .. 9E1
CAM-LEVER-SHAFT STAND group **Xa9E**

10E—Cam Shaft (driving) 10E
cam key 10E1
key (for 64E) 10E3
nut (for 64E) ..... **332** .. 10E4
gear (graduated) 10E5
" key 10E6
CAM SHAFT Xd10E, see note under CAM SHAFT Xa11E

11E—Cam Shaft (driven) 11E
cam key 11E1
distance ring 11E2
gear 11E3
" key 11E4
CAM SHAFT Xa11E, see note below.
NOTE: CAM SHAFTS are furnished only in pairs, that is, Xd10E and Xa11E complete with the following CAMS in place: Xa13E, X23E, X43E, X52E, X66E, X69E, X71E, X75E, c86E.
Should it be necessary to replace a pair of CAMS the two SHAFTS Xd10E and Xa11E must be returned to our factory.

12E—Cam-shaft Stand ..... a12EE *
cap (front, right) ..... 12E1 *
" (rear, left) ..... 12E2 *
" (rear, right) ..... a12E15 *
" (front, left) ..... a12E16 *
" screw (for 12E1, 12E2, a12E15 and a12E16) (16) ..... **27** .. 12E3
" (front, for 7E) ..... 12E4 *
" (rear, for 7E) ..... 12E5 *
" pin (in 12E4) 12E6
" screw (for 12E4 and 12E5) (4) **214** .. 12E7
cap (for a80E) ..... 12E8 *
" screw (for 12E8) (4) ..... **214** .. 12E9
oil pipe (2) 12E11
screw (7-16″ x 1 1-8″) (4) ..... **26** .. 12E12
" (7-16″ x 1 3-8″) (4) ..... **25** .. 12E13
winkley oiler (7) 12E14
register plate a12E18
" " screw (2) ..... **2279** .. a12E19
CAM-SHAFT STAND group **Xa12E**
*a12EE is assembled with 12E1 to 12E9 inclusive, 12E11, 12E14, a12E15 and a12E16.

13E—Centering-pin Cam
(driving, marked D in circle) ..... a13EE *
(driven, marked D in square) ..... a13E1 *
CENTERING-PIN CAM group **Xa13E**
*CAMS can be furnished only in pairs. When a pair of CAMS is to be replaced, the SHAFTS complete with all their CAMS must be returned to our factory.

14E—Centering-pin-cam Lever ..... a14EE *
roller† 14E3
" pin 14E4
set screw 14E5
CENTERING-PIN-CAM LEVER group **Xa14E**
*a14EE is assembled with 14E3 and 14E4.
†For use with machines on which the Cams are worn we furnish:
Centering-pin-cam Lever roller (.015″ oversize) a14E6
Centering-pin-cam Lever roller (.030″ oversize) a14E7

(For machines equipped with Lead-&-Rule Attachment, see page 17)

15E—Centering-pin-cam-lever Shaft .. **15E**

16E—Centering-pin Lever ..... a16EE *
screw (to a14EE) (3) ..... **27** .. 16E1
plate (for 15D3 and 57D4) 16E2
" screw (2) ..... **241** .. 16E3
" (for 15D1 and 57D1) a16E6
" rivet (2) ..... **7162** .. a16E7
stud (for 2A1) 16E4
" cotter ..... **95** .. 16E5
CENTERING-PIN LEVER group **Xa16E**
*a16EE is assembled with 16E4, a16E6 and a16E7.

17E—Door ..... 17EE *
hinge pin (2) 17E1
knob 17E2
latch 17E3
DOOR group **X17E**
*17EE is assembled with 17E1, 17E2 and 17E3. Order by complete symbol X17E.

19E—Gear Cover (front) 19E
screw (lower) ..... **223** .. 19E1
" (upper) ..... **219** .. 19E2
GEAR COVER group **X19E**

20E—Gear Vernier 20E
screw (2) ..... **247** .. 20E1
GEAR VERNIER group **X20E**

21E—Jaw-tongs Bell Crank (lower) .... a21EE *
ball stud ..... **848** .. a21E1
stud (short) 21E6
" nut (lower) ..... **322** .. 21E7
" " (upper) ..... **310** .. 21E8
" washer ..... **414** .. 21E9
(upper) ..... b21E10E †
ball stud ..... **848** .. a21E11
stud (long) 21E2
" nut (lower) ..... **322** .. 21E3
" " (upper) ..... **310** .. 21E4
" washer ..... **414** .. 21E5
JAW-TONGS BELL CRANK group **Xb21E**
*a21EE is assembled with a21E1.
†b21E10E is assembled with a21E11

22E—Jaw-tongs-bell-crank Fulcrum Stud 22E
nut (lower) ..... **329** .. 22E1
" (upper) ..... **327** .. 22E2
washer ..... **43** .. 22E3
JAW-TONGS-BELL-CRANK FULCRUM STUD group **X22E**

23E—Jaw-tongs Cam (driving, marked E-2 in circle) ..... 23EE *
(driven, marked E-2 in square) ..... 23E1 *
JAW-TONGS CAM group **X23E**
*CAMS can be furnished only in pairs. When a pair of CAMS is to be replaced, the SHAFTS complete with all their CAMS must be returned to our factory.

24E—Jaw-tongs-cam Lever ..... a24EE *
clamp bolt (for a26E1) (2) ..... **15** .. 24E2
roller† 24E5
" pin 24E6
adjusting screw (for a26E1) a24E7
" " lock nut ..... **320** .. a24E8
JAW-TONGS-CAM LEVER group **Xa24E**
*a24EE is assembled with 24E5 and 24E6.
†For use with machines on which the Cams are worn we furnish:
Jaw-tongs-cam Lever roller (.015″ oversize) a24E9
Jaw-tongs-cam Lever roller (.030″ oversize) a24E10

25E—Jaw-tongs-cam-lever Shaft 25E
set screw 25E1
JAW-TONGS-CAM-LEVER SHAFT group **X25E**

26E—Jaw-tongs Spring Box
ball extension a26E1
" socket (left bearing for Ball) a26E2
" " guide pin ..... **721** .. a26E3

26E—Jaw-tongs Spring Box (continued)
ball socket plug a26E4
" " " button a26E5
" plug (right bearing for Ball) a26E6
" " nut ..... **316** .. a26E7
" " washer a26E8
spring (inside) (2) ..... **665** .. a26E9
" (outside) (2) ..... **664** .. a26E10
" abutment (4) a26E11
" brake (wood) (2) a26E12
" " cone (2) a26E13
" rod (lower) b26E14
" " nut ..... **314** .. b26E15
" " " lock nut ..... **315** .. b26E16
" " (upper) b26E17
" " lock nut (crosshead end) **328** .. a26E18
" " nut ..... **314** .. b26E19
" " " lock nut ..... **315** .. b26E20
" " crosshead a26E21
" " " ball plug a26E22
" " " " " lock nut **328** a26E23
tube (2) a26E24
" cap a26E25
" " stud (2) a26E26
" " " nut (2) ..... **314** .. a26E27
" plate a26E28
JAW-TONGS SPRING BOX group includes also BALL SOCKET Xa27E and BALL SOCKET Xa81E **Xa26E**

27E—Jaw-tongs-spring-box Ball Socket (lower) a27E
lock nut a27E1
JAW-TONGS-SPRING-BOX BALL SOCKET group **Xa27E**

28E—Locking-bar Bell Crank
(for d13B and c13C) d28E
pin (3) a28E3
LOCKING-BAR BELL CRANK group **Xd28E**

32E — Locking-bar-bell-crank Stud
(in a36EE) b32E
nut ..... **319** .. b32E1
LOCKING-BAR-BELL-CRANK STUD group .. **Xb32E**

33E—Locking-bar Operating Rod b33E
eye a33E10
" lock nut ..... **316** .. a33E2
hook a33E5
" lock nut (L. H.) ..... **317** .. a33E6
spring ..... **6191** .. b33E7
" washer ..... **410** .. a33E9
LOCKING-BAR OPERATING ROD group **Xc33E**

34E—Locking-bar-cam Lever ..... c34EE *
roller† b34E3
" pin b34E6
stud (for a33E5) 34E4
" nut ..... **314** .. 34E5
LOCKING-BAR-CAM LEVER group **Xc34E**
*c34EE is assembled with b34E3 and b34E6.
†For use with machines on which the Cams are worn we furnish:
Locking-bar-cam Lever roller (.015″ oversize) a34E11
Locking-bar-cam Lever roller (.030″ oversize) a34E12

35E—Locking-bar-cam-lever Fulcrum Stud a35E
nut ..... **330** .. a35E1
LOCKING-BAR-CAM-LEVER FULCRUM STUD group **Xa35E**

For 1517 machines see Extended Matrix Case Attachment 30CU page 21.

36E—Main Stand ..... a36EE *
air pipe (to 5 unit Pin, B Block) ..... 36E1 †
" " (" 6 " " ") ..... 36E2 †
" " (" 7 " " ") ..... 36E3 †
" " (" 8 " " ") ..... 36E4 †
" " (" 9 " " ") ..... 36E5 †
" " (" 9 " " ") ..... 36E6 †
" " (" 9 " " ") ..... 36E7 †
" " (" 10 " " ") ..... 36E8 †
" " (" 10 " " ") ..... 36E9 †
" " (" 11 " " ") ..... 36E10 †
" " (" 12 " " ") ..... 36E11 †
" " (" 13 " " ") ..... 36E12 †
" " (" 14 " " ") ..... 36E13 †
" " (" 15 " " ") ..... 36E14 †
" " (" A Pin, C Block) ..... 36E15 †
" " (" B " ") ..... 36E16 †
" " (" C " ") ..... 36E17 †
" " (" D " ") ..... 36E18 †
" " (" E " ") ..... 36E19 †
" " (" F " ") ..... 36E20 †
" " (" G " ") ..... 36E21 †
" " (" H " ") ..... 36E22 †

36E—Main Stand (continued)

air pipe (to I Pin, C block)	36E23	†
" " (" J " ")	36E24	†
" " (" K " ")	36E25	†
" " (" L " ")	36E26	†
" " (" M " ")	36E27	†
" " (" N " ")	36E28	†
" " (" 1,right, or .0005" Pin, D Block)	a36E29	†
" " (" 2, left, or .0075" Pin, D Block)	36E30	†
" " (" 3, center, or Space Pin D Block)	36E31	†
" " (for air blast)	36E33	†
bolt (1-2" x 3 1-2") ..11..	36E34	
" nut (for 36E34) ..327..	36E35	
" (7-16" x 3 1-2") ..12..	36E36	
" (7-16" x 2") (3) ..13..	36E37	
" nut (for 36E36 and 36E37) (4) 322..	36E38	
bushing (for water, holes) (2)	a36E39	
MAIN STAND group **Xa36E**		‡

*a36EE is assembled with 36E1 to 36E33 inclusive, and a36E39.
†Pipe .166 properly annealed and suitable for repairs will be furnished in lengths of not less than one foot.
*‡a36EE and Xa36E can be applied only in our factory.

37E—Matrix-jaw Tongs (front)

connecting link	a37E1	*
" " pin (2)	37E3	*
lever (lower) (2)	a37E4	*
" (upper) (2)	a37E8	*
" distance piece (2)	a37E5	*
link (center) (2)	37E6	*
" pin (center) (2)	37E7	*
fulcrum pin (2)	a37E9	*
" " ring (2)	a37E10	*
lock slide (2)	a37E11	
" " spring (2)	a37E12	
MATRIX-JAW TONGS group **Xa37E**		

*We cannot furnish separate parts of these TONGS except a37E11 and a37E12.

For 1517 machines see Extended Matrix Case Attachment 30CU page 21.

38E—Matrix-jaw Tongs (rear)

connecting link	b38E1	*
" " pin (2)	38E6	*
lever (lower) (2)	a38E7	*
" (upper) (2)	a38E11	*
" distance piece (2)	a38E8	*
link (center) (2)	38E9	*
" pin (center) (2)	38E10	*
fulcrum pin (2)	a38E13	*
" " ring (2)	a38E14	*
lock slide (2)	a38E15	
" " spring (2)	a38E16	
MATRIX-JAW TONGS group **Xb38E**		

*We cannot furnish separate parts of these TONGS except a38E15 and a38E16.

39E—Matrix-jaw-tongs Stud

(front, in a36EE)	a39E	
nut (lower) ..329..	39E1	
" (upper) ..310..	39E2	
arm (for 24G)	a39E3	
MATRIX-JAW-TONGS STUD group **Xa39E**		

40E—Matrix-jaw-tongs Stud

(rear, in c3D)	40E	
nut (lower) ..327..	40E1	
" (upper) ..310..	40E2	
washer ..414..	40E3	
MATRIX-JAW-TONGS STUD group **X40E**		

41E—Mold-blade Bell Crank | 41EE | *

ball stud ..841..	41E1	
MOLD-BLADE BELL CRANK group **X41E**		

*41EE is assembled with 41E1. Order by complete symbol X41E.

42E—Mold-blade-bell-crank Stud

nut (lower) ..327..	42E1	
" (upper) ..319..	42E2	
washer ..49..	42E3	
MOLD-BLADE-BELL-CRANK STUD group **X42E**		

43E—Mold-blade Cam (driving, marked G1 in circle) | a43EE | *

(driven, marked G1 in square)	a43E1	*
MOLD-BLADE CAM group **X43E**		

*CAMS can be furnished only in pairs. When a pair of CAMS is to be replaced, the SHAFTS, complete with all their CAMS must be returned to our factory.

(For machines equipped with Display Type Attachment, see page 15)

44E—Mold-blade-cam Lever | 44EE | *

extension	44E1	
roller†	44E4	
" pin	44E5	
MOLD-BLADE-CAM LEVER group **X44E**		

44E—Mold-blade-cam Lever (continued)

*44EE is assembled with 44E4 and 44E5. Order by complete symbol X44E.
†For use with machine on which the CAMS are worn we furnish:

Mold - blade - cam Lever roller (.015" oversize)	a44E12
Mold - blade - cam Lever roller (.030" oversize)	a44E13

45E—Mold-blade Connecting Rod | 45E

lock nut ..310..	45E1	
" " (L. H.) ..311..	45E2	
MOLD-BLADE CONNECTING ROD group **X45E**		

46E—Mold-blade-connecting-rod Ball Socket (on 44E1) | 46E

lock nut	46E1	
plug	46E2	
MOLD - BLADE - CONNECTING - ROD BALL SOCKET group **X46E**		

47E—Mold-blade-connecting-rod Ball Socket (on 41E1) | 47E

lock nut	47E1	
plug (L. H.)	47E2	
MOLD - BLADE - CONNECTING - ROD BALL SOCKET group **X47E**		

48E—Mold-clamp Stud (front) ..852.. | a48E1

washer ..413..	48E2	
nut ..310..	a48E3	
MOLD-CLAMP STUD group **Xa48E**		

49E—Mold Clamp (side) | 49E

stud ..852..	a49E1	
" washer ..413..	49E2	
" nut ..310..	a49E3	
MOLD CLAMP group **X49E**		

50E—Mold Screw (1-4" x 1 1-4") (3) each **a50E**

52E—Paper-tower Cam (driving, marked F in circle) | 52EE | *

(driven, marked F in square)	52E1	*
PAPER-TOWER CAM group **X52E**		

*CAMS can be furnished only in pairs. When a pair of CAMS is to be replaced, the SHAFTS, complete with all their CAMS, must be returned to our factory.

53E—Paper-tower-cam Lever | 53EE | *

roller†	53E3	
" pin	53E4	
stud (for 54E1)	53E5	
" nut ..314..	53E6	
PAPER-TOWER-CAM LEVER group **X53E**		

*53EE is assembled with 53E3 and 53E4
†For use with machines on which the CAMS are worn we furnish:

Paper - tower - cam Lever roller (.015" oversize)	a53E7
Paper - tower - cam Lever roller (.030" oversize)	a53E8

54E—Paper-tower Operating Rod | 54E

eye (lower)	54E1	
" lock nut ..310..	54E2	
" (upper)	a54E3	
" lock nut (L. H.) ..311..	54E4	
PAPER-TOWER OPERATING ROD group **Xa54E**		

55E—Pin-jaw Tongs (front)

connecting eye	a55E1	*
" " (L. H.)	a55E2	*
" " adjusting stud ..842..	a55E15	
" " " stud lock nut ..35	a55E16	
" " " stud lock nut (L.H.) 36	a55E17	
" " pin (2)	a55E14	*
lever (left)	55E3	*
" (right)	55E4	*
" bushing (end) (4)	55E5	*
" " washer (end) (4)	55E6	*
" " (center) (2)	55E7	*
" " washer (center) (2)	55E8	*
link (center, upper) (2)	55E9	*
" (" lower) (2)	55E10	*
" fulcrum pin (2)	55E11	*
" bushing (Stud end) (2)	55E12	*
spring post (in 55E3) ..833..	55E13	
PIN-JAW TONGS group **Xa55E**		

*We cannot furnish separate parts of these TONGS except a55E15, a55E16, a55E17 and 55E13.

For 1517 machines see Extended Matrix Case Attachment 30CU page 21.

56E—Pin-jaw Tongs (rear)

connecting eye	56E1	*
" " (L. H.)	56E2	*
" " adjusting stud ..842..	56E3	
" " " stud lock nut ..35	56E4	
" " " stud lock nut (L.H.) 36	56E5	
" " pin (2)	56E6	*
lever (front)	56E7	*
" (rear)	56E8	*
" bushing (end) (4)	56E9	*
" " (center) (2)	56E10	*
" " washer (end) (4)	56E11	*
" " " (center) (2)	56E12	*
link (3)	56E13	*
" bushing (Stud end) (2)	56E14	*
" fulcrum pin (2) ..766..	56E15	*
" (lower Link at center of 56E8)	56E16	*
spring post (in 56E8) ..833..	56E17	
PIN-JAW TONGS group **X56E**		

*We cannot furnish separate parts of these TONGS except 56E3, 56E4, 56E5 and 56E17.

For 1517 machines see Extended Matrix Case Attachment 30CU page 21.

57E—Pin-jaw-tongs Spring (inner) **661**.. | 57E

(outer) ..660..	57E1	
guide tube	57E2	
" " eye	57E3	
" " nut	57E4	
" " spring sleeve	57E5	
" rod	57E6	
" " spring plate	57E7	
" " " " rivet ..7161..	57E8	
PIN-JAW-TONGS SPRING group **X57E**		

58E—Pin-jaw-tongs-spring Bell Crank | a58EE | *

pin (for 60E) ..831..	58E1	
" (for 57E3)	58E2	
" cotter ..95..	58E3	
PIN-JAW-TONGS-SPRING BELL CRANK group **X58E**		

*a58EE is assembled with 58E1 and 58E2. Order by complete symbol X58E.

59E—Pin-jaw-tongs-spring-bell-crank Stud | 59E

nut (lower) ..314..	59E1	
" (upper) ..310..	59E2	
washer ..414..	59E3	
PIN-JAW-TONGS-SPRING-BELL-CRANK STUD group **X59E**		

60E—Pin-jaw-tongs-spring Connecting Link (long, front) | **60E**

61E—Pin-jaw-tongs-spring Connecting Link (short, rear) | **61E**

62E—Pin-jaw-tongs-spring Lever | a62EE | *

pin (for 61E) ..831..	62E1	
" (for 57E7) ..831..	62E2	
PIN-JAW-TONGS-SPRING LEVER group **X62E**		

*a62EE is assembled with 62E1 and 62E2. Order by complete symbol X62E.

63E—Pin-jaw-tongs Stud (rear, in a36EE) | 63E

nut (lower) ..327..	63E1	
" (upper) ..310..	63E2	
washer ..414..	63E3	
PIN-JAW-TONGS STUD group **X63E**		

64E—Pulley (driving) | **64E**

(For machines equipped with Display Type Attachment, see page 16)

65E—Pulley (loose) | **a65E**

66E—Pump Cam (driving, marked B in circle) | 66EE | *

(driven, marked B in square)	66E1	*
PUMP CAM group **X66E**		

*CAMS can be furnished only in pairs. When a pair of CAMS are to be replaced, the SHAFTS, complete with all their CAMS, must be returned to our factory.

67E—Pump-cam Lever | 67EE | *

roller†	67E3	
" pin	67E4	
PUMP-CAM LEVER group **X67E**		

*67EE is assembled with 67E3 and 67E4. Order by complete symbol X67E.
†For use with machines on which the CAMS are worn we furnish:

Pump-cam Lever roller (.015" oversize)	a67E5
" " " " (.030" oversize)	a67E6

68E—Pump-cam-lever Connecting Rod 68E
eye (L. H.) 68E1
" lock nut (L. H.) .325.. 68E2
" 68E3
" lock nut .324.. 68E4
" pin (2) 68E5
" " cotter (4) .91.. 68E6
PUMP-CAM-LEVER CONNECTING ROD group **X68E**

69E—Transfer-wedge Cam (driving, marked C in Circle) a69EE *
(driven, marked C in square) a69E1 *
TRANSFER-WEDGE CAM group **X69E**
*CAMS can be furnished only in pairs. When a pair of CAMS are to be replaced, the SHAFTS, complete with all their CAMS, must be returned to our factory.

70E—Transfer-wedge-cam Lever 70EE *
clamp bolt .111.. 70E3
extension adjusting bolt .18.. 70E4
" " lock nut .314.. 70E5
roller† 70E6
" pin 70E7
TRANSFER-WEDGE-CAM LEVER group **X70E**
*70EE is assembled with 70E6 and 70E7.
†For use with machines on which the CAMS are worn we furnish:
Transfer-wedge-cam Lever roller (.015″ oversize) a70E8
Transfer-wedge-cam Lever roller (.030″ oversize) a70E9

71E—Type-carrier Cam (driving, marked A in circle) a71EE *
(driven, marked A in square) a71E1 *
TYPE-CARRIER CAM group **X71E**
*CAMS can be furnished only in pairs. When a pair of CAMS is to be replaced, the SHAFTS, complete with all their CAMS, must be returned to our factory.

