THE
AMERICAN DIGEST
of
BUSINESS MACHINES

Combined with the
American Trade Guide of
Store and Office Machines

A COMPENDIUM OF MAKES AND MODELS
WITH SPECIFICATIONS AND PRINCIPLES
OF OPERATION DESCRIBED

And including
USED MACHINE VALUATIONS
and an Index to
BUYING SELLING
APPRAISING EXCHANGING
REBUILDING REPAIRING
ACCESSORIES SUPPLIES
PARTS

COMPILED, EDITED AND PUBLISHED BY
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1924

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into foreign languages, including the Scandinavian.
REMINGTON TYPEWRITER CO.
374 Broadway, New York
Branches Everywhere

Quiet Model 12

Never disturbs no matter how close to the employer it is used. The sum of Remington engineering; construction and materials. Combines durability, speed and capacity with Remington features. More and better work with less fatigue. Wanted by both the employer and the operator. The NATURAL touch makes the day's work swift and easy. Fourteen noise eliminating features.

The Complete Typewriter No. 11

Includes the Remington Tabulator Key Set, the Remington Decimal Tabulator and other important Remington distinctive features. A letter writer, form writer and column figure writer. Carriages that write lines 12 inches, 16 inches, 12 inches, 9.5 inches and 8.1 inches long.

Remington Accounting Machine

For bookkeeping in all of its branches. Speed, Accuracy, Visibility, Durability, Flexibility, Proof of correctness, Ease of operation, Simplicity of operation, Quietness of operation, Simplicity of making corrections, Mechanical registration of sheets. Complete and standard keyboard. If it is bookkeeping, it can be done with the Remington Accounting Machine.

Remington Portable

Complete in its case, only four inches high. A child can carry it. For the traveler, the doctor, the writer, the farmer, the student, the storekeeper, the housewife, the boy, the girl, the children—for everybody everywhere. Writing keyboard just like the big machine. No shifting for figures.

Paragon Ribbons

Remington factory made. A ribbon for every need. Manufactured for all makes of writing machines to supply the demand for high quality supplies. In various colors and combinations of two colors.

Red Seal and Rival Carbon Papers

Remington factory made. Clear and clean copies and more copies. In various weights, sizes and finishes. The most for the money.

The Remington line is complete in every field and for every purpose.
THE PLAN, SCOPE AND PURPOSE

Entirely Different

There is nothing like the Digest. Never before has there been available in any industry a volume wherein could be found such knowledge giving data regarding ALL makes of ALL classes and kinds of business machines.

Catalog space has been offered without charge or obligation to all manufacturers, distributors and selling agencies. To be really useful, dependable and worthy of the time and money spent in its compilation, a policy of "Pay-if-you-will-enter" could not be considered. Representation has not been limited to such concerns as might feel disposed pay to have their products included. It embraces everybody's everything. It is as complete as the dictionary.

The characteristics, features, differences and functions of each machine, the various attachments to use with or on them, and their availability for different classes of work are clearly described and illustrated. Present list prices covering each model are given; the name and address of each manufacturer and method of distribution is shown. Many machines not quite ready for the market are described and illustrated.

Authoritative

The information it contains, has, for the most part been provided by the co-operation of manufacturers and distributors. It has also been gathered from other authoritative sources over a period of many years and brought strictly up to date.

Impartial

Every machine is cataloged, described and illustrated on an impartial basis. Facts are stated as they are found. There are no colorful advertising phrases or copy, such as might be designed to influence prospective purchasers. If the different companies were allowed to write their own descriptions, the publishers are in no way connected with any person or concern manufacturing office or store machines. The standards and policy of editing are strictly neutral. The personnel is specially experienced in the field, competent to carry on research, and analyze and edit mass of data necessary to produce a publication of this kind.

Advertising

The catalog pages are not advertisements. Naturally, some advertising is carried, but not in the text matter and not influencing the text. Special display advertising spaces have been sold to concerns who wish to supplement their own words what the Digest says about their products in the text matter. The advertising is readily distinguished from the text, and an acceptance of paid advertising by any maker, does not in any way influence the catalog matter regarding his products.

Historical

Early machines still likely to be in use and from which present models have been developed, are reviewed and explained. Short instructive sketches tracing the origin, development and evolution of each line included to indicate the length of time on the market and the relative success and popularity of each line of machine.

Helps Solve the Second Hand Problem

Used machine valuations are given for each major line of machines. These valuations are not arbitrary. They represent the average valuation of all machines, including new models, left over, or obsolescent. If the buyer of a machine, the buyer of a new machine, or the buyer of an old machine, or the buyer of a second-hand machine, or any of these people, should find this catalog useful, it will have been worthwhile. The prices are based on the accuracy of the catalog and the value of the machine.

The information necessary to establish the price is shown, and the value of the machine is shown, and the value of the machine is shown.

Value to the Executive

The everyday value of the Digest to the man who is not in the trade, might be illustrated by taking for example, an executive who is in the market for say, an adding machine. In the catalog section, the model is indexed, "Adding Machines", all the different makes will be found, catalogued, illustrated, and described. Complete, up-to-the-minute, authoritative, unbiased knowledge is afforded of the construction, features and characteristics of each machine that is a factor in the market for the particular work required. The price range is shown.

If an old machine is to be traded out as part payment on the new, it tells where to find the model and the same model is usually determined; the price of the machine is determined, and a standard valuation of that particular serial numbered machine. It answers his every question.

The executive knows, therefore, before he ever calls in a salesman, just what machines are on the market, the advantages and disadvantages of competitive machines for the work to be done and the valuation he can expect for his old machine.

Nowhere else could this information be secured. Even if the executive did have the catalogs or advertising literature of two, three or four companies, his decision would probably be based on the claims, sometimes extravagant, that are found in the advertising literature of some companies, and in the final analysis, he would probably select the machine of the company having the best advertising writer or the cleverest salesman, and later find that another machine, either less or more expensive, would have been preferred had he known of its existence and capabilities.

Should he desire to buy second hand equipment or sell present equipment outright for cash, the directory section shows the names of dealers in used machines, including wholesalers, handling each particular class of machines in the city or territory nearest him. It tells where to buy parts, supplies, or accessories, and who, besides the manufacturers can service or repair his equipment.

Value to the Salesmen

The publishers appreciate that a fine axiom of salesmanship is: "Know your own machine—forget your competitor's. In the salesmanship, a student of machines and their application, often brings up points about competitive machines, that a salesman, if he is in ignorance of the merits or deficiencies of that particular make, cannot very well discuss, hence, he finds himself at a disadvantage. Knowledge is power, and the Digest, therefore, is designed to tell salesmen the true and complete facts about every make of machine of the same and of every other line. It helps a salesman sell his own line better, and acts as a curb should he be the type of salesman who indulges in making disparaging remarks.
HOOVEN AUTOMATIC TYPEWRITER

Made by the Hooven Automatic Typewriter Corporation, Hamilton, Ohio. Sold by specially appointed dealers and agents.

The Hooven is an automatic, electrically driven mechanism which operates a standard Underwood typewriter mounted upon it. The function of the device is to produce individual, actual typewritten letters of the same or similar nature at high speed, mechanically. The operation of the typewriter during the typing of the letter follows exactly the mechanical movements as when the machine is operated by a typist. These mechanical movements are actuated and controlled by a perforated strip of record paper (similar to a perforated roll used on a player piano), running through the automatic mechanism of the machine. The record paper is cut on an auxiliary machine called the "Perforator".

The Perforator

In general appearance the Perforator resembles a typewriter. It has a standard four-row typewriter keyboard. The record paper, contained in a continuous strip (approximately 12 inches wide and 250 feet in length) is fed into (under) the Perforator so that as the keys are struck, small round holes are punched at different points across the width of the paper and down its length. The paper automatically feeds each time a perforation is made, so that but one hole is made on each line.

Before commencing to cut the record, the usual procedure is to prepare an exact typewritten specimen letter, as a guide, so that when cutting the record the extra perforations necessary to control line spacing, indentations, tabulations, etc., may be made. For convenience in interpreting the perforations as the record is being cut, all characters common in typewriting are printed in parallel horizontal lines across the width of the paper at the exact locations where the perforations for such characters would be made.

When the record for the entire letter has been finished, the recorded portion (usually several feet long) is torn from the roll and the two ends pasted together, forming an endless belt. It is then ready to be placed on the drum of the automatic typewriter actuating mechanism.

HOOVEN AUTOMATIC TYPEWRITER—continued

Operating Device

The typewriter actuating mechanism comprises a sub-base on which is mounted an Underwood typewriter. Both are mounted on a tubular stand, containing a receptacle for the record paper. The record paper, previously prepared on the Perforator, is placed on a drum in front of the actuating mechanism. This drum has a number of slots running lengthwise and is divided into sections, each section being connected with the key levers of the typewriter, arranged in a horizontal row on the paper across its width. When the machine is started, the drum revolves, carrying the record paper forward, by means of a wheel gears meshed in guide holes in both sides of the record paper, and the perforations for each character come under its corresponding pin, and the pin drops through the perforations into the slot of the drum, completing the mechanical connection between the automatic and the typewriter keyboard, resulting in operating one of the typewriter keys.

As rapidly as perforations appear, the keys are operated, the same as if by hand, writing each character in sequence and spacing, tabulating, etc. The normal typewriting speed is 130 words per minute.

Principally Emphasized Features

The usual procedure in larger institutions is to have one attendant for a battery of three or four machines, inserting paper, making fill-ins and removing paper successively from each machine. The principle of operation lends itself to the greatest flexibility in writing fill-ins. A word or words may be filled in at any point in a paragraph for which the machine will automatically stop, or, if desired, the next letter written from the same record may have a five or six word fill-in, or even one or more entire lines may be filled in, and when the machine is again set in operation to complete the letter, it will automatically take care of the line spacing and paragraphing.

Fill-ins of addresses and other changes throughout the letter are typed manually by the attendant. A common practice is to address the envelopes immediately before or after the finishing of its accompanying letter. Because the entire letter is written at the one time, through the one ribbon, all typing is perfectly matched. Being a machine, accuracy of spelling, punctuation, etc., is assured, requiring no proofreading. Each letter is exactly the same as the first. The usual number of carbon copies can be made.

Models and Prices

Perforator, for cutting the record paper. $75.00
Automatic Device, including a standard Model No. 5 Underwood typewriter, with special control attachments, automatic operating device connected with typewriter, mounted on a stand, electrically operated. 650.00
Perforator roll (250 feet) record paper furnished with each outfit.

ELECTROGRAPH PRESS

Made by the Electrograph Company, 725 West Grand Boulevard, Detroit, Michigan. Distributed on a lease basis to specially appointed agencies and operated on a service basis at the above address. A Gordon Job press, redesigned and equipped with special features to adapt it for producing facsimile typewritten form letters with individual names or names and addresses imprinted. Printing is done through a visible ribbon. Adresses are set on addressograph plates made on a graphite embossing machine. As each impression is made the address

(Continued on page 255)
Inter-Communicating Systems

KLEINSCHMIDT TELEGRAPH TYPEWRITER

Made by the Kleinschmidt Electric Company, Incorporated, Long Island City, New York. Installations planned and made by their own engineering staff.

An electrically operated typewriter that automatically transmits messages from one point to another. It provides for the transmission of information in a definite, permanent form to any number of distant stations. The message as typed on the sending typewriter is transmitted to every other typewriter connected; each receiving machine typing the form automatically in exactly the same way and at the same time as it is written on the sending machine. Tabulated forms and duplicate copies can be made as with any standard typewriter. The paper is fed from a continuous roll mounted on a frame in back of the machine.

The typewriter unit is a special three row keyboard, double shift machine, having a standard carriage and control features. It can be operated by anyone without previous experience.

The medium by which the message is transmitted is a continuous paper tape in which are punched combinations of perforations by the sending machine. When this tape is placed in the transmitter device, which is part of the system, the perforations in the tape actuate the keys of the distant typewriter, re-writing the message in the same form as it was originally written on the transmitting typewriter.

The commercial machine is a development of an earlier model originally designed for telegraph use. It is now available for use in hotels, banks, railroad companies and any other line of business where information is to be transmitted to one or any number of distant points.

Prices for each installation will be quoted on survey by the manufacturers.

LAMSON

Made by the Lamson Company, Incorporated. General offices and works, Syracuse, New York. Sold through branch service stations located in the principal cities throughout the country.

This concern are designers and builders of an extensive line of automatic conveying systems for saving labor in handling cash, paper and merchandise in stores, offices and industrial plants.

Several different types are made, such as pneumatic tube systems, operating by compressed air through continuous tubes, connecting departments, branches, buildings or establishments; cash and parcel carriers operating on a continuous belt; electric cable carriers; gravity and belt conveyors; elevators, spiral conveyors, etc.

The systems are built into the office or plant where they are used and the price of the equipment and installation, therefore, varies considerably.

Junior Tube System

A new two station unit recently put on the market, is designed to convey papers quickly from one department to another, for use in offices, banks, brokerage houses, factories, etc., where a built-in multi-station tube system would prove too elaborate, and where the smaller foot-power system would not have sufficient capacity.

LAMSON—continued

The operating principle is the same as that employed in the larger sizes of pneumatic tube systems made by this company. The carriers are cylinders projected through a continuous tube by air pressure generated by a blower.

The entire power plant, consisting of a motor, blower and power economizer, is contained in an oak or mahogany finished cabinet, measuring on its base 26x20” and 52” high. Either end of the tube may be used as a receiving or dispatching station. When the conveyors are dispatched from the end at which the power plant is located, they are carried by air pressure to the other end or “Out Station.” When dispatched from the “Out Station,” an electric switch control reverses the air current, creating a vacuum, which carries the conveyor through to the cabinet terminal.

As the cabinet contains all of the moving parts of the system, it can be installed or moved in a few hours. The cabinet is put in position, the tube is hung to ceilings or walls by hangers and the “out” station terminal chute or basket is mounted on any convenient table, desk or other piece of furniture.

Models and Prices

The average installation of a Junior Tube System, including approximately 100 feet of tubing, with all bends, joints, hangers, and labor necessary for installation, is approximately $500.00

The nature of and condition under which installation is made, govern the definite price.

P-A-X


A private inter-communicating telephone system, similar in its operation to the automatic telephone equipment recently adopted in the larger cities. It connects and completes, but neither supplants nor connects local or long distance telephone service.

The number of the department desired is dialed on the calling instrument. The call goes through the automatic telephone switchboard and automatically rings the bell connected with the telephone in the called department.

The construction permits of several lines being connected at one time to allow the holding of a joint discussion by several executives.

The service includes code call, conference, watchman’s service and other inter-communicating features.

The price of the equipment varies and is dependent upon the size of the equipment and the material and labor used in installation.
Typewriter Attachments
INSTANTO TYPE CLEANER

Sold by the Instanto Sales Corporation, 27 East 22d street, New York City.

The Instanto Type Cleaner is a device for cleaning the typefaces of Remington, Underwood, L. C. Smith, and Royal typewriters, with speed and cleanliness to the operator.

It consists of a brush, set in a metal frame, shaped to conform to the arc formed by the type when they are at rest. A stamped steel frame which clamps to the frame of the typewriter forms a housing for the brush when it is not in use.

To operate, the thumbs are pressed against both sides of the frame, causing the brush to pass over the surface of all the type at one time, cleaning all type in one quick motion. Releasing the pressure allows the brush to spring back out of the way.

Models and Prices

Models are made for the above mentioned machines only. $2.00 (Models for other makes of typewriters are being developed)

White Glass Slabs for all purposes

Cash Registers - Scales - Slicers - Refrigerators
Table and Counter Tops - Shelving - Wainscoting
Paneling - Ceilings - Partitions - Toilets
Bath Rooms - Hospitals - Restaurants

Plain and with Etched Designs in Colors

Sanitary Construction Co.
355 UNION PARK COURT

Typewriters

Typewriter History

As much has been published recently of the history of the typewriter, particularly of its development during the last fifty years, that it is easily within the reach of anybody who is interested in the story of that wonder.

This chapter is to trace particularly the origin of the more permanent features incorporated in present day typewriters.

The first patent on a machine, not called a typewriter, but apparently one from its description, was granted by Queen Anne to Henry Mills, an English engineer, on January 7th, 1714. It was never produced commercially.

The first American patent was issued on July 23rd, 1829, for a machine called the "Typographer," to William Austin, of Detroit, Mich., inventor of the Solar Compass. It was a combination of an index and typewriter, machine, having the type on the segment of a circle, brought to position by an arm having a hole and pin pointers or gauges. It contained the elements of later typewheel machines. It was never manufactured.

The first typewriter appeared in France in 1838, when a patent was issued in France to Xavier Prouté of Marseilles for a machine called a "Typographic." The typebars were arranged in a circle to strike down on a common point. The machine was never manufactured commercially.

The first typewriter to use a longitudinal motion of the carriage for letter spacing was first used in Charles Thurber's "Patent Printer" of 1846, developed in Worcester, Mass. It had an arrangement of keys with type on the bottom of stems arranged on a wheel rotated to the character desired and impressed on a plate. It was the first visible writing machine. Not commercially manufactured.

The same "Typewriter" was first applied to the first practical typewriter which development was commenced in 1867 in Milwaukee, Wisconsin, by Charles Gillett, S. W. Soule and Christopher Latham Sholes. Later they were joined in their work by James Densmore. The idea of the typewriter occurred during an experiment to produce a machine for numbering the pages of books to accomplish the work of present-day numbering machines. The typewriter had an up-stroke, pivoted typebar, and was a useless machine (writing capital letters only), having the present-day principles of paper feeding around a platen and printing through a ribbon. Its manufacture was commenced in September, 1873, by E. Remington & Sons, Ilion, New York, and it sold for $125.00.

It is interesting to note that this, the first typewriter ever offered for sale, but the same four-row keyboard with the same arrangement of the letters is now used on standard typewriting machines. It is not known why
Typewriters

the arrangement was selected. It might be thought that Mr. Sholes, being a printer by trade, selected an arrangement similar to a printer's type case. But a printer's case is not of similar arrangement. The most likely reason is that due to the construction of his machine, it was necessary to space the typebars for different letters in positions to overcome interference as much as possible, as they passed each other.

The first shift machine (capitals and small letters), was the Remington No. 2, placed on the market in 1878. It is a direct descendant of the original machine.

The first typewheel machine was placed on the market in 1886 by the Hammond Typewriter Company.

The first double keyboard was brought out in 1883 on a machine called the Caligraph.

The first visible writing typebar machine was known as the Horton, brought out in 1885.

The first automatic ribbon reverse was placed on a Remington typewriter in 1885.

The first front stroke machine with typebars mounted in a segment in front of the machine was the Underwood, placed on the market in 1897.

The first decimal tabulator was the Gorlin tabulator, placed on Remington typewriters in 1899.

ANALYSIS OF TYPEWRITERS

In describing the features of the different makes of typewriters, an effort has been made to adhere to a standard form of analysis. It will be found that most of the machines conform in the sequence of the descriptions of their different features, to the following table. Thus in comparing one machine with others, the same features will be found in the same order, in each description.

1—General Features
   Model number.
   Date first put on market.
   Standard or portable.
   Typebar stroke, (front), down or thrust.
   Kind of shift, (basket or carriage).
   Visible or blind writing.

2—Keyboard
   Number of rows.
   Number of keys.
   Number of characters.
   Location of shift keys, (right or left).
   Shift lock, (position).
   Shift lock release, (position).
   Feature keys on keyboard, (Back spacer key, Tabulator key, Marginal release key).
   Adjustable touch.

3—Carriage
   Kind of bearings.
   Interchangeable platens.
   Taking paper, (size).
   Writing line, (length).
   Design of escapement, (rack or rotary).
   Feed rollers, (single or unit).
   Tabulator design, built in or attached (number of keys).

   Line space lever, (right or left).
   Adjustable line spacing, (number of positions).
   Back spacer.
   Margin lock, (right or left).
   Line indicator.
   Paper fingers.
   Variable line space.
   Lateral paper guide.

4—Printing Mechanism
   Construction of typebars, (corrugated).
   Mounting, (segment or individual hangers).
   Stroke stop.
   Adjustments or bearings.
   Adjustable impression.
   Type guide, (lateral, vertical).
   Heel to prevent battering.
   Ribbon, (colored).
   Size.
   Stencil cut-out.
   Automatic reverse.

5—Construction
   Base (open or enclosed).
   Noise-reducing features.
   Finish.
   Type faces.

6—Price
   Carriage lengths.

THE FOUR-ROW VS. THE THREE-ROW KEYBOARD

Despite arguments pro and contra as to the relative merits and efficiency of each type of keyboard, the main consideration appears to be largely a mere of choice.

Ever since the days of the first practical typewriter, the original Remington Model No. 1, the four-row keyboard has been considered and called the "standard". The three-row keyboard is generally referred to as the "Universal".

Unquestionably, custom and usage have accented a place for the four-row keyboard that it must endure. Operators trained through years of experience prefer it, and the majority of typewriter manufacturers have adopted it, as standard equipment. It is the arrangement principally in all schools of typewriting, and the touch operator finds it natural because it fits his training.

The majority of typewriters in use today are four-row keyboard machines. Because generally looked upon as standard, it has not, particularly in recent years, been necessary to advance many arguments for the four-row arrangement. On the other hand, proponents of the three-row keyboard, present a very strong array of reasons why the three-row arrangement of the keyboard is more practical and efficient and, therefore, to be preferred.

Factual arguments of unusual combinations of words or characters are often submitted by both sides to prove their claims, as for instance, that in the writing of an amount, say, $123.56, an extra shift is required on four-row keyboard machines whereas the three-row arrangement allows the writing of all figures and every sign or mark used in connection with them, without shifting.

The principal other reasons most frequently advanced for three-row keyboards are:

1. All letter keys are in the same arrangement as on the four-row keyboard machines, therefore, in the bulk of the work in everyday practice, the touch operator will not find any confusion.

2. Most operators, unless specially experienced, get away from the touch system when they are writing figures. As an example they point out that the average touch operator in writing any figures, will invariably look at the keyboard.

3. The three-row keyboard offers a practical keyboard for the touch operator because with the fingers at rest on a middle row, there is
THE FOUR-ROW VS. THE THREE-ROW KEYBOARD
—continued

but one row below and one row above, whereas on a four-row keyboard, there are two rows above and one below.

4. The three-row arrangement allows for heavier typebars and, therefore, stronger construction and better alignment.

In the matter of numbers, a very strong consideration in the selection of the keyboard might be that over two million Underwood typewriters having four-row keyboards, have been made and sold. Other companies such as Remington, Royal, L. C. Smith, Woodstock, each making machines with four-row keyboards, count their sales by serial numbers each running into hundreds of thousands.

But the fact must also be considered that over one million Oliver’s with three-row keyboards have also been made and sold; that the Corona, a three-row keyboard, portable typewriter, is nearing its six hundred thousandth machine; the Underwood portable typewriter, with a three-row keyboard and but a few years on the market has passed its 80,000 serial; the Noiseless, another three row, standard size typewriter, is in its 60,000 serials and over 60,000 Rex typewriters, also with three-row keyboards, have been made and sold.

As was said at the start of this chapter, the whole consideration is largely one of choice. Some of the highest priced operators in large business houses, in order to gain the advantage of quiet, have adopted and seem to have lost none of their speed or efficiency on a three-row keyboard typewriter. As judged by this one example, it seems that the keyboard arrangement was secondary in importance to the matter of quiet.

In the purchase of an automobile, the gear shift if different from that on the majority of cars, is usually a relatively unimportant consideration. The car is really selected because of its other inherent qualities. And, perhaps, in the final analysis, the same may be true of typewriters as regards keyboard arrangement.

