

The
QUADDER

with

**THE MEMORY
SYSTEM**

and the

**PUSH BUTTON
CONTROL**

attachable
to any 30-pica
Linotype
or Intertype
machine

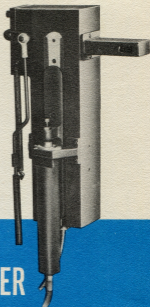


**The STAR SELECTRO-MATIC
QUADDING ATTACHMENT**

(MODEL F)

Star was first to build a Quadder which could be ATTACHED to both Linotype and Intertype machines. It pioneered the application of hydraulics for Quadder actuation. It led in the conception of the Electro Pump Stop. Now it is first in the successful adaptation of modern electrical engineering to the speeding up of Quadder operation.

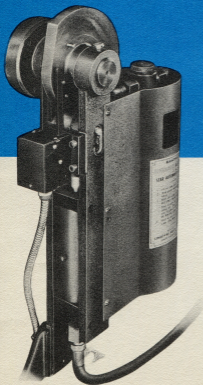
It has always been a guiding principle of STAR engineering to design new parts and equipment for easy, low cost maintenance. The Selectro-Matic model of the STAR Quadder is another example of this principle put into practice.



Why THE STAR SELECTRO-MATIC QUADDER

provides simpler . . . speedier . . . more dependable quadding action

- Push Button Selector Controls
- Automatic Quadding of Short Lines
- Applicable to Any 30-Pica Line-Casting Machine (Regardless of Age)
- Memory Circuit for Continuous Operation
- Adaptation to Teletypesetter Operation
- Electrical and Mechanical Accessibility
- Measure Setting at Double Speed
- Simplicity of the Hydraulic Actuating Unit
- Controlled Vise Jaw Movement by Rack and Gear Train
- Electro Pump Stop Safety
- Synchronization with Mohr Saw
- Maintenance Time and Expense Practically Eliminated



The function of proper electrical engineering is to eliminate moving parts. We proved this by the highly successful introduction of the Electro Pump Stop Safety previously mentioned, with the first STAR Quadder. It cut the number of parts from about one hundred used in competitive quadder mechanical pump stop safeties to less than a dozen, most of them not moving. Calculate what this means in the reduced hazard of wear, maintenance and down time — the greatest enemy of economical operation of linecasting machines.

In the following pages we give a general description of functions of the Selectro-Matic Quadder, its operation, construction, and advantages. Other questions may arise in the mind of the reader, technical or otherwise. Please do not hesitate to ask us for more information.

Push Button Selector Controls

All the operator needs to do now to select a Quadder operation is to push one of the buttons on the little box alongside the keyboard, — Right Flush, Center, or Left Flush. This convenient location keeps the operator in natural position so that his attention is not diverted from copy or keyboard during operations.

The Pump Stop Signal indicates current is flowing through the Electro Pump Stop System. When the operator or machinist wishes to let the machine go through a cycle without casting he merely flips the switch to "off" position. The other signal is wired in series with the Left Hand Vise Jaw Switch and indicates whether or not the line is casting.



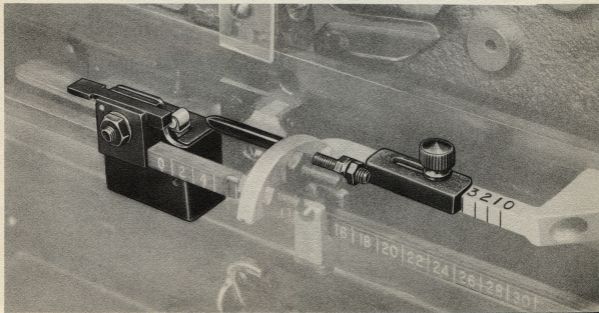
Automatic Quadding of Short Lines

When the operator is setting straight matter the normal setting of the Selector is Left Flush. All lines which are short of a full line, within 1 to 3 picas, as adjusted by the operator, will automatically flush left. This is a particularly valuable feature in the setting of type for books, catalogs, etc., where the lines are longer than in newspaper columns, and where the white space in the "widow" line (last line of the paragraph) is consequently considerable.

The advantages of this Short Line device are also available for special purposes. Where the bulk of the

composition, for example, is either center or right flush, with an occasional justified line, the appropriate button is left depressed and any line which is filled out to the set measure is automatically justified.