72E—Type-carrier-cam Lever 72EE *
clamp bolt .111.. 72E3
extension a72E4 ‡
" adjusting bolt .18.. 72E5
" " lock nut .314.. 72E6
roller† 72E7
" pin 72E8
TYPE-CARRIER-CAM LEVER group **Xa72E**
*72EE is assembled with 72E7 and 72E8.
†For use with machines on which the CAMS are worn we furnish:
Type-carrier-cam Lever roller (.015″ oversize) a72E9
Type-carrier-cam Lever roller (.030″ oversize) a72E10
‡For 14 and 18 point composition.
Type-carrier-cam Lever extension a72E12

73E—Type-pusher Bell Crank 73EE *
ball stud .841.. 73E1
TYPE-PUSHER BELL CRANK group **X73E**
*73EE is assembled with 73E1. Order by complete symbol X73E.

74E—Type-pusher-bell-crank Fulcrum Stud 74E
nut .327.. 74E1
TYPE-PUSHER-BELL-CRANK FULCRUM STUD group **X74E**

75E—Type-pusher Cam (driving, marked H in circle) a75E *
(driven, marked H in circle) c75E1E *
latch b75E2
" cotter .94.. a75E3
" spring .6122.. a75E4
" " pin .854.. a75E6
" washer .46.. a75E5
TYPE-PUSHER CAM group **X75E**
*c75E1E is assembled with a75E6 and its companion CAM a75E.
NOTE: CAMS can be furnished only in pairs. When a pair of Cams is to be replaced, the SHAFTS, complete with all their CAMS, must be returned to our factory

76E—Type-pusher-cam Lever 76EE *
ball extension 76E1
roller† 76E4
" pin 76E5
TYPE-PUSHER-CAM LEVER group **X76E**
*76EE is assembled with 76E1, 76E4 and 76E5. Order by complete symbol X76E.
†For use with machines on which the CAMS are worn we furnish:
Type-pusher cam Lever roller (.015″ oversize) a76E6
Type-pusher cam Lever roller (.030″ oversize) a76E7

77E—Type-pusher Connecting Rod 77E
ball socket (long, Cam Lever end) 77E1
" " (short, Cam Lever end) 77E2
" " " lock nut .310.. 77E3
" " " lock nut .312.. 77E4
spring (inside) .657.. a77E6
" (outside) .6112.. a77E7
TYPE-PUSHER CONNECTING ROD group **X77E**

78E — Type-pusher-connecting-rod Ball Socket (Bell Crank end) 78E
lock nut 78E1
plug 78E2
TYPE-PUSHER-CONNECTING-ROD BALL SOCKET group **X78E**

79E—Water Connection (front) 79E
screw (2) .240.. 79E1
WATER CONNECTION group **X79E**

80E—Worm Shaft a80E
collar a80E7 *
gear 80E1
hand wheel 80E2 *
key (for Worm) 80E3
" (long, for 80E1 and 80E2) a80E4
nut .329.. 80E5 *
worm 80E6
WORM SHAFT group **Xb80E**
*Parts 80E2, 80E5 and a80E7 can be applied outside our factory; for any other parts the complete WORM SHAFT must be returned to our factory.

81E — Jaw-tongs-spring-box Ball Socket (upper) a81E
lock nut a81E1
JAW-TONGS-SPRING-BOX BALL SOCKET group **Xa81E**

86E—Locking-bar Cam (marked I-3 in circle) **c86E**
NOTE: If one of these CAMS is required the SHAFTS complete with all their CAMS must be returned to our factory.

87E—Mold-blade-carrier-latch Bell Crank 87E1E *
spring .6101.. 87E7
" pin .872.. 87E6
stud b87E8
" nut .310.. 87E9
MOLD-BLADE-CARRIER-LATCH BELL CRANK group **Xa87E**
*87E1E is assembled with 87E6.

89E—Mold Clamp (front) **89E1**

96E—(*See page 15*)

97E to 112E inc.—(*See page 16*)

113E—Oil Guard **113E1**

114E—Oil Pan a114E1E *
partition (center) a114E2 *
" (rear) a114E3 *
" (rivet) (1-8″ x 1-8″) (6) a114E4 *
" (") (flathead) (4) a114E5 *
spout a114E6 *
" washer a114E7 *
plate a114E8 *
" rivet .7230.. a114E9 *
OIL PAN group **X114E**
*a114E1E is assembled with a114E2 to a114E9 inclusive. Order by complete symbol X114E.
Machines prior to 7120 were not equipped with the following parts:
OIL PAN PLATE a114E8
" rivet .7230.. a114E9

115E—Oil-pan Shelf a115E1E *
bracket (front) 115E2
" (rear) 115E3
handle a115E4 *
" rivet (4) .7177.. a115E5
link (4) a115E6 *
" fulcrum pin (upper) (4) a115E7 *
" " " washer (4) a115E8 *
" " stud (lower) (4) 115E9
" " " nut (4) .310.. 115E10
" " " washer (4) a115E11
stop pin (2) a115E12 *
OIL-PAN SHELF group **X115E**
*a115E1E is assembled with a115E4 to a115E8 inclusive and a115E12.

116E—Oil-pan-shelf-bracket Bolt (8) (each) .2216.. **116E1**

117E to 133E inc.—(*See pages 16 and 17*)

134E to 139E inc.—(*See page 17*)

140E—(*See page 15*)

141E to 145E inc.—(*See page 17*)

148E—(*See page 17*)

168E—Cam-shaft-stand Packing Piece (2) (each) **168E1**

275E—(*See page 19*)

276E—(*See page 17*)

280E to 282E inc.—(*See page 19*)

284E—Gate Vent Guard 284E1E *
block 284E2E †
" ball 284E3
" " spring 284E4
" rivet (2) .7172.. 284E5
GATE VENT GUARD group **X284E**
*284E1E is assembled with 284E2E, 284E3 and 284E4.
†284E2E is assembled with 284E1 and 284E5.

Section F

Mechanism for receiving type from the Type Carrier and assembling it in lines on the galley pan.

For Quadding and Centering Attachment see X189F group page 20.

1F—Column Pusher a1FF *
line support stop (and type guide) 1F1
" " " screw .253.. 1F2
sheave (for Weight Cord) b1F7
spring post .831.. 1F3
stop pin (for a54F1) a1F6
stud (for a1F7) a1F4
" cotter .95.. a1F5
COLUMN PUSHER group **Xa1F**
*a1FF is assembled with 1F1, 1F2, 1F3, a1F4, a1F5, a1F6 and b1F7. Order by complete symbol Xa1F.

For 14 and 18 point composition see page 15.

2F—Column-pusher Adjusting Screw (for varying "point size") 2FF *
disc 2F1 *
" pin .743.. 2F2
COLUMN-PUSHER ADJUSTING SCREW group **X2F**
*2FF is assembled with 2F1 and 2F2. Order by complete symbol X2F.

For 14 and 18 point composition see page 15.

3F—Column-pusher-adjusting-screw Stand 3FF *
spring 3F1
stud 3F2
" nut (2) .327.. 3F3
COLUMN-PUSHER-ADJUSTING-SCREW STAND group **X3F**
*3FF is assembled with 3F1 and 3F2

4F—Column-pusher Fulcrum Screw
(long) a4F3
(short) 4F1
lock nut (2) .329.. 4F2
COLUMN-PUSHER FULCRUM SCREW group **X4F**

5F—Column-pusher Lever **5F**

6F—Column-pusher-lever Stud 6F
nut .327.. 6F1
washer .45.. 6F2
COLUMN-PUSHER-LEVER STUD group **X6F**

7F—Column-pusher Spring .624.. 7F
plate (2) 7F1
COLUMN-PUSHER SPRING group **X7F**

8F—Column-pusher Spring Box 8F
adjusting ball plug 8F1
" " " lock nut 8F2
ball plunger 8F3
" " washer .46.. 8F4
plug 8F5
spring .627.. 8F6
COLUMN-PUSHER SPRING BOX group **X8F**

9F—Column Support (short*)
bar ... 9F1F †
" finger catch ... 9F2
" " " screw (2) ... 252.. 9F3
slide ... 9F4 †
" plate ... 9F5 †
" finger catch ... 9F6
" " " rivet ... 775.. 9F7
" stop pin ... 772.. 9F8
spring ... 639.. 9F9
" guide rod ... 9F10 †
COLUMN SUPPORT group ... X9F
*For Columns 9 to 13 1-2 picas.
†9F1F is assembled with 9F2 to 9F10 inclusive. Order by complete symbol X9F.

10F—Column Support (medium*)
bar ... 10F1F †
" finger catch ... 10F2
" " " screw (2) ... 252.. 10F3
slide ... 10F4 †
" plate ... 10F5 †
" finger catch ... 10F6
" " " rivet ... 775.. 10F7
" stop pin ... 772.. 10F8
spring ... 640.. 10F9
" guide rod ... 10F10 †
COLUMN SUPPORT group ... X10F
*For Columns 13 1-2 to 20 picas.
†10F1F is assembled with 10F2 to 10F10 inclusive. Order by complete symbol X10F.

11F—Column Support (long*)
bar ... 11F1F †
" finger catch ... 11F2
" " " screw (2) ... 252.. 11F3
slide ... 11F4 †
" plate ... 11F5 †
" finger catch ... 11F6
" " " rivet ... 775.. 11F7
" stop pin ... 772.. 11F8
spring ... 641.. 11F9
" guide rod ... 11F10 †
COLUMN SUPPORT group ... X11F
*For Columns 20 to 30 1-2 picas.
†11F1F is assembled with 11F2 to 11F10 inclusive. Order by complete symbol X11F.

12F—Column Support (extra long*)
bar ... 12F1F †
" finger catch ... 12F2
" " " screw (2) ... 252.. 12F3
slide ... 12F4 †
" plate ... 12F5 †
" finger catch ... 12F6
" " " rivet ... 775.. 12F7
" stop pin ... 772.. 12F8
spring ... 659.. 12F9
" guide rod ... 12F10 †
COLUMN SUPPORT group ... X12F
*For Columns 26 1-2 to 42 picas
†12F1F is assembled with 12F2 to 12F10 inclusive. Order by complete symbol X12F.

13F—Galley Bar ... 13FF *
pin ... 13F3
GALLEY BAR group ... X13F
*13FF is assembled with 13F3. Order by complete symbol X13F.

14F—Galley Cam ... b14FF *
driving pawl ... 14F1F †
" " pin (for 14F5) ... 721.. 14F2
" " fulcrum stud ... a14F3
" " " " washer (lower) 47 14F4
" " " " " (upper) 410 a14F9
" " " " nut ... 314.. a14F10
" " spring ... 646.. 14F5
" " " post (in b14FF) 880.. 14F6
" " stop pin (in b14FF) ... 14F7
sleeve ... 14F8 *
GALLEY CAM group ... Xb14F
*b14FF is assembled with a14F3, 14F7, and 14F8.
†14F1F is assembled with 14F2

15F—Galley-cam Shaft ... 15FF *
key (3) ... 15F1
ratchet ... 15F2
worm wheel ... 15F3
" " oil pan ... a15F4
GALLEY-CAM SHAFT group ... Xa15F
*15FF is assembled with 15F1.

16F—Galley-cam Stand ... 16F
dowel ... 53.. 16F1
screw (4) ... 29.. 16F2
GALLEY-CAM STAND group ... X16F

17F—Galley-pan Shelf ... a17F
adjusting bar (for Galley Pan) ... a17F1
" " clamp ... 17F2
" " " bevel nut ... 17F3
" " " wing bolt ... a17F4
" " " " washer ... a17F7
screw (4) ... 29.. 17F5
wing bolt (2) ... b17F6F *
" " pin (2) ... a17F9 *
GALLEY-PAN SHELF group ... Xa17F
*b17F6F is assembled with a17F9.
For Rule Cutting Device
Galley-pan Shelf Spring Pin (for A114F1) ... 834.. a17F8

18F—Galley-pan Support ... a18F
bar (2) ... a18F1
bevel nut (3) ... 18F2
" " wing bolt (3) ... a18F3
" " " " washer (3) ... a18F8
block (for 13FF) ... 18F4
corner block (rear, for Galley Pan) ... 18F5
" " (front, for Galley Pan) ... 18F6
wing bolt (2) ... c18F7F *
" " pin (2) ... a18F9 *
GALLEY-PAN SUPPORT group ... Xa18F
*c18F7F is assembled with a18F9.

For Quadding and Centering Attachment see X190F group page 20.
For Short Type Attachment see page 19.

19F—Line Hook (lower) ... 19F1F *
(upper) ... 19F2 *
lever ... 19F3 *
rivet (2) ... 7164.. 19F4 *
separator ... 19F5 *
LINE HOOK group ... X19F
*19F1F is assembled with 19F2 to 19F5 inclusive. Order by complete symbol X19F.

20F—Line-hook Carriage ... 20F
friction plunger (2) ... 20F1
" " spring (2) ... 625.. 20F2
LINE-HOOK CARRIAGE group ... X20F

21F—Line-hook Operating Bar ... a21F
friction plunger ... 21F1
" " spring ... 629.. 21F2
locking rod ... 21F3
LINE-HOOK OPERATING BAR group ... Xa21F

22F—Line-hook-operating-bar Stop ... 22F
adjusting screw ... a22F1
screw (2) ... 223.. 22F2
LINE-HOOK-OPERATING-BAR STOP group ... X22F

23F—Line-hook Operating Slide ... c23FF *
friction plunger (2) ... a23F12
" " spring (2) ... 625.. a23F13
pin (for Operating Bar) ... a23F7
LINE-HOOK OPERATING SLIDE group ... Xc23F
*c23FF is assembled with a23F7.

24F—Line-hook-operating-slide Shoe ... a24F
screw (5) ... 223.. 24F1
LINE-HOOK-OPERATING-SLIDE SHOE group Xa24F

25F—Line-hook-operating-slide Lever ... 25FF *
cam roller ... 25F1
" " pin ... 25F2
LINE-HOOK-OPERATING-SLIDE LEVER group X25F
*25FF is assembled with 25F2.

26F—Line-hook-operating-slide-lever Stud ... 26F
nut ... 329.. 26F1
LINE-HOOK-OPERATING-SLIDE-LEVER STUD group ... X26F

27F—Line-hook-operating-slide Spring Box ... a27F
pin (in 25FF) ... 27F1
plug (rear) ... 27F3
spring ... 626.. 27F4
" abutment (front) ... 27F5
" " (rear) ... 415.. 27F6
rod ... 27F7
" adjusting nut ... 310.. 27F8
" " lock nut ... 312.. 27F9
" eye ... 27F10
" lock nut ... 316.. 27F11
LINE-HOOK-OPERATING-SLIDE SPRING BOX group ... Xb27F

For Quadding and Centering Attachment see 191F1 page 20.

28F—Line-hook Stud ... 28F
nut ... 310.. 28F1
LINE-HOOK STUD group ... X28F

For Quadding and Centering Attachment see X192F and X193F groups page 20.

29F—Line Support (thin, from 5 1-2 pt. to 8 pt. inclusive) ... a29FF *
spring ... 29F1
" screw ... 254.. 29F2
LINE SUPPORT group ... Xa29F
*a29FF is assembled with 29F1 and 29F2. Order by complete symbol Xa29F.

For Quadding and Centering Attachment see X194F and X195F groups page 20.

30F—Line Support (thick, from 9 pt. to 12 pt. inclusive) ... a30FF *
spring ... 30F1
" screw ... 254.. 30F2
LINE SUPPORT group ... Xa30F
*a30FF is assembled with 30F1 and 30F2. Order by complete symbol Xa30F.

31F—Main Galley Stand ... a31F
dowel ... 531.. a31F1
screw (1-2″ x 1 3-8″) ... 22.. 31F2
" (3-8″ x 1 1-8″) ... 28.. 31F4
spring post (for 7F) ... 831.. 31F5
stud (stop for a35H12) ... a31F7
MAIN GALLEY STAND group ... Xa31F
Machines prior to 5503 were equipped with the following parts:
MAIN GALLEY STAND SCREW (7-16″ x 1 1-8″) is ... 26.. 31F3
and omitted a31F7.

32F—Operating Lever ... a32F

33F—Operating-lever Latch ... a33F
bar (for a44F9F) ... a33F1
" clamp ... a33F2
" " screw (knurled) ... a33F3
shaft ... a33F7
" cotter (2) ... 95.. a33F8
OPERATING-LEVER LATCH group ... Xa33F

34F—Operating-lever-latch Spring .. 623 34F

35F — Operating - lever - latch - spring Post
(in a31F) ... 834.. 35F

36F—Operating-lever-latch Stand ... a36F
bolt (2) ... 113.. 36F1
OPERATING-LEVER-LATCH STAND group .. Xa36F

(For machines equipped with Display Type Attachment, see page 17)

37F—Operating-lever Spring Box ... 37FF *
plunger ... 37F1
" stop pin ... 58.. 37F2
spring ... 638.. 37F3
OPERATING-LEVER SPRING BOX group ... X37F
*37FF is assembled with 37F1, 37F2 and 37F3. Order by complete symbol X37F.

38F—Operating-lever Stud ... 38F
nut ... 322.. 38F1
OPERATING-LEVER STUD group ... X38F

39F—Rule ... a39FF *
guide pin ... 39F1
" " rivet (2) ... 725.. 39F2
lifting rod ... 39F3 *
" " adjusting nut ... 314.. 39F4
" " " " lock nut ... 315.. 39F5
" " sleeve ... 39F6
" " spring ... 649.. 39F7
" " support ... 39F8 *
" " " rivet (4) ... 7163.. 39F9
" " washer (3) ... 410.. 39F10
RULE group ... Xa39F
*a39FF is assembled with 39F1, 39F2, 39F3, 39F8 and 39F9.

40F—Rule Lever ... a40FF *
cam roller ... 40F1
" " oil pipe ... 40F2
" " pin ... 40F3
" " " nut ... 319.. 40F4
" " " washer ... 49.. 40F5
RULE LEVER group ... Xa40F
*a40FF is assembled with 40F1 to 40F5 inclusive. Order by the symbol Xa40F.

41F—Rule-lever Stud ... 41F

42F—Sort Tray ... 42F

43F—Sort-tray Support Bar ... 43FF *
stud (long) ... 43F1
" (short) ... 43F2
" nut (2) ... 314.. 43F3
" (for 42F) ... 43F4
" nut (knurled) ... 43F5
SORT-TRAY SUPPORT BAR group ... X43F
*43FF is assembled with 43F4.

44F—Stop Slide (for long and short lines) a44FF *
adjusting stand (for column width) a44F1
" " bolt a44F16
" " " bevel nut 44F11
" " guide bar (for adjusting column width) a44F2F †
" " guide bar clamp 44F3
" " " " " wing bolt a44F4
" " " " stop pin a44F17
" " plate 44F7
" " " screw (3) **247**.. 44F8
lever a44F9F ‡
" bolt **132**.. b44F10
" bushing 44F12
" pin 44F14
pin 44F15
STOP SLIDE group **Xb44F**
*a44FF is assembled with 44F15.
†a44F2F is assembled with a44F17.
‡a44F9F is assembled with 44F14.

45F—Trip Lever c45FF *
adjusting screw **255**.. 45F1
" " clamp screw a45F2
distance pin a45F14 ‡
" " plate (lower) a45F15F ‡
" " " (upper) a45F16 ‡
" " spring **6132**.. a45F17
" " " post **884**.. a45F18 ‡
latch a45F3F †
" guide pin a45F4
" spring **6122**.. a45F13
" " post **866**.. a45F12
" stud 45F5
" " cotter **94**.. 45F6
" " washer **412**.. 45F7
spring post (for 47F) **834**.. 45F8
" " (for a45F13) **867**.. a45F11
" " (for a45F17) **868**.. a45F19
stop screw **119**.. 45F9
" " lock nut **310**.. 45F10
TRIP LEVER group **Xc45F**
*c45FF is assembled with a45F3F, a45F4, 45F5 to 45F8 inclusive, a45F11 and a45F19.
†a45F3F is assembled with a45F12.
‡a45F15F is assembled with a45F14, a45F16 and a45F18.

46F—Trip-lever Fulcrum Stud a46F
nut **314**.. a46F1
washer **410**.. a46F2
TRIP-LEVER FULCRUM STUD group **Xa46F**

47F— Trip-lever Spring **622**.. **47F**

48F — Trip-lever-spring Post (in a31F) **834**.. **48F**

49F—Type Channel Plate a49F
screw **229**.. 49F1
bolt **131**.. a49F2
TYPE CHANNEL PLATE group **Xa49F**

(For machines equipped with Display Type Attachment, see page 15)

50F—Type Channel Block (adjustable).. 50F
clamp a50F1F *
" latch a50F2
" " screw **249**.. a50F13
" spring **650**.. 50F4
" tongue 50F5 *
" " rivet (3) **721**.. 50F8
stop plate (for 50F5) 50F9
" " screw (2) **250**.. 50F10
wing bolt a50F6
" " washer **412**.. 50F7
TYPE CHANNEL BLOCK group **Xa50F**
*a50F1F is assembled with 50F, a50F2, 50F4, 50F5, 50F8 to 50F10 inclusive, and a50F13.

(For machines equipped with Display Type Attachment, see page 15)
For Short Type Attachment see page 19.

51F—Type Channel Block (fixed) a51FF *
dowel (No. 5 x 1 1-2″) (front) **55**.. 51F1
" (No. 5 x 1 1-4″) (rear) **56**.. 51F2
latch a51F3
latch screw **2204**.. a51F9
screw (1-4″ x 1 1-8″) **220**.. 51F5
" (1-4″ x 1 3-8″) **226**.. 51F6
facing (4) a51F7 *
" rivet (4) **7158**.. a51F8
TYPE CHANNEL BLOCK group **Xa51F**
*a51FF is assembled with a51F3, a51F7, a51F8 and a51F9.

52F—Column Support (extra short†)
bar 52F1F *
slide 52F4 *
" plate 52F5 *
" stop pin **772**.. 52F8
spring **6216**.. 52F9
" guide rod 52F10 *
COLUMN SUPPORT group **X52F**
*52F1F is assembled with 52F4, 52F5, 52F8, 52F9 and 52F10. Order by the complete symbol X52F.
†For columns 6 to 9 picas.

53F—Line-hook-operating-slide Latch. a53F
frame c53F1F *
" extension a53F13
" " rivet (2) **7173**.. a53F14
" fulcrum pin (2) a53F12
" spring pin **854**.. a53F6
spring **6111**.. a53F9
stud (in c53F1F) a53F8
LINE-HOOK-OPERATING-SLIDE LATCH group **Xc53F**
*c53F1F is assembled with a53F6, a53F13 and a53F14.