The fundamental idea of the DIGEST is different from anything else ever before applied to any line of business. If you do not entirely understand its reason and plan, read Pages 5 to 12.
DEMOUNTABLE

Made by the Demountable Typewriter Company, Fond du Lac, Wisconsin. Sold by dealers and special representatives throughout the country.

Principal Emphasized Features

1. Made in sections, all interchangeable and replaceable. A latch at the rear of the machine allows the operator to remove the carriage, ribbons mechanism and outside frame as one assembly, from the printing mechanism, for cleaning or replacement.

2. Carriage and platen instantly removable and interchangeable. Paper feed rolls removable for cleaning. The same machine may at any time be changed into a wider carriage machine by the purchase and substitution of a wider carriage, which is interchangeable as needed, with the original narrow carriage.

The action or type-bar assembly unit, the part of the typewriter most susceptible to wear, can be removed and replaced with a new unit at any time, at about one-half the usual cost of a new typewriter. Type arrangements, of different sizes or for foreign languages, may likewise be substituted. Standardized manufacturing process assures interchangeability of like parts of different machines.

3. All the refinements of usual standard typewriter construction, plus the demountable feature, are embodied in the machine.

DEMOUNTABLE—continued

General Features: Standard size, front stroke, single (basket) shift, visible writing; unit construction, demountable by the operator.

Keyboard: Four rows, 42 keys writing 84 characters; right and left hand shift keys equipped with shift lock and release; back space key; margin release key situated above keyboard on front frame panel; tabulator key.

Carriage: Demountable by operator. Mounted on caterpillar ball bearings. Carriage is wide, 10 inches long, weighing 10 pounds. Single key tabulator operated from key on keyboard with stops set for single, double or triple spacing and with ratchet throw-off; back space operated from key on keyboard; right and left hand margin locks; adjustable paper fingers; variable line spacer. Forward tilting paper table to allow adjustment of margin and tabulator stops.

Printing Mechanism: Removable and interchangeable, flat steel type bars, mounted in a one-piece slotted segment. Type guide at printing point. Type bars have heels to prevent battering of type.

Construction: Demountable as above described; bearings protected by dust covers. Type faces, Pica or Elite.

Models and Prices

<table>
<thead>
<tr>
<th>Section</th>
<th>Description</th>
<th>Price</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>type action unit, complete</td>
<td>$40.00</td>
</tr>
<tr>
<td>2A</td>
<td>base unit, complete</td>
<td>10.00</td>
</tr>
<tr>
<td>2B</td>
<td>deck unit, including ribbon mechanism</td>
<td>35.00</td>
</tr>
<tr>
<td>2</td>
<td>11-inch carriage, complete with way-rod assembly</td>
<td>20.00</td>
</tr>
<tr>
<td></td>
<td>Total price of assembled machine</td>
<td>$105.00</td>
</tr>
<tr>
<td>3</td>
<td>14-inch carriage, complete with way-rod</td>
<td>$30.00</td>
</tr>
<tr>
<td></td>
<td>If a 14-inch carriage machine is originally ordered, and 11-inch carriage is later desired, extra way-rod assembly is not required.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>11-inch carriage without way-rod assembly</td>
<td>18.50</td>
</tr>
</tbody>
</table>

TYPE for TYPEWRITERS, ADDING MACHINES, etc.
Twenty Years’ Experience Supplying Large Manufacturers

HULSE MANUFACTURING CO.
GENEVA, N. Y.
HAMMOND MULTIPLEX—continued

Inserted first, and rolls itself up in the perforated drum of the carriage. A distinctive type of escapement mechanism is provided. Left hand line space with adjustment for single, double or triple spacing. Adjustable front right and left hand margin stops. A paper bail serves instead of the usual paper fingers.

Printing Mechanism: Type wheel construction as above described. Two-color ribbon with manual reverse, and throw-off for stencil cutting.

Construction: Semi-enclosed. Dimensions: Width, 13 inches; depth, 13 inches; height, 7 inches; weight, 21 pounds, including cover and base.

Multiplex Models and Prices

Regular Model, “A” carriage, 8½ line or 85 characters

Regular Model, “B” carriage, 12 line or 120 characters

Regular Model, “C” carriage, 16 line or 160 characters

Regular Model, “D” carriage, 30 line or 200 characters

Mathematical Model, with keys for extra signs and characters up to 120, equipped with shift keys for numerator and denominator

Reversible Model, writes in either direction from left to right or right to left; controlled by lever, for such languages as Arabic, Persian and Hebrew, with spacing from 5½ to 14 characters to the inch

Variable Spacing Model, CC, DD, GG, FF, for two degrees of spacing, with veneer cover

Variable Spacing Model, BB, BB3, for three degrees of spacing, with veneer cover

Variable Spacing Model, EE (one spacing), either 11, 12, 15 or 18 letters to the inch, with metal cover

All models are equipped with two type shuttles (two sets of type faces)

ELLiot-Fisher

See Billing Machines; also Bookkeeping Machines.

KLEINSCmidt TELEGRAPH TYPEWRITER

See section “Intercommunicating Systems”.

HooVEN AUTOMATIC

See section “Duplicating Machines”.

The descriptions you are reading have not been prepared, nor influenced by any of the manufacturers whose products are included. The DIGEST is impartial.
NOISELESS

(See Also "Portable Typewriters")

Made by the Noiseless Typewriter Company, general sales office, 225 Broadway, New York City. Recently consolidated with the Remington Typewriter Company. Sold by the Remington Typewriter Company’s sales force through branch offices throughout the country.

Principally Emphasized Features

1. Permanently and constitutionally quiet; may be operated anywhere without the distraction and irritation so commonly caused by the usual noise of typewriter operation.

2. Printing is accomplished by pressure instead of by the hammer blow, usual on other machines, making operation permanently noiseless. The distance which the type travels is limited by the length of the type action itself, and is so fixed that each type just reaches the paper, but does not touch the platen. Through an ingenious combination of leverage, impelled by the momentum of a rapidly moving weight on each type bar, the action after the type reaches the paper, exerts a very strong pressure, insuring perfect registration on the original and carbon copies.

3. Printing is modified and the degree of pressure controlled by a fore-and-aft adjustment of the platen, controlled by a graduated dial conveniently placed on the front of the machine just above the keyboard. The adjustment increases or decreases minutely the distance between the platen and the type face, at the end of the type bar stroke. Thus, the pressure may be varied according to the number of carbon copies required or to control the density of inking to match fill-ins on process letters.

4. Indestructible steel platen.

Specifications

General Features: Standard size, thrust stroke, double shift (carriage shift), visible writing. This model (No. 5) was placed on the market in February, 1923, and supersedes Model No. 4, manufactured since 1913.

Keyboard: Three rows, 30 keys writing 90 characters. The present model has the commercial arrangement of keyboard (the arrangement of the lette keys is the same as on four-row keyboard machines, making it possible for a touch operator to change from one machine to another without confusion). Right and left hand shift keys, with left hand shift lock. Back space, tabulator and release keys situated on keyboard. Touch adjustable by operator by means of a thumb screw, affecting the tension of all operating keys at once.

Carriage: Mounted on ball bearings; takes paper 10 1/2 inches wide, writing line 9 1/2 inches long. Full drop speed escapement. Eight unit feed rolls with spring tension lever adjustable by operator, to control cards and heavy form work without slipping; left hand line space lever with adjustment for one, two and three line spacing and platen ratchet release; right and left margin stops; paper fingers designed to provide means of writing to extreme bottom of sheet; variable line spacer; adjustable lateral paper guide; paper release key on right side of carriage; right and left hand carriage release levers; single-key tabulator operated from key on keyboard.

Printing Mechanism: Type bars are of steel with a projection to prevent chatter and are instantly removable without special tools. Type guide at printing point, locking type against vertical and horizontal vibration.

Two-color 3/4-inch ribbon, with automatic reverse and cut-out for stencil work.

Construction: Cast frame; enclosed design; dust-proof. Type faces, Elite, Pica, Medium Roman, Gothic, Mica and Pin Point. All sizes smaller than Gothic can be had 10 or 12 characters to the inch; miniature Gothic is supplied 20 characters to the inch.

Models and Prices

(Model No. 5)

<table>
<thead>
<tr>
<th>Carriage</th>
<th>Writing Line</th>
<th>Price</th>
</tr>
</thead>
<tbody>
<tr>
<td>10 1/2&quot;</td>
<td>9 1/2&quot;</td>
<td>$135.00</td>
</tr>
<tr>
<td>12 1/2&quot;</td>
<td>11 1/2&quot;</td>
<td>$140.00</td>
</tr>
<tr>
<td>14 1/2&quot;</td>
<td>13 1/2&quot;</td>
<td>$145.00</td>
</tr>
<tr>
<td>16 1/2&quot;</td>
<td>15 1/2&quot;</td>
<td>$147.50</td>
</tr>
<tr>
<td>18 1/2&quot;</td>
<td>17 1/2&quot;</td>
<td>$150.00</td>
</tr>
<tr>
<td>20 1/2&quot;</td>
<td>19 1/2&quot;</td>
<td>$160.00</td>
</tr>
<tr>
<td>26 1/2&quot;</td>
<td>25 1/2&quot;</td>
<td>$185.00</td>
</tr>
</tbody>
</table>

Oliver

Made by the Oliver Typewriter Company, General offices, 150 North Dearborn Street, Chicago, Illinois. Sold direct by mail and through specially appointed dealers and agents.

Principally Emphasized Features

1. All advantageous, original Oliver features incorporated in over one million machines of previous models manufactured for 28 years, including the distinctive arch construction and actuating principle of the type bar.

2. Various size carriages interchangeable by the operator.

3. Increased speed with noise reduced to the minimum consistent with efficiency.

Specifications

General Features: Standard size, thrust stroke, double shift (carriage shift), visible writing. Placed on the market in July, 1922.
OLIVER—continued

Keyboard: Three rows, 28 keys writing 84 characters; right and left hand shift keys and shift lock; tabulator key and separate right and left margin release keys, situated directly above the top row of keyboard.

Carriage: Interchangeable, mounted on roller bearings; standard correspondence model, takes paper 10 5/8 inches wide, writing line 9 inches long; rotary escapement; paper feed rolls extend entire length of carriage; inbuilt tabulator operated from single key above keyboard. Line spacing and carriage return operated from left platen knob with an adjustment for single, double and triple line spacing and ratchet release. Back space operated from lever on right side of machine; variable line spacing; adjustable paper fingers.

Printing Mechanism: Type bars of distinctive “U” shape or arch design are mounted on either side of the printing point, held at both ends of the axe and strike downward on the platen.

Two-color, nine-sixteenths inch ribbon with automatic reverse and stencil throw-off. An indicating device denotes the exact printing point, moving out of the way with the downward stroke of the type bar.

Construction: Enclosed base. Inbuilt noise-reducing features. Typefaces: Pica, Elite, Medium Roman or Print-type.

Models and Prices

Model No. 11 with 11-inch carriage, taking paper 10.5 inches, writing line 9 inches ........................................ $75.00
Model No. 11 with 12-inch carriage, taking paper 12 inches, writing line 10.45 inches ........................................ 80.00
Model No. 11 with 15-inch carriage, taking paper 14.5 inches, writing line 13.25 inches ........................................ 85.00
Model No. 11 with 18-inch carriage, taking paper 17.82 inches, writing line 16.60 inches ........................................ 90.00

Any carriage narrower than the one originally supplied, can be substituted at any time. Any carriage wider than the one originally supplied, can also be substituted at any time but must have a wider rail.

REMINGTON—continued

Principally Emphasized Features

1. Every fundamental feature found advantageous and successful in previous models is contained in machines of the present line.
2. In-built buffers, special platen and felt insulated side plates, reduce noise to a minimum.
3. Double-coiled wire spring apron, accelerates the return action of the typebar, cushions the blow and preserves alignment by preventing imbedding of segment by typebars of keys most used. Renewable and adjustable.
4. The “Natural touch” is afforded by equalized key tension throughout the entire keyboard, being the scientific adjustment of the key action to conform to the normal muscular movements of the human hands.

Quiet Model No. 12

Specifications

Model No. 12 is equipped with a selective tabulator usually referred to as the “self-starter”, controlled from five keys mounted in a row, above and parallel to the top of the keyboard. Provides tabulations for the various indentations of paragraphs, subheadings, etc., of letters and other forms. This model was placed on the market in 1921.

Model No. 11 is the same in every feature as Model No. 12, except that it has a decimal tabulator operated from ten keys mounted above and parallel to the top row of the keyboard. It also has the noise reducing features of the Model No. 12.

Model No. 10 was discontinued late in 1923. It was the basic machine from which Models No. 11 and No. 12 have been designed. First placed on the market in 1908 and improved in 1921.

Please note that descriptions are not made up of catalog phraseology. Each analysis represents a careful study of the subject.
REMINGTON—continued

Models and Prices

<table>
<thead>
<tr>
<th>Model</th>
<th>A</th>
<th>B</th>
<th>C</th>
<th>D</th>
<th>E</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>$102.50</td>
<td>$107.50</td>
<td>$112.50</td>
<td>$130.00</td>
<td>$155.00</td>
</tr>
</tbody>
</table>
| Faces | Fica, Medium Roman, Elite or Gothic.

ROYAL

Made by Royal Typewriter Company, Incorporated. Executive offices, 364 Broadway, New York City. Sold by specially appointed dealers and their sales force throughout the country.

Principally Emphasized Features

1. A light, responsive, elastic key action and a mechanical cushion effect produced in the key levers, secured by the design of the “accelerating key bar mechanism.” As the depression of the key lever progresses, the ratio of speed of the key bar is increased.

2. The construction of the type action of the special Quiet Model is such that at a point a short distance (approximately 15 degrees) from the center, the driving leverage is lost by passing over a center, allowing the type bar to travel by its attained momentum to the paper. The absence of an anvil on the segment eliminates noise of impact, and all other sounds of operation are muffled down to a minimum. The result is a positive uniformity of impressions with a maximum of speed and a minimum of noise.

3. Triple service; letter writing, card typing and billing without extra attachments and without change of adjustments.

Specifications

Master Model No. 10

This improved model was first placed on the market in September, 1921, and supersedes various other models manufactured since 1908.
Typewriters

Catalog Section

ROYAL—continued

General Features: Standard size, front stroke, single shift (carriage shift), visible writing.

Keyboard: Four rows, 42 keys, writing 84 characters, right and left hand shift keys, with left hand shift lock and double releases; back space key and tabulator key situated on keyboard; touch adjustable by operator by thumb screw located underneath machine affecting the tension of all operating keys at once.

Carriage: Mounted on ball bearings operating as axles inside pinions meshed with a geared track; takes paper 11 inches wide, writing line 93/4 inches long; roller contact (anti-friction) rotating escapement of exclusive design; unit tabulator operated from key on keyboard; left hand line space lever, with adjustments for single, double and triple line spacing; also with ratchet throw-off; carriage release lever at end of carriage; back space mechanism operated from key on keyboard; right and left hand margin stops with line lock to prevent overrun during travel of type bar, prevents high or low misalignment. The weight of the shift is balanced.

Printing Mechanism: Type bars corrugated, mounted in one piece segment with single type-bar pivot; accelerating type bar action increases the ratio of speed of the type bar as the key is depressed; insures speed and adds to manifolding power; projection on each type bar prevents bouncing of type faces by striking against each other; one piece type guide.

Two-color 3/4-inch ribbon with automatic reverse, and cut out for stencil work; positive guides to prevent portion of any character being printed in a second color.

General Construction: Cast frame, with glass side plates, designed to reduce noise in operation; dust shields located in interior mechanism over bearings and other delicate parts.

Quiet Model

The Quiet Model is the same in all general features as the Master Model above described, except for a change in the design of the type bar action, and a lighter touch (as described on preceding page), designed to increase speed and reduce the noise in operation.

Prices of all Models

<table>
<thead>
<tr>
<th>Model No.</th>
<th>Description</th>
<th>Price</th>
</tr>
</thead>
<tbody>
<tr>
<td>19</td>
<td>(Standard Model)</td>
<td>$105.00</td>
</tr>
<tr>
<td>QX</td>
<td>(Quiet Model)</td>
<td>$105.00</td>
</tr>
<tr>
<td>X-12</td>
<td>takes paper 13 3/4&quot; wide, writes line 11&quot; long</td>
<td>$105.00</td>
</tr>
<tr>
<td>X-14</td>
<td>takes paper 15&quot; wide, writes line 13 3/4&quot; long</td>
<td>$115.00</td>
</tr>
<tr>
<td>X-18</td>
<td>takes paper 19&quot; wide, writes line 17 3/4&quot; long</td>
<td>$125.00</td>
</tr>
<tr>
<td>X-20</td>
<td>takes paper 21&quot; wide, writes line 19 3/4&quot; long</td>
<td>$135.00</td>
</tr>
</tbody>
</table>

Type Faces: Pica, Elite, Medium Roman, Elite or Pica Single or Double Gothic, Medium Roman Single Gothic.

SHILLING BROS.—continued

Principally Emphasized Features

- Entire type section can be removed from the frame of the machine, making it possible for the operator to clean, oil or adjust all parts. It also permits the substitution of separate type for writing foreign languages.

Specifications

General Features: Standard size, front stroke, single (basket) shift, visible writing; open face construction.

Placed on the market in 1921, this machine is a development and improvement on several machines previously manufactured under different names (Reliance, Pittsburgh Visible, etc.). The principal improvement is the four-unit construction, consisting of the type basket, carriage, ribbon and reverse mechanism and frame), all removable, and improved tabulator and two-color ribbon device.

Keyboard: Four rows, 44 keys writing 88 characters; right and left hand shift keys with right and hand shift lock and release.

Carriage: Mounted on ball bearings; takes paper 11 inches long, equipped with nine unit feed rolls and release, single key tabulator, operated from push button on side of machine; left hand line space lever with adjustment for single, double and triple spacing and ratchet throw-off; right and left hand margin locks; adjustable paper fingers.

Printing Mechanism: Basket shift. The entire basket is released by a button and is removable from the frame of the machine. Type bars mounted in a slotted segment with type guide at printing point, with guides to prevent battering.

Two-color, 3/4-inch ribbon with automatic reverse and throw-off for stencil cutting.

Construction: Enclosed base. Type faces, Pica and Elite.

Models and Prices

Model No. 22, as above described ........................................... $75.00

L. C. SMITH


Principally Emphasized Features

- Ball bearings: In type bar (each type bar mounted on 15 balls); in shift; in carriage runways and every other important functional part.
- Shifting type segment (the carriage remains stationary and the type bar section raises for capitals) provides lighter shift, uniform on regular or wide carriage models.
- Interchangeable platen affording the use of platens of different degrees of hardness according to the number of copies desired.
- Choice of right or left hand carriage return. Right hand return is standard equipment.
L. C. SMITH—continued

Specifications
Models No. 7 and No. 8

Models No. 7 and No. 8 are the same machine except that Model No. 7 has 33 keys writing 76 characters; Model No. 8 has 42 keys writing 84 characters. Both models have been on the market with improvements added from time to time since 1915, superseding other models marketed since 1915.

General Features: Standard size, front stroke, single (basket) shift, visible writing.

Keyboard: Four rows, 42 keys (on Model No. 8) writing 84 characters, or 33 keys (on Model No. 7) writing 76 characters; right and left hand shift keys equipped with left hand shift lock and releases; back space key, margin release key; five tabulator keys, and color control ribbon key, all situated on keyboard. Touch is adjustable by mechanic only.

Carrriage: Mounted on ball bearings; takes paper 16½ inches wide, writing line 8¼ inches long; platen interchangeable, ideal for easy and quick escapement, provides for half spacing for use in inserting omitted letters; double sets of unit feed rolls; built-in decimal tabulator operated from five keys mounted above top row of keyboard; line space lever can be located at option of purchaser for right or left hand operation, and is provided with adjustments for single, double or triple line spacing; also with throw-off to allow platen to revolve freely; carriage release lever at each end of carriage; back space mechanism operated from key on keyboard; right and left margin stops with line lock to prevent overprinting at end of line; line indicator; variable line spacer; adjustable paper fingers holding paper to allow typing to end of sheet; lateral paper guide.

Printing Mechanism: Type bars (corrugated) mounted on fifteen ball bearings in a basket segment, having adjustments for take up of wear projection on each type bar and construction, prevents battering of type by striking against each other or on metal paper fingers; type guide.

Two-color, ½-inch ribbon, operated by carriage main spring, equipped with both automatic and hand reverse, with cut out for stencil work.

General Construction: Cast frame, open design; buffers or silencers are placed at noise centers to reduce noise to a minimum; ball bearings in type bars, carriage bearings and capital shift bearings, adjustable to take up wear.

Models No. 3 and No. 6

Wide carriage machines (Model No. 3) and extra wide carriage machines (Model No. 6), having the same keyboard arrangement and otherwise the same as Model No. 8.

Prices of all Models

| Model No. 8 | Standard correspondence model, 84 characters | $165.00 |
| Model No. 7 | Correspondence model, 76 characters | $100.00 |
| Model No. 3-12" Takes paper 12½" wide, writes line 10½" long | $110.00 |
| Model No. 3-14" Takes paper 14½" wide, writes line 12½" long | $117.50 |
| Model No. 6-20" Takes paper 20½" wide, writes line 18½" long | $150.00 |
| Model No. 6-26" Takes paper 26½" wide, writes line 24½" long | $180.00 |

Type Faces: A wide variety of all popular styles.

SMITH PREMIER
(Model No. 60)

Made by the Smith Premier Typewriter Company, General offices 374 Broadway, New York City. Sold through their own sales force and specially appointed representatives throughout the country and by the American Writing Machine Company of Newark, New Jersey, through their branch offices in principal cities.

Principally Emphasized Features

- Open-face construction without the obstruction of bars or rods, affording visibility and accessibility.
- Extra size platen (1½ inches in diameter) provides a better grip on the paper and adds to the life of the platen.
- Designed in all its parts and action for the highest possible speed with a minimum of energy and effort on the part of the operator.
- Type bar segment shifts for capitals; the carriage moves only from side to side; The weight to be shifted is constant regardless of width of the carriage, lessening fatigue and increasing speed.

Specifications

General Features: Standard size, front stroke, single (basket) shift, ribbon writing; open face construction. Put on the market in 1923, this machine is a development and improvement upon the Monarch type writer manufactured and sold extensively for years by the Remington Typewriter Company. The most quickly recognized improvement is that the type bars are mounted in a solid slotted segment, whereas the Monarch all individual type bar hangers.

Keyboard: Four rows, 46 keys writing 92 characters including eight function keys; right and left hand shift keys with shift lock and release; back space keys; tabulator key and margin release key situated on the right of the front panel above the keyboard. Adjustable touch.
SMITH PREMIER—continued

Carriage: Suspended between race rails with roller bearings mounted at right angles. Correspondence model takes paper 10.5" wide, writes line 8.6" wide. Tabulator is a special equipment of the ten-key decimal dealer. Left hand line space lever with adjustment for single, double or triple spacing and ratchet throw-off; back space lever operated from key on keyboard; right and left hand margin release levers with line lock; adjustable paper fingers; variable line spacer.

Printing Mechanism: Basket shift with type bars mounted in a solid slotted segment with a stroke stop. Type guide at printing point.

Two-color, $\frac{1}{2}$-inch ribbon with four position adjustment; one position for each color of two-color ribbon, stencil cutting position and a serpentine movement for one-color ribbon to insure the use of the entire ribbon. Automatic reverse.

Construction: Open face, designed for speed of operation; frame is enclosed with dust panels.

