MATRIX STICKS

When ordering matrix sticks by telegraph one of the following 3 code words should precede the code word or words designating the style and size of the matrix sticks desired.

		Code Word
Matrix sticks to be used on Ludlow machine equipped with 21-em mold		FAULD
Matrix sticks to be used on Ludlow machine equipped with 22½-em mold		FAUSE
Matrix sticks to be used on Ludlow machine equipped with special length mold. Length of special mold is		FETCH
Loose-side for ⅞" Roman matrices		
21 or 22½ em (single slug)	$27.00	AHEAD
42 or 45 em (two slug)	36.00	AHEON
Loose-side Special Double-Column Single-Slug for ⅞" Roman matrices for use with 22½ em mold		
24½ em (single slug)	33.00	LUFFA
25½ em (single slug)	33.00	LUKES
26½ em (single slug)	33.00	LUNAS
Loose-side Special 4 pt. 6-LP Lining Gothic for use with Lining Fonts and 4 pt mold.		
21 or 22½ em (single slug)	36.00	PLUMY
Loose-side 6 pt. 6-LP Lining Gothic for use with Lining Fonts and 6 pt. mold		
21 or 22½ em (single slug)	29.00	AISLE
42 or 45 em (two slug)	37.00	ALACK

Note: Loose-side Italic matrix sticks are not manufactured as they are not practicable.

Solid Side for ⅞" Matrices		
Roman		
63 or 67½ em (three-slug)	43.00	AGAZE
105 or 112½ em (five-slug)	59.00	AFIRE

Note: One and two slug solid side sticks for ⅞" Roman matrices have been discontinued. Only Loose-side Roman ⅞" one and two slug sticks are to be sold.

Italic		
21 or 22½ em (single slug)	33.00	AFOOT
42 or 45 em (two-slug)	39.00	AFORE
63 or 67½ em (three-slug)	47.00	AFOUL

Note: Italic matrix sticks are not manufactured in lengths longer than 67½ ems, because the corners of such long Italic sticks cannot withstand excessive wear and strain.

To obtain Italic lines longer than 67½ ems in length, the long (105-112½ em) Roman stick with angle quad and the clamping Italic division quad should be used.

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	Price	Code Word
Solid-side Special Double-column Single-Slug for 7/8" Italic matrices for use with 22½ em mold		
24½ em (single slug)	$36.00	AGENT
25½ em (single slug)	36.00	AGLET
26½ em (single slug)	36.00	AGLOW
Solid Side for 1¼" matrices		
Roman		
21 or 22½ em (single slug)	35.00	AGANA
42 or 45 em (two-slug)	41.00	ABEAM
63 or 67½ em (three-slug)	49.00	AIXLA
105 or 112½ em (five-slug)	64.00	AKKRA
Italic		
21 or 22½ em (single slug)	38.00	AGORT
42 or 45 em (two Slug-Mandate)	46.00	POCKS
Solid Side for 1½" Matrices		
Roman		
21 or 22½-em sticks (single-slug)	39.00	POETS
42 or 45-em sticks (two-slug)	47.00	POGYS
63 or 67½-em sticks (three-slug)	55.00	POKES
105 or 112½-em sticks (five-slug)	68.00	POCKY
Italic 1½" matrices are not contemplated.		
Adjustable Offset for 7/8" matrices		
Roman 21 or 22½ em (single slug)	49.00	ALAKE
Roman 42 or 45 em (two-slug)	56.00	ALAND

Note: Longer than two-slug adjustable offset sticks not made because of inability to hold alignment on more than two-slug casts.

Italic adjustable offset sticks not made because of inability to hold alignment.

1¼" offset sticks not made because of mechanical limitations in delivery slide.

Initial orders for two-slug adjustable offset matrix sticks should also include one S-529A division quad This special offset division quad is required for all machines.

Orders for adjustable offset sticks to be used on Ludlow machines shipped prior to October 1, 1933, should include a notation that one part No. 579-B should be shipped to the customer, without charge, in exchange for their old part to be returned.

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	Price	Code Word
Self-Quadding for 7/8" matrices		
Roman Loose Side		
21 or 22½ em (Single-slug)	$ 62.00	AFEAR
42 or 45 em (Two-slug)	69.50	AILER
Italic Solid Side		
21 or 22½ em (Single-slug)	65.50	AHULL
42 or 45 em (Two-slug)	72.50	AILED
6-pt. Lining Gothic (Roman) Loose Side		
21 or 22½ em (Single-slug)	62.50	AFRIT
42 or 45 em (Two-slug)	70.00	AIMED
Self-Quadding for 1¼" matrices		
Single Slug Casting Stick, Solid Side		
21 or 22½ em Roman	67.00	AIMER
21 or 22½ em Italic	70.00	AINCE
42 or 45 em Roman	74.00	AINSE
Self-Centering for 7/8" matrices		
Roman loose side (single slug)		
21, 22½ or 24 em Or special lengths less than 21 ems	$262.50	FLANS
6-pt. Lining Gothic loose side		
21, 22½ or 24 em	262.50	FLISK
Special lengths (single slug) longer than 21 ems		
Roman or 6 point Lining Gothic	295.00	

Note: Italic Self-centering sticks, Multiple-slug Self-centering sticks, and 1¼" Self-centering sticks not manufactured.