Here's how it works: When a line is filled out, the TRIP (pointed shaft in the illustration below), presses the switch as it goes over the roller, cancelling the quadder signal. This permits the line to justify. Conversely, when the line is not filled out, it will automatically quad right, left, or center, according to the signal left open in the Selector Box.

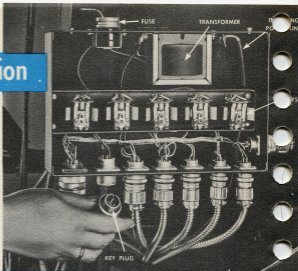


Uninterrupted Operation

The words "Memory Circuit" have become the standard expression in the present day world of electronics. Amazing calculating and bookkeeping machines, and machines which will produce a printed record of assorted information from a perforated card fed into them, all depend on memory circuits to store information until it is required by the push of a button.

This is the basic principle also of the Selectro-Matic Quadder circuit, except that it is in very simple form. By means of this memory system three lines can be stored at one time in the machine. The operator never has to wait for the line to clear the casting position before changing the Selector button. To illustrate how this works we will take a hypothetical case:

The operator is setting mixed quadder copy. The first line is required to be flushed left. He presses the Left Flush button, sets the line, and sends it up. He immediately presses the button for the next line which calls for Center, assembles the line, and sends it away. The third line is to be flushed right. He pushes the appropriate button and sets the third line without pause. By this time the first line is in casting position, the second waiting in the intermediate channel, the third being assembled.



The photo above is the Memory Control Box. It illustrates the ease of disconnecting circuits. Wires in the Box are permanent and never need be disturbed. The transformer reduces the incoming line voltage to 24 Volts.

Operation by Teletypesetter

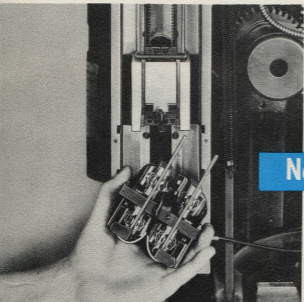
It is this Memory Circuit which makes possible the adaptation of the STAR Quadder to operation by the Teletypesetter signals, keys for which are already provided on the perforator keyboard. A plug-in to the STAR Selectro-Matic circuit is all that is needed.

This combination of Selectro-Matic Quadder and Teletypesetter operating unit can save many hours of production time on such work as books and newspaper classified advertising, or in any type of specialty work like imprints, where copy requiring quadding operations can be concentrated in quantity sufficient to justify automatic operation of the linecasting machine.

No Experts Required

Line current coming into the Selectro-Matic electrical system is reduced by the transformer in the Memory Control Box to 24 volts. This eliminates the danger of electrical shock.

No user will ever be required to trace wires in the system or replace them. Like the rest of the STAR Quadder the replaceable parts of the Selectro-Matic electrical system are all on the outside of the machine, — immediately accessible. At that, the only parts it will ever become necessary to replace are few and relatively inexpensive. These are the relays in the



This photo shows the Solenoids and Switches of the Quadder Housing removed as one unit. Two screws on each side of the housing hold the unit in, after it is slid into place in the grooves visible in the casing.

Memory Control Box and the solenoids and switches in the Quadder housing, all carefully selected for longevity and easy replacement.

In spite of the fact that electrical parts replacements will be very infrequent, extreme care has been taken in designing the system so that these replacements can be made easily and with dispatch. The relays, for instance, are removed and installed like a radio tube. All are interchangeable. The leads from the control box to the other parts of the system are also plugs of the prong type. All are keyed so that they cannot be put back into the wrong socket. A coupling secures the male and female plugs together for safety, yet disengagement is accomplished in a fraction of a minute by unscrewing coupling. (See photo to left.)

The four solenoids and three switches comprising

the Quadding and Justification Unit in the housing are removed as one unit by removing two screws on each side of the housing. The wire connections are of the sleeve type, which requires no soldering to hold them together. This means disconnection of the entire unit can be made within two or three minutes of time so that it may be taken to the bench for servicing when and if necessary.

The fifth solenoid at the bottom of the Quadder housing controls the Justification Stop and is removed with the same ease and dispatch.

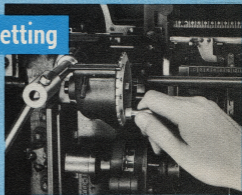
The important thing to remember is that while the latest developments in the field of electrical engineering have been taken advantage of in the design of this electrical system, *no special knowledge is required to maintain it.*

Double-Speed Measure Setting

On machines without Mohr Saws, the Selectro-Matic Measure Control Dial sets both Assembler Slide and Left Hand Vise Jaw simultaneously, but at twice the speed of previous models. The ratio is 2 picas of movement to 1 complete turn of the dial.