Prices: Model No. 60

<table>
<thead>
<tr>
<th>Carriage</th>
<th>Width of Paper</th>
<th>Writing Line</th>
<th>Correspondence Machine</th>
<th>Tabulating Machine</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>12</td>
<td>12.0</td>
<td>$102.50</td>
<td>$12.50</td>
</tr>
<tr>
<td>B</td>
<td>13.1</td>
<td>13.1</td>
<td>107.50</td>
<td>127.50</td>
</tr>
<tr>
<td>C</td>
<td>14.6</td>
<td>14.6</td>
<td>112.50</td>
<td>132.50</td>
</tr>
<tr>
<td>D</td>
<td>15.6</td>
<td>15.6</td>
<td>130.00</td>
<td>150.00</td>
</tr>
<tr>
<td>E</td>
<td>16.6</td>
<td>16.9</td>
<td>150.00</td>
<td>175.00</td>
</tr>
<tr>
<td>F</td>
<td>17.6</td>
<td>17.6</td>
<td>150.00</td>
<td>180.00</td>
</tr>
<tr>
<td>G</td>
<td>18.6</td>
<td>18.6</td>
<td>175.00</td>
<td>200.00</td>
</tr>
</tbody>
</table>

UNDERWOOD

(See Also Portable Typewriters and Bookkeeping Machines)

Made by Underwood Typewriter Company, Incorporated, 63 Vesey Street, New York City. Sold by specially appointed dealers and their sales force throughout the country.

Principally Emphasized Features

1. The original front stroke, visible typewriter, refined and perfected to its present day construction for which it is claimed to be the standard of the world.
2. Over two million machines have been sold to date, indicating its preference by users everywhere.
3. A long record of speed contests won by amateurs and professional operators.

UNDERWOOD—continued

Specifications
Models No. 4 and No. 5

Models No. 4 and No. 5 are the same machine except that Model No. 4 has 38 keys writing 76 characters; Model No. 5 has 42 keys writing 84 characters. Both models have been marketed since 1900, improvements having been added from time to time; the last improvement (October 1923) being some minor changes in mechanical design, and arrangement of wing scales (at base of line on each side of printing point) to raise with the carriage when capital shift is operated.

General Features: Standard size, front stroke, single shift (carriage shift) visible writing.

Keyboard: Four rows, 38 keys (on Model No. 4) writing 76 characters, or 42 keys (on Model No. 5) writing 84 characters; right and left hand shift keys, with shift lock operating in connection with right hand shift key; tabulator key and back space key located on keyboard, margins located above left side of keyboard; individual key tension adjustable by operator.

Carriage: Mounted on ball bearing rollers; takes paper 10$\frac{1}{2}$ inches wide; writing line 8 inches long; instantaneous lock on upper and lower case; eccentric ball-bearing escapement with center point bearings for loose and rigid dogs, designed to prevent crowding, piling or skipping of letters; built-in tabulator with automatic brake, unit style operated from single key on keyboard; left hand combination carriage return and line space lever with adjustments for one, two or three line spacing, and release to allow free rotation of platen; right hand paper release lever; back space mechanism operated from key on keyboard; right and left margin locks operated from front of carriage in connection with computing scale for visible centering of all lines; right side lock, equipped with bell signal warning, prevents type from striking when end of line has been reached; line indicator scale (called wing scales) on each side of printing point, raise and lower with platen when carriage is shifted; variable line space mechanism attached to left side platen knob; lateral paper guide attached to paper table; front sliding paper fingers; pressure lever for holding envelopes or cards flat while imprinting.

Printing Mechanism: Type bars of flat hardened steel, corrugated with protection on end to prevent battering; mounted in a one-piece slotted segment with front and rear dust guard; ring and ball type bar bearings; relief ring on segment provides uniform impressions and steady alignment; type bars may be removed easily and replaced, singly, without disturbing any others; type guide enforces correct alignment by guiding and locking type bar in printing position.

General Construction: Cast base, open design.

Model No. 3

Wide carriage machine, the same as Model No. 5, but without movable wing scales (added to Model No. 5 in October, 1923).
UNDERWOOD—continued

Prices of all Models

<table>
<thead>
<tr>
<th>Model No.</th>
<th>Description</th>
<th>Price</th>
</tr>
</thead>
<tbody>
<tr>
<td>4</td>
<td>12” wide, writes line 10½” long</td>
<td>$97.50</td>
</tr>
<tr>
<td>5</td>
<td>14” wide, writes line 12” long</td>
<td>$101.50</td>
</tr>
<tr>
<td>16” wide, writes line 14” long</td>
<td>$123.05</td>
<td></td>
</tr>
<tr>
<td>18” wide, writes line 16” long</td>
<td>$132.50</td>
<td></td>
</tr>
<tr>
<td>20” wide, writes line 18” long</td>
<td>$132.50</td>
<td></td>
</tr>
<tr>
<td>22” wide, writes line 24” long</td>
<td>$149.50</td>
<td></td>
</tr>
</tbody>
</table>

Decimal tabulator may be attached to any model. The tabulator operating keys are mounted in a straight row directly in front of forward cross member of frame. Price, extra.

Card attachment, for Models No. 4 and No. 5, extra.
Card attachment, for Model No. 3, extra.

VICTOR


Principally Emphasized Features

1. Wide, cone typebar bearings affording an inch wide bearing approximating the strength and permanency of alignment so pronounced in the old style of standard blind typewriting machines.

2. Octuple roller bearings afford pronounced stability of the carriage.

Specifications

General Features: Standard size, front stroke, single (carriage shift) visible writing. This model, (No. 10), was placed on the market in November, 1919, and supersedes Model No. 3 and previous models.

Keyboard: Four rows, 42 keys writing 84 characters; right and left hand shift keys with left hand shift lock and release.

Carriage: Mounted on octuple roller bearings, takes paper 10½ inches wide, writing line 9 inches long; interchangeable platen; rotary escapement; unit feed rolls; built-in decimal tabulator operated from a six-position indicator button and selector device, on the left of the front panel above the keyboard. Left hand line space lever with an adjustment for one, two and three line spacing and platen ratchet release; right and left margin stops with release push button located at the upper right of keyboard; back spacer operated from bar directly above top row of keyboard; adjustable paper fingers; right and left hand carriage release levers.

Printing Mechanism: Typebars mounted on individual hangers with adjustment for wear. The bearing end of the typebar has two legs with...

VICTOR—continued

Bearings one inch apart. In action, when the bar travels toward the paper, cone shaped stud on each leg enters a hole in the segment, thus locking the bar rigidly by the time it reaches the printing point.

Two-color, ½-inch ribbon with automatic reverse and throw-off for overall cutting.

Construction: Open design. Type faces: Elite, Medium Roman, Gothic, large or small Italic.

Models and Prices

Model No. 10, as above described. $110.00

WOODSTOCK

Made by the Woodstock Typewriter Company. General sales offices, 85 North Dearborn Street, Chicago, Illinois. Sold direct by their own salesmen and through specially appointed dealers and distributors.

Principally Emphasized Features

1. Built on the unit system having a single casting each for (1) the base (2) the top plate, (3) the carriage, each carrying its own essential working parts.

2. Light action, open face construction and other features designed on a standard typewriter.

Specifications

General Features: Standard size, front stroke, single (carriage) shift, visible writing. Placed on the market in 1916, superseded other models manufactured since 1914.

Keyboard: Four rows, 42 keys writing 84 characters; right and left hand shift keys, with left hand shift lock and release; back space, tabulator and margin release keys, located on keyboard. Tension is adjustable to the individual touch.

Carriage: Mounted in dirt proof rails on eight ball bearings. Standard correspondence model takes paper 11½ inches wide, writing line 9½ inches long. High speed rotary escapement; unit feed rolls. Tabulator is of the same speed, double and triple spacing and ratchet release. Right and left margin release levers; back spacer operated from key on keyboard. Paper margin stops in front of machine. Lateral paper guide; paper fingers have side adjustment and are hinged at bottom. Scale indicator and line ruling scale; built-in card holder is standard equipment. Variable line space of distinctive construction is a secondary knob operating through, but working entirely independent of, the regular left hand platen knob.
PORTABLE TYPWRITERS

CORONA

Made by the Corona Typewriter Company, Groton, New York. Sold through dealers and specially appointed agents.

The Corona is a folding portable machine, having a one-piece base, front stroke, and carriage to allow for vertical folding in a very compact space. The present model, which does not bear a model number, was placed on the market in October, 1922, and is the successor of three other models which have been sold continuously since 1906.

Specifications

General Features: Portable design; front stroke; double shift (carriage shift); visible writing. When the machine is to be placed in the case, the carriage folds on the keyboard, during which time it is disconnected from the escapement. When folded back the carriage automatically locks itself in operating position.

Keyboard: Three rows. The regular model has 28 keys writing 4 characters; the XC model has 28 keys writing 90 characters; the XCD model has 28 keys writing 90 characters of which four keys are "dead" (i.e., these four keys are not connected with the escapement mechanism and are used for language accents). Right and left hand shift keys with left hand shift lock and release. Back space key situated above and to right of keyboard.

Carriage: Hinged on two steel arms to allow folding compactly over keyboard when placed in the case. Mounted on ball bearings and rollers. Takes paper 9 7/8 inches wide with writing line 8 3/8 inches long. Escapement is dog and rack design with adjustable tension. When folded the escapement is locked out of engagement with the rack to prevent damage while the machine is in transit. Left hand line space lever with adjustment for single, or double line spacing. Back space mechanism operated from key on keyboard; right and left hand margin stops.

Printing Mechanism: Type bars are flat steel with heels to prevent battering; mounted in solid slotted segment. Type guide at printing point. Two-color ¾-inch ribbon with automatic reverse.

Construction: Stamped aluminum frame, one piece. Size of machine when opened, 9 ½ x 11 ½ x 6 ½ inches; when folded, 9 x 11 x 3 ½ inches; outside dimensions of case, 12¾ x 16 x 4½ inches. Weight, 9 lbs. plus case, 6 lbs. without case. Finish, black enamel with nickel trim. Type faces: Pica, Elite, medium Roman, billing or Italic.

Model No. 5-F Standard correspondence model, extra wide carriage, taking paper 11 ½" wide and writing a line 9 ½" long. $100.00

Model No. 6-J The "Brief" model. Same as Model No. 5-F, but has a carriage taking paper 14 ¼" wide and writing a line 13" long. $110.00

Model No. 7-K The "Policy" model. Same as Models No. 5-F and No. 6-J but has a carriage taking paper 18 ½" wide and writing a line 17" long. $130.00

Model No. 8 Under construction. Will have a 22" carriage.

The XCEL Standard Word-Writing typewriter is a machine in process of development by the XCEL Typewriter Corporation, 41 East 42nd Street, New York City. It is understood that the machine is not yet in production.

In general appearance the machine is similar to most standard typewriters and is about the same size. It is a single shift machine having five rows of keys. The four upper rows comprise a standard keyboard arrangement; there are 22 extra keys arranged in the bottom row and along each side of the standard keys, that write complete commonly used short words. Each word can be printed with the first letter a capital or lower case, as desired; they can be used as complete words or as parts or syllables of other words. Writing a complete word by the depression of a single key is made possible by an automatic multiple escapement and a distinctive arrangement of the type bars. The carriage return lever is situated to the right and just above the top row of the keyboard. The line spacing is controlled by two keys situated above the top row on the keyboard; one key feeds the paper up, another feeds the paper down. The escapement may be made inactive to provide for writing straight up or down in a column. The machine is constructed on the unit plan, being composed of five sections, each a complete assembly in itself. Construction is entirely of sheet metal and bar stock, no castings being used.

WOODSTOCK—continued

Printing Mechanism: Type bars are pivoted in a one-piece type bar segment, having an abutment or striking ring against which the bars and their printing stroke, to provide uniform printing impressions and prevent pitting of platen. Type bars are provided with protecting heels to prevent battering of type faces. Type guide at printing point. Type bars and bearings are adjustable.

Two-color, 9/16 inch ribbon with automatic reverse, actuated by a single stroke of any character key; stencil cut-out.

Construction: Unit construction, consisting of base, top plate and carriage each carrying its own essential working parts. Open design of frame and open face front construction.
CORONA—continued
Models and Prices

Regular Model, as above described, writing 84 characters........ $50.00
XC Model, same as above, but writing 90 characters........ $55.00
XCD Model, same as above, but writing 90 characters and with 1 to
4 dead keys, as required.......................... $55.00

All models are fitted in basswood case covered with Fabrild and
equipped with slip hinges and lock. A wide selection of special keyboard
and type arrangements are provided to suit the vocation of different users
such as Medical, Engineering, Chemical, Polyglot, and 50 languages.

Note: It is understood that a model with a reverse movement carriage
will shortly be placed on the market, for writing Hebrew, Arabic and such
languages.

HAMMOND MULTIPLEX

Made by the Hammond Typewriter Company. Factory and general
offices: 69th Street and East River, New York City. Sold through branches
and specially appointed dealers throughout the country.

Portable models of Hammond typewriters are made in two
styles—folding and non-folding.

The non-folding model is the same in all respects to the regu-
lar Multiplex model, described under Standard Typewriters, ex-
cept that all but the working parts are made of aluminum.
Carriage 5½ inches wide, writing a line 7 inches long. It
weighs less than 12 pounds and is furnished in a leather travel-
ing case, the cover of which is removable, leaving the bottom
to serve as a base for the ma-
icine.

Folding model is the same in
general appearance, construction
and operation as the non-folding model above described, except that the
space bar folds over the keyboard and the keyboard folds into a vertical
position. The paper rest (corresponding to the paper table) folds over
the top of the machine. The carriage is locked in position when the
machine is folded.

Models and Prices

Non-folding Multiplex model with travelling case............. $110.00
Non-folding Mathematical model with travelling case........ $120.00
Folding Multiplex model with travelling case................. $95.00
Folding Mathematical model with travelling case............. $110.00

All models are equipped with two type shuttles, (two sets of type faces)

NATIONAL

Made by the National Typewriter Company, Fond du Lac, Wisconsin,
sold by specially appointed dealers and agents.

Specifications

General Features: Portable size, front stroke, double shift, (car-
rriage shift), visible writing.

Keyboard: Three rows, 28 keys writing 84 characters; right and
left hand shift keys with right hand shift lock and release; back
space.

Carriage: Mounted on ball bearings; takes paper 10 inches wide,
writing line 9 inches long. Left hand line space lever for single
or double spacing. Back space mechanism operated from lever on
left end of carriage; right and left margin stops with lock to
prevent over printing at end of
line; tabulator with adjustable
stop operated from lever at left;
combination self-adjusting line finder, paper fingers and
label holder.

Printing Mechanism: Type bars are of flat steel mounted in a solid seg-
mant with heels to prevent battering. Type guide at printing point.

Two-color ½-inch ribbon, reversed manually by thumb screws on top of
ribbon spools.

Construction: Sheet steel frame, enclosed design. Weight, 9 pounds
without case. Outside dimensions of case, 12 x 11½ x 7 inches.

Type Faces: Pica only.

Models and Prices

Model No. 5, as above described.......................... $50.00

NOISELESS

Made by the Noiseless Typewriter Company. General sales office, 253
Broadway, New York City. Recently consolidated with the Remington
Typewriter Company. Sold by the Remington Typewriter Company's sales
offices through branch offices throughout the country.

General Features: Portable size, pressure stroke, double shift (car-
rriage shift); visible writing.

The operating principle and noiseless feature are the same in
all respects as the standard size
machine. (For description see Standard Size Typewriters.) The
Portable model was placed on the
market in November, 1921.

Keyboard: Three rows, 28 keys writing 84 characters; right and
left hand shift keys with shift
lock and release; back space and
margin release keys.
NOISELESS—continued
Carriage: Mounted on ball bearings, takes paper 9 1/4 inches wide, writes a line 7 1/4 inches long; steel plate; full drop speed escapement; left hand line space lever with adjustment for one or two spaces and ratchet release; back space mechanism operated from key on keyboard; right and left margin stops with lock to prevent over printing at end of line; and margin release key. Paper fingers provide means of writing to extreme bottom of sheet; also to permit the insertion of legal length envelopes.

Printing Mechanism: Type bars are of steel with a projection to prevent battering. Type guide at printing point. One-color 7/16 inch ribbon.

Construction: Non-folding. Weight 6 1/4 pounds without case, 8 pounds with case; outside dimensions of case 11 3/4 inches long, 9 1/4 inches wide, and 4 3/4 inches high. Type faces: Pica, Elite, Medium Roman or Gothic.

Models and Prices
Made in one model only, price ....................... $65.00

REMINGTON
Made by the Remington Typewriter Company, Incorporated, Executive offices, 374 Broadway, New York City. Sold by specially appointed dealers and their sales force throughout the country.

Specifications

General Features: Portable size; front and down stroke, single shift (carriage shift) visible writing. Type bars, when machine is to be placed in case, rest flush with top plate, and are raised, all at one time, to a writing position when machine is to be operated. A lever on the right side frame controls the raising and lowering movement. Placed on the market in August, 1921.

Keyboard: Four rows, standard, 42 keys writing 84 characters; right and left hand shift keys with shift lock and releases; back space and margin release keys.

Carriage: Mounted on roller bearings; takes paper 8.7 inches wide, writing line 7.7 inches long. Rack escapement. Two sets of paper feed rolls with reverse lever. Left hand line space lever with adjustment for single, double spacing. Back space mechanism operated from key on keyboard; right and left margin stops with lock to prevent over printing at end of line; variable line spacer; carriage locking device to hold carriage firmly when in case.

Printing Mechanism: Type bars are of flat steel corrugated, with case hardened type and heels to prevent battering; mounted in a solid slotted segment. Type guide at printing point. Two-color 3/8 inch ribbon, with automatic reverse.

Construction: Sheet steel frame. Non-folding. All metal parts not nicked are rust-proofed. Weight, 11 1/2 pounds with case; outside dimensions of case, 12 inches long, 11 inches wide and 4 inches deep. Type faces: Pica or Elite.

UNDERWOOD
Made by the Underwood Typewriter Company, Incorporated. Executive offices, 62 Vesey Street, New York City. Sold by their own sales force throughout the country.

Specifications

General Features: Portable size; front stroke, double shift (carriage shift), visible writing. Placed on the market in November, 1921.

Keyboard: Three rows, 28 keys writing 84 characters; shift key with left hand shift lock; back space key; individual key tension.

Carriage: Mounted on roller bearings. Takes paper 8 3/4 inches wide, writing line 7 1/2 inches long. Ball bearing rotary escapement. Left hand line space lever with adjustment for single or double spacing; sliding margin stops in front of carriage; automatic line locking mechanism; adjustable paper guides; writing line guide; margin release key and carriage release lever at right end of carriage.

Printing Mechanism: Type bars are of flat steel, corrugated, mounted in a slotted segment; projection on type end to prevent battering or breakage. Type guide at printing point. Two-color 3/8 inch ribbon with manual type set and stencils.
## Comparison of Portable Typewriters

<table>
<thead>
<tr>
<th>Name</th>
<th>Folding</th>
<th>Characters</th>
<th>Keyboard</th>
<th>Ribbon</th>
<th>Shift Keys</th>
<th>Carriage</th>
<th>Dimensions</th>
<th>Equipment</th>
<th>Price</th>
</tr>
</thead>
<tbody>
<tr>
<td>Allen</td>
<td>No</td>
<td>87</td>
<td>3-row</td>
<td>2-col</td>
<td>L</td>
<td>9½&quot; x 7½&quot;</td>
<td>*11¾&quot; x 12&quot; x 7&quot;</td>
<td>BS, Tab.</td>
<td>$50.00</td>
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<tr>
<td>Corona Regular</td>
<td>No</td>
<td>84</td>
<td>3-row</td>
<td>2-col</td>
<td>R &amp; L</td>
<td>9¼&quot; x 8½&quot;</td>
<td>9¾&quot; x 12¾&quot; x 10&quot;</td>
<td>BS</td>
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<tr>
<td>Corona XC</td>
<td>Yes</td>
<td>84</td>
<td>3-row</td>
<td>2-col</td>
<td>R &amp; L</td>
<td>9¼&quot; x 8½&quot;</td>
<td>9¾&quot; x 12¾&quot; x 10&quot;</td>
<td>BS</td>
<td>55.00</td>
</tr>
<tr>
<td>Hammon, Folding</td>
<td>Yes</td>
<td>90</td>
<td>3-row</td>
<td>2-col</td>
<td>R &amp; L</td>
<td>9½&quot; x 8¼&quot;</td>
<td>11¼&quot; x 12&quot; x 9&quot;</td>
<td>BS, 4 dead keys for accents</td>
<td>97.50</td>
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<tr>
<td>Hammon, Non-Folding</td>
<td>No</td>
<td>90</td>
<td>3-row</td>
<td>2-col</td>
<td>R &amp; L</td>
<td>9½&quot; x 8¼&quot;</td>
<td>11¼&quot; x 12&quot; x 9&quot;</td>
<td>BS, Tab.</td>
<td>105.00</td>
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<tr>
<td>National Noiseless</td>
<td>No</td>
<td>84</td>
<td>4-row</td>
<td>2-col</td>
<td>R &amp; L</td>
<td>8½&quot; x 7½&quot;</td>
<td>11¼&quot; x 12&quot; x 7&quot;</td>
<td>BS, Tab.</td>
<td>65.00</td>
</tr>
<tr>
<td>Remington</td>
<td>Semi</td>
<td>84</td>
<td>4-row</td>
<td>2-col</td>
<td>R &amp; L</td>
<td>8½&quot; x 7½&quot;</td>
<td>11¼&quot; x 12&quot; x 7&quot;</td>
<td>BS, Variable</td>
<td>60.00</td>
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<tr>
<td>Underwood</td>
<td>No</td>
<td>84</td>
<td>3-row</td>
<td>2-col</td>
<td>†L</td>
<td>9½&quot; x 7½&quot;</td>
<td>9¾&quot; x 12½&quot; x 9¾&quot;</td>
<td>BS</td>
<td>50.00</td>
</tr>
</tbody>
</table>

* Without case.
† Underwood portables having serial numbers over 85,000 and new machines, may be equipped at any time with right as well as left hand shift keys, at an additional charge of $5.00.
Billing Machines

CONTINUOUS FORM BILLING MACHINES

Typewriting machines using fan-folded and inter-folded forms as above described, and forms in continuous rolls, are designed to eliminate nonproductive operations required in billing on an ordinary typewriter using individual cut forms.

Continuous form billing machines, however, simplify the individual operations of billing, such as inserting carbon between sheets, checking the set of forms into alignment, inserting the forms in the typewriter, re-aligning the forms after they are in the typewriter, finding the first writing position, removing the carbon from the forms after the bill has been written.

The automatic feed features of such machines provide, by the single operation of removing a completed set of bills from the machine, the bringing of a new set automatically into exact position for the first writing operation, with each copy interleaved with carbon paper. The carbon paper itself is not handled.

The operator loads the machine but once in preparation for the writing of hundreds, and in many cases thousands, of sets of forms.

Two styles of carbon paper are used: Floating sheets are strips of carbon paper, approximately 24" long, fed with and between copies of the forms. One of each sheet is attached to a blade, interleaved between each copy of the form, and when one form is removed each blade draws its sheet of carbon paper into position for the next form.

Roll carbon is fed from a roll, transversely across the continuous form, the free end clamped on the other side of the machine. Roll carbon does not move with the form.

With either arrangement of the carbon paper, a fresh surface can be brought to the printing position at any time by releasing clamps, and drawing the used portion out of the machine and tearing it off.

As compared with ordinary typewriters handling cut sheets and separate sheets of carbon, these machines provide exceptional speed by reducing to a minimum the time required for all operations, excepting the actual typing, without any additional physical strain on the operator.

FAN FOLDED, INTER-FOLDED AND ROLL FORMS

Forms for use with Underwood Fan Fold and Elliott-Fisher billing machines, are of two kinds—inter-folded forms and fan folded forms. Both kinds provide multiple copies of the same or related forms for systems requiring the making of from two to thirteen copies at one writing. The different companies dealing in these forms, maintain staffs of systematizers to work out combinations of different forms, such as to provide copies of such card as invoice for several different departments and at the same time provide a stock requisition, inventory record and shipping receipt, etc. A wide variety of color combinations of paper and ink are afforded. To meet some special conditions, in the providing of carbon copies, forms in the combination may be carbon backed in part with what is known as spot carbon.