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	Price	Code Word
Loose-side for 7/8" Roman matrices		
Equipped with Ratchet Stop and Index Collar		
21 or 22½ em (single slug)	$32.00	GLEED
42 or 45 em (two-slug)	40.00	GLEIB
Loose-side Special Double-column Single Slug for 7/8" Roman matrices.		
Equipped with Ratchet Stop and Index Collar		
24½ ems (single slug)	37.00	LORNS
25½ ems (single slug)	37.00	LORYS
26½ ems (single slug)	37.00	LUFFS
Loose-side 4 pt. 6-LP Lining Gothic for use with Lining fonts and 4 pt. mold		
Equipped with Ratchet Stop and Index Collar		
21 or 22½ em (single slug)	40.00	POLAR
Loose-side 6 pt. 6-LP Lining Gothic for use with Lining fonts and 6 pt. mold		
Equipped with Ratchet Stop and Index Collar		
21 or 22½ em (single slug)	34.00	GLIFF
42 or 45 em (two-slug)	41.00	GLINT
Italic		
21 or 22½ em (single slug)	41.00	FRACK
42 or 45 em (two-slug)	44.00	FRAIK
Solid Side Special Double-column Single-slug for 7/8" Italic matrices		
Equipped with Ratchet Stop and Index Collar		
24½ ems (single slug)	40.00	GAIST
25½ ems (single slug)	40.00	GAITT
26½ ems (single slug)	40.00	GATTY
Ratchet Stop and Index Collar for installation on 7/8" matrix sticks in the field.		
SAS898½	5.00	GLISK
Ratchet Stop for installation on 1¼" matrix sticks in the field.		
SAS898¾	5.00	GLOUR

Ratchet Stop and Index Collar Assembly cannot be installed on the following styles of matrix sticks because impracticable:

Adjustable Offset sticks
Self-quadding sticks
Self-centering sticks

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Price Code Word

Matrix Sticks for use with Special Length Ludlow Molds

The schedule below is to be used in figuring prices of special-length Ludlow matrix sticks for use with special-length Ludlow molds:

A single-slug stick (any length) is the same price as the corresponding style single-slug (21 or 22½ em) matrix stick.

A two-slug stick (any length) is the same price as the corresponding style two-slug (42 or 45 em) matrix stick.

A three-slug stick (any length) is the same price as the corresponding style three-slug (63 or 67½ em) matrix stick.

A special four-slug, solid-side, Roman or Italic stick (for special purposes) is priced as follows:

Length of single-slug cast	⅞"	1¼"	1½"
Below 18 ems	$55.00	$62.00	$67.00
18 to 23 ems (incl.)	58.00	64.00	69.00
Over 23 ems	62.00	67.00	73.00

A special five-slug, solid-side stick (Roman only) priced as follows:

Length of single-slug cast	⅞"	1¼"	1½"
Below 18 ems	62.00	67.00	73.00
18 to 23 ems (incl.)	65.00	72.00	77.00
Over 23 ems	69.00	75.00	79.00

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7/8" Loose-Side Sticks

These sticks have a movable side, which is forced against the sides of the matrices by the locking slide shoe as the stick and matrices are locked in position in the machine. The loose or movable side forces the matrices into proper alignment. The one and two slug Loose-side sticks are used with all the point sizes of 7/8" matrices.

The Italic loose-side stick is obviously not practical.

7/8" Solid Side Matrix Sticks

The three and five-slug length Roman sticks are made only in the solid side because it will be almost impossible to operate the loose-side stick on more than a double-slug cast.

Italic matrix sticks are made only with solid side. It is only necessary to order Italic matrix sticks when angle (Italic) body typeface matrices are specified. The sticks are specially designed to take the Ludlow angle body matrices.

All sizes of the No. 11 Italic, the No. 18 Victoria Italic and the No. 28 Tempo Italic faces are driven on a perpendicular (Roman) body and Roman sticks are used when casting from these three "Italic" type-faces.

The five-slug length sticks are arranged for either the Roman or the Italic body typefaces. When the Italic typefaces are to be used, clamping Italic division quads should be ordered with the stick (see spaces and quads).

