SMYTH

STANDARD OF THE WORLD

BOOKBINDING MACHINERY

No. 18 SMYTH BOOK SEWING MACHINE

SEMI-AUTOMATIC MODEL

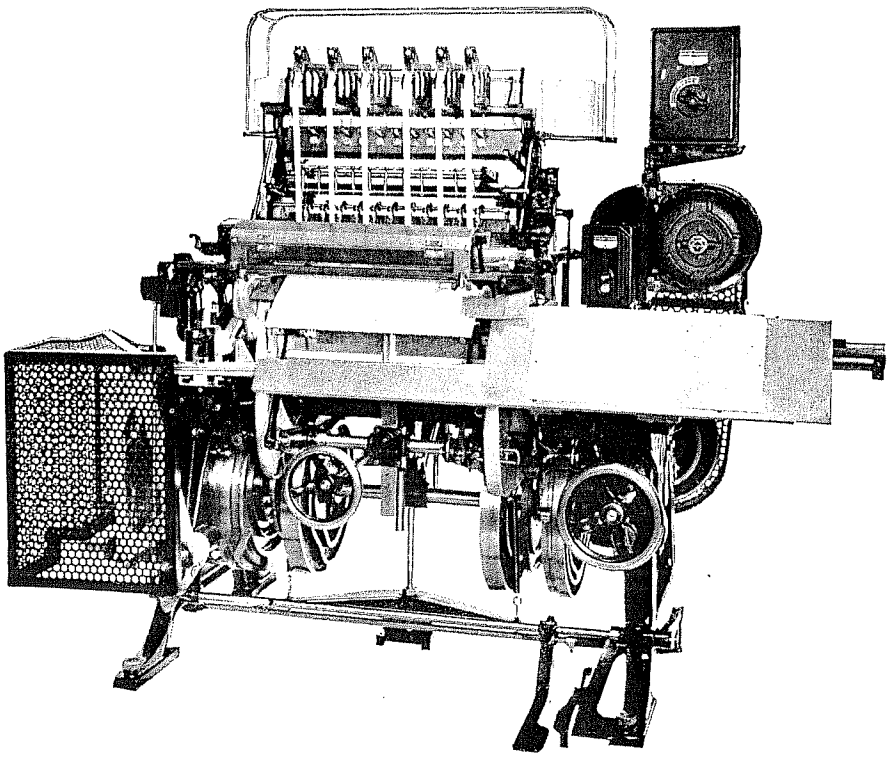
GENERAL SPECIFICATIONS
OPERATING INSTRUCTIONS
PARTS CATALOGUE

The Smyth No. 12 and the Smyth No. 18 Booksewing Machines are essentially identical in construction and operation. Because of this, the No. 12 Instruction and Parts Book, with certain additions and amendments, is supplied with your No. 18 Sewer.

Pages C through J identify all parts used on the No. 18 machine which differ from corresponding parts used on the No. 12 machine. We call attention to the fact that the entire book should be carefully read for instruction as to set-up, operation, adjustments, etc.

Parts common to both the No. 12 and No. 18 models are to be ordered by their No. 12 numbers; parts used *only* on the No. 18 machine are designated by 18-numbers.

THE SMYTH MANUFACTURING COMPANY
HARTFORD 1, CONNECTICUT
U. S. A.



SPECIFICATIONS—

Range—3″ x 3½″ to 10½″ x 18″

Speed—Up to 75 Signatures per Minute

Power Required—½ HP

Floor Space—36″ x 73½″

IMPORTANT: When ordering parts for the No. 18 Smyth Booksewing Machine, check carefully with the alphabetical parts list to avoid possible error.