Any set of cut (single sheet) forms can be duplicated in continuous forms. They may be supplied completely prepared (border punched for binders, perforated, printed in two colors, printed on back, etc.)

When the continuous forms are removed from the machine, they are the same in appearance as single sheet forms.
being rewound on a spool on the opposite side, which operation automatically brings new carbon surface into writing position. Only a small portion of the carbon paper is used at a time.

Floating sheets of carbon paper, when used, have their ends attached to individual interleaving blades, at the rear of the platen, and feed forward with the forms. When one set of forms is withdrawn, all carbon sheets are held in correct position for the next form.

When it is desired to remove a set of forms, pressure on a foot lever releases the tension and allows the entire set to be drawn forward to the front of the platen, at which point is located a cutting edge against which they are cut off. As one set of forms is withdrawn, the next set is brought into position, automatically, for the impriming of the first line of the new bill.

Two separate sets of forms may be used interchangeably on the same machine; the carbon blades and interleaving device of one form being removed from their place at the rear of the machine, when the other set is being used.

Prices: See schedule at end of descriptions, in section Bookkeeping Machines.

UNDERWOOD FAN FOLD BILLING MACHINE—continued

Made by the Underwood Typewriter Company, General offices, 39 Vesey Street, New York City. Sold by their own sales force.

A combination of an Underwood No. 3 typewriter with a device for feeding and inter-leaving carbon paper between each copy of continuous forms, folded or inter-folded forms, for the writing of bills, invoices or other forms requiring many copies. The typewriter differs from the standard Underwood Model No. 3-12" or No. 3-14" in that the platen is mounted in a frame extending outward from the typewriter. The base of the platen supports a carriage on which blades to which the ends of the carbon paper sheets are attached, are mounted, so as to interleave the forms from right and left. This carriage has a forward and backward movement; the top section is removable and interchangeable to permit different kinds of form sets to be used intermittently without the necessity of preparing (by inter-leaving) the carbon sheets each time.

The supply of bills or other forms, is contained in a billing carton in which such forms are furnished, located on the floor or any place to the rear of the machine.

The first forms having been inter-leaved with carbon paper (by the insertion of blades between each form), the end of the strip of forms is drawn forward under the platen. The platen is dropped, automatically locking in position. The bill is written in the usual way. When finished the platen is raised, releasing the pressure on forms and carbons. The rear carriage is pushed back (by a handle mounted on it) carrying with it all car-

Models and Prices

Model No. 3-12", Pica—Gothic, capitals only (shiftless) ................ $222.50
Model No. 3-12", Pica—Gothic, with upper and lower case ........... 237.50
Model No. 3-16", Pica—Gothic, capitals only (shiftless) ............... 237.50
Model No. 3-16", Pica—Gothic, with upper and lower case .......... 242.50
Continuous form billing device for accounting machines .............. 125.00

UNDERWOOD CONDENSED BILLING MACHINE

The condensed billing machine writes the bill and sales sheet (as many copies are required) at one operation. A feeding device, attachable to any Underwood accounting machine, provides for the rapid and accurate insertion of the bill with perfect registration of the sales sheet, and contains the entries on the sales sheet so that the space taken up on the sheet by the printed headings may not be lost. The sales sheet may be provided with columns for distributing or classifying the sales.

UNDERWOOD BILLING AND ACCOUNTING MACHINE

For work requiring the adding or subtracting of typed amounts (quantities or price), an Underwood computing machine equipped with a continuous form billing device will be supplied. Such machines will compute totals of each individual invoice, subtracting discounts, allowances and other deductions, show net amounts, and, if desired, accumulate a grand total throughout the day of any or all factors, such as a grand total of all invoices and separate totals of discounts, allowances, etc.

The book you are now reading is the only one of its kind. It includes all machines without a penny of cost to the manufacturer. You can, therefore, understand why it can afford to be neutral.
UNITED (UARCO) HAMILTON

ROLL PAPER TYPEWRITER ATTACHMENTS

Made and sold in the West by the United Autographic Register Company, 2516 West 43rd St., Chicago, Illinois.


Attachments for all standard makes of typewriters for the supply and feeding of forms in multiple copies for billing, etc.

Revolving hubs on which paper in from one to six rolls is carried, are mounted on a frame, and, from regular spacing controls on the typewriter, feed the forms through special feed rollers. Auxiliary typewriter ribbons, one for each copy desired, run between the forms, eliminating the use of carbons.

The construction is self contained. The frame is mounted on a track to move back and forth with the carriage. The entire device may be detached from the typewriter when its use is not desired.

Models and Description

Model A-O—A simple one-roll equipment.

Model A—For three rolls, furnishing original, duplicate and triplicate copy.

Model C—Equipped with stand, provides one to five copies.

Model D—Applied to Underwood Billing Typewriter only. Uses carbon paper for copies (is not equipped with auxiliary typewriter ribbon feature).

Prices are nominal when a quantity order is placed for rolled paper forms to be used with the devices.

BURROUGHS MOON-HOPKINS

Made by the Burroughs Adding Machine Company. General offices and factory, Detroit, Michigan. Sold by special representatives through branch offices in all principal cities.

This machine is a combination of a typewriter having a standard keyboard, with an adding, subtracting and multiplying mechanism, all contained in the same unit. The typewriter section can be used independently of, or in conjunction with, the computing mechanism.

It is designed particularly for the production of invoices complete. It handles eighth, tenth and decimal fractions as well as whole numbers. The name and address of the customer, quantities and descriptions, are typed by the typewriter section and added, subtracted or multiplied amounts are listed, totaled and computed by the computing mechanism. All totals, differences and products are printed directly from the computing mechanism by depressing a result key; they are not copied by the typewriter section.

In writing an invoice the typewriter section is used to insert the name of the customer, quantities and descriptions. The computing mechanism, operated from a separate keyboard, handles all additions, subtractions and multiplications.

Several columns may be listed, depending upon the model, as determined by the number of registers with which each machine is equipped, and the several totals carried in the machine at one time may be printed as desired. While the invoice is in the machine, the extensions may be figured and the price shown by items, at the same time accumulating, and later furnishing a printed total, of all items. Discounts, meanwhile, may be computed, printed and subtracted, and the net total shown.

In multiplying, to produce extensions, fractions in either price or quantity are computed with the same facility as whole numbers. If no discount is to be figured, the extension may be printed in its correct column on the completion of the multiplying operation. When a discount is to be deducted the gross amount may be held in the machine without printing the discount computed and deducted, and the net amount only or both the gross and net amounts, imprinted.

The wide range of applications possible on this machine can perhaps be better determined by the following description of its construction, operation and key arrangement:

Construction

The typewriter section is a single case (for writing capital letters only), blind printing typewriter, having a hinged platen, raising the same as on a Model No. 6 Remington typewriter. The typewriter section is used for typing all descriptive matter.
BURROUGHS MOON-HOPKINS—Continued

The computing mechanism operates independently of the typewriter mechanism. It is controlled from a separate keyboard and all printing is done by a separate set of type bars positioned under the platen at the printing point.

The accumulating mechanism actuates registers arranged as follows:

Front registers, of which there may be any number from one to five (according to the model), are mounted within the machine and slide on a bar to operating position as they are selected, either by a manual control or by stops, actuated by the movement of the carriage.

The rear register, is mounted in back of the front registers, and does not move. It is always in position to receive amounts transferred from any front register, or the multiplier-subtractor (described later) or direct from the set up on the amount keyboard.

The multiplier-subtractor acts as a medium to hold amounts to be multiplied or amounts to be subtracted.

Functions of the Front Registers

The front registers will receive, add and store, individually but not collectively, amounts introduced into them by depressing the numeral keys on the right hand of the lower keyboard. Each operates independently of the other and can only operate when it is in position. An indicator located on the right of the front of the machine, denotes which of the registers is in operating position. None of the registers can be seen by the operator and the accumulated totals are not visible except by printing. Any of the front registers when moved to operating position, will receive a total transferred from the rear register, and will, likewise, transfer any total held in them, to the rear register, eliminating it or continuing to store it in the register making the transfer. Thus, an amount may be introduced into the rear register direct from the keyboard and then transferred to a front register and still remain stored in the rear register. Items as they are introduced into any register, print automatically and totals and subtotals can be printed at any time by the depression of a key.

Functions of the Rear Register

The rear register may have amounts transferred into it from the keyboard, the same as a front register, but its principal use is as a transfer medium for receiving an amount from any front register, or the multiplier-subtractor and transferring it to another front register or into the multiplier-subtractor. It will also print any total held in it, direct, without transfer to any other register. The rear register has an important function in subtraction.

Subtraction

The amount from which the subtraction is to be made is introduced either direct from the keyboard or by transfer from any other register, into the rear register. The smaller amount (the amount to be subtracted), is introduced into the multiplier-subtractor, which as before stated, is a holding medium only, and is not really a register. When the subtract key is depressed, the subtraction is automatically made, leaving the balance in the rear register from which it can be imprinted direct, or introduced for storage or printing in any of the front registers.

Multiplication

The amount to be multiplied is introduced from any other register or direct from the keyboard, into the multiplier-subtractor. The numeral keys on the right side of the lower keyboard are then depressed in the

(Continued on page 430)
BURROUGHS MOON-HOPKINS—continued

Order in which they occur in the amount to be multiplied. The machine automatically multiplies the amount held in the multiplier-subtractor by the amount represented by each key on the keyboard. Each key is depressed but once. A device operated by a key on the keyboard functions to automatically point off the proper number of decimals in the product. The product at the end of the multiplication is in the multiplier-subtractor and can be printed either direct or transferred into the rear or any front register. Depressions of the multiplier keys are not recorded. There is no record to indicate at the end of the transaction, which keys were depressed.

After a multiplication or any other function of the machine involving decimal or common fractions, (eighths or tenths) leaving a total, remainder, or product that is part fraction, the depression of the "full-cent" key adds to or subtracts from the fraction to print the nearest whole number.

Functions of Control Keys

It will be noted in the accompanying illustration, that this machine is equipped with two keyboards. The four rows in the upper set are the typewriter keys, used for typing descriptions. The four tabulator keys immediately above the typewriter keyboard, are used in connection with the typewriter keys. The typewriter space bar separates the two keyboards.

The lower keyboard controls the computing mechanism. The numeral keys to the left are for setting up amounts to be introduced into the registers. The numeral keys to the right, are used only to actuate the multiplier. The motor or operates the motor to carry into the machine, amounts set up on the keyboard. The carriage return key causes the carriage to return to the right and to space one line, automatically.

The Decimal Discount Key, also known as the Point-off Key, points off one place in a product each time it is depressed, eliminating the right hand figure and moving the decimal point one place to the left.

The Eliminating Key permits a number to be printed but not added.

The Error Key is used to restore any key depressed in error.

The Extend Key when depressed after an amount has been set up on the keyboard, introduces such an amount into the multiplier-subtractor. If desired, the amount so extended into the multiplier-subtractor can at the same time, be introduced into a front register or by the simultaneous depression of the Front Total and Extend Keys again, any amount in a front register may be printed and extended into the multiplier-subtractor.

The Final Product Key clears the multiplier-subtractor and the rear register, printing the amount that is in the rear register and transmitting it to a front register.

Models and Prices

Model 7402, without multiplier-subtractor section, and for adding and listing whole numbers only; equipped with 1 Front register having listing and printing capacity of 8 places and totaling capacity of 10 places.

Rear register, having listing and printing capacity of 9 places and totaling capacity of 10 places. 10" carriage. Electric drive with motor returned carriage mechanism.

Tabulator.

Price .............................................. $550.00
BURROUGHS MOON-HOPKINS—continued
Models and Prices—continued

Model 7202, for adding and listing, subtracting and multiplying, one-tenth or one-eighth fractions, as well as whole numbers; equipped with 3 front registers, having listing and printing capacity.

<table>
<thead>
<tr>
<th>Reg. No. 1</th>
<th>Reg. No. 2</th>
<th>Reg. No. 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>With 1/10 fractions</td>
<td>999,999.99-9/10</td>
<td>999,999.99</td>
</tr>
<tr>
<td>With 1/8 fractions</td>
<td>9,999.99-7/8</td>
<td>999,999.99</td>
</tr>
<tr>
<td>Totaling capacity</td>
<td>9,999.99-9/10</td>
<td>999,999.99</td>
</tr>
<tr>
<td>With 1/10 fractions</td>
<td>9,999.99-9/10</td>
<td>999,999.99</td>
</tr>
<tr>
<td>With 1/8 fractions</td>
<td>999.99-7/8</td>
<td>999.99-9/8</td>
</tr>
</tbody>
</table>

Rear register, having the same listing, printing and totaling capacity as each register with which it is used.

Multiplier-subtractor section, having the same listing, printing and totaling capacity as each register with which it is used.

12" carriage.

Electric drive with motor returned carriage mechanism.

Tabulator:

Price, equipped to handle one-tenth fractions .......... $950.00
Price, equipped to handle one-eighth fractions .......... 1,000.00
Extra for each additional front register, (either model) 50.00
Extra for automatic tabulator mechanism and counter control mechanism .......... 125.00
Extra for 15" carriage .......... 15.00
Extra for 18" carriage .......... 25.00
Extra for condensed billing device .......... 25.00
Extra for Pica type .......... 25.00
Extra for high back on carriage, 12", $15.00; 15", $20.00; 18", $25.00
Extra for brass platens .......... 12", $15.00; 15", $20.00; 18", $25.00

On machines designed to handle amounts in whole numbers only:

When equipped with five front registers, the maximum capacity of each register is eight places.

On machines designed to handle amounts in whole numbers and one-tenth fractions:

When equipped with five front registers, the maximum capacity of each register is seven places of whole numbers, plus one column for fractions in No. 1 front register, rear register and multiplier-subtractor.

On machines designed to handle amounts in whole numbers and one-eighth fractions:

When equipped with five front registers, the maximum capacity of each register is five places of whole numbers, plus one column for fractions in No. 1 front register, rear register and multiplier-subtractor.

ELLIOTT-FISHER—continued

Writing machines are made in three styles:
(1) Writing Machines for cut forms.
(2) Automatic Feed Machines for continuous forms.
(3) Book Recording Machines for writing in bound books.
(4) Accounting and Bookkeeping Machines are described in detail under Bookkeeping Machines.

The basic principle of all Elliott-Fisher machines is the flat platen or writing surface. This is a smooth slab of rubber composition upon which the paper is laid and held in a flat position by pressure exerted against metal flanges on either side by the flat writing surface which is raised or lowered by a foot pedal. This pressure holds all papers in perfect registration and in an absolutely fixed position. Forms of any length whatever, not exceeding 17" in depth, may be accommodated.

The typing mechanism is mounted upon a carriage and moves from left to right across the writing surface, the type bars striking downward upon the platen. Vertical line spacing may be adjusted to any desired distance.

All machines are constructed in units, consisting of:

The writing head, which is the typewriter mechanism, and can be used interchangeably on any platen;

The platen, made in distinctive models for writing on cut forms, in bound books, or on continuous forms;

The pedestal or base, a desirable although not an indispensable part of each equipment.


The Elliott-Fisher Company manufactures both writing and accounting machines. Both the writing and accounting machines are of various sizes and capacities, designed to handle all classes of records. The Accounting machines add and subtract in any number of columns up to and including 29. The adding and subtracting is accomplished automatically as the figures are written.
ELLIOIT-FISHER—continued

The Typing Mechanism

The keyboard is standard, the keys being arranged in four rows, as there are on any standard typewriter.

The printing or typing mechanism is mounted on a frame, on ball bearings, and has an automatic lateral motion. The frame is in turn mounted on a track at each side of the platen, and has a vertical or line-spacing motion. Controls are provided for both motions. (It will be noted that the printing mechanism, containing the typebars and keyboard, of the machine, moves as does the carriage on an ordinary typewriter, and in addition, has a forward and backward motion to provide line spacing usually accomplished on a standard typewriter by feeding the paper around a cylindrical platen. The paper on this machine does not move throughout the entire typing operation.)

Machines may be equipped to write capital letters only, having what is known as a single-arm type-assembly; or both upper and lower case letters, having what is known as a double-arm type-assembly; or may be equipped with two styles of type faces, such as pica type for all ordinary uses, and pin point type for writing checks, etc. The latter arrangement is known as the hybrid type-assembly.

ELLIOIT-FISHER BOOK WRITING MACHINE

This machine is used to typewrite on the pages of bound books. It is a combination of any style of Elliott-Fisher writing machine head, and a flat platen with a special holding device to clamp the book to secure an even writing surface. It is adaptable for the recording of deeds and other public documents, or in any circumstance requiring recording in books having regular sewed or loose leaf bindings. It may also be used to write on any kind of loose sheet or form.

Prices: See schedule at end of descriptions in section Bookkeeping Machines.

REMINGTON
See Typewriters; also Bookkeeping Machines.

TYPE-ADDER

Made by the Type-Adder Corporation. General offices, Woolworth Building, New York City. Sold by their own organization.

This device designed to be fitted to all standard typewriters, is a compact adding and subtracting machine, developed for use in billing, bookkeeping and special form work.

It contains a set of totalizer dials actuated from an auxiliary set of keys, which when the device is in position, forms a fifth row of keys on the standard typewriter keyboard. It does not interfere with the regular use of the typewriter for correspondence purposes and may be instantly attached or detached if desired, without mutilating the typewriter, being held in place by but two screws.

In operation, the amount to be added is written, as in regular typewriting practice, except that the auxiliary set of numeral keys provided on the Type-Adder are struck instead of the regular keys on the typewriter. Amounts are automatically added as they are written.

A control lever positions the mechanism to add or subtract. Subtraction direct—complementary numbers are not used. Items may be written in any of the color combinations usual in typewriting and may be vertically cross-added or positioned anywhere on the sheet. Clearing is accomplished while printing the total by subtracting the amount out of the dials.

Models and Prices

Made at present in one model only with an attaching member made specially for the Underwood, Remington, Royal or Woodstock typewriters.

For use with Underwood typewriters .................. $60.00

Attaching members for other makes of typewriters will be ready in the future.

After you read any advertisement—of any business machine in any magazine or other medium, complete your information by referring to the DIGEST.
BOOKKEEPING MACHINES—continued

Automatic repeat print of items on cross tabulation, sub-total and total key and automatic total on carriage return, including repeat print timing mechanism.......................... 175.00
With selected column return, including special feed of proof strip and special control carriage tabulation, extra.......................... 85.00
Limited repeat printing device (on machines equipped with semi-automatic cross tabulating shuttle or motor return carriage)...... 25.00
Proof strip mechanism: Standard sizes 2-5/16" and 8-15/32" wide;.... 75.00
Repeat key mechanism; extra repeat key, date or folio repeat keys.......................... 125.00
Foot pedal for carriage throw back (on any machine except those equipped with motor return carriage).......................... 75.00

DALTON

Made by the Dalton Adding Machine Company. General offices and factory, Norwood, Cincinnati, Ohio. Sold by their own sales force, operating through branch offices.

The Dalton bookkeeping machine is a Dalton Super Model adding machine, equipped with special devices, principally in the carriage, to adapt it to bookkeeping operations. Different models are made, equipped with either semi-automatic cross tabulating carriages or shuttle carriages, and in nine and thirteen column capacities.

Abbreviations for months and other descriptive words are imprinted by the word-printing device (described and illustrated on page 39), located to the left of the printing point. The setup is made on this device by a setting lever, operating in connection with a radial index, and the amount is imprinted by an auxiliary key independently of the imprinting of the amount.

A range of fifteen characters of abbreviations is afforded on models equipped with a single word-printing device, and thirty characters on those equipped with dual word-printing device.

Addition is semi-complementary. Amounts to be subtracted are set up as complements on the keyboard and by the depression of a key designated "subtract" or automatically by the tabulation of the carriage, the complement is completed (the nines to the left of the complementary amount are set up automatically). When the machine is operated, the amount is subtracted in the counter and non-printed except for a minus sign at the printing point. On the next operation of the machine, the amount previously subtracted is printed as a true number, but non-added.

Upon the completion of the posting in each column, the carriage automatically tabulates or shuttles to the next column position.

DALTON—continued

Models and Prices

<table>
<thead>
<tr>
<th>Capacity</th>
<th>Carriage Size</th>
<th>Word Printer</th>
<th>With Shuttle Carriage</th>
<th>Price</th>
</tr>
</thead>
<tbody>
<tr>
<td>9 cols.</td>
<td>10-inch</td>
<td>15 characters</td>
<td>$650.00</td>
<td>$650.00</td>
</tr>
<tr>
<td>9 cols.</td>
<td>13-inch</td>
<td>15 characters</td>
<td>750.00</td>
<td>750.00</td>
</tr>
<tr>
<td>9 cols.</td>
<td>18-inch</td>
<td>15 characters</td>
<td>850.00</td>
<td>850.00</td>
</tr>
<tr>
<td>9 cols.</td>
<td>24-inch</td>
<td>15 characters</td>
<td>1150.00</td>
<td>1150.00</td>
</tr>
<tr>
<td>9 cols.</td>
<td>30-inch</td>
<td>15 characters</td>
<td>1250.00</td>
<td>1250.00</td>
</tr>
<tr>
<td>9 cols.</td>
<td>10-inch</td>
<td>30 characters</td>
<td>725.00</td>
<td>725.00</td>
</tr>
<tr>
<td>9 cols.</td>
<td>13-inch</td>
<td>30 characters</td>
<td>750.00</td>
<td>750.00</td>
</tr>
<tr>
<td>9 cols.</td>
<td>18-inch</td>
<td>30 characters</td>
<td>875.00</td>
<td>875.00</td>
</tr>
<tr>
<td>9 cols.</td>
<td>24-inch</td>
<td>30 characters</td>
<td>975.00</td>
<td>975.00</td>
</tr>
<tr>
<td>9 cols.</td>
<td>30-inch</td>
<td>30 characters</td>
<td>1275.00</td>
<td>1275.00</td>
</tr>
</tbody>
</table>

ELLIOTT-FISHER ACCOUNTING MACHINES


Elliott-Fisher Accounting Machines are of two different types:
1. Simplex Accounting Machines, to write, add, subtract, and compute totals of vertically listed amounts,
2. Universal Accounting or Bookkeeping Machines, to write, add, subtract and compute totals of amounts written in vertical columns, and at the same time compute balances of amounts written across the sheet.
ELLIOIT-FISHER—continued

See detailed description of typing mechanism and platen under Billing Machines.

The flat platen, a distinctive feature of all Elliott-Fisher machines, lends a high degree of adaptability to this equipment, for all accounting work that several related forms of different sizes may be posted in one working. The most usual application of this feature is the posting of ledger, statement and audit or proof sheet at one time.

The forms to be posted are gripped at the side of the paper holder and securely held in place on the platen. The line spacing or vertical motion of the audit sheet is controlled by a continuous steel tape, having pins at regular intervals, which enter perforations in the edge of the audit sheet. A turn of a handle at the side of the platen moves the audit sheet one or several lines in either direction, as desired, bringing it in position to receive carbon impressions in uninterrupted sequence, of every posted item.

Simplex Accounting Machines

The registers, which on this type of machine compute amounts posted in vertical columns only, are mounted on a bar at the rear of the machine head. They are adjustable to position for any desired column. Registers will operate only over the columns for which they are set. As many as 29 registers may be used.

Amounts are read out of the register through a window, so placed as to allow clear visibility from the operating position. Registers are reset to zero by subtracting out the amounts appearing in them, usually by typing the total at the foot of the column of items added in the register. Amounts subtracted from vertical registers are typed in distinctive oblique characters, through a red ribbon if desired. A type of register is also supplied, if desired, with hand resetting device.