For Quadding and Centering Attachment see X196F group page 20.

54F—Line-support Pusher a54F1F *
guide a54F2
" rivet **7192**.. a54F3
LINE-SUPPORT PUSHER group **Xa54F**
*a54F1F is assembled with a54F2 and a54F3. Order by complete symbol Xa54F.

55F—Line-support-pusher Catch Plate **55F1**

66F—Weight 66F1
plug 66F2
rod 66F3F *
" washer 66F4
spring (inner) **6147**.. 66F5
" (outer) **6146**.. a66F6
tube 66F7F †
" bushing 66F8
" cap 66F9
WEIGHT group **X66F**
*66F3F is assembled with 66F4.
†66F7F is assembled with 66F8.

68F—Weight Chain **a68F1**
" " rod a68F2
" " " nut a68F3
" " " rivit **7245**.. a68F4
" " hook a68F5
WEIGHT CHAIN group **Xa68F**
Earlier machines were equipped with 68F1 Weight Cord. The improved parts are interchangeable if the Sheaves B1F7 and a131F1 are applied.

68F—Weight Cord **68F1**

76F to **129F inc.**—*(See pages 17 and 18)*

131F—Weight-chain Sheave a131F1
support 131F2
" clamp screw **233**.. 131F3
" nut **35**.. 131F4
" washer **420**.. 131F5
WEIGHT-CHAIN SHEAVE group **Xa131F**

175F and **176F**—*(See page 18)*

189F to **196F inc.**—*(See page 20)*

217F to **220F inc.**—*(See page 20)*

Section G

Mechanism for moving and positioning Controller Paper and admitting air to the Pin Blocks.

1G—Air Tower (complete) consists of Xa1G, X2G, X3G, X4G, X5G, 6G1, X7G, X8G, Xa10G, X12G, X13G, X14G, 15G, X16G, Xa17G, X18G, Xa19G, Xd20G, X22G, 23G, 23G1G, 24G, X25G, a39E3 and a54E3. Order by complete symbol **1GG**

AIR-TOWER HOUSING (front) 1G *
(rear) 1G1 *
air pipe (31) 1G2 *
base a1G3 *
" screw (between Housings, left) **219**.. 1G4
" " (" " right) **220**.. a1G22
cross girt 1G5G *
" " cap 1G6 *
" " " screw (top) (2) **231**.. 1G8
" " " " (side) (2) **235**.. 1G9

1G—Air Tower (continued)
dowel (to 1G5G) (4) **58**.. 1G10
screw (to a1G3) (4) **233**.. 1G11
" (to 1G5G) (3) **232**.. 1G12
" (to 1G5G, thin head) **238**.. 1G13
" (to a36EE) (4) **222**.. 1G14
stud (for a19G) 1G16
" washer **413**.. 1G17
" nut **310**.. 1G18
stop pin (for 12G) **837**.. 1G19
" screw (for 14GG) (2) **2186**.. 1G20
" " lock nut (2) **35**.. 1G21
AIR-TOWER HOUSING group **Xa1G**
*1G5G is assembled with 1G, 1G1, 1G2, a1G3, 1G6 to 1G13 inclusive, 1G16 and 1G19.

2G—Air Bar (including Valve Body) a2GG *
clamp screw **242**.. 2G1
leather packing 2G2
spring (2) **630**.. 2G3
" stud (2) 2G4
" " washer (2) **420**.. 2G5
" " nut (2) **35**.. 2G6
" " " lock nut (2) **37**.. 2G7
valve a2G8
" spring **632**.. 2G9
" body plug (in 2GG) 2G10
AIR BAR group **X2G**
*a2GG is assembled with 2G1, 2G2 and a2G8 to 2G10 inclusive.

3G—Air-bar Clamping Lever
(also operates 2G8) 3G
stud (for 4G1) 3G1
" nut **35**.. 3G2
screw (for operating 2G8) **2186**.. 3G3
" lock nut **35**.. 3G4
AIR-BAR CLAMPING LEVER group **X3G**

4G—Air-bar-clamping-lever Connecting Rod 4G
adjustable sleeve a4G7
" " lock nut **37**.. a4G8
connecting hook 4G1
" " lock nut **36**.. 4G2
" link 4G3
" " lock nut **35**.. 4G4
spring **634**.. 4G5
" seat 4G6
washer a4G9
AIR-BAR-CLAMPING-LEVER CONNECTING ROD group **X4G**

5G—Air-bar Shaft 5G
distance collar 5G1
headless screw (end) **257**.. 5G2
" " nut **35**.. 5G3
" " washer **419**.. 5G5
AIR-BAR SHAFT group **X5G**

6G—Air Pipe (to 2GG) a6G
connection 6G1
AIR PIPE group **X6G**

For Quadding and Centering see page 20.

7G—Air-pipe Cover (right) 7G
screw (3) **252**.. 7G1
AIR-PIPE COVER group **X7G**

For Quadding and Centering see page 20.

8G—Air-pipe Cover (left) 8GG *
screw (3) **252**.. 8G1
guide (for X21G) 8G2 *
" rivet (4) **780**.. 8G3
" screw (2) **249**.. 8G4
AIR-PIPE COVER group **X8G**
*8GG is assembled with 8G2 and 8G3.

9G—Basket
bottom 9G1G *
leather strip (front) 9G2 *
" " (rear) 9G3 *
" " rivet (6) **780**.. 9G4 *
side plate (2) 9G5 *
wire connecting rod (2) 9G6 *
BASKET group **X9G**
*9G1G is assembled with 9G2 to 9G6 inclusive. Order by complete symbol X9G.

10G—Name Plate a10G
screw (4) **2387**.. 10G1
NAME PLATE group **Xa10G**

12G — Paper-feed Locking Lever (for stopping movement of paper) 12G
stud **843**.. 12G1
PAPER-FEED LOCKING LEVER group **X12G**

For Quadding and Centering see page 20.

13G—Paper-feed Pawl
(locking, upper) ..... 13G1G *
" hub ..... 13G2 *
" operating link ..... 13G3 *
" operating link pin (also Spring Post) ..... **857**.. 13G4
" operating link bushing 13G5
(feeding, lower) ..... 13G6 *
" connecting link (2) ..... 13G7 *
" " " rivet (2) 13G8
" spring post ..... **872**.. 13G9
spring ..... **6299**.. a13G10
PAPER-FEED PAWL group **X13G**
*13G1G is assembled with 13G2 to 13G9 inclusive.

For Quadding and Centering see page 20.

14G—Paper-feed-pawl Ring ..... 14GG *
pin (Stop for 13G6) 14G1
friction spring (2) ..... **633**.. 14G2
" " screw (2) 14G3
" " washer (2) ..... **418**.. 14G4
PAPER-FEED-PAWL RING group **X14G**
*14GG is assembled with 14G1.

15G—Paper-feed-pawl Stud
(lower, in 14GG) ..... **843**.. **15G**

16G—Paper-feed-pawl Stud (upper, in 1GG) a16G
nut ..... **33**.. 16G1
PAPER-FEED-PAWL STUD group **X16G**

17G—Paper-feed Spring Box
connection (upper) c17G1
" lock nut a17G12
pin a17G2
" cotter (2) ..... **97**.. 17G3
spring ..... **6184**.. a17G5
" rod b17G6
" " nut 17G7
" " washer (2) a17G8
tube a17G9
PAPER-FEED SPRING BOX group **Xb17G**
Machines prior to 1-26-44 were equipped with Paper-feed-spring box connection (upper) b17G1
Paper-feed-spring box spring rod a17G6
The improved parts are interchangeable if the complete group is furnished.

18G—Paper Tension Bar (large, right) .. 18G
arm (right) (2) 18G1
(small, left) 18G2
arm (left) (2) 18G3
" fulcrum pin 18G4
" distance sleeve 18G5
" guide plate 18G6
connecting link (2) 18G7
" " fulcrum pin (in Housing) 18G8
" " pin (to lift 18G) 18G9
PAPER TENSION BAR group **X18G**

For Quadding and Centering see page 20.

19G—Paper-tower Lever a19G
stud (for 4G) a19G1
" nut ..... **35**.. 19G2
" (for Xa17G and 54E) a19G3
" nut ..... **310**.. 19G4
PAPER-TOWER LEVER group **Xa19G**

20G—Pin Wheel (rear) ..... d20GG *
(front) ..... a20G1 *
pin (24, in a20G1) 20G2
shaft ..... a20G3 *
ratchet ..... 20G4 *
PIN WHEEL group **Xd20G**
*d20GG is assembled with a20G1, 20G2, a20G3 and 20G4. Order by complete symbol Xd20G.

21G—Winding Spool
flange ..... 21G1G *
" bushing (for Driving Pin) ..... 21G2 *
" spring (for holding paper) ..... 21G3 *
plug (rear) 21G4
shaft ..... 21G5G †
" head ..... 21G6 †
" driving disc ..... 21G7G §
" " " pin ..... 21G8 §
" " " lock nut ..... **310**.. 21G9
" spring ..... **658**.. 21G10
" " abutment 21G11
" " " tube 21G12
tube ..... 21G13 *
WINDING SPOOL group **X21G**
*21G1G is assembled with 21G2, 21G3 and 21G13.
†21G5G is assembled with 21G6.
§21G7G is assembled with 21G8.

22G—Winding-spool Driving Shaft 22G1
nut ..... **316**.. 22G2
WINDING-SPOOL DRIVING SHAFT group .. **X22G**

23G—Winding-spool Driving Ratchet .. 23G
pawl ..... 23G1G *
" arm ..... 23G2 *
" " operating finger 23G3
" " stop pin 23G4
" pin 23G5
WINDING-SPOOL DRIVING RATCHET group **X23G**
*23G1G is assembled with 23G2, 23G4 and 23G5.

24G—Winding-spool Operating Spring ..... **662**.. **24G**

25G — Winding - spool - spring - box Plunger 25G1
button 25G2
cotter ..... **95**.. 25G3
spring ..... **647**.. 25G4
WINDING - SPOOL - SPRING - BOX PLUNGER group **X25G**

27G to **29G inc.**—*(See page 20)*

Section H

Mechanism for melting metal and forcing it into the Mold, also the supply and drain pipes to their connections with the parts they supply.

1H—Air Pipe
(brass, .190" x 1 1-2") a1H
(" .190" x 19") a1H1
(iron, 1-8" x 1 1-8") (2) 1H2
(" 1-8" x 2 1-4") 1H3
(" 1-8" x 3 7-8") a1H4
(" 1-8" x 8 1-8") a1H5
(" 1-8" x 24") a1H13
elbow (1-8") (4) 1H6
expansion elbow 1H7
" " nut 1H8
" " packing (leather) (3) ... 1H9
tee (1-8") 1H11
union (brass, .190") (2) 1H12
" (iron, 1-8") b1H14
AIR PIPE group **Xa1H**

2H—Air Cock (for air supply, 1-8") a2H
(for air blast) 2H1
AIR COCK group **Xa2H**

7H—Gas Cock
(1-4" x 1-4") (for gas supply) **a7H**

9H—Gas Pipe
(iron, 1-4" x 1 3-8") 9H
(" 1-4" x 3 3-4") a9H1
(" 1-4" x 16 1-8") b9H2
(" 1-4" x 1 3-4") a9H11
elbow (1-4") (4) 9H5
nipple (1-4", galv. iron, for 49H) 9H7
union (1-4", iron) b9H8
GAS PIPE group **Xb9H**

For Electric Melting Pot see page 21.

12H—Melting Pot (Gas) a12H
casing ..... a12H2H *
" bracket ..... a12H18 *
" " dowel (2) ..... **58**.. a12H20
" " screw (2) ..... **216**.. a12H19
" screw (right) 12H8
" stud (2) a12H9
" " nut (2) ..... **310**.. a12H10
" " washer (2) ..... **410**.. a12H11
screw (4) ..... **2198**.. a12H25
magnesia packing a12H22
asbestos cement a12H24
MELTING POT group **Xc12H**
*a12H2H is assembled with a12H, 12H8, a12H9, a12H10, a12H11, a12H18, a12H19, a12H20, and a12H25. Order by the complete symbol Xc12H.

Machines 4636 to 4647 inclusive, and 4658 to 8920 inclusive (except 8853 to 8864 inclusive, for which see Xc12H) were equipped with the following parts:

MELTING POT (Gas) 12H
casing (inside) ..... b12H1H *
" (outside) ..... 12H2 *
" plate (large) ..... 12H3H †
" " screw (8) ..... **223**.. 12H4
" " (small) ..... 12H5 †
" " screw (3) ..... **222**.. 12H6
" screw (right) 12H8
" stud (2) a12H9

12H—Melting Pot (Gas) (continued)
casing stud nut (2) ..... **310**.. a12H10
" " washer (2) ..... **410**.. a12H11
MELTING POT group (with Magnesia Packing) Xb12H
*b12H1H is assembled with 12H, 12H2, 12H3H, 12H4, 12H6, 12H8, a12H9, a12H10 and a12H11. This assembly is obsolete and will no longer be furnished. Order instead the improved part Xc12H, which is interchangeable.
†12H3H is assembled with 12H5.

13H—Melting-pot Chimney **13H**

For Machines equipped with Display Type Attachment or Lead and Rule Mold Attachment see those Attachments.

14H—Nozzle (1-2") **14H**
Nozzle, (vented) 14H45
" nut 14H46
" vent tube 14H50
" " " holder 68L1
Vented nozzles are not used with vented gate molds.

15H—Nozzle Squaring Pin
(for 1-2" Nozzle) **15H**
(for 5-8" Nozzle) **15H1**

16H—Pipe Bracket ..... b16HH *
plug a16H5
screw (large) (2) ..... **28**.. a16H1
" (small) ..... **236**.. a16H3
screen a16H4
PIPE BRACKET group **Xa16H**
*b16HH is assembled with a16H5.

(For machines equipped with Display Type Attachment, see page 15)

17H—Piston 17H
handle ..... 17H1H *
" stem ..... **850**.. 17H2 *
" " nut ..... **314**.. 17H3 *
PISTON group **X17H**
*17H1H is assembled with 17H2 and 17H3.

For use with worn Pump Bodies we furnish:
Piston (.003" oversize) a17H4
handle ..... 17H1H *
" stem ..... **850**.. 17H2 *
" " nut ..... **314**.. 17H3 *
PISTON (.003" oversize) group **X17H4**
*17H1H is assembled with 17H2 and 17H3.

18H—Piston Lever a18H
bearing (2) a18H1
" screw (2) a18H3
PISTON LEVER group **Xa18H**

For machines with Display-Type Attachment see page 15.

19H—Piston Operating Rod 19H
crosshead (lower, for 21H) 19H1
" dowel ..... **51**.. 19H2
" (upper, for a18H) a19H3
nut ..... **330**.. 19H4
PISTON OPERATING ROD group **X19H**

For Increased Pressure Attachment see page 19.

20H—Piston Spring ..... **644**.. 20H
rod 20H1
" eye a20H2
" " pin ..... **847**.. 20H3
" " " cotter ..... **93**.. 20H4
" nut ..... **329**.. 20H5
washer ..... **46**.. a20H6
PISTON SPRING group **X20H**
For pump bodies X23H9 or Xa23H19 use piston spring ..... **6159**.. a20H7

21H—Pump Bell Crank 21H
shaft 21H1
" set screw 21H2
PUMP BELL CRANK group **X21H**

22H — Pump - bell - crank Connecting Rod 22H
eye 22H1
" lock nut ..... **324**.. 22H2
" (L. H.) 22H3
" lock nut (L. H.) ..... **325**.. 22H4
" pin (2) 22H5
" " cotter (4) ..... **91**.. 22H6
PUMP - BELL - CRANK CONNECTING ROD group **X22H**

For Cored Mold Attachment see page 19.
For Increased pressure Attachment see page 19.
For casting larger sizes display type see page 15.
(For Lead and Rule Attachment, see page 17)

23H—Pump Body ..... 23HH *
bearing (nozzle end, for a26HH) 23H1
guide (and stop, for 17H) 23H2
" screw (2) ..... 220 .. 23H3
plug (bottom) 23H4
regulating screw (for flow of metal) 23H5
valve 23H6
PUMP BODY group X23H
*23HH is assembled with 23H1 to 23H6 inclusive. Order by complete symbol X23H.

24H—Pump-body Lever a24H
bearing (2) a24H1
" screw (2) a24H3
PUMP-BODY LEVER group Xa24H

25H—Pump-body Lifting Lever (Piston end) 25H
locating latch 25H1
" " screw 25H2
stand (front, on a12H) 25H3
" (rear, on a12H) ..... 25H4H *
" cap ..... 25H5 *
" " screw (2) ..... 223 .. 25H6
" screw (5) ..... 223 .. 25H7
PUMP-BODY LIFTING LEVER group X25H
*25H4H is assembled with 25H5 and 25H6.

26H—Pump-body Lifting Lever (Nozzle end) ..... a26HH *
stud 26H1
" nut ..... 322 .. 26H2
pin (bearing for 23HH) a26H3
" nut ..... 35 .. a26H4
PUMP-BODY LIFTING LEVER group X26H
*a26HH is assembled with a26H3 and a26H4.

27H—Pump-body Lifting Spring .. 6108 a27H
plate (upper) 27H1
" (lower) a27H2
PUMP-BODY LIFTING SPRING group X27H

28H—Pump-body Operating Rod a28H
extension (for 27H1) a28H2
" pin ..... 787 .. 28H3
nut (3) ..... 321 .. 28H4
" lock nut (2) ..... 320 .. 28H5
PUMP-BODY OPERATING ROD group X28H

29H—Pump-body-operating-rod Lever 29H
pin 29H1
" cotter ..... 94 .. 29H2
stand 29H3
PUMP-BODY-OPERATING-ROD LEVER group X29H

Machines prior to 7936 were equipped with the following parts:

30H—Pump-body-operating-rod-lever-stand Support 30H
screw (2) ..... 29 .. 30H1
PUMP - BODY - OPERATING - ROD - LEVER - STAND SUPPORT group X30H

31H—Pump-body Spring ..... 645 .. 31H
rod 31H1
" crosshead 31H2
" " eye a31H3
" " " nut ..... 327 .. 31H4
" " " pin ..... 847 .. 31H5
" " " " cotter ..... 93 .. 31H6
" " " washer ..... 45 .. 31H7
" " stop 31H8
" " " nut ..... 329 .. 31H9
" nut (upper) ..... 329 .. 31H10
" sleeve a31H11
" stop nut (bottom) (2) ..... 331 .. 31H13
PUMP-BODY SPRING group Xa31H

32H—Pump-lever Connecting Link (between a18H and a24H) 32H
pin (2) 32H1
" cotter (2) ..... 92 .. 32H2
plunger 32H3
" spring ..... 663 .. 32H4
PUMP-LEVER CONNECTING LINK group .. X32H

33H—Pump Rocker Arm a33H
latch 33H1
" pin 33H2
" " cotter (2) ..... 91 .. 33H3
plunger a33H4
" spring ..... 6114 .. a33H6
shaft 33H7

33H—Pump Rocker Arm (continued)
plug a33H8
PUMP ROCKER ARM group X33H

34H—Pump Operating Lever (engaged by 33H1) ..... 34HH *
clamp bolt ..... 110 .. 34H1
PUMP OPERATING LEVER group X34H
*34HH is assembled with 34H1. Order by complete symbol X34H

35H—Pump Trip (hand)
rod ..... b35H1H *
" nut ..... 310 .. 35H2
" washer ..... 415 .. 35H3
" plate 35H4
" " rivet (2) ..... 7140 .. a35H5
" stop nut ..... 310 .. b35H10
" " washer ..... 413 .. a35H11
handle a35H12
" nut 35H8
" spring ..... 643 .. 35H9
PUMP TRIP group Xa35H
*b35H1H is assembled with 35H4 and a35H5.

Machines prior to 5503 were equipped with the following parts:

PUMP TRIP
spring box 35H6
" " handle 35H7
and omitted a35H12.

37H—Swing Frame (for 12H) ..... b37H *
guide block 37H1
" " screw (2) ..... 222 .. 37H2
handle ..... 37H3H †
" stem ..... 850 .. 37H4 †
" " nut ..... 314 .. 37H5 †
spring post (for a27H) ..... 883 .. a37H6
adjusting screw (long) ..... 119 .. a37H9
" " (short) (2) ..... 136 .. a37H10
bushing a37H11
table ..... a37H12H *
" bolt (3) ..... 15 .. a37H13
worm shaft a37H14
" " nut (2) ..... 331 .. a37H15
" " thrust bearing a37H16
SWING FRAME group Xb37H
*a37H12H is assembled with b37H and a37H13.
†37H3H is assembled with 37H4 and 37H5.

Machines 4636 to 4647 inclusive and 4658 to 7935 inclusive were equipped with the following parts:

SWING FRAME a37H
spring post ..... 831 .. 37H6

38H—Swing-frame Post b38H
bolt (to a36EE) ..... 16 .. 38H1
screw (lower) ..... 21 .. 38H4
" (upper) ..... 23 .. 38H5
SWING-FRAME POST group Xb38H

Machines 4248 to 7935 inclusive were equipped with the following parts:

SWING-FRAME POST ..... a38H *
clamp bolt ..... 17 .. 38H2
*This part is obsolete. Consult Philadelphia for improved parts.

39H—Swing-frame Screw (for raising and lowering 12H) a39H
nut ..... 327 .. a39H1
washer ..... 45 .. a39H2
sleeve a39H4
washer (large) a39H5
SWING-FRAME SCREW group Xa39H

Machines prior to 7936 were equipped with the following parts:

SWING-FRAME SCREW 39H
nut ..... 329 .. 39H1
washer 39H2
" pin ..... 787 .. 39H3
SWING-FRAME SCREW group X39H

40H—Swing-frame-worm-shaft Crank . b40HH *
handle 40H2
pin ..... 7178 .. a40H3
SWING-FRAME-WORM-SHAFT CRANK group Xb40H
*b40HH is assembled with 40H2 and a40H3. Order by complete symbol Xb40H.