With the Mohr Saw, the STAR Measure Control necessarily is held to the same ratio as the Saw mechanism,—one complete turn of the dial to one pica of movement. However, all three settings, Assembler Slide, Vise Jaw, and Saw are made by the turn of the Measure Control Dial simultaneously.

The added advantage of the new STAR Measure Control is that all odd point measures are set only from the Measure Control Dial without need for a secondary adjustment.

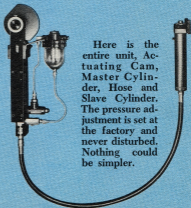


Each notch in the Dial pictured above represents a point. Exact point settings are thus obtained for odd point measures.

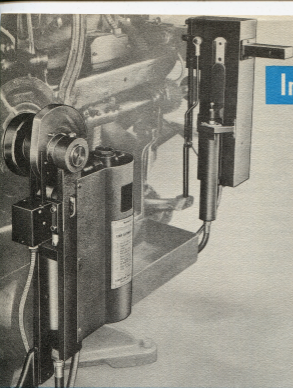
Simplest Hydraulics

The first use of hydraulics in connection with a Quadder was demonstrated at the Graphic Arts Exposition in Chicago in 1950 at the STAR Exhibit. The Korean War intervened to prevent production until 1952 when it was released.

The STAR Hydraulic Actuating Unit eliminated the sharp impact of the Vise Jaws against Matrices which was characteristic of the other Quadders. There is only one hose with its two connections in the entire system. No other unit could be as simple and effective unless it was an EXACT imitation.



Here is the entire unit, Actuating Cam, Master Cylinder, Hose and Slave Cylinder. The pressure adjustment is set at the factory and never disturbed. Nothing could be simpler.



Independent Cam Action

As a by-product of the use of hydraulics in connection with the STAR Quadder it became possible to make it completely independent of the linecasting machine in operation. The only function served by the machine is to turn the independent Cam which has been attached to the end of the Cam Shaft of the Linotype or Intertype as the case may be.

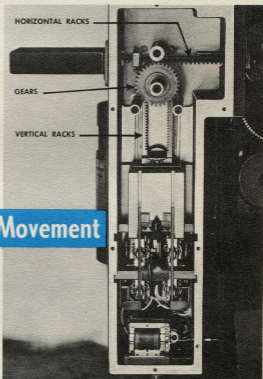
The value of this independent action lies in the ability to thus provide a proper breather between first and second justification to allow proper Matrix alignment; after the cast it relieves the pressure against the Vise Jaws just enough to permit the First Elevator to rise, while retaining support for the Matrix line.

The Hydraulic Actuating Unit is attached to the end of the linecasting machine's Cam Shaft. The Cam which actuates the Hydraulic piston in the Master Cylinder also actuates the switches in the box below through the two levers which are visible sticking up on either side of the Cam. These switches in turn control the solenoids and relays which perform the quadder functions.

Gear-Controlled Vise Jaw Movement

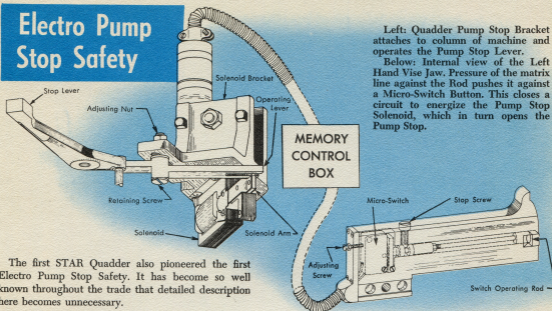
The patented, basic core of the STAR Quadder has from the beginning always been the Rack and Gear Train which controls the movement of the Vise Jaws in quadding operations. It is this Rack and Gear Train which is actuated by the Hydraulic Unit.

Precision built and sturdy this train of Racks and Gears keeps the Vise Jaw movement "in gear" at all times, obviating the need for levers which have always proven to be a weakness. There are no delicate parts to wear out or break. In the first seven years of the STAR Quadder's history only one vertical and one horizontal rack have been replaced, and this due to an unusual accident. Considering the fact that close to 900 STAR Quadders have been installed in this period of time, (up to Jan. 1955), we feel it safe to say that this is a fool-proof system.