The Simplex Accounting Machine is used extensively for invoicing, statistical records, payroll, vouchers, check and check register, inter-line abstracting, bank remittance letters, financial statements, and all the simpler forms of accounting where writing and adding or subtracting in columns is desired. On invoice work, this machine totals each individual invoice, billed amounts and the total billing for the day. The sales sheet may be condensed or expanded to provide commodity distribution of sales as a by-product of the billing operations.

Universal Accounting and Bookkeeping Machines

The Universal Accounting Machine may be used on all kinds of accounting records and ledger work, sales and expense distribution, statements, etc.

In addition to the vertical computing registers, this equipment also has a cross computing (adding and subtracting) register, mounted on the right side of the writing head, and travelling with it at all times. It is controlled by stops of different design to add or subtract. Amounts introduced into vertical computing registers are, at the same time, added into or subtracted from the cross computing register. Amounts added in a vertical register may be made to subtract from the cross computing register, and vice versa.

When it is desired to introduce amounts into a vertical computing register, but not actuate the cross computing register, a stop may be set to render the cross computing register inactive at that column position. Likewise when it is desired to accumulate totals of quantities, other than money, in a vertical register, a stop may be set to prevent such accumulations in the cross computing register.

ELLIOIT-FISHER—continued

Universal Accounting and Bookkeeping Machines—continued

Column selection in vertical registers is made by a ten-key decimal tabulator. When the writing head is tabulated to the correct decimal column position, in any column, the cross computing register is brought to corresponding position by the depression of a tabulator bar, located immediately in front of the cross computing register.

When amounts are typed, the action is immediately conveyed to the accumulator mechanism of both vertical and cross computing registers. Each column of the register being actuated as each numeral of the amount is typed.

Thus when an error is made by typing the wrong amount, the usual procedure is to complete the posting and make a counter entry on the next line as the correction.

The cross computing register, like the vertical computing registers, is cleared by subtracting out the amount appearing in it. An advantageous application of this construction is in the distribution of sales or expense amounts.

The total amount is introduced into the cross computing register and as each item of distribution is typed in its respective column, it subtracts from the cross computing register and adds in the vertical register for that column thus providing a total of each classification at the end of the posting. If the distribution has been correctly and completely made, the cross computing register should clear at the end of the operation.

When the cross computing register is clear (showing all ciphers) a star character may be imprinted as proof of clearance. The star is usually shown at the beginning and end of each entry.

Subtraction, in the cross computing register, is automatic, the gear wheels being driven forward to add or backward to subtract. The action is controlled by stops of different design mounted on a bar behind the writing head.

Subtraction is performed in the vertical computing registers, by means of complements. The gear wheels in these registers always travel in the same direction. When an amount is to be subtracted, the nine to the left of the amount, to the capacity of the register, are inserted, one decimal column at a time, by a special key which may be equipped to print a distinctive character, on or to non-print. A shift key, called the subtract key, then depressed and the amount typed from keys marked with complements, the imprint appearing in true numbers in distinctive oblique type, just previous to the typing of the last number of value in the amount to be subtracted, a key is depressed which completes the complement conversion, but does not space or print.

Credit balances can only be written by the depression of the subtract key which actuates a shift, causing the amount of the credit balance to be imprinted in oblique characters of a distinctive design, to distinguish them from debit balances.

Proof of Posting

The ability of this machine to accumulate individual totals or amounts written in each column, makes possible several methods of proving the accuracy of postings.

The total of every factor: old balances, debits, credits and new balances, with proof of old balance pick-up (made by typing it twice and accumulating a total in a separate register), may be accumulated and checked with predetermined totals at the end of the run. As previously stated, the half sheet, made automatically and simultaneously with the postings during the run, provides a complete detailed record of the amount, nature and position of every posted item, and at the end of the run, the totals appearing in the vertical column registers, may be entered at the bottom of each column.
**Prices: Elliott-Fisher Machines**

The following prices are given by units. To determine the price of a complete machine, add together the prices of the units desired.

<table>
<thead>
<tr>
<th>Type of Machine</th>
<th>Length of Writing Line</th>
<th>Unit Price</th>
</tr>
</thead>
<tbody>
<tr>
<td>Writing machine heads without column registers, platens, pedestals or decimal tabulators:</td>
<td>11&quot;</td>
<td>16&quot;</td>
</tr>
<tr>
<td>Single-arm type assembly</td>
<td>$165.00</td>
<td>$180.00</td>
</tr>
<tr>
<td>Double-arm type assembly</td>
<td>$190.00</td>
<td></td>
</tr>
<tr>
<td>Writing machine heads with decimal tabulators; without column registers, platens or pedestals:</td>
<td>165.00</td>
<td>180.00</td>
</tr>
<tr>
<td>Single-arm type assembly</td>
<td>165.00</td>
<td></td>
</tr>
<tr>
<td>Hybrid-arm type assembly</td>
<td>180.00</td>
<td>200.00</td>
</tr>
<tr>
<td>Automatic Feed Machines, equipped with writing machine heads with platens; without column registers, decimal tabulators or pedestal mounting:</td>
<td>225.00</td>
<td></td>
</tr>
<tr>
<td>Single-arm type assembly</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Writing-adding machine heads with decimal tabulators; without column registers, platens or pedestals:</td>
<td>331.00</td>
<td>359.00</td>
</tr>
<tr>
<td>Hybrid-arm type assembly, pin point and pica Gothic type</td>
<td>331.00</td>
<td>359.00</td>
</tr>
<tr>
<td>Bookkeeping machine heads with cross footer and decimal tabulator but without column registers, platens or pedestals—capacity of cross footer from 999 99 to 999999999 99 or 999999999 999999999 99</td>
<td>572.00</td>
<td>605.00</td>
</tr>
<tr>
<td>Extra for Public Utility Keyboard</td>
<td>36.00</td>
<td>36.00</td>
</tr>
</tbody>
</table>

Platens (the lengths of writing lines indicated vary slightly depending upon the class of work for which they are designed): | 67.00 | 90.00 | 118.00 |
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Without carbon rolls</td>
<td>99.00</td>
<td>123.00</td>
</tr>
<tr>
<td>For bound books</td>
<td>61.00</td>
<td></td>
</tr>
<tr>
<td>With carrier tape and two carbon rolls</td>
<td>137.00</td>
<td>156.00</td>
</tr>
</tbody>
</table>

Pedestals: | 25.00 |
| Model P without shelves | 25.00 |
| Model PR with one square and one rectangular shelf | 109.00 |
| Model PR with square and one rectangular shelf | 104.00 |
| Shelf for P Pedestal, square, non-adjustable | 7.50 |

Column registers for writing-adding and bookkeeping machines: | 7.50 |
| 6 wheels—999 99 or 999999999 99 | $42.00 |
| 7 wheels—999 99 or 999999999 99 | 48.00 |
| 8 wheels—9999 999 999 9999 | 52.00 |
| 9 wheels—99999 999999 99999999 | 57.00 |
| 10 wheels—999999 9999999 999999999 99 | 61.00 |
| 11 wheels—9999999 999999999 999999999 999999999 99 | 67.00 |

Base Plates for use in columns where cross footer is to operate without column totals: 8.70

Above prices F. O. B. Harrisburg, Pa. and subject to change without notice.

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**ELLIS**

Made by the Ellis Adding Typewriter Company, Newark, New Jersey. Sold by their own representatives in principal cities throughout the country. Ellis machines comprise the following types:

- Adding manufactories with single counters.
- Adding-manufactories with two counters.
- Combination adding-bookkeeping-typewriting machines with single counters.
- Combination adding-bookkeeping-typewriting machines with two counters.

Duplex (two counter models) may also be constructed to order.

Adding-bookkeeping models are used principally for bank account work or general billing, and some other kinds of bank bookkeeping. The sum-add feature may be controlled by the movement of the carriage as the function of the imprinter but not adding of bank ABA numbers, folio numbers, etc.

The combination adding-typewriting machine is adaptable for general bookkeeping, and is also used for bank transit work. The typewriter section is entirely independent of the adding section, the design comprising two separate machines in the one frame. Added or subtracted amounts are set up on the adding machine keyboard and printed by a separate printing device of adding machine design. The typewriter keyboard is used only for the typing of descriptions and amounts, or quantities that shall enter into the calculated totals. The numeral characters imprinted by the typewriter are different in design from those imprinted by the adding machine section as added or subtracted amounts, thereby eliminating the possibility of confusion or error.

The design of the typewriter section comprises a front stroke type action in which the type bars mounted in a solid segment. Printing is visible. The carriage on all types of machines (those with and without the typewriter) is automatic, including automatic return and controlling of non-add and non-print features. Stops of different design, set on a bar at the front of the carriage, are tripped by the tabulation of the carriage, to control the adding and subtracting functions of the counter. On two counter models, selector stops automatically select the counter to operate in each column.

The counter arrangement of duplex models provides for accumulating totals in either counter or for transferring the total accumulated in one counter to the other.
ELLIS—continued

Subtraction is direct and may be controlled automatically in defined column positions by tabulation of the carriage, or manually, by means of a key on the keyboard. The special-control keys are: Non-add key for non-adding any item; Debit-sub-total key for controlling the adding of items into the debit or No. 1 counter; Debit-sub-total key for printing as a sub-total, amounts accumulated in the debit or No. 1 counter; Credit-add key for controlling the adding of items into the credit or No. 2 counter; Credit-sub-total key for printing as a sub-total, amounts accumulated in the credit or No. 2 counter; Credit-add key for printing total balances accumulated in the credit or No. 2 counter; Repeat key for repeating an item set up on the keyboard in any capacity designated by the other control keys; Error key for the restoring of all keys depressed on the keyboard; Subtracting key, when depressed, causes the machine to subtract in one counter. When the total key is depressed, it immediately cuts out and restores all other feature keys that may be in operating position.

A safety control, locks all adding or subtracting operations of the machine while the carriage is out of an amount column position.

In posting ledger and statements at the one operation, the two forms may be inserted into the machine at the one time with carbon paper between. Or a split platen may be provided, to allow for the insertion of a ledger sheet in one end of the carriage, and a statement form in the other, repeating the posting from the ledger sheet to the statement by the automatic tabulating action of the carriage.

Models and Prices

<table>
<thead>
<tr>
<th>Model Description</th>
<th>Price</th>
</tr>
</thead>
<tbody>
<tr>
<td>Single counter adding machine, 9 columns adding and listing capacity</td>
<td>$50.00</td>
</tr>
<tr>
<td>Same as above with fully automatic carriage</td>
<td>$60.00</td>
</tr>
<tr>
<td>Combination adding-bookkeeping and typewriter, single counter, complete with all automatic devices</td>
<td>$50.00</td>
</tr>
<tr>
<td>Same as above with two counters</td>
<td>$55.00</td>
</tr>
<tr>
<td>Subtraction model</td>
<td>$157.00</td>
</tr>
</tbody>
</table>

The above prices include standard size 14" carriage, electric drive and single case typewriter characters.

- Add for 18" carriage                                    | $30.00 |
- Add for 24" carriage                                    | $100.00 |
- Add for shift key and upper and lower case characters on typewriter                      | $35.00 |

NATIONAL ACCOUNTING MACHINES—continued

Each machine is specially built to meet the requirements of the business with which it is to be used. It does not necessarily change the system of accounting in use, but provides of sixty different types of printers may be built into the machine, as many totals and sub-totals up to the maximum number may be installed. The keyboard capacity and folio or account number section are likewise individual in their design and capacity. As many as printed records of each classification may be produced at one time.

The accumulations in each counter may be printed as a sub-total or cleared. All accumulators are equipped with a special lock and key so that only authorized persons may sub-total or clear them, thus making one person responsible for all records.

In addition to accumulating individual and grand totals, the machine counts the number of items of each classification, thus providing information valuable in figuring averages for sales cost purchases, etc.

A detailed record of each operation is printed on a roll of paper inside the machine and the totals of each classification may also be printed on the same roll. This detailed record strip is equipped with an automatic device to permit writing a notation opposite any printed record. This record can be used as a posting medium, a proof sheet, or as a permanent record for reference purposes.

A ticket can also be issued, showing the date, amount, classification and identification number and symbols, such as code, or account number and cost price. The ticket may also be used as a tracer, posting medium, receipt or requisition, or can be sorted and filed for use with analysis of accounts, less pay roll costs, expenses, etc. Thus, the information printed on a ticket can at the same time be printed on a strip or form which may be inserted in the machine.

Some of its uses are:

- Commercial:
  - Accounts Control
  - Contract Distribution
  - Cost Analysis
  - Expense Analysis
  - Labor Distribution
  - Pay Roll Distribution
  - Hotel Accounting

- Banking:
  - Savings Department, for posting deposits, withdrawals and interest to passbook, ledger card and tellers' audit sheet in one operation, providing separate totals of each teller's deposits, withdrawals, and interest postings, a grand total of all deposits, withdrawals and interest, old balances, etc.

General Construction

In appearance the machine follows cash register design. It has a radial scoreboard, is push-in key-set and motor operated. The counters or individual total registers are located in the back of the machine and when acted upon by the depression of a key on the keyboard (each counter having its individual control key) they slide on a bar into position for engagement. Accumulated totals are not visible. All totals may be printed as totals or sub-totals on the proof sheet within the machine.

The styles of printers with which this machine may be equipped, are numerous. All print through a ribbon. A sliding printing table and a selector operated from a separate keyboard to the left of the printing
NATIONAL ACCOUNTING MACHINES—continued

point, provide speed in locating the ledger card, statement or other forms
in the correct position for printing.

The printing action is unusual. Two forms may be inserted, one above
the other and in the operation of the machine, one is imprinted slightly
previous to the other and is then ejected, making way for the impression
on the second form. Many of the printing actions are automatic. All
ciphers to the left of the last digit set on the keyboard, print automatical-
y. The date and the identification mark to distinguish the classifica-
tion, are imprinted with each item. Totals print automatically from the
depression of a key.

Sub-totals can be taken by moving the total lever to an upper position
and depressing the keys controlling each total. The amount of each total
is printed on a proof sheet.

When it is desired to clear the machine, the total lever is moved to a
lower position and the different total keys depressed to bring their
respective counters into operating position.

Sub-totals are identified by a distinctive character after the amount;
clearing totals are likewise identified by a printed character. The proof
sheet can be taken out of the machine for filing. The size of ledger cards
may be 8 inches wide by 4 to 6 inches high. When used in banks, the
pass book dimension closed, may be 3½ by 4, 5 or 6 inches.

Models and Prices

Practically every installation of these machines is built to order and it
is, therefore, difficult to show prices for complete units. The follow-
ing are understood to be the basic prices:

Basic price of machine, equipped with 5 rows of keys, with printer,
detail strip, and one counter. .......... $1,100.00
Extra for each additional counter ........................................... 25.00
Extra for number printer ............................................. 200.00
Extra for indication of amount registered ................................... 50.00
Extra for cash drawer ................................................. 25.00

REMINGTON ACCOUNTING MACHINE
(Wahl Mechanism)

Made by the Remington Typewriter Company, Incorporated. General
offices, 374 Broadway, New York City. Sold by their own sales force
through branch offices in principal cities throughout the country.

Remington Cross Accounting Machine

The Remington Accounting Machine is a combination of a Remington
Standard Model 11 typewriter equipped with a decimal tabulator, and the
Wahl adding-subtracting mechanism. The typewriter unit (described in
detail on pages 492 to 495) is the same on all models. There are two dis-
tinct types of machines:

1. The Vertical Accounting Machine to write, add, subtract and com-
pute individual totals of amounts written in vertical columns.

2. The Cross Accounting Machine, to write, add, subtract and compute
totals of amounts written in vertical columns, and at the same time
compute the balances of amounts written across the sheet.

Vertical Accounting Machines

The primary use of the vertical accounting type of machine, is for all
purposes where typewritten descriptions and added columns appear on the
same page. Descriptions of any kind can be typed by the typewriter
mechanism independently of, or in connection with the computing
mechanism.
THE AMERICAN DIGEST

Bookkeeping Machines

Catalog Section

REMINGTON ACCOUNTING MACHINES—continued

The registers, called totalizers, are self-contained units, mounted on a rack on the front of and moving with the carriage. They are adjustable so that they may be moved to the position of any column. As many totalizers may be used on the same machine as there are separate columns of figures to be added or subtracted on the same sheet. The maximum number (limited by the size of the largest carriage) is thirty totalizers, each of seven columns capacity.

The registers are actuated by a mechanism operated from the standard numerial keys on the typewriter keyboard. The total is recorded on the dials of each register, appearing in a window, visible from the operating position. The registers will add or subtract only in the columns for which they are set.

Normally, typed amounts, add in the registers. When it is desired to subtract an amount, the throwing of a lever, located on the left front of the machine, causes the amount introduced in the register to be subtracted. Registers are reset to zero by subtracting out the amount in them, usually by typing the total at the foot of the column of items added.

Vertical accounting machines are used extensively for bank transit and remittance letters, and in commercial lines, for invoicing, billing, sales analysis, statistical work, the writing of voucher checks, and any other form of accounting where writing and adding or subtracting in columns is desired. A condensed sales sheet record of all bills written, can be compiled as a by-product of the billing operations.

Cross Accounting Machines

The Remington Cross Accounting Machine includes, in addition to the mechanism of the vertical accounting machine, a cross accumulator or totalizer, mounted on the right side of the carriage and traveling with it at all times, in which the different operations of the vertical totalizer are recorded. The cross totalizer will operate in any combination desired. It is controlled to add or subtract by steps of different design, adjustable on each vertical computing register, and tripped by the travel of the carriage as it arrives at the printing position for each column. Amounts introduced into vertical computing registers are at the same time added into or subtracted from the cross computing register.

Subtraction is performed in the vertical computing registers by throwing a lever on the front of the machine manually, which reverses the mechanism of the registers to show a subtracted amount.

This type of machine is therefore suitable for all kinds of accounting and ledger posting, sales and expense distribution, statements, etc.

When it is desired to introduce an amount into a vertical computing register but not actuate the cross computing register, a stop may be set to render the cross computing register inactive in that column position. Likewise, when it is desired to accumulate the total of quantities, other than money, in a cross computing register, a stop may be set to render the vertical computing register inactive.

Column selection in the vertical registers is made by a ten-key decimal tabulator. An auxiliary tabulator, known as a front rail column selector consisting of tabulator keys mounted on the top of the carriage toward the front, permits the operator to reach instantly any column in which an entry is to be made, skipping all intervening columns.

When amounts are typed, the register is immediately conveyed to the actuator mechanism of both vertical and cross computing registers, each column of the register being actuated as each numeral of the amount is typed.

OF BUSINESS MACHINES

Catalog Section

Bookkeeping Machines

REMINGTON ACCOUNTING MACHINES—continued

The cross computing register, like the vertical register, is cleared by subtracting out the amount in it. An advantageous feature of this construction is the distribution of sales or expense amounts. The total amount is introduced into the cross computing register and as each item of distribution is typed in its respective column, it subtracts from the cross computing register, and adds in the vertical register for that column, thus providing a total of each classification at the end of the posting.

If the distribution has been correctly and completely made, the cross computing register should clear at the end of the operation. If it does not clear the entire machine locks.

Proof of Posting

The usual method of proof is to accumulate the individual totals of amounts written in each column, such as the total of old balances, credits, and new balances. An extra register is usually added to total the amount of old balances picked up a second time and typed in a separate column. The totals provided by the vertical computing registers are checked against the predetermined totals of each of the factors secured before commencing the run.

If an audit sheet is prepared (by making a carbon copy on an under- sheet by and at the same time as the posting of the ledger), the posted items may be checked for accuracy as to amount, posted position and account.

Combined Statement and Ledger

Two methods of combining the writing of statement and ledger in one operation are afforded on this machine.

By the twin cylinder method of posting, the platen is split into two sections, involving independently of each other or together, at the will of the operator, and the itemized statement and summarized ledger provide the original record on both the customer's statement and the ledger sheet. The statement is inserted in the left side of the carriage and the ledger sheet on the right side, both being inserted simultaneously to secure accuracy.

The registers placed in position to operate as the amounts are typed in any or all columns of the statement, provide totals to be checked at the end of the run against the totals provided in the other registers mounted in a position over the columns of the ledger. Thus many varieties of checks may be afforded to prove the correctness of postings to both statement and ledger.

This arrangement of the machine is also serviceable in accounting work where two records of the same transaction are required, showing respectively the detail and summary, or for writing vouchers and distribution of vouchers being inserted in the left side of the machine and distribution sheet in the right side.

By the second method, a carbon record is made from the statement to the ledger sheet. If desired, a special device may be attached to connect the items on the carbon record to eliminate all waste of space. This device is used principally for condensing items of invoicing on a sales or distribution sheet.
**REMNIGHTON ACCOUNTING MACHINES—continued**

Models and Prices

Vertical Accounting Machines, consisting of typewriter and actuator only, without totalizer, with carriage

- A: $200.00
- B: 215.00
- C: 225.00
- D: 245.00
- E: 275.00

Cross Accounting Machines, consisting of typewriter and actuator only, without totalizer, with carriage

- A: $225.00
- B: 235.00
- C: 245.00
- D: 265.00
- E: 295.00

(For widths of carriages, see page 404.)

Totalizers for both types:

<table>
<thead>
<tr>
<th>Number of wheels</th>
<th>Price</th>
</tr>
</thead>
<tbody>
<tr>
<td>4</td>
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<td>8</td>
<td>$75.00</td>
</tr>
<tr>
<td>9</td>
<td>$80.00</td>
</tr>
</tbody>
</table>

Each individual wheel, above seven, up to the limit of capacity

(13 wheels) $3.60

Dummy Register (Each operation of the cross foot must be transmitted through a vertical totalizer, or if no column total is desired but an amount is to be introduced into the cross foot, a dummy register is used), price 5.00

Totalizers are supplied with and without space between dollars and cents, and may be equipped to compute amounts expressed in numerals by the decimal system, pounds, shillings and pence, ¾ and ½ fractions, or a combination of money and fractions, and many other combinations of units of weight, measurement, time and capacity, etc. The maximum capacity of the totalizer is thirteen places. All totalizers are interchangeable.

Stand with book shelf $39.00

Stand without book shelf 25.00

Tray and ledger stand, but without book shelf, for use with stand without book shelf 12.50

**UNDERWOOD BOOKKEEPING MACHINE**

Made by the Underwood Typewriter Company. General offices, 30 Vesey Street, New York City.

The Underwood Accounting Machine is a combination of an Underwood standard typewriter and an inbuilt computing mechanism, contained in the base as an integral part of the equipment. A variety of models are made, differing in the number of registers with which they are equipped and in the width of the carriage.

Standard models may have from one to five registers. Each register will add or subtract direct, typed amounts, and any or all registers can be controlled to function as cross computing registers. Registers may operate individually or in groups, some adding and other subtracting, the same typed amounts.

The functioning principle of the registers, adapts this machine to an extensive variety of bookkeeping work. It may be used for any of the many forms of bank bookkeeping, ledger and statement posting, transit and country bank letters, and for all kinds of commercial bookkeeping.

The typewriter section is used for typing all descriptions. Amounts are introduced into the registers from the numeral keys on the top row of the typewriter. A ten-key decimal tabulator controls the positioning of the sheet for both the typed descriptions and the computed amounts.

An Underwood Bookkeeping Machine Having Three Registers and Fully Equipped

1—The proof or tally strip for the simultaneous listing of posted items and check entries and prove totals; 2—automatic carriage return control and the spacer; 3—upper: numeral keys; lower: tabulator keys; 4—the calculating mechanism contained in the base; 5—eliminating keys to correct errors before they are carried into the machine; 6—the aligning plate to ensure the position of forms to secure perfect line registration; 7—the indicator, showing whether the register is controlled to add or subtract; 8—register dials set under glass panel, visible to the operator; 9—the electric motor drive; 10—the "star proof of clearance" key, operative only when the register is cleared.
UNDERWOOD BOOKKEEPING MACHINES—continued

Construction

The typewriter section is substantially the same in its construction as a standard Underwood typewriter, described on pages 410 to 412. It may be equipped with either single case (capital letters) only, or a combination of both capital and small letters.