Machines prior to 7936 were equipped with the following parts:

SWING-FRAME-SCREW CRANK ..... 40HH *
clamp bolt ..... 110 .. 40H1
handle 40H2
SWING-FRAME-SCREW CRANK group X40H
*40HH is assembled with 40H1 and 40H2. Order by complete symbol X40H

41H—Thermometer b41HH
support a41H2
" hook a41H3
" " nut ..... 33 .. a41H4
" lock nut ..... 310 .. a41H5
" sleeve (support for Mold oiler) .. a41H6
THERMOMETER group X41H

42H—Water Escape Valve a42H15
reducing nipple (1-8" to .190") a42H16
" bushing (5-16" to 1-8") a42H17
WATER ESCAPE VALVE group Xb42H

43H—Water Pipe
(brass, drain from a36EE, 5-16" x 9 1-2") a43H
(" " " " 5-16" x 18 7-8") a43H1
(" " " " .190" x 1 3-4") .. a43H3
union (5-16") (2) 43H2
WATER PIPE group Xa43H

44H—Water Pipe
(brass, drain from Mold, .190" x 1 1-4") .. 44H
(" " " " .190" x 20 1-2"). a44H1
(" " " " .190" x 14 1-2"). a44H3
union (.190") (2) 44H2
WATER PIPE group Xa44H

45H—Water Pipe
(brass, supply, 5-16" x 2 3-8") 45H
(" " 5-16" x 3") a45H1
(" " 5-16" x 19 1-4") a45H3
(iron, supply, 3-8" x 3 3-8") a45H4
(" " 3-8" x 3 7-8") a45H5
(" " 3-8" x 15 1-8") a45H6
(" " 3-8" x 18") a45H7
elbow (3-8") (3) a45H8
union (3-8", 5-16") (2) 45H2
" (iron, 3-8") b45H9
WATER PIPE group Xa45H

46H—Water Pipe
(iron, drain from Pipe Bracket, 3-8" x 3 3-8") a46H
(iron, drain from Pipe Bracket, 3-8" x 4 7-8") a46H1
(iron, drain from Pipe Bracket, 3-8" x 14 1-2") a46H2
(iron, drain from Pipe Bracket, 3-8" x 18") a46H3
elbow (iron, 3-8") (3) a46H4
union (iron, 3-8") b46H5
WATER PIPE group Xa46H

47H—Water-pipe Connection
(side, on a36EE) 47H
screw (3) ..... 242 .. 47H1
WATER-PIPE CONNECTION group X47H

48H—Water Supply Valve a48H18
reducing bushing (5-16" to 1-8") a48H19
short nipple (1-8", 3-4" long) a48H20
WATER SUPPLY VALVE group Xb48H

49H—Gas Hose (19 1-2") 49H
for heat regulator gas hose (40") a49H2

52H—Water Supply Cock a52H

55H—Gas Burner (3-burner) ..... b55H1H *
air regulating sleeve (3) 55H2
" " " screw (3) ..... 2167 .. a55H3
" " " " washer (3) 449 . 55H36
clamp a55H20
" nut ..... 319 .. a55H21
" washer ..... 49 .. a55H31
screen (3) a55H14
" disc (3) a55H33
" holder (3) a55H15
" " collar (3) a55H16
shield (on a37H) a55H27
" pin a55H28
support ..... a55H22 ‡
" bolt ..... a55H32H ‡
" " nut ..... 327 .. a55H29
" cotter ..... 92 .. a55H24
valve (3) ..... 55H4H §
" body ..... a55H9H ||
" " bolt ..... 113 .. 55H10
" " pipe (gal. iron 1-4" x 3 3-4"). 55H17
" " " elbow (45°) 55H18
" " " " nipple (gal. iron).. 55H19
" " plug (1-4" iron) (3) 55H12
" " " (.190", brass) (3) .2235 .. 55H11
" nozzle (3) a55H5
" nut (3) 55H7
" " lock nut (3) ..... 392 .. 55H8
" spring (3) ..... 6185 .. 55H6
GAS BURNER group Xb55H
*b55H1H is assembled with 55H2, a55H3 and 55H36.
‡a55H32H is assembled with a55H22.

55H—Gas Burner (3-burner) (continued)

§55H4H are each assembled with one of a55H5.
(If natural gas is used, omit VALVES 55H4H and substitute the following:

GAS BURNER (3-burner) VALVE (3) ..... a55H4H †
" " " " nozzle (3) a55H30

†a55H4H are each assembled with one of a55H30.

||a55H9H is assembled with 55H4H, 55H6, 55H7, 55H8, 55H11, 55H12, 55H17 55H18 and 55H19.

NOTE: Machines prior to 5355 unless equipped with the Lead-&-Rule Attachment were equipped with 2-burner gas burner and its connecting parts. Some machines prior to August 26th, 1918 were equipped with a small type 3-burner gas burner. Both of these style burners are now obsolete and repair parts for them will only be furnished until stock is exhausted. The burner XB55H can be applied in place of either of the two old type burners.

56H—Gas-cock Operating Handle 56H1
extension 56H2
" bolt ..... **123**.. 56H3
" " nut ..... **35**.. 56H4
collar 56H5
" set screw ..... **127**.. 56H6
GAS-COCK OPERATING HANDLE group ... **X56H**

57H to 64H inc.—*(See pages 15 and 16)*

76H—Pyrometer **X76H**

78H—Pyrometer Thermocouple Support 78H1
Pyrometer Thermocouple support arm ... 78H2
" " " nut **310** 78H3
" " " " washer
..... **413**.. 78H4
PYROMETER THERMOCOUPLE SUPPORT group **X78H**

79H—Pyrometer Support 79H1
Pyrometer support bracket 79H2
" " " cap 79H3
" " " " screws (4)
..... **2200**.. 79H4
PYROMETER SUPPORT group **X79H**

(ATTACHMENT 21CU)

14 and 18 Point Composition Attachment

OBJECT: To adapt the Composing Machine to cast 14 and 18 point composition.

NOTE: When this Attachment is applied the Display Type Attachment must be applied at the same time if it is not already on the machine. This Attachment requires 3EN Composition Molds.

This Attachment consists of the following:

29A—Centering Pin (short taper) ..... a29A1A *
key ..... **7176**.. 29A3
nut ..... **310**.. 29A4
CENTERING PIN group **Xa29A**
*a29A1A is assembled with 29A3.

69A—Matrix Case (for .2"x.4" and .4"x.4" Matrices for 14 and 18 pt. composition) 69A1A *
cover plate 69A2
" " rivet (4) ..... **7226**.. 69A3
spring plate 69A4
rod (8) 69A5
MATRIX CASE group **X69A**
*69A1A is assembled with 69A2 to 69A5 incl. Order by complete symbol X69A.

72E—Type Carrier Cam Lever Extention **a72E12**

2F—Column Pusher Adjusting Screw. Xa2F

3F—Column Pusher Adjusting Screw Stand **Xa3F**

NOTE: Customers find it a great time saver to have an extra BRIDGE equipped with SHORT TAPER CENTERING PIN so that when changing from standard composition to 14 and 18 point composition and back again they simply exchange BRIDGES instead of having to exchange CENTERING PINS in the BRIDGE with its attendant delay. If an extra BRIDGE is purchased, omit the SHORT TAPER CENTERING PIN listed above.

Bridge complete, equipped with short taper a1AAA

(ATTACHMENT 9CU)

Display Type Attachment

OBJECT: To provide for casting the larger sizes (above 12 point) as sorts; also required for lead and rule casting.

Part "A"

41A—Matrix Holder (for Display Matrices) 41A1A *
stop pin ..... **7161**.. 41A2
slide ..... 41A3A †
" bushing 41A4
" clamp (long) a41A5
" " (short) 41A6
" " lever 41A7
" " " pin ..... **7177**.. 41A8
" " spring (3) ..... **6208**.. 41A9
slide cover plate 41A10
" " " screw (4) ..... **260**.. 41A11
" handle 41A12
" latch 41A13
" " button 41A14
" " rivet (2) ..... **7219**.. 41A15
" spring post (3) ..... **870**.. 41A16
" matrix abutment (standard) 41A17
" " " screw ..... **243**.. 41A18
MATRIX HOLDER group **X41A**
*41A1A is assembled with 41A2.
†41A3A is assembled with 41A4, a41A5, 41A6 to 41A18 inclusive.

For casting 24-point face on 18-point body or on 20-point body order the following for use with the above Holder X41A:

MATRIX-HOLDER-SLIDE MATRIX ABUTMENT a41A19
clamp (long) b41A20
" (short) a41A21

For casting 36-point face on 30-point body, 30-point face on 24-point body or 18-point face on 14-point body order the following for use with the above Holder X41A:

MATRIX-HOLDER-SLIDE MATRIX ABUTMENT a41A22
clamp (long) b41A23
" (short) a41A24

For casting 14- and 18-point faces on 24-, 30-, or 36-point body order the following for use with the above Holder X41A:

MATRIX-HOLDER-SLIDE MATRIX ABUTMENT a41A25
clamp (long) a41A26
" (short) a41A27

14B—Normal-wedge-locking-pin Lifting Handle **a14B12**

32C — Mold - blade - abutment - slide - abutment-screw Packing Piece **32C1**

11D—Justification Wedge **a11D1**
Worn WEDGES may be returned for regrinding.

21D—Normal Wedge ..... b21D1D *
handle b21D2
NORMAL WEDGE group **Xa21D1**
*b21D1D is assembled with b21D2. Order by complete symbol Xa21D1
Worn WEDGES may be returned for regrinding.

69D—Justification and Normal-wedge Gage **a69D1**

44E—Mold-blade-cam Lever ..... a44E6E *
compound lever b44E7
" " locking screw a44E8
" " " " collar b44E9
" " stud a44E10
" " " nut ..... **322**.. a44E11
roller 44E4
" pin 44E5
MOLD-BLADE-CAM LEVER group **Xa44E6**
*a44E6E is assembled with 44E4 and 44E5.

96E—Mold-blade-cam-lever-compound-lever Abutment 96E1
nut ..... **319**.. 96E2
washer ..... **49**.. 96E3
MOLD-BLADE-CAM-LEVER-COMPOUND-LEVER ABUTMENT group **X96E**

140E—Centering-pin-lever Gag Block . a140E1E *
pin a140E2
spring ..... **6136**.. 140E3
stud 140E4
" nut ..... **35**.. 140E5
CENTERING-PIN-LEVER GAG BLOCK group **X140E**
*a140E1E is assembled with a140E2.

50F—Type Channel Block
(adjustable) (curved channel) 50F
clamp ..... a50F14F *
" latch a50F15
" " pin (3) ..... **7116**.. 50F3
" spring ..... **650**.. 50F4
" tongue ..... 50F5 *
" " rivet (3) ..... **7180**.. a50F16
" type guide ..... a50F17 *
stop plate 50F9
" " screw (2) ..... **250**.. 50F10
TYPE CHANNEL BLOCK group **Xb50F**
*a50F14F is assembled with 50F, 50F3, 50F4, 50F5, 50F9, 50F10, a50F15, a50F16 and a50F17. Order by complete symbol Xb50F.
NOTE: The regular BOLT 50F6 and WASHER 50F7 are used with this TYPE CHANNEL BLOCK but are not included as part of the complete BLOCK since they are part of the standard equipment on every machine.

51F—Type Channel Block (fixed) ..... a51F10F *
latch a51F11
" screw (2) ..... **260**.. a51F12
screw (rear) ..... **231**.. a51F13
TYPE CHANNEL BLOCK group **X51F10**
*a51F10F is assembled with a51F11 and a51F12.
NOTE: The regular SCREW 51F5 is used with this TYPE CHANNEL BLOCK but is not included as part of the complete BLOCK since it is part of the standard equipment on every machine.

14H—Nozzle (1-2") (for Display Type) ... **a14H2**

17H—Piston (for Display Type) a17H5
handle ..... 17H1H *
" stem ..... **850**.. 17H2 *
" " nut ..... **314**.. 17H3 *
PISTON group **X17H5**
*17H1H is assembled with 17H2 and 17H3.

For use with worn Pump Bodies order:

PISTON (for Display Type) (.003" oversize) a17H6
handle ..... 17H1H *
" stem ..... **850**.. 17H2 *
" " nut ..... **314**.. 17H3 *
PISTON group (.003" oversize) **X17H6**
*17H1H is assembled with 17H2 and 17H3.

The Composition Pump Body X23H is used with the Piston X17H5 for display type, however for casting the larger sizes of display type a Pump Body X23H9 with a larger Piston X17H7, 1 1-16" in diameter, is sometimes used, also required is the Piston Spring a20H7.

PISTON (1 1-16") a17H7
handle ..... 17H1H *
" stem ..... **850**.. 17H2 *
" " nut ..... **314**.. 17H3 *
PISTON group **X17H7**
*17H1H is assembled with 17H2 and 17H3
PISTON (1 1-16") (.003" oversize) a17H8
handle ..... 17H1H *
" stem ..... **850**.. 17H2 *
" " nut ..... **314**.. 17H3 *
PISTON group **X17H8**
*17H1H is assembled with 17H2 and 17H3.

19H—Piston-operating-rod Crosshead
stud a19H5
" nut ..... **314**.. a19H6
" " lock nut ..... **315**.. a19H7

20H—Piston Spring (for 1 1-16" Piston) ..... **6159**.. **a20H7**

23H—Pump Body (1 1-16") ..... a23H9H *
bearing 23H1
guide a23H10
" screw (2) ..... **220**.. 23H3
plug a23H13
regulating screw 23H5
valve a23H12
PUMP BODY group **X23H9**
*a23H9H is assembled with 23H1, 23H3, 23H5, a23H10, a23H12 and a23H13. Order by complete symbol X23H9.

38H—Swing-frame Post
spring post (for 64H1) ..... **894**.. **a38H6**

57H—Latch ..... 57H1H *
plate 57H2
" screw (2) ..... **244**.. 57H3
LATCH group **X57H**
*57H1H is assembled with 57H2 and 57H3. Order by complete symbol X57H.

58H—Latch Abutment ..... 58H1H *
plate 58H2
" screw (2) ..... 244 .. 58H3
LATCH ABUTMENT group **X58H**
*58H1H is assembled with 58H2 and 58H3. Order by complete symbol X58H.

59H—Latch-abutment Spring ... 6107 .. **59H1**

60H—Latch Pin ..... 60H1H *
cotter ..... 96 .. 60H2
plate ..... 60H3 *
" spring pin ..... 890 .. 60H4
" stop pin 60H5
LATCH PIN group **X60H**
*60H1H is assembled with 60H3, 60H4 and 60H5.

61H—Latch Spring ..... 6101 .. **61H1**

62H—Latch Stand 62H1
shaft ..... 62H2H *
" arm ..... 62H3 *
" nut ..... 327 .. 62H4
" " lock nut ..... 391 .. 62H5
" spring ..... 6106 .. 62H6
spring pin (for 59H1) ..... 892 .. 62H7
LATCH STAND group **X62H**
*62H2H is assembled with 62H3.

63H — Pump - body - spring - rod Stop Block ..... 63H1H *
spring post ..... 840 .. 63H2
stud 63H3
PUMP - BODY - SPRING - ROD STOP BLOCK group **X63H**
*63H1H is assembled with 63H2.

64H — Pump - body - spring - rod - stop - block Spring ..... 623 .. **64H1**

(ATTACHMENT 9CU)

Display Type Attachment

Part "B"

3E—Belt Shifter Arm a3E5
clamp a3E6
" bolt ..... 112 .. a3E7
set screw ..... 116 .. 3E1
BELT SHIFTER ARM group **X3E5**

5E—Belt-shifter Ring b5E3
pin 5E2*
BELT-SHIFTER RING group **Xb5E3**
*Part of the regular machine but furnished as part of this attachment.

6E—Belt-shifter-ring Rod a6E3
fibre washer 6E1*
nut ..... 329 .. a6E4
spring ..... 620 .. 6E2*
BELT-SHIFTER-RING ROD group **X6E3**
*Part of the regular machine and therefore not furnished as part of this attachment.

65E—Pulley (loose) ..... b65E2E *
pin a65E3
PULLEY group **Xa65E2**
*b65E2E is assembled with a65E3 Order by complete symbol Xa65E2.

97E—Belt Shifter Operating Bar **a97E1**

98E—Belt-shifter-operating-bar Connecting Rod a98E1
cotter (2) ..... 96 .. 98E2
washer (3) ..... 412 .. 98E3
BELT-SHIFTER-OPERATING-BAR CONNECTING ROD group **Xa98E**

99E—Belt-shifter-operating-bar-connecting-rod Guide 99E1
screw (2) ..... 223 .. 99E2
BELT-SHIFTER-OPERATING-BAR-CONNECTING-ROD GUIDE group **X99E**

100E—Belt-shifter-operating-bar Lever 100E1
bracket 100E2
" clamp screw ..... 213 .. 100E3
pin 100E4
" cotter (2) ..... 95 .. 100E5
stud 100E6
" nut ..... 314 .. 100E7
BELT - SHIFTER - OPERATING - BAR LEVER group **X100E**

101E—Clutch Control Shaft ..... a101E1E *
bell crank ..... 101E2 *
" " dowel ..... 58 .. 101E3
lever ..... a101E4 *
" dowel ..... 58 .. 101E5
CLUTCH CONTROL SHAFT group **Xa101E**
*a101E1E is assembled with 101E2, 101E3, a101E4 and 101E5. Order by complete symbol Xa101E.

102E—Clutch Control Operating Rod .. 102E1
eye 102E2
nut ..... 314 .. 102E3
CLUTCH CONTROL OPERATING ROD group **X102E**

103E — Clutch-control-operating-rod-eye Pin ..... 103E1E *
spring 103E2
CLUTCH - CONTROL - OPERATING - ROD - EYE PIN group **X103E**
*103E1E is assembled with 103E2. Order by complete symbol X103E.

104E—Clutch Gear **104E1**

105E—Clutch Shifter ..... 105E1E *
guide rod (long) 105E2
" " (short) 105E3
plate ..... 105E4 *
" fulcrum pin (for a105E7) 105E5
" " " cotter ..... 96 .. 105E6
" lever (for engaging b5E3) a105E7
" rivet (2) ..... 7178 .. 105E8
spring pin ..... 880 .. 105E9
CLUTCH SHIFTER group **Xa105E**
*105E1E is assembled with 105E2 to 105E5 inclusive, 105E8 and 105E9.

106E—Clutch-shifter Spring ..... 628 .. a106E1
plate (2) a106E2
CLUTCH-SHIFTER SPRING group **X106E**

107E—Gear Cover (rear) 107E1
screw (2) ..... 223 .. 107E2
GEAR COVER group **X107E**

108E—Interlocking Lever ..... 108E1E *
spring pin ..... 851 .. 108E2
INTERLOCKING LEVER group **X108E**
*108E1E is assembled with 108E2. Order by complete symbol X108E.

109E — Interlocking - lever Operating Rod a109E1
eye ..... a109E2E *
" pin a109E3
" " cotter ..... 95 .. 109E4
" " washer ..... 412 .. a109E6
lock nut ..... 314 .. 109E5
INTERLOCKING - LEVER OPERATING ROD group **X109E**
*a109E2E is assembled with a109E3.

110E — Interlocking - lever - operating - rod Guide 110E1
nut ..... 319 .. 110E2
INTERLOCKING - LEVER - OPERATING - ROD GUIDE group **X110E**

111E—Interlocking-lever Spring .. 623 .. **111E1**

112E—Interlocking-lever Fulcrum Stud **112E1**

117E—Sliding Gear **117E1**

118E—Sliding-gear Shifter **118E1**

119E—Sliding-gear-shifter Yoke ..... 119E1E *
handle 119E2
" spring ..... 64 .. 119E3
post 119E4
" nut ..... 35 .. 119E5
" washer ..... 446 .. 119E6
SLIDING-GEAR-SHIFTER YOKE group **X119E**
*119E1E is assembled with 119E4.

120E—Sliding-gear Hollow Shaft ..... 120E1E *
bushing ..... 120E2 *
plug (wood) 120E3
SLIDING-GEAR HOLLOW SHAFT group ... **X120E**
*120E1E is assembled with 120E2 and 120E3. Order by complete symbol X120E.

121E—Sliding-gear Safety Lever 121E1
rod (2) 121E2
" hanger 121E3
" nut (4) ..... 319 .. 121E4
SLIDING-GEAR SAFETY LEVER group **X121E**

122E—Speed Bracket ..... a122E1E *
cap (front for 123E1) ..... 122E2 *
" (center for 123E1) ..... 122E3 *
" (rear for 123E1) ..... 122E4 *
" (front for 124E1) ..... 122E5 *
" (rear for 124E1) ..... 122E6 *
" (front for 125E1) ..... 122E7 *
" (rear for 125E1) ..... 122E8 *
" (front for 120E1) ..... 122E9 *
" (rear for 120E1) ..... 122E10 *
" screw (for 122E2 to 122E10 inclusive) (19) ..... 28 .. 122E11
" (for 131E7) ..... 122E12 *
" screw (for 122E12) (3) ..... 27 .. 122E13
guide post (for 101E2) 122E14
" " nut ..... 310 .. 122E15
" " " lock nut ..... 312 .. 122E16
" " spring ..... 6154 .. 122E17
" " washer (2) ..... 413 .. 122E18
oil pipe cover base (2) a122E19
" hole cover (2) 122E20
" " " screw (4) a122E21
" pipe (to 118E1 and 121E3) (2) 122E22
" " (" rear bearing for 125E1) 122E23
" " (" front " " 125E1) 122E24
" " (" rear " " 120E1) 122E25
" " (" " " " 123E1) 122E26
" " (" middle " " 123E1) 122E27
" " (" front " " 120E1) 122E28
" " (" rear " " 124E1) 122E29
pin (to 120E1 and 120E2) 122E30
spring post (for X106E) ..... 891 .. 122E31
" " (" 111E1) ..... 855 .. 122E32
tumbler housing ..... a122E33 *
" " screw (4) ..... 28 .. 122E34
" " stop plate 122E35
" " " " rivet (2) 7179 .. 122E36
winkley oiler (5) 122E37
bushing (2) a122E38
" locating pin (2) ..... 721 .. a122E39
SPEED BRACKET group **X122E**
*122E1E is assembled with 122E2 to 122-E13 inclusive, 122E22 to 122E36 inclusive.