Double-column Single-Slug Matrix Sticks

The double-column matrix sticks are designed for use in newspaper and publication house composing rooms for the casting of the double-column headings on one slug in the 12, 12½ and 13-em column measures. They are designed so the type overhangs on both ends of the slug shank. High spaces and quads are used in casting from these sticks to insure a proper cast on the end overhang.

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7/8" Roman 4 Pt. and 6 Pt. Lining Gothic Loose-Side Sticks

Lining matrices (Lining Gothic, Engravers Bold, Victoria Italic and Commerce Gothic) are so driven that the bottom of the face notch of the matrix lines up with the side of the 12-point mold when the matrices are set in a regular matrix stick. As the position of the mold slot of 6-point molds and 4-point molds is central in relation to the 12-point mold slot, in casting the lining faces with a regular stick and either a 4 or a 6-point mold, the side of the head of the slug would overhang the shank. To eliminate this overhang, the Lining Gothic sticks are manufactured with a side lock-up variation. The 6-point stick for use with a 6-point mold is 3 points wider on one side and 3 points narrower on the other side than a regular stick. The 4-point Lining Gothic stick is similar to the 6-point Lining Gothic stick except that it is further offset by 1-point, to position the matrices properly over the mold slot.

7/8" Adjustable Roman Offset Sticks

This stick is used to obtain variation in the top and bottom alignment of Ludlow typefaces. The adjustable side is made in two parts. One part (the stationary side bar) is attached to the end pieces of the stick and has a groove cut in it at an angle. The other part (the sliding sideplate) has a tongue cut at the same angle as the groove in the stationary side bar. The tongue on the sliding sideplate is held in the groove in the stationary side bar by two studs in the parallel angled slots that are cut in the sliding sideplate.

By turning the adjusting nut at the front end of the stick, the sliding sideplate moves on the tongue and groove arrangement and alters its position in relation to the scaled side of the stick.

When open to its widest point this stick will permit the matrices to be moved a maximum of 6 points from the scaled side of the stick.

Use of the ratchet stop and index collar is not practicable on the adjustable offset stick.

An italic offset stick is not manufactured because of inability to hold alignment of angle body matrices in such a stick.

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1¼" Solid-side Matrix Sticks

The investment in 1¼" multiple-slug sticks should be profitable to those large newspapers, publication and poster plants which can be expected to set a considerable percentage of lines in the 1¼" matrices, but for general use in the smaller plant the single-slug casting stick method may prove most practical.

Comparing the two methods in detail:

By using both hands, as compositors are accustomed to do when setting large movable types, and using the assembling row in the 1¼" case, it takes no more time to set the line than it would with a long casting stick.

The first slug length of matrices is then removed from the assembling row of the case and placed in the 1¼" self-quadding stick, with the loss of only a very small amount of time. The stick is then placed in the machine and the first slug cast. The stick is then removed from the machine and the next set of matrices placed in the self-quadding stick, and the stick is again placed in the machine, *while the previous slug is being trimmed and delivered.* No time is lost in this operation as there need be no stopping of the machine.

With the multiple-slug stick division quads must be used, and because of the width of the characters it may sometimes be necessary to juggle the matrices, placing quads in the front end of the stick in order to make the breaks in the proper places. There is time lost in this operation that is not lost in the assembly plan.

The only actual time lost is trimming the ends of the slug. If the slug cutter is used, chipping off the slug ends takes only a second.

Italic 1¼" three-slug sticks will be manufactured only on special order. The objections to such Italic sticks are:

(1) They are not entirely practical because of the limited space in which the division quad must be placed.

(2) Generally the use of the three-slug 1¼" Italic line would be so limited that the investment in such sticks would hardly be warranted.

(3) Roman sticks can be used for this purpose by placing angle spaces at each end of the stick.

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Self-Quadding Matrix Sticks

This stick can be used in quadding-out left or right flush lines or in centering lines, by the use of the supplementary one-to-two scale. The ease and speed with which a line will be quadded-out with this stick will be appreciated by Ludlow users, and should prove a valuable selling point when approaching Ludlow prospects, especially those who already know all about the Ludlow.

Because of the low price of our other matrix sticks, it is possible that certain customers or prospective customers would not understand why the selling price of the self-quadding matrix stick is not lower. The truth of the matter is that the price of the stick is actually very low. The cost of making and selling the sticks exceeds the price charged for them, and it is not likely that the company will ever make a fair profit at the present price. This fact was faced before deciding to offer the stick for sale, but it was concluded at that time that the advantages to Ludlow users would warrant proceeding to manufacture and sell the sticks without profit.

The following are some reasons why the cost of these self-quadding sticks is so much higher than that of the regular sticks and also higher than might be supposed by people not familiar with the manufacture of such products:

1. The sticks cannot be manufactured in large enough quantities to warrant a big investment in special machines and expensive special tools calculated to afford quantity-production low cost.