The registers are contained in the base. They are actuated independently of the typewriter mechanism. The operator, in typing an amount, sets up a condition only, and when the last figure of the amount is printed, an electrical contact is automatically made causing a motor to drive the adding and subtracting mechanism. Subtraction is direct and where required, the figures will automatically print in red (such as credits in ledger postings).

The selection of the register in which it is desired to introduce an amount, is made by a stop called a "Selector," mounted at the rear of the machine, tripped by the carriage as it brings the specific column to the printing point. The action in each register (either adding or subtracting) is likewise controlled by a stop set on a bar, also at the rear of the machine. An indicator at the upper right side of the typewriter section indicates the control (whether to add or subtract) of each register, before an amount is typed. Should an error be made in typing an amount, it may be corrected at any time before the last figure is typed by depressing a key, known as an "Error" key, located immediately in front of the active register. A star character, imprinted from a key located beside the error key on each register, when depressed, causes a star to be printed either before commencing, or at the finishing of an operation, as proof that the affected register was clear before or after the posting.

Feeding devices on the carriage provide for the insertion of ledger and statements at one time, both being produced (one as a carbon copy of the other) by the one writing. The forms may, vary in length and width, and an entry is to be made, may be at a different position on each, such as at the top of the sheet on one, and at the bottom of the sheet on another. The arrangement permits of the rapid insertion and assembly of forms.

Concurrently with the posting of ledgers and/or statements a carbon copy is made in one continuous strip, of the figures printed by the machine. Totals of each factor such as debits-postings, credits-postings, or new balances, may be accumulated in separate registers, if desired, thus a control is provided to be used as a checking medium in case of transposition or other errors on the part of the operator, and to prove the correct pick-up of old balances or other factors of posting.

The machine may also be equipped so that the forms may be inserted in front of the cylinder, directly to the writing position. Adjustable aligning plates provide for the accurate line registration of the inserted forms.

The carriage tabulates automatically immediately after the last figure of an amount is typed and returns automatically at the end of each line, spacing also for the next line.

Amounts accumulated in the registers are subtracted out to clear them. When each register is clear, the star proof of clearance may be imprinted. (For description of the method of proof recommended in the use of this machine, see chapter "Detail of Operation of the Underwood Bookkeeping Machine".)

<table>
<thead>
<tr>
<th>Model No.</th>
<th>1-12</th>
<th>1-14</th>
<th>1-16</th>
<th>1-18</th>
<th>1-20</th>
<th>1-26</th>
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<td>2</td>
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<tr>
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<td>12&quot;</td>
<td>12&quot;</td>
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<td>18&quot;</td>
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<tr>
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<td>$800.00</td>
<td>$800.00</td>
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<td>$825.00</td>
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<th>2-18</th>
<th>2-20</th>
<th>2-26</th>
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<td>2</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>2</td>
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<tr>
<td>Length</td>
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<td>12&quot;</td>
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<td>18&quot;</td>
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<td>25&quot;</td>
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<th>3-18</th>
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<td>3</td>
<td>3</td>
<td>3</td>
<td>3</td>
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<tr>
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<th>4-16</th>
<th>4-18</th>
<th>4-20</th>
<th>4-26</th>
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</thead>
<tbody>
<tr>
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<td>4</td>
<td>4</td>
<td>4</td>
<td>4</td>
<td>4</td>
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<tr>
<td>Length</td>
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<td>20&quot;</td>
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<tr>
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</thead>
<tbody>
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<td>5</td>
<td>5</td>
<td>5</td>
<td>5</td>
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<tr>
<td>Length</td>
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<td>16&quot;</td>
<td>18&quot;</td>
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<td>26&quot;</td>
</tr>
<tr>
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<td>$1190.00</td>
<td>$1200.00</td>
<td>$1215.00</td>
<td>$1225.00</td>
<td>$1225.00</td>
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</table>

The prices shown for each machine include nine place capacity registers, standard book support and three column selectors.

Proof sheet device, to supply a carbon record of posted items on a continuous strip, fed from a tally roll, extra .......................... $50.00
Front feed attachment, for the insertion of sheets in front of the machine ........................................... 75.00
Automatic control for subtraction ............................................. 35.00
Tally roll attachments .......................................................... 35.00

WALES

Subtracting Multiple Counter Bookkeeping Machine

Made by the Wales Adding Machine Company, General offices and factory, Wilkes-Barre, Pennsylvania. Sold through specially appointed dealers and their own sales force throughout the country.

These machines contain all of the features of regular Wales adding and subtracting machines and in addition, are equipped with two counters and two sets of visible total dials, one located above the other. The construction provides for accumulating of debits and credits, or similar items, in two separate visible counters, printing them in contrasting colors and automatically and visibly subtracting either total from the other, showing and totaling the balance in the color of the greater amount.

This machine is adaptable for all classes of bookkeeping work, as well as for making customers' statements, trial balances, etc. It is equally suited to handle any class of work where a grand total is desired or on any work where separate totals and differences or balances are to be obtained.

Operation

The lower counter is known as the debit counter; the upper counter is known as the credit counter. Numbers added into the debit counter, or the debit totals are printed in black; numbers added into the credit
Scales

Scales

There is no basis of definite valuations for used computing scales. Each manufacturing company has a different standard under which machines of their own or other makes are traded. A common practice for years among a great many companies, has been to make a fixed allowance of $50.00 for any kind or type of computing scale, which in practically every case, was decidedly more than the actual value of the scale.

The second hand dealer market is very limited and is unreliable in the extreme. Prices are not quoted except in specific instances and are always subject to immediate acceptance.

Bookkeeping Machines

Bookkeeping Machines

There is no basis of valuation for used bookkeeping equipment. This arises from the fact that to be resold, a special knowledge of the application of the machine to the prospects business, is required. This is something which the average doing machine dealer is not competent, nor disposed, to do. Companies trading in bookkeeping equipment of makes other than their own, on orders for new machines, usually quote a modest valuation or allowance.

The depreciation on used bookkeeping equipment is, therefore, tremendous as compared to its price new, and unless sold to another user or to a dealer having an immediate prospect of turn-over, nothing like the same percentage of valuation as compared to the new price, such as enjoyed by other equipment, need be expected.

While every effort has been made to include every machine of American manufacture and those having organized representation in the United States, and great care has been exercised to check the correctness and completeness of all descriptions and data contained herein, the publishers do not assume responsibility for errors of omission or commission. All serial numbers, dates, etc., whether specifically so noted or not, must be understood to be approximate.

Manufacturers' Typewriter Clearing House

is the name of a corporation in Chicago having men at its head who understand the dealer's needs, and not only INVITE business, but APPRECIATE it.

Typewriters

Typewriters

Standard and Portable

LOCATION OF SERIAL NUMBERS

Corona:
On inside of rear frame, at bottom, center.

Hammond:
Old style, under right ribbon spool. Model No. 12 and Multiplex, on left back end of machine over left rear rubber foot.

Monarch:
On top plate under right end of carriage.

Noiseless:

Oliver:
Models No. 1, 2 and 3, on top of base casting under back of right key lever section to right of center of machine; also on span rod right end on back of carriage.
Models No. 5, 7, 9 and 11, on left of base forward of tension spring under carriage rear. Also on carriage as on Model No. 3.

Remington:
Standard size: On top plate right side under end of carriage. Portable size: On inside of right side frame, toward front.

Royal:
On top plate, right side rear, under the carriage.

L. C. Smith:
Models No. 1, 2 and 3, on the front cross bar just in back of front panel right end.
Models No. 4, 5, 6, 7, and 8, on the front cross bar in the mechanism behind panel to the rear of keyboard right end.

Smith Premier:
On the top plate under right end of carriage.

Underwood:
Standard models: On the top right side casting just forward of the "U" shaped design in the casting. The model number is stamped on the panel inside of the forward end of this "U" shaped section, being what would appear a continuation of the serial number.
Portable model: On right front flange or leg by which the machine is fastened to base board of case.

A Neutral Source of Supply

We do not sell typewriters, either wholesale or retail, therefore we are not your competitor. We specialize in parts and supplies for dealers.

AMES SUPPLY CO.
564-72 W. Randolph St.
Chicago
BLICKENSDERFER

Made by the Blickensderfer Manufacturing Company, Stamford, Connecticut.

Early models were type wheel principle machines, printing from an ink pad; three row keyboards.

Model No. 90 was a front stroke, three row keyboard, visible writing typebar machine. It has been improved by L. R. Roberts Manufacturing Company and is now known as the “Roberts Ninety”. (For description see catalog section.)

Blick-Bar. This model was also a standard size, four row keyboard, front stroke machine, first marketed in 1913. In 1920 a very few machines were made by the Harry A. Smith Typewriter Company, Elkhart, Indiana, under their name as Model No. 10. (A complete description of the Harry A. Smith typewriter is elsewhere in this section.)

Valuations

Valuations are not generally quoted. The valuations shown should be understood to represent limited quotations only.

Model
No. 5, portable, visible printing, interchangeable type wheel ........... $3.00
No. 6, featherweight model, aluminum frame, equipped with back spacer and tabulator .................. 5.00
No. 7, portable ........................................ 5.00
No. 8, equipped with extended front frame, tabulator .................. 5.00
No. 9, similar to Model No. 8 .................................. 5.00
Electric Models
Model No. 90, front stroke, typebar model .......................... $5.00

CENTURY NO. 10

For description and illustration, see Catalog Section.

Valuation (not generally quoted) ........................................ $5.00

CORONA

Construction
(Serial numbers are approximate)

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<tr>
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<th>Serial</th>
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<tr>
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<td>No. 3</td>
<td>32,001</td>
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<td>Jan. 1915</td>
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<td>No. 5</td>
<td>120,000</td>
<td>July 1917</td>
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<tr>
<td>No. 6</td>
<td>247,000</td>
<td>late 1919</td>
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<td>No. 7</td>
<td>295,000</td>
<td>late 1920</td>
</tr>
<tr>
<td>No. 8</td>
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<td>Oct. 1922</td>
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Valuations

* Denotes models of present line. For descriptions and illustration see Catalog Section.

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<th>Low</th>
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<td>No. 6</td>
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<td>19.50</td>
</tr>
</tbody>
</table>

DEMOUNTABLE

For description and illustration, see Catalog Section.

Valuation (not generally quoted) .................................... $25.00

Send Us Your Platens
29 Service Stations
24 Hour Service

AMERICAN WRITING MACHINE CO.
See Adv. Page 609

Dealers
—let us be your stock room, to supply you with dependable machines, quickly and in wide variety, as you need them.

TYPEWRITERS — ADDING MACHINES — CHECK WRITERS

Manufacturers' Typewriter Clearing House
193 North Dearborn Street, Chicago.
### FOX
Made by the Fox Typewriter Company, Grand Rapids, Michigan. First visible models placed on the market in 1906. Model No. 23 dates from 1908 and Model No. 24 from 1912. The Fox typewriter was also known in some localities as the Rapid.

**Visible Models:** Had four row keyboard, platen shift, equipped with two-color ribbon, single or ten-key switch, backspace, variable line space, right and left hand line space lever; 10½-inch carriage writing line 9 inches long.

**No. 1 or Baby Portable,** was a three-row, visible writing machine, having a folding carriage similar to the Corona. It was replaced in a short time by the

**Sterling Portable:** A 7-pound basket shift, three-row keyboard, front stroke, visible writing machine having a 9½-inch carriage, two-color ribbon, left hand shift keys and back space. Frame was aluminum. Retail selling price $90.00. Manufacture discontinued.

### Valuations

<table>
<thead>
<tr>
<th>Model</th>
<th>High</th>
<th>Low</th>
<th>Average</th>
</tr>
</thead>
<tbody>
<tr>
<td>Blind Writers</td>
<td>None</td>
<td>None</td>
<td>None</td>
</tr>
<tr>
<td>Models No. 23 or 24 (visible)</td>
<td></td>
<td>$10.50</td>
<td>$5.00</td>
</tr>
<tr>
<td>Fox or Rapid</td>
<td></td>
<td>$10.50</td>
<td>$5.00</td>
</tr>
<tr>
<td>Models No. 25, 26, 27 or 28 (visible)</td>
<td>7.50</td>
<td>5.00</td>
<td>5.50</td>
</tr>
<tr>
<td><strong>Portables:</strong></td>
<td>7.50</td>
<td>5.00</td>
<td>5.50</td>
</tr>
<tr>
<td><strong>No. 1 or Baby</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Model</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Sterling</strong></td>
<td>7.50</td>
<td>5.00</td>
<td>5.50</td>
</tr>
</tbody>
</table>

### GARGELL
A portable, double shift, 3-row keyboard, visible writing machine, manufactured for a short time by the Gargell Typewriter Company, Chicago, Illinois. Production now discontinued. It was a three-stroke machine, having a gear-driven, reciprocating type-bar action, two-color ribbon, back space, right and left hand shift keys, interchangeable carriage. Weight, 15 lbs. in traveling case; height 4 inches.

### Valuations

- Not generally quoted

### GOURLAND
Made by the Gourland Typewriter Company, Brooklyn, New York. Sold through dealers and agents. It is understood that production is at the present time temporarily suspended.

Single shift, front stroke, four row keyboard having 42 keys writing 84 characters; visible writing.

**Construction:** On the unit principle, having (1) main frame and printing mechanism, (2) carriage, (3) top plate and ribbon movement, (4) outer frame. Type bars are removable; equipped with right and left hand shift keys; left hand shift lock; back space; single key tabulator; combined fingers and margin stops. Two-color, ½-inch ribbon. Sold for $60.00. Valuation (not generally quoted) $8.00

### HAMMOND
See description and illustrations in Catalog Section.

### Valuations

<table>
<thead>
<tr>
<th>Models 87,001 to 88,000, any model</th>
<th>150,001 and above</th>
<th>150,001 and above</th>
</tr>
</thead>
<tbody>
<tr>
<td>Serials 87,001 to 88,000, any model</td>
<td>150,001 and above</td>
<td>150,001 and above</td>
</tr>
<tr>
<td>Multiplex, any serial</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Portable (folding or non-folding)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### FEDERAL
A front stroke four row keyboard, visible writing machine. Announced in 1919 by the Federal Adding Machine Corporation, New York City. It was the successor of a previous machine known as the Vagigraph. Manufacture discontinued.

Valuation (not generally quoted) $6.00
HARRIS

MOLLE
A front stroke, three-row keyboard, visible writing machine. Made for a time by the Molle Typewriter Corporation, Oshkosh, Wisconsin. Manufacture discontinued. It was a lightweight machine, built on the unit principle, basket shift, having one-color ribbon, right and left hand shift keys and weighed 11 3/4 pounds. Retail price was $50.00. 

Valuation. Not generally quoted.

HOOVEN AUTOMATIC
See Duplicating Machines.

MONARCH—continued

The deduction of $2.50 is usually made when machines are equipped with Elite or other type faces, and a deduction of $5.00 is usually made for machines equipped to write capital letters only.

<table>
<thead>
<tr>
<th>Model</th>
<th>Valuation</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>High</td>
</tr>
<tr>
<td>No. 1, 2 or 3 Straight Numbers</td>
<td></td>
</tr>
<tr>
<td>Serials No. to 11,000</td>
<td>$10.00</td>
</tr>
<tr>
<td>Serials No. 111,001 and above</td>
<td>17.50</td>
</tr>
<tr>
<td>Code Numbers with Two Letter Prefix</td>
<td></td>
</tr>
<tr>
<td>Serials No. 40,001 to 49,999</td>
<td>17.50</td>
</tr>
<tr>
<td>Serials No. 50,001 to 59,999</td>
<td>20.00</td>
</tr>
<tr>
<td>Serials No. 60,001 to 69,999</td>
<td>25.00</td>
</tr>
<tr>
<td>Serials No. 70,001 to 79,999</td>
<td>30.00</td>
</tr>
<tr>
<td>Serials No. 80,001 to 89,999</td>
<td>30.00</td>
</tr>
<tr>
<td>Serials No. 90,001 to 99,999</td>
<td>35.00</td>
</tr>
<tr>
<td>Serials No. 100,001 to 119,999</td>
<td>40.00</td>
</tr>
</tbody>
</table>

NATIONAL PORTABLE
For description and illustration see Catalog Section.

Valuations: $10.00 $5.00 $6.00

NOISELESS

Construction
(Serial numbers are approximate)

<table>
<thead>
<tr>
<th>Model</th>
<th>Description</th>
<th>Serial</th>
</tr>
</thead>
<tbody>
<tr>
<td>No. 4</td>
<td>One-color ribbon, right and left capital shift keys; left (only) figure shift</td>
<td>12,300</td>
</tr>
<tr>
<td>No. 5</td>
<td>Right and left hand figure shift keys, began February, 1925</td>
<td>1922</td>
</tr>
</tbody>
</table>

Two-color ribbon as standard equipment, began with Model 5, but a two-color ribbon attachment can be supplied with any model regardless of age.

Dates of Manufacture

Valuations
Note: Valuations shown are for typewriters complete as to parts with regular keyboards, upper and lower case, equipped with Pica type. A deduction of $2.50 is usually made when machines are equipped with Elite or other type faces, and a deduction of $5.00 is usually made for machines equipped to write capital letters only.

*Denotes models of present line. For descriptions and illustrations see Catalog Section.
### NOISELESS—continued

<table>
<thead>
<tr>
<th>Model</th>
<th>Description</th>
<th>High Valuation</th>
<th>Low Valuation</th>
<th>Average Valuation</th>
</tr>
</thead>
<tbody>
<tr>
<td>No. 1—Serials to 5,000</td>
<td></td>
<td>$15.00</td>
<td>$10.00</td>
<td>$11.25</td>
</tr>
<tr>
<td>No. 3</td>
<td>5,001 to 12,500</td>
<td>15.00</td>
<td>10.00</td>
<td>12.00</td>
</tr>
<tr>
<td>No. 4—54 characters, regular carriage, Serials No. 12,301 to 15,000</td>
<td></td>
<td>25.00</td>
<td>10.00</td>
<td>14.50</td>
</tr>
<tr>
<td></td>
<td>15,001 to 22,000</td>
<td>25.00</td>
<td>7.50</td>
<td>13.50</td>
</tr>
<tr>
<td></td>
<td>22,001 to 35,000</td>
<td>30.00</td>
<td>7.50</td>
<td>14.50</td>
</tr>
<tr>
<td></td>
<td>35,001 to 50,000</td>
<td>30.00</td>
<td>10.00</td>
<td>15.00</td>
</tr>
<tr>
<td></td>
<td>50,001 to 60,000</td>
<td>30.00</td>
<td>15.00</td>
<td>19.00</td>
</tr>
<tr>
<td></td>
<td>60,001 and above</td>
<td>35.00</td>
<td>15.00</td>
<td>20.50</td>
</tr>
</tbody>
</table>

### OLIVER

**Construction and Dates of Manufacture**

(Serial numbers are approximate)

<table>
<thead>
<tr>
<th>Model</th>
<th>Description</th>
<th>First Placed on Market</th>
<th>Serials From</th>
<th>To</th>
</tr>
</thead>
<tbody>
<tr>
<td>1-</td>
<td>Improved paper feed</td>
<td>1896</td>
<td>1</td>
<td>5,000</td>
</tr>
<tr>
<td>2-</td>
<td>Larger and heavier model, one color ribbon; no back spacer</td>
<td>1898</td>
<td>5,000</td>
<td>5,000</td>
</tr>
<tr>
<td>3-</td>
<td>First machines were similar to Model No. 2, but had enclosed base. Back spacer and tabulator at serial 283,000</td>
<td>1901</td>
<td>25,000</td>
<td>183,000</td>
</tr>
<tr>
<td>4-</td>
<td>Similar to Model No. 5, with left margin release key changed to right side of keyboard</td>
<td>1907</td>
<td>494,000</td>
<td>494,000</td>
</tr>
<tr>
<td>5-</td>
<td>First model having right and left hand shift keys and two-color ribbon</td>
<td>1914</td>
<td>551,000</td>
<td>1,000,000</td>
</tr>
<tr>
<td>11-</td>
<td>Quiet Speedster Model</td>
<td>1922</td>
<td>Over 1,000,000</td>
<td></td>
</tr>
</tbody>
</table>

---

### A New Service For Typewriter Dealers

When you buy rouges, order them shipped to us. We take down and thoroughly clean each machine, renew all worn, missing or damaged parts, including platen, type, screws, etc., revinyl all bright parts, and reship the machine to you, complete. You do your own assembling and aligning, adjusting, etc.

**Ames Supply Company** - - - **Chicago**

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Expert Rebuilding

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6, 7, 8 Beauchamp St., London, England

**Dependable Service, Fair Prices**

**Careful Work**
REGAL REBUILT ROYALS
The Quality Rebuilt—Nearest to New
Endorsed By Original Manufacturer
ROUGH—ALL MAKES
WIDE VARIETY—ATTRACTIVE PRICES
—SELECT GRADE
Stock in 76 Warehouses Throughout Country
Write for latest price list on Roughs, and Dealers
proposition on Regal Rebuilt Royals.

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Our large stock means quick service for Pacific Coast Trade

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BERKELEY, CALIF.

Used Machine Valuations

OLIVER—continued

Valuations
(For machines equipped with regular correspondence size carriages.)

Note: Valuations shown are for typewriters complete as to parts with regular keyboards, upper and lower case, equipped with Pica type. A deduction of $2.50 is usually made when machines are equipped with Elite or other type faces, and a deduction of $5.00 is usually made for machines equipped to write capital letters only.

Denotes models of present line. For description and illustration see Catalog Section.

<table>
<thead>
<tr>
<th>Model</th>
<th>High</th>
<th>Low</th>
<th>Average</th>
</tr>
</thead>
<tbody>
<tr>
<td>No. 1</td>
<td>None</td>
<td>None</td>
<td>None</td>
</tr>
<tr>
<td>No. 2</td>
<td>None</td>
<td>None</td>
<td>None</td>
</tr>
<tr>
<td>No. 3—Serials No. 35,000 to 182,999</td>
<td>$5.00</td>
<td>$5.00</td>
<td>$5.00</td>
</tr>
<tr>
<td>No. 4</td>
<td>$5.00</td>
<td>$5.00</td>
<td>$5.00</td>
</tr>
<tr>
<td>No. 5—Serials No. 49,000 to 550,999</td>
<td>$10.00</td>
<td>$7.50</td>
<td>$8.00</td>
</tr>
<tr>
<td>No. 6—Serials No. 550,000 to 999,999</td>
<td>$15.00</td>
<td>$10.00</td>
<td>$12.50</td>
</tr>
<tr>
<td>No. 11—Over 1,000,000</td>
<td>$15.00</td>
<td>$15.00</td>
<td>$15.00</td>
</tr>
</tbody>
</table>

See "National Portable."