123E—Speed-bracket Cone Shaft ..... 123E1‡
cone gear (small) ..... 123E2‡
" " (medium) ..... 123E3‡
" " (large) ..... 123E4‡
gear (large) ..... 123E5‡
key (long) (for 123E2 to 123E5 inc.) .... 123E6‡
" (short) (for 123E8) ..... 123E7‡
pinion (long) ..... 123E8‡
SPEED-BRACKET CONE SHAFT group **X123E**
‡Parts should be replaced in our factory.

124E — Speed - bracket Driving Shaft (front) ..... 124E1‡
gear (large, middle) ..... 124E2‡
key (for 124E2 and 124E5) (2) ..... 124E3‡
" (for 124E6) ..... 124E4‡
pinion (long, front) ..... 124E5‡
" (small, rear) ..... 124E6‡
SPEED-BRACKET DRIVING SHAFT group .. **X124E**
‡Parts should be replaced in our factory.

125E — Speed - bracket Driving Shaft (rear) ..... 125E1‡
gear (medium, middle) ..... 125E2‡
" (large, rear) ..... 125E3‡
key (3) ..... 125E4‡
pinion (small, front) ..... 125E5‡
SPEED-BRACKET DRIVING SHAFT group .. **X125E**
‡Parts should be replaced in our factory.

126E—Speed-bracket Quadrant **126E1**

127E — Speed - bracket - quadrant Bolt (2) each ..... 110 .. **127E1**

128E — Speed - bracket - quadrant - bolt Nut (2) each ..... 314 .. **128E1**

129E—Speed-bracket-quadrant Shaft .. 129E1‡
key ..... 129E2‡
lever ..... 129E3E *
" handle 129E4
" " pin 129E5
" " spring ..... 64 .. 129E6
" set screw (2) ..... 139 .. 129E7
pinion ..... 129E8‡
SPEED-BRACKET-QUADRANT SHAFT group **X129E**
*129E3E is assembled with 129E4, 129E5, 129E6, 129E7.
‡Parts should be replaced in our factory.

130E — Speed - bracket Screw (long, to a12EE) ..... 2217 .. **130E1**
NOTE: When the Speed Regulating Attachment is applied to a machine already equipped with the Cam Oiling Device, order the following additional parts:
SCREW (short, to 115E2 and 115E3) (6) .27 130E2

131E—Speed-bracket Sliding Shaft.... 131E1‡
gear (large, middle)..... 131E2‡
" (medium, rear)..... 131E3‡
key (3)..... 131E4‡
nut.....**330**.. 131E5
pinion (small, front)..... 131E6‡
rack..... 131E7
washer.....**444**.. 131E8
SPEED-BRACKET SLIDING SHAFT group...**X131E**
‡Parts should be replaced in our factory.

132E—Speed Index Plate..... a132E1
bracket..... 132E2E *
" pin (2)..... 132E3
screw (6).....**251**.. 132E4
SPEED INDEX PLATE group.....**X132E**
*132E2E is assembled with 132E3.

133E—Tumbler..... 133E1E‡ *
idler..... 133E2‡
" shaft..... 133E3‡
latch..... 133E4E †
" fulcrum pin..... 133E5
" " " cotter (2).....**95**.. 133E6
" spring.....**6153**.. 133E7
" stop pin..... 133E8
oil pipe (front)..... 133E9
" " (rear)..... 133E10
" " clamp..... 133E11
" " " screw.....**246**.. 133E12
pinion..... 133E13‡
" shaft (also fulcrum for 133E1E)... 133E14‡
TUMBLER group.....**X133E**
*133E1E is assembled with 133E9 to 133E12 inclusive.
†133E4E is assembled with 133E8.
‡Parts should be replaced in our factory.

37F—Operating-lever Spring Box..... a37F4F *
cam..... a37F5 *
dowel (stop for 37F1).....**58**.. 37F2
plunger..... 37F1
spring.....**6163**.. a37F6
OPERATING-LEVER SPRING BOX group... **X37F4**
*a37F4F is assembled with 37F1, 37F2, a37F5 and a37F6. Order by complete symbol X37F4.

(ATTACHMENT 22CU)

Attachment for English Display Matrices

OBJECT: To adapt the Composing Machine to use English Display Matrices.

NOTE: When this Attachment is applied the Display Type Attachment must be applied at the same time if it is not already on the machine.

29A—Centering Pin..... a29A1A *
key.....**7176**.. 29A3
nut.....**310**.. 29A4
CENTERING PIN group.....**Xa29A**
*a29A1A is assembled with 29A3.
NOTE: In addition to furnishing the above part the BRIDGE a1A must be altered by enlarging the holes for the BOLTS 6A3, the CENTERING-PIN STAND a6A must be reduced on its diameter which extends down through the BRIDGE, and the SLIDING FRAME b9A must be altered to receive the spring clip on the ENGLISH DISPLAY MATRIX HOLDER. The BRIDGE should be returned to our Factory for these alterations.

Matrix Holder (for English Display Matrices).....**Xa48A**

(ATTACHMENT 11CU)

Lead and Rule Attachment

OBJECT: To operate Continuous Strip Molds. When this attachment is applied the Display Type Attachment must be applied if not already on the machine. The Automatic Cutter should also be applied at the same time.

NOTE: Machines prior to 5355 require in addition to the parts listed below, the 3-Burner Gas Burner for which see Xb55H.

51B—Mold-blade Micrometer Wedge.. 51B1
adjusting screw..... 51B2
" " spring..... 51B3
" " " screw (2)...**2212**.. 51B4
rod..... 51B5
" nut.....**31**.. 51B6
" " lock nut.....**31**.. 51B7
" spring.....**6170**.. 51B8
spring.....**6196**.. 51B9
stand..... 51B10
MOLD-BLADE MICROMETER WEDGE group **X51B**

52B—Mold-blade-micrometer-wedge-stand Screw (2).....**222**.. **52B1**

53B—Mold-blade Operating Bar..... **53B1**

15E—Centering-pin-cam-lever Shaft.. **a15E1**

134E—Centering-pin-lever Bracket.... b134E1E *
clamp (2)..... a134E13
" pin (2)..... a134E14
" thumb screw (2)..... a134E15
CENTERING-PIN-LEVER BRACKET group **Xb134E**
*b134E1E is assembled with a134E13, a134E14 and a134E15. Order by complete symbol Xb134E.

135E—Clamping-screw Connecting Rod..... a135E1
eye..... a135E9
" lock nut.....**314**.. a135E10
" pin..... a135E11E *
" " spring..... a135E12
nut.....**314**.. a135E13
" lock nut.....**315**.. a135E14
washer (2).....**410**.. a135E15
spring.....**6225**.. b135E7
" adjusting nut .....**315**.. a135E16
" " " lock nut.....**314**.. a135E17
CLAMPING-SCREW CONNECTING ROD group.....**Xa135E**
*a135E11E is assembled with a135E12.

136E—Auxiliary Bracket..... 136E1E *
adjusting screw..... 136E2
clamp bolt..... 136E3
" " nut (2).....**312**.. 136E4
pin..... 136E5
AUXILIARY BRACKET group.....**X136E**
*136E1E is assembled with 136E5.

137E—Guard (on 136E1)..... 137E1
screw (2).....**241**.. 137E2
GUARD group.....**X137E**

138E—Operating-bar Lever (2)..... 138E1E *
bushing..... 138E2 *
connecting eye..... 138E3 *
" " pin..... 138E4 *
bolt.....**120**.. 138E5
" nut.....**310**.. 138E6
" sleeve..... 138E7
" washer.....**415**.. 138E8
OPERATING-BAR LEVER group.....**X138E**
*138E1E is assembled with 138E2 to 138E8 inclusive. Order by complete symbol X138E.

139E—Operating-bar-lever Fulcrum Pin..... 139E1
cotter.....**93**.. 139E2
OPERATING-BAR-LEVER FULCRUM PIN group.....**X139E**

141E—Spring Box..... 141E1
cap (2)..... 141E2
sleeve..... 141E3
spring.....**6192**.. 141E4
" abutment (2)..... 141E5
rod..... 141E6
" adjusting nut (2).....**310**.. 141E7
" " " lock nut (2).....**312**.. 141E8
" lock nut.....**312**.. 141E9
trunnion..... 141E10
SPRING BOX group.....**X141E**

142E—Spring-box Lever (2) (each)..... **142E1**

143E—Spring-box-lever Fulcrum Pin.. 143E1
nut (2).....**319**.. 143E2
SPRING-BOX-LEVER FULCRUM PIN group.**X143E**

144E—Spring-box-lever Link..... **144E1**

145E—Spring-box-lever-link Pin..... 145E1
cotter.....**95**.. 145E2
SPRING-BOX-LEVER-LINK PIN group.....**X145E**

13H—Melting-pot-chimney Extension **a13H1**

14H—Nozzle (for continuous strip Molds) **a14H4**

17H—Piston..... 17H
handle..... 17H1H *
" stem..... 17H2 *
" " nut.....**314**.. 17H3 *
PISTON group.....**X17H**
*17H1H is assembled with 17H2 and 17H3.

For use with worn Pump Bodies we furnish:
PISTON (.003" oversize)..... a17H4

17H—Piston (continued)
handle..... 17H1H *
" stem.....**850**.. 17H2 *
" " nut.....**314**.. 17H3 *
PISTON (.003" oversize) group.....**X17H4**
17H1H is assembled with 17H2 and 17H3.

23H—Pump Body..... a23H11H *
bearing (nozzle end)..... 23H1
guide..... 23H2
" screw (2).....**220**.. 23H3
plug (bottom)..... 23H4
regulating screw..... 23H5
valve..... 23H6
PUMP BODY group.....**X23H11**
*a23H11H is assembled with 23H1 to 23H6, inclusive. Order by complete symbol X23H11.

(ATTACHMENT 12CU)

Automatic Cutter

(Rule Cutting Device)

OBJECT: To automatically cut the product of the continuous strip Molds to any length desired, from six picas to twenty-five inches. To use this attachment requires that the machine be equipped with the Lead and Rule Mold Operating Attachment which in turn requires the Display Type Attachment.

148E—Shear Cam (marked R)..... 148E1
screw (3).....**213**.. 148E2
" nut (3).....**314**.. 148E3
SHEAR CAM group.....**X148E**

276E—Guard..... 276E1E *
bracket..... 276E2 *
" screw (2).....**2233**.. 276E3
GUARD group.....**X276E**
*276E1E is assembled with 276E2.
NOTE: Automatic Cutters shipped prior to February, 1928, were not equipped with any parts of group X276E. These parts provide a guard in front of the INTERLOCKING-LEVER OPERATING ROD a109E1.

4F—Column-pusher Fulcrum Screw... **a4F3**

17F—Galley-pan Shelf
spring pin (for a114F1).....**834**.. **a17F8**

76F—Box (for short leads)..... **76F1**

77F—Channel Bar (for leads and rules).. a77F1
screw (2).....**227**.. 77F2
support (for long strips)..... a77F3
" screw..... a77F4
CHANNEL BAR group.....**Xa77F**

Earlier Automatic Cutters were equipped with the following parts:
CHANNEL BAR..... 77F1
screw (2).....**227**.. 77F2
and omitted a77F3 and a77F4.
NOTE: The improved parts are to keep long strips of lead or rule from bending as they are being delivered from the MOLD. To apply these parts requires that the SUPPORT a77F3 and SCREWS a77F4 be furnished and the CHANNEL BAR 77F1 altered to suit. After this alteration the CHANNEL BAR becomes a77F1.

78F—Galley..... 78F1F *
support bar (2)..... 78F2 *
" " rivet (5).....**7207**.. 78F3
GALLEY group..... **X78F**
*78F1F is assembled with 78F2 and 78F3. Order by complete symbol X78F.

79F—Guide Plate
(front)..... 79F1F *
(rear)..... 79F2 *
rivet (4).....**7160**.. 79F3 *
separator (4).....**437**.. 79F4 *
GUIDE PLATE group..... **X79F**
*79F1F is assembled with 79F2, 79F3 and 79F4. Order by complete symbol X79F.

80F—Guide Roller (for strips)..... 80F1
eccentric shaft..... 80F2
" " handle.....**865**.. 80F3
" " cotter.....**95**.. 80F4
GUIDE ROLLER group..... **X80F**

81F—Main Bracket ..... a81F1F *
spring post (for 120F1) .....831.. 81F3
" " (for 127F1) .....856.. 81F4
fulcrum-pin (for 108F1) 81F5
" " cotter .....91.. 81F6
" " washer .....442.. 81F7
MAIN BRACKET group **X81F**
*a81F1F is assembled with 81F3, 81F4 and 81F5.

82F—Main-bracket Buffer (for Shear)
(leather) 82F1
screw (2) .....241.. 82F2
" washer (2) .....440.. 82F3
MAIN-BRACKET BUFFER group **X82F**

83F—Shear Blade **a83F2**

84F—Shear-blade Guide **84F1**

85F—Shear-blade Shoe ..... 85F1F *
screw (4) .....234.. 85F2
tube ..... 85F3 *
" dowel .....535.. a85F4 *
SHEAR-BLADE SHOE group **X85F**
*85F1F is assembled with 85F3 and a85F4.
NOTE: We do not furnish separate parts of this SHOE 85F1F. If a new TUBE 85F3 is required we furnish an assembled SHOE 85F1F.

86F—Shear-blade-shoe-tube Clamp
(upper) a86F1
(lower) a86F3
screw .....140.. 86F2
SHEAR-BLADE-SHOE-TUBE CLAMP group .. **X86F**

87F—Shear-blade-shoe-tube Guide 87F1
screw (2) .....2207.. 87F2
SHEAR-BLADE-SHOE-TUBE GUIDE group .. **X87F**

88F—Shear Gage ..... 88F1F *
lug 88F2
" latch 88F3
" pin .....7161.. 88F4
adjusting nut a88F5
" " sleeve a88F6
SHEAR GAGE group **X88F**
*88F1F is assembled with 88F2 and 88F4.

89F—Shear-gage Spring .....6237.. **a89F1**

90F—Stacker Plate ..... 90F1F *
support (right) ..... 90F2 *
" rivet (2) .....7216.. 90F3
spring .....6206.. 90F4
support spring pin .....854.. 90F5
" (left) ..... 90F6 *
" rivet (2) .....7218.. 90F7
STACKER PLATE group **X90F**
*90F1F is assembled with 90F2, 90F3, 90F5, 90F6 and 90F7.

91F—Stacker Rock Shaft **91F1**

92F—Stacker Support Block (2) 92F1
shoe (leather) (2) 92F2
" screw (8) .....244.. 92F3
STACKER SUPPORT BLOCK group (2) (each) **X92F**

93F—Supporting Beam 93F1
bolt (2) .....15.. 93F2
SUPPORTING BEAM group **X93F**

94F—Supporting-beam Bracket (right) 94F1F *
bolt (2) .....129.. 94F2
spring pin .....855.. 94F3
SUPPORTING-BEAM BRACKET group **X94F**
*94F1F is assembled with 94F3.

95F—Supporting-beam Bracket (left).. 95F1F *
bolt (2) .....129.. 95F2
spring pin .....859.. 95F3
SUPPORTING-BEAM BRACKET group **X95F**
*95F1F is assembled with 95F3.

96F—Transfer Bar (rear) ..... b96F1F *
hanger (left) ..... 96F2F †
" spring pin .....864.. 96F3
" (right) 96F4
" screw (4) .....241.. 96F5
pin a96F6
TRANSFER BAR group **Xb96F**
*b96F1F is assembled with a96F6.
†96F2F is assembled with 96F3.
AUTOMATIC CUTTERS shipped prior to January 1931, were equipped with: TRANSFER BAR (rear) a96F1.

Automatic Cutters shipped prior to March, 1924, were equipped with:
TRANSFER BAR (rear) 96F1

97F—Transfer Bar (front) a97F1
hanger (left) ..... 97F4F *
" spring pin .....864.. 97F5
" (right) 97F6
" screw (4) .....241.. 97F7
TRANSFER BAR group **Xa97F**
*97F4F is assembled with 97F5.

Automatic Cutters shipped prior to March, 1924, were equipped with:
TRANSFER BAR (front) 97F1
pusher (3) 97F2
" screw (6) .....241.. 97F3

100F—Transfer-bar-hanger Rod 100F1
cotter (2) .....93.. 100F2
TRANSFER-BAR-HANGER ROD group **X100F**

101F—Transfer-bar Operating Lever ... a101F1F *
extension a101F2
" rivet (2) .....7163.. a101F3
adjusting screw .....2252.. a101F4
" " nut .....35.. a101F5
bearing a101F6
TRANSFER-BAR OPERATING LEVER group **Xa101F**
*a101F1F is assembled with a101F2, a101F3, to a101F6 inclusive. Order by complete symbol Xa101F.

102F—Shear-Yoke Adjusting Screw (in 119F1) .....136.. 102F1
nut .....310.. 102F2
SHEAR-YOKE ADJUSTING SCREW group ... **X102F**

103F—Transfer-bar-hanger Spring (long) .....623.. **a103F1**

104F—Transfer-bar-hanger Spring (short) .....6205.. 104F1
plate (2) 104F2
TRANSFER-BAR-HANGER SPRING group ... **X104F**

105F—Patent Plate a105F3
screw (2) .....251.. 105F2
PATENT PLATE group **Xa105F**

106F—Main-bracket Screw (2) (each) **213** **106F1**

107F—Main-bracket Shield 107F1
screw (2) .....241.. 107F2
MAIN-BRACKET SHIELD group **X107F**

108F—Shear Bell Crank ..... 108F1F *
pin (stop for 123F1) .....7225.. 108F2
post (for 121F2) .....858.. 108F3
" nut 108F4
" washer .....420.. 108F5
SHEAR BELL CRANK group **X108F**
*108F1F is assembled with 108F2.

109F—Shear-bell-crank Adjusting Screw (in a81F1) .....136.. 109F1
nut .....310.. 109F2
SHEAR-BELL-CRANK ADJUSTING SCREW group **X109F**

110F—Shear-cam Lever ..... 110F1F *
spring pin .....834.. 110F2
roller 110F3
" pin 110F4
SHEAR CAM LEVER group **X110F**
*110F1F is assembled with 110F2, 110F3 and 110F4. Order by complete symbol X110F.

111F—Shear-cam-lever Fulcrum Pin ... 111F1
nut .....329.. 111F2
washer .....443.. 111F3
SHEAR-CAM-LEVER FULCRUM PIN group **X111F**

113F—Shear-cam-lever-fulcrum-pin Bracket a113F1
screw (2) .....29.. a113F2
SHEAR-CAM-LEVER-FULCRUM-PIN BRACKET group **Xa113F**

Machines prior to 5383, equipped with Automatic Cutter, were equipped with:
SHEAR-CAM-LEVER-FULCRUM-PIN BRACKET 113F1
screw (2) .....28.. 113F2
" nut (2) .....319.. 113F3
SHEAR-CAM-LEVER-FULCRUM-PIN BRACKET group **X113F**

114F—Shear-cam-lever Spring ...6212.. a114F1
plate (2) a114F2
SHEAR-CAM-LEVER SPRING group **X114F**

115F—Shear Operating Pin 115F1
cotter (2) .....93.. 115F2
washer .....45.. 115F3
SHEAR OPERATING PIN group **X115F**

116F—Shear Trip Lever ..... 116F1F *
spring pin .....854.. 116F2
SHEAR TRIP LEVER group **X116F**
*116F1F is assembled with 116F2. Order by complete symbol X116F.

117F—Shear-trip-lever Spring ...6201.. 117F1
plate (2) 117F2
SHEAR-TRIP-LEVER SPRING group **X117F**

118F—Shear-trip-lever Spring Bar ..... 118F1F *
pin .....854.. 118F2
screw (2) .....2166.. 118F3
plate (stop for 91F1) 118F4
SHEAR-TRIP-LEVER SPRING BAR group .. **X118F**
*118F1F is assembled with 118F2.

119F—Shear Yoke ..... 119F1F *
fulcrum pin 119F2
" " cotter (2) .....93.. 119F3
spring pin .....831.. 119F4
SHEAR YOKE group **X119F**
*119F1F is assembled with 119F4.

120F—Shear-yoke Spring .....6207.. 120F1
plate (2) 120F2
SHEAR-YOKE SPRING group **X120F**

121F—Stacker-rock-shaft Connecting Rod 121F1
eye (lower) 121F2
" (upper) 121F3
" pin 121F4
" " cotter (2) .....95.. 121F5
nut (2) .....35.. 121F6
STACKER-ROCK-SHAFT CONNECTING ROD group **X121F**

122F—Thrust Bar 122F1
fulcrum pin 122F2
nut (2) 122F3
THRUST BAR group **X122F**

123F—Thrust-bar Bell Crank ..... 123F1F *
pin .....861.. 123F2
" cotter .....97.. 123F3
spring pin .....851.. 123F4
THRUST-BAR BELL CRANK group **X123F**
*123F1F is assembled with 123F2 and 123F4. Order by complete symbol X123F.

124F—Thrust-bar-bell-crank Fulcrum Pin .....862.. 124F1
nut .....35.. 124F2
THRUST-BAR-BELL-CRANK FULCRUM PIN group **X124F**

125F—Thrust-bar-bell-crank Operating Bar **125F1**

126F—Thrust-bar-bell-crank Spring (short) .....6201.. 126F1
plate (2) 126F2
THRUST-BAR-BELL-CRANK SPRING group. **X126F**

127F—Thrust-bar-bell-crank Spring (long) .....6202.. 127F1
plate (2) 127F2
THRUST-BAR-BELL-CRANK SPRING group. **X127F**

128F—Thrust Bar Latch (left) ..... 128F1F *
spring pin .....854.. 128F2
(right) ..... 128F3F †
spring pin .....854.. 128F4
fulcrum pin .....863.. 128F5
" " nut .....35.. 128F6
spring .....6132.. 128F7
THRUST BAR LATCH group **X128F**
*128F1F is assembled with 128F2.
†128F3F is assembled with 128F4.