The Pawls attached to the Rack Engaging Levers are pushed into notches in the Vertical Racks by the action of the solenoids when energized. These racks are engaged with small gears (not visible) attached to the large gears visible in the photo. Upward movement of the Vertical Racks moves the gears and therefore the Horizontal Racks attached to Vise Jaws.

Electro Pump Stop Safety



The first STAR Quadder also pioneered the first Electro Pump Stop Safety. It has become so well known throughout the trade that detailed description here becomes unnecessary.

Within the last three years improvements have brought it to a state of perfection as complete as we can ever visualize.

Left: Quadder Pump Stop Bracket attaches to column of machine and operates the Pump Stop Lever.

Below: Internal view of the Left Hand Vise Jaw. Pressure of the matrix line against the Rod pushes it against a Micro-Switch Button. This closes a circuit to energize the Pump Stop Solenoid, which in turn opens the Pump Stop.

Synchronization with Mohr Saw

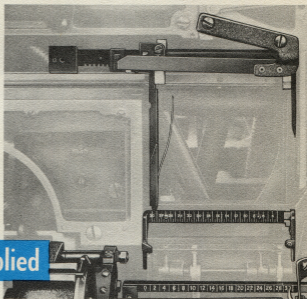
When the Mohr Saw is applied with the STAR Quadder, a substantial saving in the price of the Saw is effected. The Measure Control Mechanism supplied with the STAR Quadder eliminates the control normally supplied with the Saw.

The STAR Measure Control is also of improved design mechanically. It has replaceable bushings at bearing points, and is adjustable with relationship to the Assembler Slide connections.

Additional Equipment Supplied

In order to enable composition of various length of lines to be set without constant resetting of the Delivery Slide, the STAR "No-Set" Delivery Slide is provided as part of the Quadder.

In addition, Adjustable Vise Locking Screws, (Right and Left), Vise Locking Studs, and an Assembling Elevator Gate with Matrix Support Rail are supplied.



Also with the Left Hand Vise Jaw which is part of the Electro Pump Stop Safety, goes the Right Hand Vise Jaw, and the two Vise Jaw Blocks of special design. A hardened Assembler Slide and special Assembler Slide Brake of the STAR improved type make up the last of the extra parts which go with the Selectro-Matic Quadder.



HERE'S WHAT THE SELECTRO-MATIC QUADDER WILL DO FOR YOU!

Continually rising cost of operation in the Graphic Arts field has caused printing plant owners, publishers, and other printing executives charged with production to seek new methods of increasing efficiency. Too many, however, have overlooked possibilities of improving their present equipment, and have wasted capital funds to acquire new equipment instead of improving the equipment they have with considerably less expenditure.

In the composing room there generally exists the greatest opportunity for cost-cutting by improvement in equipment. It is inconceivable that a job or ad machine for instance, or any other slug machine doing some specialty work which requires quadding, should not be equipped with an automatic Quadder. It has

been proven hundreds and hundreds of times that line-casting machines engaged in such operations can improve their productive output from 20 to 60%, depending on the type of work involved. Even taken at the minimum no owner or executive can afford not to stop this leak.

Very often in the job printing field, a Selectro-Matic Quadder can mean the difference between profit and loss on a job, between getting it or not getting it. In the newspaper field, where deadlines are a constant headache, it means the ability to accept late advertisements which otherwise could not be handled. Heads, TV listings, and classified advertising are handled faster, with less operator effort when a Selectro-Matic STAR Quadder is on the job.

**Bogota Favored To Take
Third In Row From Park**

**Scarlets Face Bucs For Twenty-Ninth Time At
Riverview Field Tomorrow Morning**

Bogota — Bogota High School is set to play a row over Ridgefield Park here when the teams collide for the twenty-third time when they were last seen in 1892. The teams began to play in 1892.

JOHN J. SIMMONS

AMERICAN NEWS & ILLUSTRATION SERVICE, INC. PHOTODUPLICATION

But it means your roof needs attention, Mister! Don't put off repairs to your home—we have a long-line material of low-priced vinyl for many home use water and weather-proofing, re-siding, or minor estimates.

We Recommend

Precision
TRADE MARK
Parts

STAR PARTS Inc.

SOUTH HACKENSACK, N. J.

Branch: 1327 Broadway, Kansas City, Mo.
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 Los Angeles • Denver • Boston
 Canada: Sears Ltd. and Agents Overseas

If all be true that I do think,
 There are five reasons we should drink:
 Good wine—a friend—or being dry—
 Good wine—a friend—or being dry—
 Or last we should be by and by—
 Or other reason why.

Latin epigram of the 16th century