PORTEX

RAPID

REMINGTON
Construction
(Serial numbers are approximate)

Variable line spacer............On Model No. 6 begins at serial 138,000
Variable line spacer............On Model No. 7 begins at serial 170,000
Carriage geared controller......On Visible Models begins at serial 200,000
Stationary ribbon on spacing....On Visible Models begins at serial 382,000
1E construction (Improved segment and typebars) begins in...........1919
Straight serials (not coded on visible models end at serial...........440,000
Model numbers, begin...........August, 1919
Improved No. 10 (Incorporating improvements in carriage escapement, typebar mechanism and ribbon mechanism)
begin................................January, 1921
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**That Will Interest the Dealer or Any Buyer**

**Wholesale, Retail, Export Supplies, Sundries**

**INVINCIBLE TYPEWRITER SUPPORT**
Best Swing Stand Made
Enamel, Varnish, Oil, Brushes, Pads, Parts, Etc.
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Accurate Grinding

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- **BUFFALO,** 117 Franklin Street
- **CHICAGO,** 324 E. Dearborn Street
- **CHICAGO,** 119 N. Clark Street
- **CINCINNATI,** 148 E. Fourth Street
- **CLEVELAND,** 34 Euclid Arcade
- **DALLAS,** 1503 Commerce Street
- **DENVER,** 1723 Champa Street
- **DETROIT,** 1253 Griswold Street
- **INDIANAPOLIS,** 30 S. Penna Street
- **KANSAS CITY,** 905 Grand Avenue
- **LOS ANGELES,** 732 S. Spring Street
- **MILWAUKEE,** 127 Second Street
- **MINNEAPOLIS,** 724 Marquette Ave.
- **NEWARK,** 449-455 Central Avenue
- **NEW YORK** CITY, 340 E. 23rd St.
- **NEW ORLEANS,** 345 Baronne Street
- **NEW YORK** CITY, 321 Broadway
- **PITTSBURGH,** 630 Pearl Avenue
- **PHILADELPHIA,** 1209 Arch Street
- **SAN DIEGO,** 909 Third Street
- **SAN FRANCISCO,** 506 Market Street
- **ST. LOUIS,** 807 Pine Street
- **ST. PAUL,** 150 East 5th Street

---

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Established 1880

**Executive Offices and Factory**

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are not bought from me just because of personality.
Dealers who have bought everywhere else, now standardize on HUG PLATENS.

There's a Reason—and it's in the platen.
Like everything else in the world, platens vary in grade. Years of experience and exhaustive experiments make it possible for us to supply platens that are better. You'll know it if you will but compare them, their work and durability with any others you have been using. Furnished in black or blue grey.

PLATENS RECOVERED and PLATEN SHELLS FOR
TYPEWRITERS, ADDING MACHINES,
MULTIGRAPH, MULTICOLOR PRESS,
DUPLICATING MACHINES

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THE AMERICAN DIGEST OF BUSINESS MACHINES

Used Machine Valuations

Remington—continued
Valuations

Note: Valuations shown are for typewriters complete as to parts with regular keyboards, upper and lower case, equipped with Pica type. A deduction of $2.50 is usually made when machines are equipped with Elite or other type faces, and a deduction of $5.00 is usually made for machines equipped to write capital letters only.

*Denotes models of present line. For descriptions and illustrations see catalog section.

<table>
<thead>
<tr>
<th>Model</th>
<th>High</th>
<th>Low</th>
<th>Average</th>
</tr>
</thead>
<tbody>
<tr>
<td>No. 2—About the earliest practical double shift, blind writer, regular carriage</td>
<td>None</td>
<td>None</td>
<td>None</td>
</tr>
<tr>
<td>No. 3—Wide carriage model of No. 2</td>
<td>None</td>
<td>None</td>
<td>None</td>
</tr>
<tr>
<td>No. 4—Writes capitals only</td>
<td>None</td>
<td>None</td>
<td>None</td>
</tr>
<tr>
<td>No. 5—Similar to No. 3</td>
<td>None</td>
<td>None</td>
<td>None</td>
</tr>
<tr>
<td>No. 6—Blind writer similar to No. 2, wide carriage. $10.00</td>
<td>$3.00</td>
<td>$5.00</td>
<td></td>
</tr>
<tr>
<td>No. 7—Blind writer, wide carriage; tabulator. 10.00</td>
<td>3.00</td>
<td>5.00</td>
<td></td>
</tr>
<tr>
<td>No. 8—Blind writer, extra wide carriage</td>
<td>10.00</td>
<td>3.00</td>
<td>5.00</td>
</tr>
<tr>
<td>No. 9—Blind writer, regular carriage, with decimal tabulator</td>
<td>10.00</td>
<td>5.00</td>
<td>7.50</td>
</tr>
<tr>
<td>No. 10 or *No. 11</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Straight Numbers

| Serials No. to 138,000 | 10.00 | 5.00 | 8.50 |
| 138,001 to 216,000 | 10.00 | 7.50 | 9.50 |
| 216,001 to 300,000 | 12.50 | 7.50 | 10.00 |
| 300,001 to 385,000 | 15.00 | 7.50 | 10.50 |
| 385,001 and above | 15.00 | 10.00 | 11.50 |

Code Numbers

With two letter prefix if the first prefix letter is not letter "L":

| Serials No. 40,001 to 49,999 | 15.00 | 10.00 | 11.50 |
| 50,001 to 59,999 | 17.50 | 10.00 | 13.50 |
| 60,001 to 69,999 | 20.00 | 12.50 | 17.50 |
| 70,001 to 79,999 | 25.00 | 17.50 | 20.00 |
| 80,001 to 89,999 | 35.00 | 27.50 | 31.25 |
| 90,001 to 99,999 | 40.00 | 32.50 | 36.25 |
| 00,001 to 10,999 | 40.00 | 32.50 | 36.25 |
| 10,001 to 20,999 | 40.00 | 32.50 | 36.25 |

With two letter prefix, first prefix letter always "L" (improved segment and type bars):

| Serials No. 90,001 to 99,999 | 40.00 | 35.00 | 38.00 |
| 90,001 to 40,000 | 40.00 | 35.00 | 38.00 |

| No. 12—Any serial | 40.00 | 35.00 | 38.75 |

Portable—Code numbers with two letter prefix:

| Serials No. 00,001 to 09,999 | 17.50 | 7.50 | 12.75 |
| 10,001 to 19,999 | 20.00 | 12.50 | 15.00 |
| 20,001 and up | 22.50 | 12.50 | 17.85 |

Junior—Any serial

| 5.00 | 5.00 | 5.00 |

Accounting Machines:
Same valuations as regular Remington typewriter of like serial number.
REMINGTON—continued

Model No. 2 was the first shift machine, similar to No. 6. Over 100,000 of this model were made and sold.

Model No. 3 was practically the same machine, except that it was equipped with a wide carriage.

Model No. 6, illustrated opposite, enjoyed a popularity that continued for years and thousands of them are still in use. Like other machines previous to the No. 10, the No. 6 was a blind writing machine, that is, the carriage had to be lifted to inspect the work being typed.

Model No. 10 was discontinued late in 1923.

REX

A three row, front stroke, visible writing machine. Made from 1916 until recently by the Rex Typewriter Company, Fond du Lac, Wisconsin, and sold extensively until 1922 by the American Can Company, Chicago, Illinois. It had a three row keyboard, two-color ribbon, manually reversed, single key tabulator, back spacer, 11-inch carriage with a removable platen. Model No. 4 was the standard carriage; Model No. 4A had two extra keys; Model No. 10 had an improved carriage, the same as is now standard equipment on the Removable typewriter. Manufacture discontinued. This machine, with very slight changes, was also known as the Harris.

Valuation ............................................. $5.00

ROBERTS “90”

For description see Catalog Section.

Valuation (not generally quoted) ............................................. $5.00

ROYAL

Construction

Royal Standard: A low frame, light weight machine first put on the market in 1906. A single shift, four row keyboard, visible writer without tabulator or back spacer; one color ribbon. Sold for $65.00.

Royal Grand: Marketed contemporary with and a heavier and larger machine than the Royal Standard. A single shift, four row keyboard, single key tabulator, back spacer.

Model No. 5: Was an improved model of the Royal Standard. Placed on the market in 1911. It had a two-color ribbon, tabulator and back spacer and sold for $75.00.

Models No. 6 and 7: Wide carriage models of the Model No. 5.

Model No. 10: Commenced at serial 173,000 in 1914. Glass sides as regular equipment on No. 10 began at serial 212,000 in 1915. Variable line spacer began at serial 282,000.

Quiet Model (QX): Began at serial 600,000 in 1921.

Model X-12, X-14, X-16, X-18: Are Model No. 10 with 12", 14", 16" and 18" carriages respectively. Placed on the market in July, 1922.

Dates of Manufacture

<table>
<thead>
<tr>
<th>Year</th>
<th>Serial</th>
<th>Year</th>
<th>Serial</th>
<th>Year</th>
<th>Serial</th>
</tr>
</thead>
<tbody>
<tr>
<td>1906</td>
<td>1</td>
<td>1913</td>
<td>141,000</td>
<td>1920</td>
<td>Jan. 420,000</td>
</tr>
<tr>
<td>1907</td>
<td>4,000</td>
<td>1914</td>
<td>175,000</td>
<td>1920</td>
<td>July 500,000</td>
</tr>
<tr>
<td>1908</td>
<td>14,000</td>
<td>1915</td>
<td>200,000</td>
<td>1921</td>
<td>Jan. 560,000</td>
</tr>
<tr>
<td>1909</td>
<td>23,000</td>
<td>1916</td>
<td>235,000</td>
<td>1921</td>
<td>July 585,000</td>
</tr>
<tr>
<td>1910</td>
<td>30,000</td>
<td>1917</td>
<td>281,000</td>
<td>1922</td>
<td>Jan. 605,000</td>
</tr>
<tr>
<td>1911</td>
<td>35,000</td>
<td>1918</td>
<td>337,000</td>
<td>1922</td>
<td>July 640,000</td>
</tr>
<tr>
<td>1912</td>
<td>55,000</td>
<td>1919</td>
<td>385,000</td>
<td>1923</td>
<td>Jan. 650,000</td>
</tr>
<tr>
<td></td>
<td>107,000</td>
<td>1924</td>
<td>740,000</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Serial numbers shown represent the approximate first serial for each year.

Valuations

Note: Valuations shown are for typewriters complete as to parts with regular keyboards, upper and lower case, equipped with Pica type. A deduction of $.25 is usually made when machines are equipped with Elite or other type faces, and a deduction of $.50 is usually made for machines equipped to write capital letters only.

* Denotes models of present line. For descriptions and illustration see Catalog Section.

<table>
<thead>
<tr>
<th>Model</th>
<th>High</th>
<th>Low</th>
<th>Average</th>
</tr>
</thead>
<tbody>
<tr>
<td>Royal Grand—Any serial</td>
<td>$5.00</td>
<td>$5.00</td>
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<tr>
<td>Royal Standard—Model No. 1, any serial</td>
<td>$10.00</td>
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<tr>
<td>Model No. 3—Wide carriage model of No. 1, any serial</td>
<td>$10.00</td>
<td>$5.00</td>
<td>$7.75</td>
</tr>
</tbody>
</table>

Send Us Your Platen

29 Service Stations
24 Hour Service

AMERICAN WRITING MACHINE CO.
See Adv. page 609
## Typewriters

### ROYAL—continued

<table>
<thead>
<tr>
<th>Model</th>
<th>Valuations—continued</th>
<th>High</th>
<th>Valuation</th>
<th>Low</th>
<th>Average</th>
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</thead>
<tbody>
<tr>
<td>No. 5—Regular carriage, Serials No. 175,001 to 175,000</td>
<td>to 175,000</td>
<td>$15.00</td>
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<td>Serials No. 175,001 to 225,000</td>
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<td>225,001 to 300,000</td>
<td>$15.00</td>
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<td>$11.50</td>
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<tr>
<td>300,001 and above</td>
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<td>$11.50</td>
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<td>No. 6 or 7—Wide carriage models of No. 5, any serial</td>
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<td>Serials No. 200,001 to 215,000</td>
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<td>215,001 to 225,000</td>
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<td>$7.50</td>
<td>$11.50</td>
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<td>225,001 to 250,000</td>
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<td>$7.50</td>
<td>$11.50</td>
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<td>250,001 to 275,000</td>
<td>$15.00</td>
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<td>$11.50</td>
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<td>275,001 to 300,000</td>
<td>$15.00</td>
<td>$7.50</td>
<td>$11.50</td>
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<td>300,001 to 350,000</td>
<td>$15.00</td>
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<td>$7.50</td>
<td>$11.50</td>
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<td></td>
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<td>400,001 to 500,000</td>
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<td>$11.50</td>
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<td>500,001 to 600,000</td>
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<td>$7.50</td>
<td>$11.50</td>
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<td>600,001 and above</td>
<td>$15.00</td>
<td>$7.50</td>
<td>$11.50</td>
<td></td>
<td></td>
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</table>

*Quiet Model*—With Code Letters XQ before serial, any serial | $15.00 | $7.50 | $11.50 |

| No. X-12, X-14—12” and 14” carriage models of Model No. 10, Serials No. 200,000 | $15.00 | $7.50 | $11.50 |
| Serials No. 200,001 to 215,000 | $15.00 | $7.50 | $11.50 |
| 215,001 to 225,000 | $15.00 | $7.50 | $11.50 |
| 225,001 to 250,000 | $15.00 | $7.50 | $11.50 |
| 250,001 to 275,000 | $15.00 | $7.50 | $11.50 |
| 275,001 to 300,000 | $15.00 | $7.50 | $11.50 |
| 300,001 to 350,000 | $15.00 | $7.50 | $11.50 |
| 350,001 to 400,000 | $15.00 | $7.50 | $11.50 |
| 400,001 to 500,000 | $15.00 | $7.50 | $11.50 |
| 500,001 to 600,000 | $15.00 | $7.50 | $11.50 |
| 600,001 and above | $15.00 | $7.50 | $11.50 |

| No. X-18—18” carriage model of Model No. 10, Serials No. 210,000 | $15.00 | $7.50 | $11.50 |
| Serials No. 210,001 to 225,000 | $15.00 | $7.50 | $11.50 |
| 225,001 to 250,000 | $15.00 | $7.50 | $11.50 |
| 250,001 to 300,000 | $15.00 | $7.50 | $11.50 |
| 300,001 to 350,000 | $15.00 | $7.50 | $11.50 |
| 350,001 to 400,000 | $15.00 | $7.50 | $11.50 |
| 400,001 to 600,000 | $15.00 | $7.50 | $11.50 |
| 600,001 and above | $15.00 | $7.50 | $11.50 |

### SHILLING BROS.

Also known as the Pittsburgh Visible. For description see Catalog section.

Valuation (not generally quoted) .................................................. $5.00

### L. C. SMITH

**Construction**

(Partial numbers are approximate)

Pivot bar to serial 27,000; ball bearing over serial 27,000; back spacer begins at serial 45,000; improved type bar begins at serial 225,000; variable line spacer begins at serial 350,000.

### Dates of Manufacture

<table>
<thead>
<tr>
<th>Model No. 1</th>
<th>Model No. 2</th>
<th>Model No. 3-12</th>
<th>Model No. 3-14</th>
<th>Model No. 4</th>
<th>Model No. 5</th>
<th>Model No. 6</th>
<th>Model No. 7</th>
<th>Model No. 8</th>
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<tbody>
<tr>
<td>1905</td>
<td>1906</td>
<td>1906</td>
<td>1907</td>
<td>1907</td>
<td>1908</td>
<td>1910</td>
<td>1911</td>
<td>1911</td>
</tr>
<tr>
<td>1906</td>
<td>1,500</td>
<td>3,000</td>
<td>4,000</td>
<td>27,000</td>
<td>1,410</td>
<td>3,380</td>
<td>1,500</td>
<td>4,000</td>
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<tr>
<td>1907</td>
<td>1,000</td>
<td>2,000</td>
<td>2,500</td>
<td>12,500</td>
<td>2,250</td>
<td>5,000</td>
<td>1,500</td>
<td>3,000</td>
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<tr>
<td>1908</td>
<td>2,500</td>
<td>4,000</td>
<td>3,500</td>
<td>15,000</td>
<td>3,250</td>
<td>6,000</td>
<td>1,500</td>
<td>3,500</td>
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<tr>
<td>1909</td>
<td>3,000</td>
<td>5,000</td>
<td>4,000</td>
<td>20,000</td>
<td>4,250</td>
<td>6,500</td>
<td>1,500</td>
<td>4,000</td>
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<tr>
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<td>4,000</td>
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<td>5,000</td>
<td>25,000</td>
<td>5,250</td>
<td>8,000</td>
<td>1,500</td>
<td>4,500</td>
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<tr>
<td>1911</td>
<td>4,500</td>
<td>7,000</td>
<td>6,000</td>
<td>30,000</td>
<td>6,250</td>
<td>9,000</td>
<td>1,500</td>
<td>5,000</td>
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<tr>
<td>1912</td>
<td>5,000</td>
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<td>7,000</td>
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<td>10,000</td>
<td>1,500</td>
<td>5,500</td>
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<td>1913</td>
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<td>9,000</td>
<td>8,000</td>
<td>40,000</td>
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<td>11,000</td>
<td>1,500</td>
<td>6,000</td>
</tr>
<tr>
<td>1914</td>
<td>6,000</td>
<td>10,000</td>
<td>9,000</td>
<td>45,000</td>
<td>9,250</td>
<td>12,000</td>
<td>1,500</td>
<td>6,500</td>
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<tr>
<td>1915</td>
<td>6,500</td>
<td>11,000</td>
<td>10,000</td>
<td>50,000</td>
<td>10,250</td>
<td>13,000</td>
<td>1,500</td>
<td>7,000</td>
</tr>
</tbody>
</table>

*Serial numbers shown represent the approximate first serial for each year.

### Valuations

**Note:** Valuations shown are for typewriters complete as to parts with regular keyboards, upper and lower case, equipped with Pica type. A deduction of $2.50 is usually made when machines are equipped with Elite or other type faces, and a deduction of $5.00 is usually made for machines equipped to write capital letters only.

* Denotes models of present line. For descriptions and illustration see Catalog Section.

---

**Manufacturers’ Typewriter Clearing House**

193 North Dearborn Street, Chicago.

**Prompt attention—**

The goods you order—

The quality and appearance you expect—plus

Skillful, dependable workmanship and appreciation of your patronage!
## Used Machine Valuations

### L. C. SMITH—continued

<table>
<thead>
<tr>
<th>Model</th>
<th>Valuations—continued</th>
<th>High</th>
<th>Low</th>
<th>Average</th>
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</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>No. 1—76 characters, regular carriage. Any serial.</td>
<td></td>
<td>10.00</td>
<td>5.00</td>
<td>7.25</td>
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<tr>
<td>No. 2—84 characters without type guide, regular carriage. Serials No. to 69,000.</td>
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<td>7.50</td>
</tr>
<tr>
<td>69,001 to 100,000.</td>
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<td>8.50</td>
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<tr>
<td>100,001 and above.</td>
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<td>12.50</td>
<td>5.00</td>
<td>9.00</td>
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<tr>
<td>No. 3—12&quot;—84 characters, 12&quot; carriage model of No. 8. Any serial.</td>
<td></td>
<td>40.00</td>
<td>32.50</td>
<td>35.65</td>
</tr>
<tr>
<td>No. 3—14&quot;—84 characters, 14&quot; carriage model of No. 2 to serial 8,000; No. 5 to serial 25,000; No. 8 over serial 25,000. Serials No. to 8,250.</td>
<td></td>
<td>15.00</td>
<td>5.00</td>
<td>8.25</td>
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<td>Serials No. 8,251 to 12,000.</td>
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<tr>
<td>12,001 to 16,000.</td>
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<td>9.50</td>
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<tr>
<td>16,001 to 20,000.</td>
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<td>12.50</td>
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<tr>
<td>20,001 to 24,000.</td>
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<tr>
<td>24,001 to 28,000.</td>
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<tr>
<td>28,001 to 32,000.</td>
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<td>22.50</td>
<td>25.00</td>
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<tr>
<td>32,001 to 36,000.</td>
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<td>27.50</td>
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<tr>
<td>36,001 and above.</td>
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<tr>
<td>No. 4—76 characters, regular carriage. Serials No. to 13,800.</td>
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<tr>
<td>Serials No. 13,801 to 14,500.</td>
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<tr>
<td>14,501 to 15,300.</td>
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<tr>
<td>15,301 to 16,000.</td>
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<tr>
<td>16,001 to 17,000.</td>
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<td>16.75</td>
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<td>17,001 to 18,300.</td>
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<td>20.00</td>
<td>27.50</td>
</tr>
<tr>
<td>18,301 and above.</td>
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<td>20.00</td>
<td>27.50</td>
</tr>
<tr>
<td>No. 5—84 characters, with type guide, regular carriage. Serials No. to 96,500.</td>
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<td>96,501 to 225,000.</td>
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<td>11.75</td>
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<td>225,001 to 240,000.</td>
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<tr>
<td>240,001 to 250,000.</td>
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<td>15.00</td>
<td>18.00</td>
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<td>250,001 to 255,500.</td>
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<td>17.50</td>
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<td>255,501 to 260,000.</td>
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<td>25.00</td>
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<tr>
<td>260,001 and above.</td>
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<td>32.50</td>
<td>35.50</td>
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<tr>
<td>No. 6—16&quot; or 6—18&quot;—84 characters 16 or 18&quot; carriage models of No. 2 to serial 2,000; No. 5 to serial 8,000; No. 8 over serial 8,000. Serials No. 4,301 to 5,400.</td>
<td></td>
<td>15.00</td>
<td>7.50</td>
<td>10.00</td>
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<tr>
<td>15.00</td>
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<td>22.50</td>
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<td>25.00</td>
<td>17.50</td>
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<td>32.50</td>
<td>32.50</td>
<td>35.50</td>
<td></td>
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<tr>
<td>No. 6—20&quot; or 6—26&quot;—Extra wide carriage models of No. 8.</td>
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<td>20.00</td>
<td>22.50</td>
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<tr>
<td>10,001 to 11,000.</td>
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<td>20.00</td>
<td>20.00</td>
<td>22.50</td>
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<tr>
<td>11,001 and above.</td>
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<td>20.00</td>
<td>25.00</td>
<td>28.75</td>
</tr>
<tr>
<td>No. 7—76 characters, regular carriage, similar to No. 8. Serials No. to 17,500.</td>
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<td>21.75</td>
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<tr>
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<td>28.75</td>
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<td>No. 8—84 characters, standard correspondence machine, regular carriage. Serials No. to 250,000.</td>
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<td>Serials No. 251,001 to 315,000.</td>
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<td>315,001 to 335,000.</td>
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<td>27.75</td>
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<td>335,001 to 400,000.</td>
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<td>27.75</td>
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<td>400,001 to 425,000.</td>
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<td>27.75</td>
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<tr>
<td>425,001 and above.</td>
<td></td>
<td>40.00</td>
<td>25.00</td>
<td>27.75</td>
</tr>
</tbody>
</table>

---

### SECOR

A four row, single shift, front stroke typewriter, placed on the market in 1911. It had a decimal tabulator, right and left hand shift keys, back spacer and two-color ribbon with automatic reverse. Retail price was $100.00. Manufacture discontinued. Valuation (not generally quoted). $5.00

### HARRY A. SMITH

A standard size front stroke, single shift, four row keyboard, visible writing machine, having two color ribbon, 10½-inch carriage on which the platen only was shifted for capitals; rotary escapement; ball bearing typebars having individual hangers.

A very few of these machines were made in 1920 by the Harry A. Smith Typewriter Company, Elkhart, Indiana, which company has since gone into business. This same machine was marketed until 1917 by the Blickensderfer Manufacturing Company, Stamford, Connecticut, as the Blick-Bar. Valuations are not generally quoted.

---

### Write Today

For Our

Unusually Attractive Proposition

For DEALERS

Smith Typewriter Sales Co.
41-360 E. Grand Ave.
Chicago, Illinois
Our Ideal Rebuilding Service for the Dealer

is based on the principle that good, dependable, thorough rebuilding can only be done with complete equipment, by specialized workmen — that such expensive equipment is justified only for centralized quantity production. Let us be your completely modern shop — to turn out work that will make you proud — at no investment expense to you.

All Machines Disassembled to Frames Enamelled at 275° for Three Hours. Transfers and Varnish at 150 for Two Hours. All Nickel Parts Plated. New Platen and Feed Rolls.