129F—Thrust-bar Operating Rod 129F1
eye 129F2
" lock nut .....35.. 129F3
" pin .....860.. 129F4
" " cotter .....95.. 129F5
THRUST-BAR OPERATING ROD group **X129F**

175F—Friction Plate 175F1
screw .....2167.. 175F2
" washer .....440.. 175F3
FRICTION PLATE group **X175F**

176F—Stacker Guard* **176F1**
*Automatic Cutters shipped prior to January, 1924, were not equipped with Stacker Guard 176F1. This part operates to prevent overthrow of the Transfer Bars when stacking material.

(ATTACHMENT 18CU)

Short Type Attachment

OBJECT: To provide for the casting and delivery of short type from Style FC and Style FD (short type) Molds.

NOTE: In addition to furnishing the following new parts the following alteration must be made: on Machines prior to 9843 the Normal-wedge-locking-pin Stand must have clearance cut in it to clear the Type Pusher.

20B—Type Carrier ..... a20B15B *
bushing ..... **458**.. a20B10
jaw a20B16
" rivet (2) ..... **7168**.. a20B17
lever (for a31B8) d20B3
" pin b20B4
" " cotter ..... **95**.. a20B9
" stand b20B1
" " rivet (2) ..... **7104**.. a20B2
" (for a26B4) a20B11
" pin ..... **7161**.. a20B12
shield a20B5
" screw (2) ..... **252**.. 20B6
stop (for Type Support) a20B18
" rivet ..... **7139**.. a20B19

TYPE CARRIER group, including ROD Xa21B, EXTENSION X22B, CLAMP Xa26B4, SHOE b23BB, SHOE b24B, SHOE Xa27B4, and SPRING Xa31B8... **Xa20B15**

*a20B15B is assembled with b20B1, a20B2, d20B3, b20B4, a20B5, 20B6, a20B9, a20B10, a20B11, a20B12, a20B16, a20-B17, a20B18, a20B19, Xa21B, X22B, Xa26B4, Xa27B4, and Xa31B8. Order by complete symbol Xa20B15.

21B—Type-carrier Connecting Rod 21B
forked eye (carrier end) ..... 21B1B *
" " lock nut (L. H.) ..... **317**.. 21B2
" " pin ..... 21B3 *
" " dowel ..... **58**.. 21B4
" " (cam lever end) a21B5
" " lock nut ..... **316**.. 21B6
" " pin 21B7
" " " cotter ..... **93**.. 21B8
spring ..... **615**.. 21B9
" abutment 21B10
sleeve 21B11
TYPE-CARRIER CONNECTING ROD group . **Xa21B**
*21B1B is assembled with 21B3 and 21B4

22B—Type-carrier Extension a22B
lock nut ..... **310**.. 22B1
sleeve a22B2
spring ..... **616**.. 22B4
TYPE-CARRIER EXTENSION group **X22B**

23B—Type-carrier Shoe (long) ..... b23BB *
cam (front) ..... a23B3 *
" (rear) ..... a23B4 *
" rivet (lower) ..... **7206**.. a23B5
" " (right) ..... **721**.. a23B6
" " (center, left) (2) ..... **7207**.. a23B7
*b23BB is assembled with a23B3 to a23B7, inclusive.

24B—Type-carrier Shoe (short) **b24B**

26B—Type Clamp b26B4
extension b26B1
spring ..... **6221**.. a26B7
TYPE CLAMP group **Xa26B4**

27B—Type-clamp Shoe a27B4
screw (3) ..... **260**.. a27B1
TYPE-CLAMP SHOE group **Xa27B4**

28B—Type-pusher Guide **a28B4**

29B—Type Pusher ..... a29B8B *
blade ..... b29B1 *
" rivet (head end) (2) ..... **732**.. 29B2
" " (eye end, long) ..... **7104**.. 29B3
" " (eye end, short) ..... **732**.. 29B4
eye ..... a29B5 *
*a29B8B is assembled with b29B1, 29B2, 29B3, 29B4, and a29B5.

31B—Type Support Spring b31B8
bar ..... g31B1B *
" rivet (2) ..... **7208**.. a31B2
" yoke a31B10
" spring ..... **6110**.. a31B6
" extension a31B7
TYPE SUPPORT SPRING group **Xa31B8**
*g31B1B is assembled with a31B2 and b31B8

21D—Short Type Normal Wedge **Xa21D7**

19F—Line Hook ..... a19F6F *
lever ..... 19F3 *
rivet (2) ..... **7164**.. 19F4 *
block ..... a19F7 *
LINE HOOK group **Xa19F6**
*a19F6F is assembled with 19F3, 19F4 and a19F7. Order by complete symbol Xa19F6.

51F—Type Channel Block ..... b51F30F *
latch a51F31
" screw (2) ..... **2220**.. a51F32
pin a51F33
type guide plate (right) a51F34
" " " screw (6) ..... **2220**.. a51F35
" " " (left) a51F36
" " " screw (5) ..... **2220**.. a51F37
adjusting screw a51F38
*b51F30F is assembled with a51F31 to a51F38 inclusive.

(ATTACHMENT 20CU)

Cored Mold Operating Attachment

OBJECT: To provide for the use of Style 3U Cored Molds. This attachment is used for the 30- and 36-point 3U (cored) Molds. The 4U Mold which is used for casting 24-point cored product does not require this attachment, but operates with the same standard equipment as the earlier 1U and 2U Molds.

3A—Bridge-lever-link Pin ..... a3A2A *
spring a3A1
BRIDGE-LEVER-LINK PIN group **Xa3A2**
*a3A2A is assembled with a3A1. Order by complete symbol Xa3A2.

67A—Centering-pin-lifting-link Gag Block (2) 67A1
clip (2) 67A2
CENTERING-PIN-LIFTING-LINK GAG BLOCK group (2) **X67A**

16C—Mold-blade Operating Rod
ejecting spring ..... **6191**.. a16C21
" " sleeve b16C4

275E—Centering-pin Loading Lever ... 275E7
spring ..... **665**.. 275E2
" plunger a275E3
" " adjusting screw ..... **121**.. a275E8
" " " " nut.. **310**.. a275E9
" " rod 275E4
" " " nut ..... **314**.. 275E5
" " " " lock nut ..... **315**.. 275E6
CENTERING-PIN LOADING LEVER group.. **X275E7**

14H—Nozzle **a14H2**

17H—Piston (for Display Type) a17H5
handle ..... 17H1H *
" stem ..... **850**.. 17H2 *
" " nut ..... **314**.. 17H3 *
PISTON group **X17H5**
*17H1H is assembled with 17H2 and 17H3.

20H—Piston Spring ..... **6159**.. **a20H8**

23H—Pump Body ..... 23H *
bearing (nozzle end, for a26HH) a23H19
guide (and stop, for a17H5) 23H2
" screw (2) ..... **220**.. 23H3
plug (bottom) 23H4
regulating screw (for flow of metal) 23H5
valve 23H6
PUMP BODY group **Xa23H19**
*a23H19H is assembled with 23H, 23H2, 23H3, 23H4, 23H5 and 23H6. Order by complete symbol Xa23H19.

Increased Pressure Attachment

OBJECT: To give greater pump capacity for casting solid 30 and 36 point display type.

Increased Pressure Attachment consists of the following:

3A—Bridge-lever-link Pin ..... a3A2A *
spring a3A1
BRIDGE-LEVER-LINK PIN group **Xa3A2**
*a3A2A is assembled with a3A1 Order by complete symbol Xa3A2.

67A—Centering-pin-lifting-link Gag Block (2) 67A1
clip (2) 67A2
CENTERING-PIN-LIFTING-LINK GAG BLOCK group (2) **X67A**

16C—Mold-blade Operating Rod
ejecting spring ..... **6191**.. a16C21
" " sleeve b16C4

275E—Centering-pin Loading Lever ... 275E7
spring ..... **665**.. 275E2
" plunger a275E3
" " adjusting screw ..... **121**.. a275E8
" " " " nut.. **310**.. a275E9
" " rod 275E4
" " " nut ..... **314**.. 275E5
" " " " lock nut ..... **315**.. 275E6
CENTERING-PIN LOADING LEVER group.. **X275E7**

17H—Piston (1 1-16") a17H7
handle ..... 17H1H *
" stem ..... **850**.. 17H2 *
" " nut ..... **314**.. 17H3 *
PISTON group **X17H7**
*17H1H is assembled with 17H2 and 17H3.

20H—Piston Spring (outside) .... **6242**.. a20H9
" " (inside) ..... **6159**.. a20H7
abutment a20H10
rod a20H11
" eye a20H2
" " pin ..... **847**.. 20H3
" " " cotter ..... **93**.. 20H4
rod nut (knurled) a20H12
washer ..... **465**.. a20H13
PISTON SPRING group **Xa20H9**

23H—Pump Body (1 1-16") ..... a23H9H *
bearing 23H1
guide a23H10
" screw (2) ..... **220**.. 23H3
plug a23H13
regulating screw 23H5
valve a23H12
PUMP BODY group **X23H9**
*a23H9H is assembled with 23H1, 23H3, 23H5, a23H10, a23H12 and a23H13. Order by complete symbol X23H9.

(ATTACHMENT 29CU)

Quadding and Centering Device

(Can be applied only in our factory)

36E—Air Pipe
paper tower A to valve box a36E54
" " B " " " a36E55
" " C " " " a36E56
valve box to A pin a36E57
" " " B " a36E58
" " " C " a36E59

280E—Air Pipe { 280E1 / 280E2 / 280E3 / 280E4
repeater release to control box ..... { 280E5 / 280E6 / 280E7
repeater release to tee ..... { 280E8 / 280E9
tee to control box 280E10
tee to valve box ..... { 280E11 / 280E12
valve box to quadder control 280E18
connector (8) 280E19
" nut (28) 280E20
" sleeve (28) 280E21
nipple (in 282E9) (8) 280E22
" nut (8) ..... **3008**.. 280E16
clamp 280E17
" screw ..... **246**.. 280E23E
tee base 280E24
connecting block (281E1 to control box). **X280E**
AIR PIPE group 281E1
281E—Air Pipe Connection Block 281E2
connector (for pipe) (7) 281E3
screw (to main stand) (2) ..... **220**..
AIR PIPE CONNECTION BLOCK group **X281E**

282E—Valve Box Body (for control valve) 282E1E *
plug (large) 282E2
valve box body (for cut-off valve) 282E3
plug (large) 282E4
" (small) ..... **2371**.. 282E5
screw (to holding plate) (4) ..... **2372**.. 282E6
bottom plate 282E7
" " screw (4) ..... **236**.. 282E8
holding plate 282E9
" " screw (to main stand) (2) ..... **2285**.. 282E10
valve (control) 282E11
" pin 282E12
" spring ..... **6291**.. 282E13

282E—Valve Box Body (for control valve) (continued)

valve (cut-off) (lower) 282E14
" " " (upper) 282E15
" pin 282E16
" spring ..... 6292.. 282E17
VALVE BOX group **X282E**
*282E1E is assembled with 282E2 to 282E9 inclusive, 282E11 to 282E17 inclusive. Order by complete symbol X282E.

189F—Column Pusher ..... 189F1F *
line support stop 189F2
" " " screw ..... 253.. 189F3
release pin (for line support pusher catch) 189F4
sheave (for chain) 189F5
spring post ..... 831.. 189F6
stop pin (for line support pusher) 189F7
stud (for sheave) 189F8
" cotter ..... 95.. 189F9
COLUMN PUSHER group **X189F**
*189F1F is assembled with 189F2 to 189F9 inclusive, order by complete symbol X189F.

190F—Line Hook (lower) 190F1
(upper) ..... 190F2F *
knob 190F3
lever 190F4
rivet (2) ..... 7164.. 190F5
separator 190F6
LINE HOOK group **X190F**
*190F2F is assembled with 190F1 to 190F6 inclusive order by complete symbol X190F.

191F—Line-Hook Stud 191F1
nut ..... 310.. 191F2
LINE HOOK STUD group **X191F**

192F—Line-support (thin) (5 to 8 pt.) (9 to 24 picas) ..... 192F1F *
guide 192F2
" rivet (2) ..... 7192.. 192F3
spring 192F4
" screw ..... 254.. 192F5
LINE-SUPPORT group **X192F**
*192F1F is assembled with 192F2 to 192F5 inclusive, order by complete symbol X192F.

193F—Line-support (thin) (5 to 8 pt.) (23 to 60 picas) ..... 193F1F *
guide 193F2
" rivet (2) ..... 7192.. 193F3
spring 193F4
" screw ..... 254.. 193F5
LINE-SUPPORT group **X193F**
*193F1F is assembled with 193F2 to 193F5 inclusive, order by complete symbol X193F.

194F—Line-support (thick) (9 to 12 pt.) (9 to 24 picas) ..... 194F1F *
facing 194F2F
guide 194F4
" rivet (2) ..... 7192.. 194F5
spring 194F6
" screw ..... 254.. 194F7
LINE-SUPPORT group **X194F**
*194F1F is assembled with 194F2F, 194F4, to 194F7 inclusive, order by complete symbol X194F.

195F—Line-support (thick) (9 to 12 pt.) (23 to 60 picas) ..... 195F1F *
guide 195F2
" rivet (2) ..... 7192.. 195F3
spring 195F4
" screw ..... 254.. 195F5
LINE-SUPPORT group **X195F**
*195F1F is assembled with 195F2 to 195F5 inclusive. Order by complete symbol X195F.

196F—Line-support Pusher ..... 196F1F *
guide 196F2
" rivet ..... 7192.. 196F3
LINE-SUPPORT PUSHER group **X196F**
*196F1F is assembled with 196F2 and 196F3. Order by complete symbol X196F.

212F—Line-support Chain b212F1
cotter ..... 97.. a212F3
LINE-SUPPORT CHAIN group **Xb212F**

217F—Line-support-pusher Catch 217F1
screw 217F2
slide 217F3
" guide 217F4
" screw (2) ..... 2251.. 217F5
" spring ..... 6293.. 217F6
LINE-SUPPORT-PUSHER CATCH group **X217F**

218F—Trip (repeater) 218F1
carriage ..... 218F2F *
" clamp screw 218F3
" " " nut 218F4
" gage 218F8
" " clamp screw 218F9
" " " " nut 218F10
pin ..... 7224.. 218F5
spring 218F6
" post ..... 8357.. 218F7
TRIP group **X218F**
*218F2F is assembled with 218F1, 218F5 and 218F7.

219F—Trip-gage Bar (repeater) ..... 219F1F *
hinge (front, also valve tappet) 219F2
" bracket ..... 219F3F †
" " pin 219F4
" " screw (2) ..... 246.. 219F5
" rivet (2) ..... 7226.. 219F6
" (rear) 219F7
" bracket ..... 219F8F ‡
" " pin 219F11
" " screw (2) ..... 247.. 219F9
" rivet (2) ..... 7226.. 219F12
valve tappet cover 219F10
TRIP-GAGE BAR group **X219F**
*219F1F is assembled with 219F2, 219F6, 219F7 and 219F12.
†219F3F is assembled with 219F4.
‡219F8F is assembled with 219F11.

220F—Valve (repeater release) 220F1
body ..... 220F2F *
" connector (for pipe) (2) 220F11
" bracket 220F3
" " packing piece 220F4
" " screw (to galley stand) (2) .. 220F5
" plug (large) 220F6
" " (small) ..... 2371.. 220F7
" screw (2) ..... 236.. 220F8
bushing 220F9
spring 220F10
VALVE group **X220F**
*220F2F is assembled with 220F1, 220F3, 220F6 to 220F11.

7G—Air-pipe Cover (right) a7G2

8G-Air-pipe Cover (left) ..... a8G5G *
guide (for winding spool) 8G2
" rivet (4) ..... 780.. 8G3
AIR-PIPE COVER group **Xa8G5**
a8G5G is assembled with 8G2 and 8G3. Order by complete symbol Xa8G5.

13G—Paper Feed Pawl (locking) (upper) 13G1
operating link 13G3
" " pin ..... 857.. 13G4
" " bushing 13G5
(feeding lower) 13G6
" connecting link (2) 13G7
" " " rivet (2) 13G8
" spring post ..... 872.. 13G9
spring ..... 6299.. a13G10
arm (part No. 1) ..... a13G12G *
" rivet ..... 7174.. 13G18
" (part No. 2) 13G13
" adjusting screw (2) ..... 2185.. 13G14
" " " nut (2) ..... 33.. 13G15
" screw (2) ..... 2167.. 13G16
hub a13G11
PAPER FEED PAWL group **Xa13G**
*a13G12G is assembled with a13G11, 13G1 and a13G18.

14G—Paper-feed-pawl Ring ..... a14G5G *
arm 14G6
" rivet (2) ..... 7276.. a14G7
pin (stop for 13G6) 14G1
PAPER-FEED-PAWL RING group **Xa14G5**
*a14G5G is assembled with 14G6, a14G7 and 14G1 order by complete symbol Xa14G5.

19G—Paper-tower Lever ..... a19G5G *
pin (eccentric) a19G6
lock nut ..... 387.. a19G7
PAPER-TOWER LEVER group **Xa19G5**
*a19G5G is assembled with a19G6 and a19G7. Order by complete symbol Xa19G5.

27G—Patent Plate 27G1
screw (4) ..... 251.. 27G2
PATENT PLATE group **X27G**

28G—Control Box (repeater paper feed) .. 28G1G *
screw (long to piston block) ..... 2370.. 28G2
" (short to air tower housing) 2225.. 28G3
cover (bottom) 28G4
" connector (for pipe) (3) 28G19
" plug (2) ..... 2239.. 28G5
" screw (3) ..... 238.. 28G6

28G—Control Box (repeater paper feed) (continued)

cover (top) 28G7
" screw (2) ..... 237.. 28G8
lever 28G9
" adjusting screw 28G10
" pin ..... 7268.. 28G11
" screw ..... 236.. 28G12
piston (feed) (upper) 28G13
" " (lower) 28G20
" (lock) ..... 28G14G †
" end 28G18
plunger (friction pressure on 28G9) .7277 28G15
" spring 28G16
" " screw (2) ..... 249.. 28G17
CONTROL BOX group **X28G**
*a28G1G is assembled with 28G4 to 28G13, 28G14G, 28G15 to 28G17, 28G19 and 28G20.
†28G14G is assembled with 28G18.

29G—Control Plate (quadding) (inner) .. 29G29
rivet (to shaft) (2) ..... 725.. 29G30
(outer) ..... 29G31G *
hub 29G32
" spring ..... 6294.. 29G33
locating pin 29G34
stop pin 29G35
ratchet wheel 29G1
" " detent spring a29G2
" " " " screw 2251.. 29G3
" " pawl 29G4
" " " lever a29G5
" " " " pin (in shaft bracket) 29G6
ratchet wheel pawl lever pin cotter .97.. 29G7
" " " " " washer .420.. 29G8
" " " " piston a29G9
" " " " " block a29G10
pipe connector 29G26
" " " " " " screw 233.. 29G11
" " rocking plate ..... 29G12G †
" " " " boss 29G13
" " " " link 29G14
" " " " pin (long) (for pawl) 29G15
" " " " " cotter .97 29G16
" " " " " spring washer 29G17
" " " " " washer 420 29G18
" " " " " (short) (for link) 29G19
ratchet wheel rocking plate pin cotter 97 29G20
" " " " " washer 420 29G21
" " taper pin ..... 555.. 29G22
shaft ..... 29G23G ‡
" bracket ..... 29G24G §
" " boss 29G25
" collar 29G27
" " taper pin ..... 555.. 29G28
CONTROL PLATE group **X29G**
†29G12G is assembled with 29G13, 29G15 and 29G19.
‡29G23G is assembled with 29G1, 29G22, 29G27, 29G28, 29G29 and 29G30.
§29G24G is assembled with 29G6, and 29G25.
*29G31G is assembled with 29G32, 29G34 and 29G35.

(ATTACHMENT 30CU)

Extended Matrix Case (1517)

Provides a Matrix Case of Increased Capacity

NOTE: This attachment cannot be applied outside the factory.

8A—Matrix Case ..... b8A10A *
bar a8A11
comb (13) a8A12
cover plate b8A13
" " screws (4) ..... 2375.. a8A15
shoe (2) a8A5
" rivet (16) ..... 7171.. a8A6
spacing comb (right and left) (side) (2) .. a8A14
" " (front and rear) (end) (2) . a8A9
MATRIX CASE group **Xb8A10**
*B8A10A is assembled with a8A5, a8A6, a8A9, b8A10 to A8A15 inclusive. Order by complete symbol Xb8A10.

1C—Air Pin (16) 1C
spring (16) ..... 69.. 1C1
AIR PIN group (16) **X1C**

2C—Air Pin (fixed, stop for front row) .. a2C
spring ..... 6119.. a2C1
AIR PIN group **Xa2C**

3C—Air-pin Block ..... a3C12 *
screw ..... **2373** .. a3C13
" (5/16"x1 5/8") (2) ..... **212** .. 3C4
" (5/16"x2 1/2") (2) ..... **211** .. 3C5
" (1/4"x5/8") (2) ..... **223** .. 3C6
stop pin a3C14
dowel (No. 6x2 1/2") ..... **51** .. 3C1
" (No. 6x2") ..... **52** .. 3C2
" (No. 5x1 1/4") ..... **56** .. 3C3
spring post ..... **896** .. b3C7
AIR-PIN BLOCK group **Xa3C12**
*This Air-pin Block cannot be applied outside of our factory.

4C—Air-pin Plate b4C3
dowel (2) ..... **56** .. 4C1
screw (4) ..... **223** .. 4C2
AIR-PIN PLATE group **Xb4C3**

8C—Matrix-jaw (front) b8C4

9C—Matrix-jaw (rear) a9C4

10C—Matrix-jaw Stop a10C3
rivet (2) ..... **7224** .. a10C1
MATRIX-JAW STOP group **Xa10C3**

12C—Matrix-jaw Stop Rack (solid) b12C18

18C—Pin-jaw (front) ..... a18C5C *
stud (for XA56E18) ..... **835** .. 18C1
" nut ..... **35** .. 18C2
" " washer ..... **417** .. 18C3
PIN-JAW group **Xa18C5C**
*a18C5C is assembled with 18C1.