2. The total number of parts in a self-quadding stick is almost twice the total number of parts in a regular stick.

3. Extreme precision is required on four times as many parts on the self-quadding stick as on a regular stick.

4. Both sides and the entire length of the sliding member must be ground to extreme precision. The least variation in this part will cause a fin on the slug.

5. The time required to assemble the self-quadding stick is three times the time required to assemble a regular stick. The fitting of the special floating nut to overcome the possibility of the threads on the long screw hitting at dead center on the nut is no small part of the assembling expense.

Because of the higher price that must be charged for these self-quadding sticks, a little extra tact should be used in selling them. A good way, when applicable, is to tell the customer, before showing him the stick, that you have an article that should save many hours in his composing room, but that it is very expensive to make and therefore not cheap to buy.

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When he has asked to see this stick, show it to him, pointing out the advantages and the amount of time that could be saved by its use. After he understands the amount of time that could be saved by using this stick in his composing room, tell him something of why it is expensive to make, returning to the point that, after all, its price is insignificant compared with its value to him. Often times, such treatment of the matter should cause your customer to realize that, after all, the price is not high, but low.

The length of the locking surface of the under side of the new style standard locking equalizing bars for Ludlow machines has been increased. On this new equalizing bar, which has been included on all machines shipped after February 1, 1931, this bearing surface extends the entire 6" length of the bar.

This change was made because of the small (about ⅛") bearing surface between the end of the old style equalizing bar and the end quad of the 22½-em *self-quadding stick*. While this ⅛" bearing surface would probably be satisfactory in most cases, it was decided to increase the length of this bearing surface, because of the possibility of variations in the equalizing bars and of wear to the lockdown parts.

Users who purchased 22½-em self-quadding sticks prior to February 1, 1931, have been supplied with new equalizing bars without charge. On all orders from users whose 22½-em machines are not equipped with the new equalizing bar, such a bar should be included with the order, without charge to the customer.

⅞" Self-Centering Matrix Sticks

This stick may not interest all Ludlow users and prospects, but any user or prospective user who sets any considerable number of lines centered within single slug measures will undoubtedly find it to be of great value. This should apply particularly to check imprinters, tag manufacturers, label manufacturers, ticket manufacturers, book binders, publication houses, etc.

The self-centering stick can be manufactured for any special *single-slug* mold length from 12 to 25½ ems. Multiple slug self-centering sticks are not practicable.

Some present or prospective customers may question why the selling price of the self-centering matrix stick is not lower. Really, it is unfair, although seemingly advisable, to call it a matrix stick, in view of its being so much more of a precision tool. The following facts may be helpful in discussing price:

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The cost of manufacturing this stick is much higher than might generally be supposed by those not familiar with the manufacture of precision tools, because:

(1) The demand for such sticks will not warrant their manufacture in large enough quantities to justify a big investment in expensive special tools (jigs and fixtures) which are necessary in order to afford quantity production at low cost.

(2) The total number of parts in a self-centering stick is many times the number of parts in a regular stick.

(3) Extreme precision is required on eight times as many parts of the self-centering stick as in a regular stick.

(4) The time required to assemble the self-centering stick is twenty times the time required to assemble a regular stick.

(5) Only the most expert workmen can be used on the manufacture of these sticks.

Actually, the price set is extremely low, but because of its necessarily being so much higher than the price of other simpler matrix sticks, a little extra tact must be used in selling it. It may be best that the prospective purchaser be not told the price of the stick until after he has some idea of its advantage to him and of the amount of savings the use of this stick promises in his composing room, and so understands that after all its price is really insignificant compared to the value of the stick to him.

The actual amount of time that this stick can be expected to save in the composing room will of course vary considerably according to its use. It is, after all, a tool and not a piece of automatic machinery, and any tool is only as effective as the person who is using it. We have questioned two users rather closely as to the amount of time they believe the self-centering stick has saved for them, and they both insist that it has more than cut their composition time in half. Of course, in both these users' plants practically every line set is centered, and the lines are comparatively short, but they feel that even with a self-quadding stick it took their compositors longer to center the line than to set and space it.

Care should be taken, however, *not to guarantee* any particular time saving, because, after all, the operator has control of the time element and the efficiency of any *tool* he uses.

Because it is not always possible to show the prospective buyer why the stick may be worth many times the cost, we have no objection to accepting orders in the United States on a ten-day approval basis. The user may try the stick out for

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ten days in his own plant, and if he finds that the saving does not warrant the investment, the stick may then be returned for full credit.

Parts for self-centering sticks can not be successfully fitted to sticks in the field. Self-centering sticks requiring repairs should be returned to the factory.