SMITH PREMIER

Dates of Manufacture
(Serial numbers are approximate)

<table>
<thead>
<tr>
<th>Year</th>
<th>Model No. 2 1896 Serial</th>
<th>Model No. 4 1896 Serial</th>
<th>Model No. 10 1903 Serial</th>
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</thead>
<tbody>
<tr>
<td>1895</td>
<td>38,500</td>
<td>17,300</td>
<td>34,000</td>
</tr>
<tr>
<td>1900</td>
<td>96,300</td>
<td>68,800</td>
<td>65,928</td>
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<tr>
<td>1910</td>
<td>131,131</td>
<td>113,800</td>
<td>94,400</td>
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<tr>
<td>1911</td>
<td>131,500</td>
<td>114,400</td>
<td>119,700</td>
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<td>1912</td>
<td>132,000</td>
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<td>1913</td>
<td>132,000</td>
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<tr>
<td>1914</td>
<td>132,000</td>
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</tbody>
</table>

Code Numbers

Code numbers began in August, 1914, and follow the same system as the Remington Typewriter Company's code. For complete explanation, see Remington typewriter data in this section.

Valuations

Note: Valuations shown are for typewriters complete as to parts with regular keyboards, upper and lower case, equipped with Pica type. A deduction of $2.50 is usually made when machines are equipped with Elite or other type faces and a deduction of $5.00 is usually made for machines equipped to write capital letters only.

* Denotes models of present line. For descriptions and illustrations see Catalog Section.

<table>
<thead>
<tr>
<th>Model</th>
<th>Valuation High</th>
<th>Valuation Low</th>
<th>Valuation Average</th>
</tr>
</thead>
<tbody>
<tr>
<td>No. 2, 3, 4, 5, 6 or 9 — All blind writing and with double keyboards</td>
<td>$ 5.00</td>
<td>$ 2.00</td>
<td>$ 2.50</td>
</tr>
<tr>
<td>No. 10 — 84 characters, double keyboard, visible writer, two-color ribbon, back spacer and tabulator.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Straight Numbers, Serials No. 1 to 134,000</td>
<td>10.00</td>
<td>5.00</td>
<td>7.00</td>
</tr>
<tr>
<td>134,000 and above</td>
<td>20.00</td>
<td>5.00</td>
<td>10.00</td>
</tr>
</tbody>
</table>

Code Numbers

With two letter prefix:

<table>
<thead>
<tr>
<th>Serials No.</th>
<th>Valuation</th>
</tr>
</thead>
<tbody>
<tr>
<td>40,001 to 49,999</td>
<td>20.00</td>
</tr>
<tr>
<td>50,001 to 59,999</td>
<td>20.00</td>
</tr>
<tr>
<td>60,001 to 69,999</td>
<td>15.00</td>
</tr>
<tr>
<td>80,001 to 89,999</td>
<td>20.00</td>
</tr>
<tr>
<td>90,001 to 99,999</td>
<td>20.00</td>
</tr>
</tbody>
</table>

No. 30 — 84 characters, individual typebar hangers, single shift, four row keyboard. Any serial | 40.00 | 20.00 | 25.00 |

*No. 60 — 84 characters, single shift, four row keyboard. Any serial | 40.00 | 25.00 | 30.00 |
BUY your Typewriter and Adding Machine Ribbons in bulk and make double the profit on each sale. Reel-O-Ribbon Service will enable you to spool your own ribbons at a cost as low as 16c each. All kinds of Inked Ribbons furnished in reels of 144 yards, or spooled, wrapped in tin-foil and packed in lithographed metal boxes. Put up under your own imprint or in plain boxes.

**We Manufacture**

**Eyelet Tool**

SILK TYPEWRITER RIBBONS

REGULAR TYPEWRITER RIBBONS

ADDING MACHINE RIBBONS

INKED RIBBONS for Multigraphs, Addressing Machines, Time Clocks, Cash Registers and all Office Machines

Carbon Paper in 25 Different Grades

Price $3.50

Quick Service On Re-Inking of Multigraph Ribbons

WRITE FOR CATALOGUE AND PRICE LIST Containing valuable information for the dealer

PHILLIPS RIBBON & CARBON CO., INC.

Manufacturers

ROCHESTER, N. Y.

SMITH PREMIER—continued

Valuations—continued

Smith Premier Model No. 30 was announced in 1923 and is the forerunner of the present Model No. 60 (for description of which see Catalog Section). It differs from the Model No. 60 in that it has the individual typebars the same as the Monarch typewriter of which it is an improved successor.

Smith Premier Model No. 60, it will be noted, has the typebars mounted in a solid slotted segment and also incorporates some few other improvements not found in the No. 30.

You can't buy a typewriter in the rough and do the work on it in your own shop at the price we can sell you a rebuilt. That's hard to believe, but a trial order will convince you as it has thousands of other dealers.

Manufacturers' Typewriter Clearing House

193 North Dearborn Street, Chicago.
STANDARD FOLDING

STEARNs
A front stroke, single shift, four row keyboard visible writing machine; placed on the market in 1909. Manufacture discontinued.

Valuation (not generally quoted) $5.00

SUN
A three row keyboard, double shift, front stroke machine. Made for years in a number of successive models. The inking is accomplished by a primary and secondary rotating ink pad. Manufacture discontinued.

Valuations
Model No. 1, 2 or 3 $2.50
Model No. 6 $5.00

UNDERWOOD

Construction
(Serial numbers are approximate)

<table>
<thead>
<tr>
<th>Models</th>
<th>Models</th>
<th>Models</th>
</tr>
</thead>
<tbody>
<tr>
<td>No. 4 and 5</td>
<td>No. 3-12,</td>
<td>No. 3-19,</td>
</tr>
<tr>
<td>Serial No.</td>
<td>Serial No. 3-14, 3-16</td>
<td>Serial No. 3-20, 3-26</td>
</tr>
<tr>
<td>Back escapement, to</td>
<td>23,000</td>
<td>3,000</td>
</tr>
<tr>
<td>Rotary escapement, from</td>
<td>23,000</td>
<td>5,000</td>
</tr>
<tr>
<td>Automatic ribbon, reverse, from</td>
<td>175,000</td>
<td>19,300</td>
</tr>
<tr>
<td>Two-color ribbon, from</td>
<td>247,000</td>
<td>32,500</td>
</tr>
<tr>
<td>Back space, from</td>
<td>247,000</td>
<td>25,500</td>
</tr>
<tr>
<td>Improved paper feed, from</td>
<td>200,000</td>
<td>35,000</td>
</tr>
<tr>
<td>Improved paper guide, from</td>
<td>194,000</td>
<td>56,000</td>
</tr>
<tr>
<td>Variable line space, from</td>
<td>700,000</td>
<td>125,000</td>
</tr>
<tr>
<td>Improved shift lock, from</td>
<td>700,000</td>
<td>166,000</td>
</tr>
<tr>
<td>Change in wing scales, from</td>
<td>1,720,000</td>
<td>56,000</td>
</tr>
<tr>
<td>First Model G, from</td>
<td>392,000</td>
<td>85,500</td>
</tr>
<tr>
<td>First Model H, from</td>
<td>517,000</td>
<td>85,500</td>
</tr>
<tr>
<td>First Model K, from</td>
<td>1,690,000</td>
<td>310,000</td>
</tr>
</tbody>
</table>

Dates of Manufacture
Models No. 1 and No. 2—From 1896 to 1900, highest serials around 12,000.

<table>
<thead>
<tr>
<th>Models</th>
<th>Models</th>
<th>Models</th>
</tr>
</thead>
<tbody>
<tr>
<td>No. 4 and 5</td>
<td>No. 3-12,</td>
<td>No. 3-19,</td>
</tr>
<tr>
<td>*Serial</td>
<td>*Serial 3-14, 3-16</td>
<td>*Serial 3-20, 3-26</td>
</tr>
<tr>
<td>1900</td>
<td>1000</td>
<td>1000</td>
</tr>
<tr>
<td>1901</td>
<td>500</td>
<td>500</td>
</tr>
<tr>
<td>1902</td>
<td>8,000</td>
<td>900</td>
</tr>
<tr>
<td>1903</td>
<td>22,000</td>
<td>1,500</td>
</tr>
<tr>
<td>1904</td>
<td>45,000</td>
<td>3,500</td>
</tr>
<tr>
<td>1905</td>
<td>65,000</td>
<td>5,200</td>
</tr>
<tr>
<td>1906</td>
<td>100,000</td>
<td>9,000</td>
</tr>
<tr>
<td>1907</td>
<td>180,000</td>
<td>14,000</td>
</tr>
<tr>
<td>1908</td>
<td>227,000</td>
<td>20,000</td>
</tr>
<tr>
<td>1909</td>
<td>295,000</td>
<td>28,500</td>
</tr>
<tr>
<td>1910</td>
<td>356,000</td>
<td>35,000</td>
</tr>
<tr>
<td>1911</td>
<td>453,000</td>
<td>42,000</td>
</tr>
<tr>
<td>1912</td>
<td>546,000</td>
<td>48,000</td>
</tr>
<tr>
<td>1913</td>
<td>655,000</td>
<td>55,000</td>
</tr>
<tr>
<td>1914</td>
<td>740,000</td>
<td>62,000</td>
</tr>
<tr>
<td>1915</td>
<td>830,000</td>
<td>69,000</td>
</tr>
<tr>
<td>1916</td>
<td>1,050,000</td>
<td>76,000</td>
</tr>
<tr>
<td>1917</td>
<td>1,160,000</td>
<td>82,000</td>
</tr>
<tr>
<td>1918—January</td>
<td>1,280,000</td>
<td>87,500</td>
</tr>
<tr>
<td>1919—January</td>
<td>1,370,000</td>
<td>93,000</td>
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<tr>
<td>1920—January</td>
<td>1,480,000</td>
<td>99,000</td>
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<tr>
<td>1921—January</td>
<td>1,525,000</td>
<td>105,000</td>
</tr>
<tr>
<td>1922—January</td>
<td>1,525,000</td>
<td>111,000</td>
</tr>
<tr>
<td>1923—January</td>
<td>1,650,000</td>
<td>117,000</td>
</tr>
<tr>
<td>1924—January</td>
<td>1,700,000</td>
<td>123,000</td>
</tr>
</tbody>
</table>

*Serial numbers shown represent the approximate first serial for each year.

Typewriter Parts, Tools, Supplies
PLATEN SERVICE—COVERS
Get in touch with the nearest of our ten service stations or our main plant in Chicago

AMES SUPPLY CO. 564-72 W. Randolph St. Chicago
### UNDERWOOD—continued

**Valuations**

**Note:** Valuations shown are for typewriters complete as to parts with regular keyboards, upper and lower case, equipped with Pica type. A deduction of $2.50 is usually made when machines are equipped with Elite or other type faces, and a deduction of $5.00 is usually made for machines equipped to write capital letters only.

* Denotes models of present line. For descriptions and illustrations see Catalog Section.

<table>
<thead>
<tr>
<th>Model</th>
<th>Valuation High</th>
<th>Valuation Low</th>
<th>Valuation Average</th>
</tr>
</thead>
<tbody>
<tr>
<td>No. 1—76 characters, regular carriage. Any serial</td>
<td>$10.00</td>
<td>$5.00</td>
<td>$8.75</td>
</tr>
<tr>
<td>No. 2—84 characters, regular carriage. Any serial</td>
<td>$10.00</td>
<td>$5.00</td>
<td>$8.75</td>
</tr>
<tr>
<td>*No. 3—12&quot;, 5—14&quot;, 3—16&quot;—84 characters. Same as Model No. 6 but with 12&quot;, 14&quot;, or 16&quot; carriage. Serials No. to 82,000</td>
<td>10.00</td>
<td>5.00</td>
<td>8.75</td>
</tr>
<tr>
<td>82,001 to 100,000</td>
<td>15.00</td>
<td>7.50</td>
<td>9.50</td>
</tr>
<tr>
<td>100,001 to 125,000</td>
<td>15.00</td>
<td>7.50</td>
<td>10.00</td>
</tr>
<tr>
<td>125,001 to 150,000</td>
<td>20.00</td>
<td>10.00</td>
<td>13.50</td>
</tr>
<tr>
<td>150,001 to 200,000</td>
<td>25.00</td>
<td>15.00</td>
<td>18.75</td>
</tr>
<tr>
<td>200,001 to 250,000</td>
<td>30.00</td>
<td>20.00</td>
<td>24.00</td>
</tr>
<tr>
<td>250,001 to 300,000</td>
<td>35.00</td>
<td>22.50</td>
<td>28.75</td>
</tr>
<tr>
<td>300,001 to 350,000</td>
<td>35.00</td>
<td>30.00</td>
<td>33.75</td>
</tr>
<tr>
<td>350,001 and above</td>
<td>40.00</td>
<td>35.00</td>
<td>37.00</td>
</tr>
<tr>
<td>*No. 3—18&quot;, 3—20&quot;, 3—26&quot;—84 characters. Same as Model No. 5 but with 18&quot;, 20&quot;, or 26&quot; carriage. Serials No. to 11,500</td>
<td>10.00</td>
<td>5.00</td>
<td>8.75</td>
</tr>
<tr>
<td>11,501 to 18,000</td>
<td>15.00</td>
<td>7.50</td>
<td>10.00</td>
</tr>
<tr>
<td>18,001 to 25,000</td>
<td>20.00</td>
<td>10.00</td>
<td>13.50</td>
</tr>
<tr>
<td>25,001 to 35,000</td>
<td>30.00</td>
<td>15.00</td>
<td>20.00</td>
</tr>
<tr>
<td>35,001 to 50,000</td>
<td>35.00</td>
<td>17.50</td>
<td>25.00</td>
</tr>
<tr>
<td>50,001 to 60,000</td>
<td>35.00</td>
<td>25.00</td>
<td>31.25</td>
</tr>
<tr>
<td>60,001 to 70,000</td>
<td>35.00</td>
<td>30.00</td>
<td>33.75</td>
</tr>
<tr>
<td>70,001 and above</td>
<td>35.00</td>
<td>30.00</td>
<td>34.50</td>
</tr>
<tr>
<td>*No. 4—76 characters, regular carriage. Serials No. to 37,500</td>
<td>10.00</td>
<td>5.00</td>
<td>8.75</td>
</tr>
<tr>
<td>37,501 to 247,000</td>
<td>10.00</td>
<td>5.00</td>
<td>8.75</td>
</tr>
<tr>
<td>247,001 to 500,000</td>
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<td>7.50</td>
<td>13.50</td>
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<tr>
<td>500,001 to 600,000</td>
<td>15.00</td>
<td>10.00</td>
<td>13.50</td>
</tr>
<tr>
<td>600,001 to 750,000</td>
<td>17.50</td>
<td>10.00</td>
<td>14.35</td>
</tr>
<tr>
<td>750,001 to 800,000</td>
<td>22.50</td>
<td>12.50</td>
<td>18.25</td>
</tr>
<tr>
<td>800,001 to 1,000,000</td>
<td>30.00</td>
<td>17.50</td>
<td>25.50</td>
</tr>
<tr>
<td>1,000,001 to 1,150,000</td>
<td>30.00</td>
<td>25.00</td>
<td>29.50</td>
</tr>
<tr>
<td>1,150,001 to 1,250,000</td>
<td>35.00</td>
<td>27.50</td>
<td>31.25</td>
</tr>
<tr>
<td>1,250,001 to 1,350,000</td>
<td>35.00</td>
<td>30.00</td>
<td>33.75</td>
</tr>
<tr>
<td>1,350,001 to 1,500,000</td>
<td>35.00</td>
<td>35.00</td>
<td>37.50</td>
</tr>
<tr>
<td>1,500,001 and above</td>
<td>40.00</td>
<td>35.00</td>
<td>37.50</td>
</tr>
<tr>
<td>*No. 5—84 characters, regular carriage. Serials No. to 247,000</td>
<td>10.00</td>
<td>5.00</td>
<td>8.75</td>
</tr>
<tr>
<td>247,001 to 500,000</td>
<td>20.00</td>
<td>12.50</td>
<td>16.00</td>
</tr>
<tr>
<td>500,001 to 600,000</td>
<td>20.00</td>
<td>15.00</td>
<td>16.50</td>
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<td>600,001 to 750,000</td>
<td>25.00</td>
<td>17.50</td>
<td>19.75</td>
</tr>
<tr>
<td>750,001 to 1,000,000</td>
<td>25.00</td>
<td>20.00</td>
<td>25.00</td>
</tr>
</tbody>
</table>

### VICTOR

For description and illustration see Catalog Section.

<table>
<thead>
<tr>
<th>Model</th>
<th>Valuation High</th>
<th>Valuation Low</th>
<th>Valuation Average</th>
</tr>
</thead>
<tbody>
<tr>
<td>Model No. 1 or 2</td>
<td></td>
<td>$5.00</td>
<td></td>
</tr>
<tr>
<td>Model No. 3</td>
<td></td>
<td>$10.00</td>
<td></td>
</tr>
<tr>
<td>Model No. 10</td>
<td></td>
<td>$20.00</td>
<td></td>
</tr>
</tbody>
</table>

### SELECT GRADE TYPEWRITERS

**Better Than Many Rebuilts**

**PRICED BUT LITTLE ABOVE ROUGHS**

**Order a Few Today and Be Convinced**

**AMERICAN WRITING MACHINE CO.**
See Adv. page 609

---

Confidence—
is the basis of all successful dealing. There may be little difference in typewriters, but there is in the house from which you buy.

**Manufacturers' Typewriter Clearing House**

193 North Dearborn Street, Chicago.
WOODSTOCK
Construction and Dates of Manufacture
(Serial numbers are approximate)

<table>
<thead>
<tr>
<th>Model</th>
<th>Description</th>
<th>First Placed on Market</th>
<th>Discontinued</th>
<th>Serial</th>
</tr>
</thead>
<tbody>
<tr>
<td>No. 3</td>
<td>Regular carriage, taking paper</td>
<td>Sept. 1914</td>
<td>Aug. 1915</td>
<td>End 1917</td>
</tr>
<tr>
<td>No. 4</td>
<td>Regular carriage, taking paper</td>
<td>Early 1915</td>
<td>End 1917</td>
<td></td>
</tr>
<tr>
<td>No. 5D</td>
<td>Regular carriage, taking paper</td>
<td>Oct. 1916</td>
<td>Mar. 1920</td>
<td></td>
</tr>
<tr>
<td>No. 5B</td>
<td>Wide carriage model of No. 5B, taking paper</td>
<td>Oct. 1916</td>
<td>Mar. 1920</td>
<td></td>
</tr>
<tr>
<td>No. 5BW</td>
<td>Wide carriage model of No. 5BW</td>
<td>Mar. 1921</td>
<td></td>
<td></td>
</tr>
<tr>
<td>*No. 5DW</td>
<td>Wide carriage model of No. 5D, taking paper</td>
<td>June 1920</td>
<td></td>
<td></td>
</tr>
<tr>
<td>*No. 6F</td>
<td>Wide carriage taking paper</td>
<td>Early 1921</td>
<td></td>
<td>70,000</td>
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<tr>
<td>*No. 5F</td>
<td>Wide carriage taking paper</td>
<td>Jan. 1922</td>
<td></td>
<td>90,000</td>
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<tr>
<td>*No. 7K</td>
<td>Wide carriage taking paper</td>
<td>Apr. 1923</td>
<td></td>
<td>10,757</td>
</tr>
</tbody>
</table>

Models No. 5, 6 and 7 are numbered in the same series.
Models No. 3, 4, 5B and 5D were numbered in code (not regular consecutive serial numbers), making it impossible to give any starting or closing serial numbers for these machines.

Valuations

Note: Valuations shown are for typewriters complete as to parts with regular keyboards, upper and lower case, equipped with Pica type. A deduction of $2.50 is usually made when machines are equipped with Elite or other type faces, and a deduction of $5.00 is usually made for machines equipped to write capital letters only.

<table>
<thead>
<tr>
<th>Model</th>
<th>High</th>
<th>Low</th>
<th>Average</th>
</tr>
</thead>
<tbody>
<tr>
<td>No. 3</td>
<td>$12.50</td>
<td>$10.00</td>
<td>$10.75</td>
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<tr>
<td>No. 4</td>
<td>15.00</td>
<td>10.00</td>
<td>13.50</td>
</tr>
<tr>
<td>No. 5</td>
<td>20.00</td>
<td>15.00</td>
<td>18.00</td>
</tr>
<tr>
<td>No. 5W</td>
<td>22.50</td>
<td>17.50</td>
<td>20.50</td>
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<tr>
<td>*No. 5F</td>
<td>32.50</td>
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<td>28.75</td>
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<tr>
<td>*No. 5D</td>
<td>37.50</td>
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<tr>
<td>*No. 6J</td>
<td>40.00</td>
<td>35.00</td>
<td>37.50</td>
</tr>
<tr>
<td>*No. 7K</td>
<td>37.50</td>
<td>32.50</td>
<td>35.00</td>
</tr>
</tbody>
</table>

YPST

A front stroke, basket shift, four row keyboard, visible writing, direct inked machine. Sold by the American Writing Machine Company, Newark, New Jersey.

Valuations

For visible model (Models No. 15, 16, 17, 18, 20, 21, 22 or 23). Any serial; Valuation (not generally quoted) $5.00

TYPEWRITERS ON WHICH NO VALUATIONS ARE QUOTED

<table>
<thead>
<tr>
<th>Alexander</th>
<th>Franklin</th>
<th>New Century, 5, 6, 7</th>
</tr>
</thead>
<tbody>
<tr>
<td>American</td>
<td>Fitch</td>
<td>Odell</td>
</tr>
<tr>
<td>Bar Lock</td>
<td>Ford</td>
<td>Peerless</td>
</tr>
<tr>
<td>Bennet</td>
<td>Fountain</td>
<td>Postal</td>
</tr>
<tr>
<td>Brooks</td>
<td>Granville</td>
<td>Reliance</td>
</tr>
<tr>
<td>Calligraph</td>
<td>Hartford</td>
<td>Rem. Sh. Viz.</td>
</tr>
<tr>
<td>Columbia W. C.</td>
<td>Hall</td>
<td>Rem. Nos. 2, 3, 4, 5, 8, 9</td>
</tr>
<tr>
<td>Columbia Shift</td>
<td>International</td>
<td>Rem. Sholes, all models</td>
</tr>
<tr>
<td>Commercial</td>
<td>Junior</td>
<td>Sholes</td>
</tr>
<tr>
<td>Chicago</td>
<td>Jackson</td>
<td>Stearns</td>
</tr>
<tr>
<td>Chandall</td>
<td>Jewett</td>
<td>Smith Premier Nos. 1, 2, 5, 6, 9</td>
</tr>
<tr>
<td>Daugherty</td>
<td>Keystone</td>
<td>Williams Nos. 1, 2, 3, 4, 6</td>
</tr>
<tr>
<td>Denison</td>
<td>Lambert</td>
<td>Wellington</td>
</tr>
<tr>
<td>Duplex</td>
<td>Lazaar</td>
<td>Yetman</td>
</tr>
<tr>
<td>Epsilene</td>
<td>Manhattan</td>
<td>Yost Nos. 1, 2, 4, 5, 6, 7, 8, 9, 10, 11 and W. C.</td>
</tr>
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<td>Emerson</td>
<td>Munson</td>
<td>Visagraph</td>
</tr>
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<td>Empire</td>
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<td></td>
</tr>
<tr>
<td>Pay Shoes</td>
<td>Niagara</td>
<td></td>
</tr>
</tbody>
</table>

Typewriter dealers can double or triple their business, with no additional capital, by reducing their stocks to a small number of machines, for samples or demonstrating, and replacing them, as sold, by rush orders to us.

Manufacturers' Typewriter Clearing House
193 North Dearborn Street, Chicago.