40C—Control Valve 40C1
box ..... 40C2C *
" screw (long) (to pin block) (2) 40C3
" " (short) (to pin block) 40C4
cover (top) 40C5
" screw (2) ..... **247** .. 40C6
guide pin (3/32"x1/2") ..... **7224** .. 40C7
locking plunger 40C8
" " head 40C9
" " spring 40C10
" " rivet (1/16"x11/16") 40C11
plug (bottom) 40C12
" screw (4) ..... **2239** .. 40C13
spring ..... **6295** .. 40C14
CONTROL VALVE group **X40C**
*40C2C is assembled with 40C1, 40C5 to 40C14 inclusive.

36E—Main Stand a36E51
plug screw (3) ..... **2239** .. 36E60
bolt (1/2"x3 1/2") ..... **11** .. 36E34
" nut ..... **327** .. 36E35
" (7/16"x3 1/2") ..... **12** .. 36E36
" (7/16"x2") (3) ..... **13** .. 36E37
" nut (4) ..... **322** .. 36E38
bushing (2) a36E39
taper plug ..... **552** .. b36E52
" " a36E53
MAIN STAND group (including air pipes) **Xa36E51**
*Pipe size .166 properly annealed and suitable for repairs will be furnished in lengths of not less than one foot.

38E—Matrix-jaw Tongs (rear) *
connecting link b38E1
" " pin (2) 38E6
lever (lower) (2) a38E17
" (upper) (2) a38E18
" distance piece (2) a38E8
link (center) (2) 38E9
" pin (center) (2) 38E10
fulcrum pin (2) a38E13
" " ring (2) a38E14
lock slide (2) a38E15
" " spring (2) a38E16
MATRIX-JAW TONGS group Xa38E17
*We cannot furnish separate parts of these Tongs except the Lock Slide a38E15 and Spring a38E16.

56E—Pin-jaw Tongs (rear)
connecting eye ..... 56E1 *
" " (L.H.) 56E2
" " adjusting stud ..... **842** .. 56E3
" " " " lock nut **35** 56E4
" " " " " "
(L. H.) .. **36** .. 56E5
pin (2) 56E6
lever (front) a56E18
" (rear) a56E19
" bushing (end) (2) 56E9
" " (center) (2) 56E10
" " washer (end) (4) 56E11
" " " (center) (2) 56E12

56E—Pin-Jaw Tongs (rear) (continued)
link (3) 56E13
" bushing (stud end) (2) 56E14
" fulcrum pin (2) ..... **766** .. 56E15
" (lower link at center of 56E19) 56E16
spring post (in 56E19) ..... **833** .. 56E17
PIN-JAW TONGS group **Xa56E18**
*We cannot furnish separate parts of these Tongs except the Adjusting Stud 56E3, Lock Nut 56E4, Lock Nut 56E5 and Spring Post 56E17.

57E—Pin-jaw-tongs Spring (inner) **6298** a57E9
(outer) ..... **6297** .. a57E10
guide tube 57E2
" " eye 57E3
" " nut 57E4
" " spring sleeve 57E5
" rod 57E6
" " spring plate 57E7
" " " " rivet ..... **7161** .. 57E8
PIN-JAW-TONGS SPRING group **Xa57E9**

Electric Melting Pot

Object: To use electricity for heating the metal in the Melting Pot.

Electric Melting Pot—3000 watts, (1948 style) complete with Partlow temperature control and Control Box for automatic temperature control. Furnished for 125 or 250 volts, direct or alternating current and any standard cycles up to 60 inclusive as specified by the purchaser. (60 cycle in stock, lower cycles to order). When ordering complete Pots or renewal parts ALWAYS GIVE COMPLETE ELECTRICAL SPECIFICATIONS.

12H—Melting Pot (3000 watts) ..... b12H12HH *
casing c12H13
" plate a12H14
" " screw (8) ..... **2203** .. a12H15
" screw (right) 12H8
" stud (2) a12H9
" " nut (2) ..... **310** .. a12H10
" " washer (2) ..... **410** .. a12H11
" bracket a12H18
" " screw (2) ..... **216** .. a12H19
" " dowel (2) ..... **58** .. a12H20
screw (4) ..... **2198** .. a12H25
heating unit (right) ..... a12H40H †
" " (left) ..... a12H41H ‡
" " support (2) a12H42
" " " screw (2) .. **D2652** .. a12H43
" " clamp (2) a12H44
" " " screw (4) .... **D2655** .. a12H45
heating unit terminal box b12H46
" " " " cover (front) .. a12H47
" " " " " screw (4)
.. **D2554** .. a12H48
" " " " " (back) .. a12H49
" " " " " screw (4)
.. **D2554** .. a12H50
" " " " screw(base) **172** a12H51
" " " " " " **121** a12H52
" " " " " lock
washer (2) **485** a12H53
" " support bracket (in a12H46) a12H54
" " " " screw (2) ..
.. **D2554** .. a12H55
name plate a12H56
" " screw (2) ..... **251** .. a12H57
temperature control bulb socket a12H58
" " " " screw
.. **D2550** .. a12H59
control box ..... a12H60H §
" " screw (to a12H62) (2) **D2515** a12H61
" " bracket a12H62
" " " set screw .... **D1125** .. a12H63
connector (angle 3/4") (2) a12H64
conduit a12H65
wire a12H66
asbestos rope gasket a12H23
insulating powder a12H67
glue a12H68
asbestos paper a12H69
*b12H12HH is assembled with 12H8 to a12H15, a12H18 to a12H20, a12H25, a12H40H to a12H59, a12H64 to a12H69.
†a12H40H is assembled with a12H42 to a12H45 inclusive, a12H58 and a12H59.
‡a12H41H is assembled with a12H42 to a12H45 inclusive.
§a12H60H is assembled with a12H61 to a12H63 inclusive.

12H—Melting Pot (3000 watts) (continued)
Partlow temperature control ..... 72L *
mounting bracket a72L2
" " screw (2) ..... **2198** .. 72L8
" " set screw ..... **2384** .. 72L6
" " " " wrench .. **8305**
mercury element (30") 72L11
*We can supply the mercury element. For any other repairs on the Partlow temperature control contact The Partlow Corp., 2 Campion Road, New Hartford, New York.

Renewal Parts For Control Box — Cutler Hammer No.
contactor (4 pole) size 1 (25 amps.) ....
for AC controller (item 2) C84-3387
for DC controller (item 16) C84-3387
stationary contacts (8) 21-368
movable contacts (4) 4221-4
heat insulator (4) 56-907
movable contact springs (4) 69-194
copper strip (DC only) 1319-64
shunt (DC only) 919-2017

Coil
for 125 volts 25 cycles AC 9-464-17
" " " 50 " " 9-464-5
" " " 60 " " 9-464-1
" 250 " 25 " " 9-464-18
" " " 50 " " 9-464-6
" " " 60 " 9-464-2
" 125 " DC 9-498-5
250 " " 9-498-6

Resistance Units
for 125 volts 25 cycles (E-H resis.) 57-377-6
" " " 50 " " " 57-377-6
" " " 60 " " " 57-377-6
" 250 " 25 " " " 57-377-7
" " " 50 " " " 57-377-7
" " " 60 " " " 57-377-7
" 125 " DC " (A-C " 57-377-9
" " " " " (E-H " 57-377-7
" 250 " " " (A-C " 57-377-15
" " " " " (E-H " 57-377-9

Note: Machines from 1935 to 1948 were equipped with a combination control panel and dynamic thermometer and the b12H12HH Melting Pot. When ordering renewal parts ALWAYS GIVE COMPLETE ELECTRICAL SPECIFICATIONS.

Renewal parts for this combination control panel are as follows:

Dynamic Thermometer — Cutler Hammer No.
operating coil 28-82
adjustable contact screw (2) 23-1032
contact clip 23-1033
terminal block (2) 17-647
" bracket 79-520
block 17-643
terminal screw (3) 811-7250
clamping screw (2) 911-3812F1
adjusting screw 11-360
bearing plate 20-125
post 18-212
bearing block assembly 41-103-2
hair pin pointer 69-391
spring 969-1206J
spring 969-464
toggle switch 61533-4

Contactor No. 531
(Electric pot 1935 to 1938 used contactor No. 366. This has been discontinued.)
for AC 10-453-8
for DC 10-453-11
stationary contacts (8) 21-368
movable contacts (4) 4221-4
heat insulator (4) 56-907
movable contact spring (4) 69-194
copper strip (DC only) 1319-64
shunt (DC only) 916-2017

Coils for No. 366 or 531 Contactor
125 volt 25 cycle AC (A-B) 9-464-17
" " 50 " " " 9-464-5
" " 60 " " " 9-464-1
250 " 25 " " " 9-464-18
" " 50 " " " 9-464-6
" " 60 " " " 9-464-2
125 " DC " 9-498-2
250 " " " 9-498-3

Relay No. 508
for AC 10-286-4
for DC 10-286-14

Coil

125 volt 25 cycle AC	9-642-30
" " 50 " "	9-642-16
" " 60 " "	9-642-16
250 " 25 " "	9-642-29
" " 50 " "	9-642-35
" " 60 " "	9-642-35
125 " DC	9-642-19
250 " "	9-642-23
Resistance unit (used on all controllers) A-B	
125 volt 25 cycle AC	57-180
250 " " " "	57-185
125 " 50 " "	57-177
250 " " " "	57-183
125 " 60 " "	57-176
250 " " " "	57-181
125 " DC	57-180
250 " DC	57-185
Resistance unit (used on DC controller only) C-D.	
125 volt DC	57-175
250 " "	57-178
Resistance unit (used on DC controller only) E-F.	
125 volt DC	57-179
250 " "	57-180

NOTE: Machines prior to 1935 were equipped with the 1922 style ELECTRIC MELTING POT. This style POT is no longer furnished. Repair parts for this style POT will be furnished as long as available. The 1948 style POT can be applied in place of the 1922 style POT without any other change.

MOLD INFORMATION

Composition Molds

Style 3E—4 to 12 point.

Style 3EA—For casting faces 12-point or smaller on bodies 13 or 14 point.

Style 3EH—For casting and composing type from 5 to 12 point with quads and spaces .851″ or .853″ high as specified, for use in mounting cuts directly on quads.

Style 2FC, Short Type—For casting short type on 12 point body from Cellular Matrices, either in composition or as sorts.

Style 3EN—In 14 and 18 point sizes, for use with new style 14 and 18 point composition fonts of .030″ drive .2″ x .4″ and .4″ x .4″. Machine must be equipped with Display Type Attachment and 14 and 18 point Composition Attachment.

Sort Casting Molds

Style FD, Short Type Casting—For casting short type from flat Display Matrices on 18 point body only.

Style T—With blades for 12, 14 and 18 point (other point size blades special).

Style U—With blades for 24, 30 and 36 point (other point size blades special).

Style 2T—Single point size 12 to 22 point.

Style 2U—Single point size 24 to 36 point.

Style 3U—30 and 36 point sizes for casting cored type and high quads and spaces only (requires Cored-Mold Attachment).

Style 4U—Made only in 24-point size. Casts cored type and high quads and spaces only (operates with standard Display Type Attachment and does not require the special Cored Mold Operating Equipment).

Lead and Rule Molds

For use with Lead and Rule Attachment

Style 2R—1½ to 12 point.

Style 2RA—12 point only, tie-up slug, depth of slot .050″.

Style 2RB—Standard point size 6 point, other point sizes to order, column rule.

Mold Repairs

It is not possible for operators to repair MOLDS for they have neither the special tools nor necessary training.

If any defects occur in the product produced by a MOLD that cannot be corrected by following the directions folder, the complete MOLD should be at once returned to us with samples of the defective product; enclose these in the box with the MOLD and all of its parts, prepay express charges and write us stating (a) point size, style, and number of MOLD; (b) date of shipment and route; (c) details of trouble.

Names and Symbols of Parts of the Style 3E Mold

*NOTE: Only the parts indicated by an asterisk (*) can be applied without returning the MOLD to our factory.

(See also special note following coupling 1MB3E2 and gate pusher 4MB3E1).

BASE PLATE		1MA3E1	
bushing (2)		1MA3E2	
" (for 6MA3E3) (2)		1MA3E4	
BASE PLATE FRONT ABUTMENT		2MA3E1	*
adjusting screw (left, blunt)	2226	2MA3E2	*
" " (right, pointed)	2227	2MA3E3	*
" " lock nut (2)	386	2MA3E4	*
screw (3)	223	2MA3E5	*
BASE-PLATE-FRONT-ABUTMENT NUMBER PLATE		3MA3E1	
screw (2)	251	3MA3E2	*
BASE-PLATE-FRONT-ABUTMENT SHOE		5MA3E1	*
BASE-PLATE-GATE-PUSHER CAM		6MA3E1	
screw (2)	2166	6MA3E2	*
dowel (2)	7104	6MA3E3	*
CROSS BLOCK		1MB3E1	
coupling		1MB3E2	†
" screw	2165	1MB3E3	*
dowel (to 3MB3E1)		1MB3E4	
screw (to adjust 2MB3E1)	2167	1MB3E5	*

†NOTE: The old COUPLING or all broken parts of it must be returned for duplication.

CROSS-BLOCK GATE BLOCK (right)		2MB3E1	
screw (front) (2)	236	2MB3E2	*
" (top) (2)	2228	2MB3E3	*
CROSS-BLOCK GATE BLOCK (left)		3MB3E1	
oil pad (felt)		3MB3E2	*
screw (front) (2)	236	3MB3E3	*
" (top) (2)	2228	3MB3E4	*
CROSS-BLOCK GATE PUSHER		4MB3E1	†

†NOTE: The old GATE PUSHER or all broken parts of it must be returned for duplication.

MOLD BLADE (lower) (give point size)		1MC3E1	
MOLD BLADE (upper) (give point size)		2MC3E1	
carrier		2MC3E2	
" spring pin	895	2MC3E4	*
" latch		2MC3E5	*
" " fulcrum pin		2MC3E6	*
" " spring	6213	2MC3E7	*‡
" " " eye (2)		2MC3E14	*
" lever		2MC3E12	*
" " fulcrum pin		2MC3E13	*
" pin (stop for 2MC3E5)		2MC3E15	

‡NOTE: If SPRING 2MC3E7 is wanted assembled with its two EYES 2MC3E14 order as SPRING a2MC3E7M.

MOLD-BLADE-CARRIER GUIDE BLOCK		3MC3E1	*
screw	2166	3MC3E2	*
" washer	440	3MC3E3	*
MOLD-BLADE STOP		7MC3E1	
screw (2)	2166	7MC3E3	*
" washer (2)	440	7MC3E4	*
MOLD-BLADE TOP GUIDE		8MC3E1	
screw (2)	2208	8MC3E2	*
MOLD-BLADE SHOE (for 1MC3E1)		9MC3E1	
screw	2208	9MC3E2	*
MOLD-BLADE SHOE (for 2MC3E1)		10MC3E1	
screw (4)	2208	10MC3E2	*
MOLD-BLADE GUIDE (left)		18MC3E1	*
screw	2208	18MC3E2	*
TYPE BLOCK (right)		1MD3E1	
oil pad (felt)		1MD3E5	*
plug screw (brass)	2235	1MD3E7	*
" " (brass)	2239	1MD3E8	*
screw (bottom, from 1MA3E1) (2)	2230	1MD3E11	*
" (rear, from 9MD3E1) (2)	2229	1MD3E12	*
" (right, to 9MD3E1)	237	1MD3E13	*
TYPE BLOCK (left) (specify point size)		a2MD3E1	
plug screw	2239	2MD3E6	*
screw (bottom, from 1MA3E1)	2230	2MD3E7	*
" (rear, from 9MC3E1)	2229	2MD3E9	*
" (right, to 9MD3E1)	237	2MD3E32	*
TYPE-BLOCK GATE KNOCK OFF		6MD3E1	*
screw (2)	260	6MD3E2	*
TYPE-BLOCK SQUARING PLATE		9MD3E1	
plug screw (3)	2235	9MD3E6	*
" "	2239	9MD3E7	*
screw (to 1MA3E1) (5)	2161	9MD3E8	*

Names and Symbols of Parts of the Style 2E Mold

(The manufacture of Style 2E MOLDS has been discontinued, parts will be furnished as long as available.

*NOTE: Only the parts indicated by an asterisk (*) can be applied without returning the MOLD to our factory.

(See also special note following COUPLING 1MB2E2 and GATE PUSHER 4MB2E1.)

BASE PLATE		b1MA2E1	
bushing (2)		a1MA2E2	
" (for 6MA2E3) (2)		1MA2E4	
BASE-PLATE FRONT ABUTMENT		2MA2E1	*
adjusting screw (left, blunt)	2226	2MA2E2	*
" " (right, pointed)	2227	2MA2E3	*
" " lock nut (2)	386	2MA2E4	*
screw (3)	223	2MA2E5	*
BASE-PLATE-FRONT-ABUTMENT NUMBER PLATE		3MA2E1	
screw (2)	251	3MA2E2	*
BASE-PLATE-FRONT-ABUTMENT SHOE		5MA2E1	*
BASE-PLATE-GATE-PUSHER CAM		6MA2E1	
screw (2)	2166	6MA2E2	*
dowel (2)	7104	6MA2E3	*
CROSS BLOCK		1MB2E1	
coupling		1MB2E2	†
" screw	2165	1MB2E3	*
dowel (to 3MB2E1)		1MB2E4	
screw (to adjust 2MB2E1)	2167	1MB2E5	*

†NOTE: If the CROSS-BLOCK COUPLING 1MB2E2 be broken, this part can be replaced by returning to us the pieces of the COUPLING, provided these are in such condition that the required measurements can be obtained from them.

CROSS-BLOCK GATE BLOCK (right)		2MB2E1	
screw (front) (2)	236	2MB2E2	*
" (top) (2)	2228	2MB2E3	*
CROSS-BLOCK GATE BLOCK (left)		3MB2E1	
oil pad (felt)		3MB2E2	*
screw (front) (2)	236	3MB2E3	
" (top) (2)	2228	3MB2E4	
CROSS-BLOCK GATE PUSHER		4MB2E1	†

†NOTE: The old GATE PUSHER or all broken parts of it must be returned for duplication.

MOLD BLADE (lower) (give point size)		1MC2E1	
MOLD BLADE (upper) (give point size)		2MC2E1	
carrier		d2MC2E2	
" spring pin	895	2MC2E4	*
" latch		2MC2E5	*
" fulcrum pin		2MC2E6	*
" " spring	6213	a2MC2E7	*§
" " " eye (2)		a2MC2E14	*
" lever		2MC2E12	*
" " fulcrum pin		a2MC2E13	*
" pin (stop for 2MC2E5)		a2MC2E15	

§NOTE: If SPRING a2MCE7 is wanted assembled with its two EYES a2MC2E14 order SPRING a2MC2E7M.

MOLD-BLADE-CARRIER GUIDE BLOCK		3MC2E1	*
screw	2166	3MC2E2	*
" washer	440	3MC2E3	*
MOLD-BLADE STOP		7MC2E1	
screw (2)	2166	7MC2E3	*
" washer (2)	440	7MC2E4	*
MOLD-BLADE TOP GUIDE		8MC2E1	
screw (2)	2208	8MC2E2	*
MOLD-BLADE SHOE (for 1MC2E1)		9MC2E1	
screw	2208	9MC2E2	*
MOLD-BLADE SHOE (for 2MC2E1)		10MC2E1	
screw (3)	2208	10MC2E2	*
TYPE BLOCK (right)		1MD2E1	
nick pin		1MD2E3	
" " plug		1MD2E4	
oil pad (felt)		1MD2E5	*
plug screw (brass)	2235	1MD2E7	*
" " "	2239	1MD2E8	*
screw (from a1MA2E1) (short) (3)	2230	1MD2E11	
" (from a9MD2E1) (2)	2231	1MD2E12	
" (from a1MA2E1) (long)	2229	1MD2E13	
" washer	441	1MD2E14	
TYPE BLOCK (left) (5 to 8 pt.)		c2MD2E1	
(left) (9 to 12 pt.)		c2MD2E2	
plug screw (2)	2239	2MD2E6	*
screw (from a1MA2E1) (short)	2230	2MD2E7	
" (from a9MD2E1)	2231	2MD2E9	
" (from a1MA2E1) (long)	2229	2MD2E11	
" washer	441	2MD2E12	
dowel	57	2MD2E26	
TYPE-BLOCK GATE KNOCK OFF		6MD2E1	
screw (2)	260	6MD2E2	
TYPE-BLOCK SQUARING PLATE		b9MD2E1	
plug screw (2)	2235	9MD2E6	*
screw (to a1MA2E1) (2)	2161	9MD2E8	

Names and Symbols of Parts of the Styles T, 2T, U, 2U, 3U and 4U Molds

When ordering be sure to specify style of MOLD.

The symbols here given are for the T MOLD.

All parts which can be furnished for applying to a MOLD outside our factory are designated by an asterisk (*) following the symbol. (See also special note following CROSS-BLOCK COUPLING 1MB1T2, MOLD-BLADE STOP 7MC1T1 and GATE PUSHER 4MB1T1).

		For U Molds change letter T to Letter U.
BASE-PLATE	a1MA1T1	
bushing (short)	a1MA1T2	
" (long)	a1MA1T3	
BASE-PLATE FRONT ABUTMENT	2MA1T1	*
adjusting screw (left, blunt)	2157.. 2MA1T2	*
" " (right, pointed)	2193.. 2MA1T3	*
" " lock nut (2)	386.. 2MA1T4	*
screw (3)	221.. 2MA1T5	*
BASE-PLATE-FRONT-ABUTMENT NUMBER PLATE	3MA1T1	
screw (2)	251.. 3MA1T2	*
BASE-PLATE-FRONT-ABUTMENT PACKING BLOCK	4MA1T1	
BASE-PLATE-FRONT-ABUTMENT SHOE	5MA1T1	*
BASE-PLATE-GATE-PUSHER CAM	6MA1T1	*
screw (3)	2355.. 6MA1T2	*
CROSS BLOCK	1MB1T1	
coupling	1MB1T2	†
coupling screw	2165.. 1MB1T3	*
dowel (to 3MB1T1)	1MB1T4	
screw (to adjust 2MB1T1)	2167.. 1MB1T5	*

†NOTE: If the CROSS-BLOCK COUPLING 1MB1T2 (or 1MB1U2) be broken this part can be replaced by returning to us the broken pieces of the COUPLING, provided these broken pieces are in such condition that the required measurements can be obtained from them.

CROSS-BLOCK GATE BLOCK (right)	2MB1T1	
screw (4)	236.. 2MB1T2	*
CROSS-BLOCK GATE BLOCK (left)	3MB1T1	
oil pad (felt)	3MB1T2	*
screw (4)	236.. 3MB1T3	*
CROSS-BLOCK GATE PUSHER	4MB1T1	†

†NOTE: The old GATE PUSHER or all broken parts of it must be returned for duplication.

MOLD-BLADE (bottom) (give point-size)	a1MC1T1	
MOLD BLADE (top) (give point-size)	2MC1T1	
MOLD-BLADE POINT BLOCK (give point-size)	a5MC1T1	
MOLD-BLADE SHIELD	6MC1T1	
screw (2)	2208.. 6MC1T2	*
MOLD-BLADE STOP	7MC1T1	‡
screw (2)	246.. 7MC1T3	*

‡NOTE: If the MOLD-BLADE STOP 7MC1T1 (or 7MC1U1) be broken, this part can be replaced by returning to us the broken pieces of the STOP, provided these broken pieces are in such condition that the required measurements can be obtained from them.

MOLD-BLADE TOP GUIDE (designate point-size of MOLD BLADE)	8MC1T1	
screw (2)	2220.. 8MC1T2	*
MOLD-BLADE LEVER (lower)	12MC1T1	*
(upper)	12MC1T2	*
spring	6152.. 12MC1T3	*
" box	12MC1T4	*
" " pin	12MC1T5	*
" " plug	12MC1T6	*
MOLD-BLADE-LEVER FULCRUM STUD	13MC1T1	*
MOLD-BLADE-LEVER-SPRING-BOX PLATE	14MC1T1	*
screw (2)	247.. 14MC1T2	*
TYPE BLOCK (right)	a1MD1T1	
bushing (2)	1MD1T16	
oil pad	1MD1T5	*
plug screw (3)	2239.. 1MD1T7	*
" " (5)	2235.. 1MD1T8	*
pin (for 3MD1T1)	1MD1T9	*
screw (to 9MD1T1, short)	1MD1T10	*
" (from 1MA1T1, short) (2)	2162.. 1MD1T11	*
" (from 9MD1T1, long)	231.. 1MD1T12	*
" (from 1MA1T1, long)	231.. 1MD1T13	*
" washer (4)	435.. 1MD1T14	*
TYPE BLOCK (left)	a2MD1T1	
plug screw (3)	2239.. 2MD1T6	*
screw (from 1MA1T1) (3)	2162.. 2MD1T7	*
" (from 9MD1T1, rear)	231.. 2MD1T9	*
" washer	435.. a2MD1T24	*
nick pin	2MD1T18	
" " plug	2MD1T19	
TYPE-BLOCK CLAMP BOLT	3MD1T1	*
nut	31.. 3MD1T2	*
spring	6155.. 3MD1T3	*
washer	436.. 3MD1T4	*
TYPE-BLOCK CLAMP-BOLT SCREW	4MD1T1	*
TYPE-BLOCK SQUARING PLATE	9MD1T1	

Styles T, 2T, U, 2U, 3U and 4U Molds (continued)

adjusting screw (6)	2159.. 9MD1T2	
bushing (¼ long)	9MD1T4	
" (⅛ long)	9MD1T9	
" (2)	9MD1T10	
plug screw (3)	2235.. 9MD1T6	*
screw (2) (from 1MA1T1)	2161.. 9MD1T8	

Names and Symbols of Parts of the Continuous Strip Molds

This list applies to Style R, RA, RB, 2R, 2RA, and 2RB MOLDS shipped after 1918—the improved parts which differ from the R MOLD being listed at the end of this section.

All parts which can be furnished for applying to a MOLD outside our factory are designated by an asterisk (*) (see also special note following MOLD-BLADE CAP a11MC1R1).

BASE PLATE	b1MA1R1	
bushing (2)	a1MA1R2	
plug screw (4)	2235.. 1MA1R5	*
NUMBER PLATE	3MA1R1	*
screw (2)	251.. 3MA1R2	*
CLAMP SCREW	a7MA1R1	*
bushing	a7MA1R2	
lever	a7MA1R3	*
" lock nut	324.. 7MA1R5	*
pressure disc	a7MA1R12	
" " key	a7MA1R13	
FRICTION BLOCK	a9MA1R1	
clamp	a9MA1R2	
" release screw	a9MA2R4	*
" " " nut	a9MA2R14	*
" " " washer	435.. a9MA1R5	*
" spring	6228.. 9MA1R6	*
plug screw	a9MA1R3	
screw (2)	2168.. 9MA1R7	*
" washer (2)	438.. 9MA1R8	*
trimmer	a9MA1R9	*
" packing plate (give point-size)	a9MA1R10	*
" screw (2)	232.. a9MA1R11	*
TIE BAR (left)	a10MA1R1	
screw (2)	2224.. a10MA1R2	*
TIE BAR (right)	11MA1R1	*†
screw (2)	2213.. 11MA1R2	*
†For 1½-point "R" MOLDS.		
TIE BAR (right)	a11MA1R3	

MOLD BLADE (high, give point-size and height)	a1MC1R1	†
MOLD BLADE (low, give point-size and height)	a2MC1R1	
†For Style RA MOLDS.		
MOLD BLADE (give point-size and height)	1MC1RA1	

MOLD-BLADE CAP (give height of lead and point-size)	a11MC1R1	†‡
support	a11MC1R2	
‡For Style RB MOLDS.		
MOLD-BLADE CAP (give height of lead and point size)	11MC1RB1	†

†NOTE: If the MOLD-BLADE CAP used in casting low leads, be broken, this part can be replaced by returning to us the broken pieces of the CAP together with MOLD-BLADE-CAP SUPPORT, provided these broken pieces are in such condition that the required measurements can be obtained from them.

MOLD-BLADE POINT BLOCK (lower)	5MC1R1	
(upper)	a5MC1R2	
bushing (in a5MC1R2)	a5MC1R3	
MOLD-BLADE STOP	7MC1R1	
screw (2)	236.. 7MC1R2	*
MOLD-BLADE SHOE (2)	9MC1R1	
screw (4)	243.. 9MC1R2	*
TYPE BLOCK (rear, large)	a1MD1R1	†‡§
bushing (2)	a1MD1R16	†
plug screw (5)	2239.. 1MD1R7	*
screw (to b1MA1R1, bottom)	2161.. 1MD1R11	*
" (from b1MA1R1, side) (2)	2168.. 1MD1R12	*
" (through 5MC1R1 and 2) (5)	2223.. 1MD1R15	*
" washer	435.. 1MD1R14	*
†For Style RA MOLDS.		
TYPE BLOCK (rear large)	b1MD1RA1	
bushing (2)	a1MD1RA16	
‡For Style RB MOLDS.		
TYPE BLOCK (rear, large)	a1MD1RB1	
§For 1½-point "R" MOLDS.		
TYPE BLOCK (rear)	a1MD1R17	

TYPE BLOCK (front, upper)	a2MD1R1	‡§
(front, lower)	a2MD1R13	‡§
plug screw (in a2MD1R1) (3)	2239.. 2MD1R5	*
" " (in a2MD1R13) (3)	2239.. 2MD1R14	*
screw (to b1MA1R1)	2161.. 2MD1R7	*

Continuous Strip Molds (continued)

bushing (in a2MD1R1) (2)	a2MD1R18	
" (in a2MD1R13) (2)	a2MD1R19	
screw (bottom) (2)	2166.. 2MD1R8	*
" (side) (4)	243.. 2MD1R9	*
" (top)	242.. 2MD1R15	*
" washer	435.. 2MD1R16	*
vent pusher	a2MD1R17	†

†NOTE: The old VENT PUSHER or all broken parts of it must be returned for duplication.

‡For 1½-point "R" MOLDS.		
TYPE BLOCK (front, upper)	a2MD1R20	
TYPE BLOCK (front, lower)	a2MD1R21	
§For Style RB MOLDS.		
TYPE BLOCK (front, upper)	a2MD1RB1	
TYPE BLOCK (front, lower)	a2MD1RB13	

TYPE-BLOCK MATRIX ABUTMENT	10MD1R1	†‡§
screw	233.. 10MD1R2	*
†For Style RA MOLDS.		
TYPE-BLOCK MATRIX ABUTMENT	a10MD1RA1	
‡For Style RB MOLDS.		
TYPE-BLOCK MATRIX ABUTMENT	10MD1RB1	
§For 1½-point "R" MOLDS.		
TYPE-BLOCK MATRIX ABUTMENT	a10MD1R4	

TYPE-BLOCK MATRIX CLAMP	11MD1R1	*†§
screw	2225.. a11MD1R2	*
sleeve	a11MD1R3	*
spring	6182.. a11MD1R4	*
" abutment (lower)	a11MD1R5	*
" " (upper)	438.. a11MD1R6	*
†For Style RB MOLDS		
TYPE-BLOCK MATRIX CLAMP	11MD1RB1	*
matrix packing piece (under Matrix) (specify point size opening wanted)	a11MD1RB7	*
packing piece (above Matrix)	a11MD1RB10	*

Style 1RB Molds prior to No. 452 were not equipped with PACKING PIECE a11MD1RB10, but had an extra CLAMP 11MD1R1 to be used only for leads below .888". This extra CLAMP may be discarded if PACKING PIECE a11MD1RB10 is ordered.

‡For 1½-point "R" MOLDS.		
TYPE-BLOCK MATRIX CLAMP	a11MD1R9	*

TYPE-BLOCK PACKING BLOCK (give point size)	12MD1R1	
TYPE-BLOCK SHIELD	a13MD1R1	*
For all 1½-point Style 1R Molds		
TYPE-BLOCK FACING	a14MD1R1	
TYPE-BLOCK FACING BUSHING	a14MD1R2	

The following new and improved parts in the 2R Molds differ from corresponding parts in R Molds.

BASE PLATE	b1MA2R1	
bushing	a1MA2R2	
nozzle seat	a1MA2R8	†
" " screw (2)	234.. 1MA2R9	*
" " " washer (2)	435.. 1MA2R14	*
bushing	1MA2R15	
NUMBER PLATE	3MA2R1	*
MOLD-BLADE POINT BLOCK (upper)	a5MC2R2	
bushing (2)	a5MC2R3	*
TYPE BLOCK (rear) (large)	a1MD2R1	
TYPE BLOCK (front) (upper)	a2MD2R1	
(front) (lower)	a2MD2R13	
plug screws (5)	2239.. 2MD2R14	*
bushing (front) (upper) (2)	2MD2R18	
" (front) (lower) (2)	a2MD2R19	*
TYPE BLOCK packing block	a12MD2R1	*
" " bushing (2)	a12MD2R2	*

†NOTE: This NOZZLE SEAT has an apron projecting through the BASE PLATE. To apply it to Style 2R MOLDS built prior to 12-22-27 (which were equipped with a flat NOZZLE SEAT 1MA2R8 and FILLER PIECE b1MA2R17) the MOLD must be returned to our factory.

Names and Symbols of Parts of the Style FC and FD Molds

The names in the following list are alike for both FC and FD MOLDS but the symbols differ; when ordering a part for a 2FC MOLD change the letters "FC" to "2FC" in the symbol, when ordering a part for the FD MOLD change the letters "FC" to "FD" in the symbol.

All parts which can be furnished for applying to a MOLD outside our factory are marked with an asterisk (*) (See also special note following CROSS-BLOCK COUPLING 1MB2FC2).

Style FC and FD Molds (continued)

For 2FC Molds change Letters FC to 2FC
For FD Molds change Letters FC to FD

Base Plate 1MAFC1
bushing (for water-ways) (2) a1MAFC2
" (for 6MAFC3) (2) 1MAFC4
Base-plate Front Abutment ..... 2MAFC1 *
adjusting screw (left, blunt) ..... 2226 .. 2MAFC2 *
" " (right, pointed) .. 2227 .. 2MAFC3 *
" " lock nut (2) ..... 386 .. 2MAFC4 *
screw (3) ..... 223 .. 2MAFC5 *
Base-plate-front-abutment Number Plate ..... 3MAFC1 *
screw (2) ..... 251 . 3MAFC2 *
Base-plate-front-abutment Shoe ..... 5MAFC1 *
Base-plate-gate-pusher Cam 6MAFC1
screw (2) ..... 2166 .. 6MAFC2 *
dowel (2) ..... 7104 .. 6MAFC3
Cross Block 1MBFC1
coupling ..... 1MBFC2 †
" screw ..... 2165 .. 1MBFC3 *
screw (4) ..... 2208 .. 1MBFC6

†If the Cross-block Coupling 1MBFC2 be broken, this part can be replaced by returning to us the pieces of the Coupling provided these are in such condition that the required measurements can be obtained from them.

Cross-block Gate Block (right) 2MBFC1
oil pad ..... 2MBFC6 *
plug screw (2) ..... 2239 .. 2MBFC5
screw (front) (2) ..... 2223 .. 2MBFC3 *
" (top) (2) ..... 2228 .. 2MBFC4 *
Cross-block Gate Block (left) 3MBFC1
dowel 3MBFC5
oil pad 3MBFC2
screw (front) (2) ..... 2223 .. 3MBFC3
" (top) (2) ..... 2228 .. 3MBFC4
Cross-block-gate-block Squaring Plate 5MBFC1
screw (to adjust 2MBFC1) ..... 2167 .. 5MBFC2 *
Cross-block Gate Pusher a4MBFC1
Mold Blade 1MCFC1
Mold-blade Guide (right) 15MCFC1
plug screw ..... 2239 .. 15MCFC6
screw (bottom) (2) ..... 2230 .. 15MCFC2
" (rear) ..... 2221 .. 15MCFC3
" (rear) ..... 2168 .. 15MCFC4
" (bottom) ..... 2162 .. 15MCFC5
Mold-blade Guide (left) 16MCFC1
screw (bottom) ..... 2230 .. 16MCFC2
" (rear) ..... 2221 .. 16MCFC3
" (bottom) ..... 2162 .. 16MCFC4
Mold-blade Shoe 9MCFC1
screw (2) ..... 237 .. 9MCFC2 *
Type Block (right) a1MDFC1
screw (3) ..... 237 .. 1MDFC12
Type Block (left) a2MDFC1
screw ..... 237 .. 2MDFC9
" ..... 2208 .. 2MDFC20
Type-block Squaring Plate a9MDFC1
plug screw (2) ..... 2235 .. 9MDFC6
plug screw (3) ..... 2239 .. 9MDFC7
screw (3) ..... 2231 .. 9MDFC8
" (2) ..... 2167 .. 9MDFC11
Line Standard ..... 1MEFC1 *

Miscellaneous Supplies

Pica Gage (20 picas) (2) 7L1
(10 picas) 7L2
(6 ") 7L3
(5 ") 7L4
(4 ") 7L5
(3 ") 7L6
(2 ") 7L7
(½ ") 7L8
board ..... 7L9L *

Miscellaneous Supplies (continued)

board hook (10) ..... 7L10 *
" screw eye ..... 7L11 *
squeeze standard (2 points) ..... 7L12L †
" " (1 1-2 points) ..... 7L13 †
" " (1 point) ..... 7L14 †
" " 1-2 (point) ..... 7L15 †
" " (.003") ..... 7L16 †
" " rivet ..... 7L17 †
" " " washer ..... 7L18 †
Pica Gage complete X7L

*7L9L is assembled with 7L10 and 7L11
†7L12L is assembled with 7L13 to 7L18 inclusive.

Skimmer, For Use At Metal Pot X8L
Pump Arm Drill 9L1
Boxes For Cellular Matrices (Pasteboard having metal partitions providing 225 compartments for .2" x .2") X10L
Line Standard (regular) 21L1
Screwdriver (4" x 1-8") 22L1
(7 1-2" x 1-4") 22L3
(7 1-2" x 3-8") 22L4
(3" x 3-16") 22L5
(6" x 5-16") 22L6
(10" x 3-8") (heavy) 22L7
Lining Gage
case ..... a23L19 †
stand a23L1
eye glass ..... a23L17 †
knife edge ..... b23L18L ‡
" " shoe (right) 23L3
" " " (left) 23L4
" " " screw (6) ..... 2171 .. 23L5 †
micrometer screw a23L6
" " bearing a23L7
" " " collar a23L8
" " graduated ring a23L9
" " spring ..... 6135 .. 23L10 †
post a23L11
" bracket ..... a23L12L *†
" " clamp screw ..... a23L13 †
" " clip ..... a23L14 *
guide tube 23L15
" " screw (2) ..... 2171 .. 23L16 †
Lining Gage (complete with case) Xa23L

*a23L12L is assembled with a23L14.
‡b23L18L is assembled with a23L7, a23L8 and a23L11.
†Only parts which will be furnished separately. If other parts are injured the Gage must be returned to Philadelphia for repair.

Mold Gun X34L

Automatic Heat Control For Gas ..... a55L1L *
bracket 55L2
" screw (2) ..... 232 .. 55L6

*a55L1L is assembled with 55L2, 55L5 and 55L6.

Nozzle Vent Tube Holder 68L1

Oil Can (Large) 70L3
Oil Can (Medium) 70L2

Wrenches
No. 81 (1 1-16") .....
No. 82 (5-16" x 13-32") .....
No. 83 (13-32" x 1-2") .....
No. 84 (5-8" x 3-4") .....
No. 85 (13-16" x 7-8") .....
No. 86 (7-32" sq. x 1-2" hex.) .....
No. 87 (Spanner, 1" diam.) .....
No. 88 (Spanner, 3-4" diam.) .....
No. 89 (Spanner, 1 1-8" diam.) .....
No. 810 (9-32" x 5-16") .....
No. 828 (Pin, 60° bend) .....
No. 829 (Spanner, 1 1-2" diam.) .....
No. 8118 (Set Screw) .....

Miscellaneous Supplies (continued)

Arkansas Stone (white) ½"x½"x3½" ...
Automatic Metal Feeder (Margach), with one ingot mold .....
Automatic Metal Feeder (Star) with one ingot mold .....
Automatic Metal Feeder Ingot Molds, special thin ingot size.
Boxes For Cellular Matrices (Wooden) with compartments providing for 225 .2" x .2" matrices .....
Boxes For Display Matrices, hold 83 matrices each in a separate compartment with space for line standard .....
Caster Plate Book .....
Casting Machine Adjustment Book ....
Cone Hole Cleaner .....
Drill,* No. 30 .....
" " 50 .....
" " 60 .....
*We furnish only high speed drills.

File, 4" narrow pillar .....
" 6" hand smooth flat .....
Ladle, Small For Melting Pot .....
Melting Furnace Ladles—Superior:
6-inch bowl, 15 pound capacity, with spout .....
6-inch bowl, 15 pound capacity, without spout .....
8-inch bowl, without long spout .....
10-inch bowl, without long spout .....
Melting Furnace Skimmers—Superior:
5-inch, with iron handle, 34" overall ...
6-inch, with iron handle, 42" overall ...
Metal Cleaner: Not a flux to take the dross off the top of molten metal, but a cleaner that takes the dirt and impurities out of the metal. 2 lb. can .....
Metal Cleaning Rod, for Mono-Metal Cleaner X50L
Monotype Controller Paper: The flexible connection between the Keyboard and the Composing Machine, packed in cases containing about 100 lbs.
Monotype Loose Leaf Specimen Book ..
Motor Belt for casting machine motor, 88" x 1 1-4" endless .....
Nozzle Lube: A dross deterrent for Nozzles, makes drilling easier and reduces drill breakage. Useful also in freeing Pump Pistons. Box contains 12 sticks.
Nozzle threads in Pump Body) .....
Oil, Rule Mold: A very special oil which exhaustive tests have proved to be the most satisfactory lubricant for all our Continuous Strip Molds, and all Molds casting cored type and material. No other lubricant will preserve the Molds and give so good a product. Sold in 2 gallon sealed containers .....
Also furnished in 30 gallon drums.
Oil, Type Mold: A suitable oil for Monotype Molds, which work at high temperature and high speed, is essential. After much experience we have found this oil best for all Molds which compose or cast type without a core. This Mold Oil is of proper body for lubricating the Casting Machine. Sold in 2 gallon containers.
Pliers, Pipe, 10" .....
" (flat nose, parallel jaws) .....
" long flat nose (5") .....
Steel Em Scale X6KT
Tap, Hand (¼") 13 thread (for cleaning)
Tracing Cloth Ribbon .....
Tweezers .....

Waiting for Inspiration, rushing things in reliance upon Inspiration, and all the rest of it, are a lazy man's habits. Get the bones of the work well into your head, and the tools well into your hand, and get on with your job, and the Inspiration will come to you: *if you're worth a tinker's damn as an artist, that is!*

BEMBO, 405

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BULMER, 462

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DEEPDENE, 315

monotype . . . sets *better*. . . prints *better*. . . looks *better*. . .

Waiting for Inspiration, rushing things in reliance upon Inspiration, and all the rest of it, are a lazy man's habits. Get the bones of the work well into your head, and the tools well into your hand, and get on with your job, and the Inspiration will come to you: *if you're worth a tinker's damn as an artist, that is!*

FOURNIER, 403

Waiting for Inspiration, rushing things in reliance upon Inspiration, and all the rest of it, are a lazy man's habits. Get the bones of the work well into your head, and the tools well into your hand, and get on with your job, and the Inspiration will come to you: *if you're worth a tinker's damn as an artist, that is!*

JANSON, 401

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VALIANT, 412

Complete specimens of these types and the 20*th Century Series shown overleaf will be sent on request*

AMERICA'S

most complete

CONTEMPORARY

TYPE SERIES:

monotype

20th Century

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$1234567890

20th Century Light, 606

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20th Century Light Italic, 6061

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20th Century Medium, 605

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20th Century Medium Italic, 6051

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20th Century Bold, 604

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20th Century Bold Italic, 6041

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20th Century Extrabold, 603

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20th Century Extrabold Italic, 6031

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20th Century Ultrabold, 609

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20th Century Ultrabold Italic, 6091

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20th Century Medium Condensed, 608

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20th Century Medium Condensed Italic, 6081

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20th Century Extrabold Condensed, 607

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20th Century Extrabold Condensed Italic, 6071

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20th Century Ultrabold Condensed, 610