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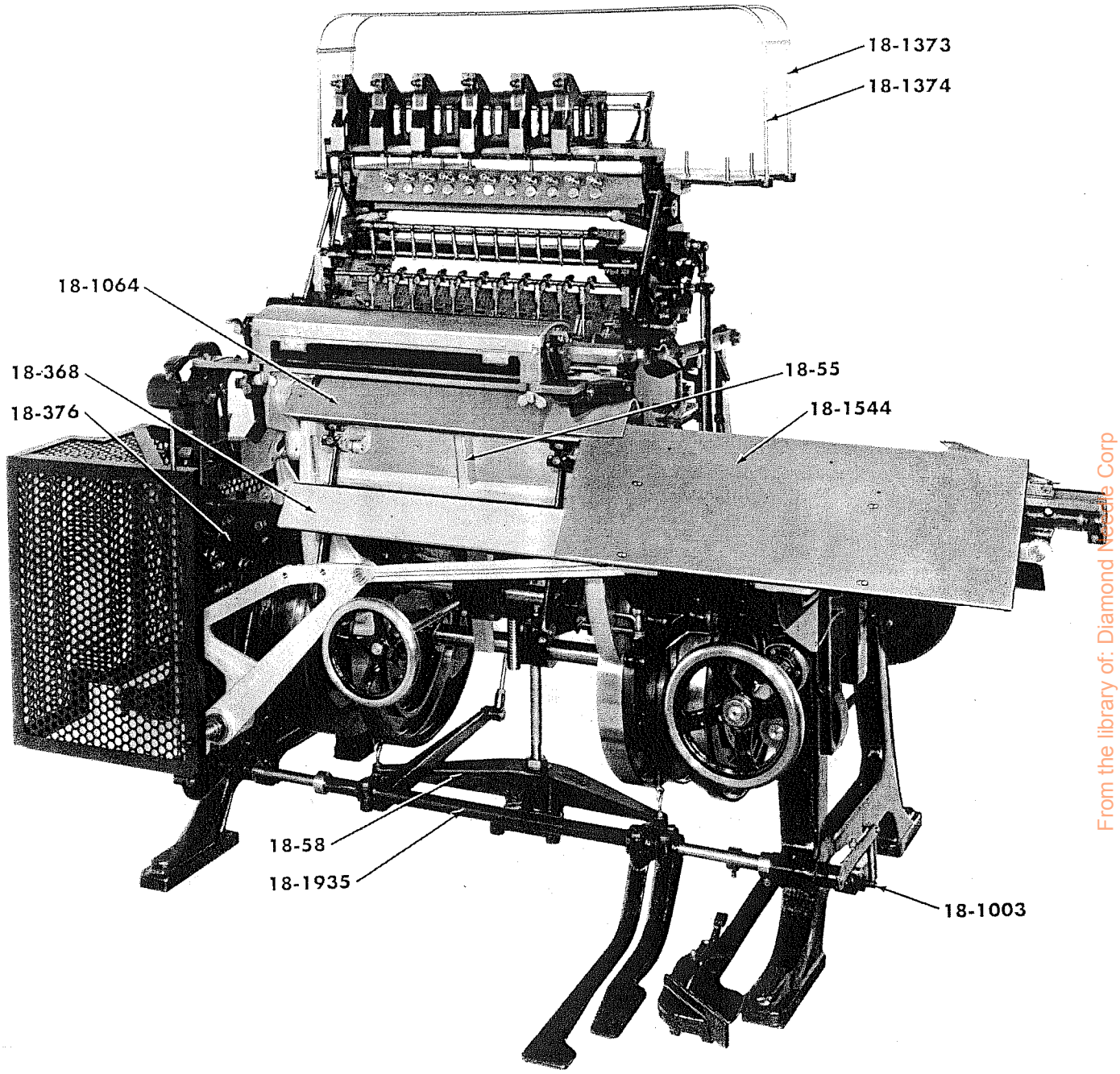
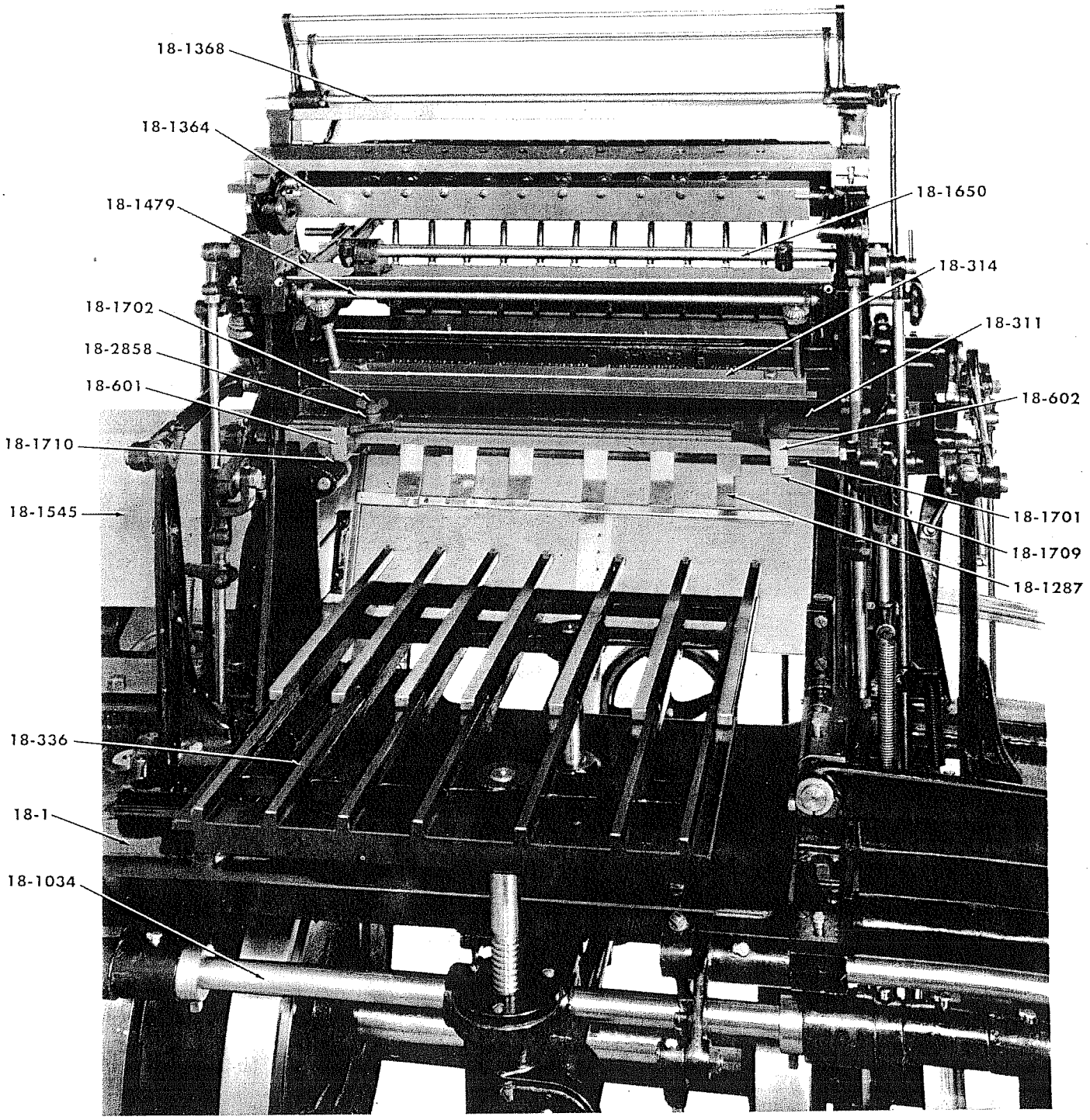


Right Front View

18-55	Signature Arm
18-58	Signature Arm Balance Spring Bracket
18-368	Saddle Feed Bracket—Front
18-376	Saddle Feed Bell Crank Bracket
18-1003	Brace Rod
18-1064	Signature Arm Top Plate—Wide
18-1373	Thread Guide Rod—Rear
18-1374	Thread Guide Rod—Front
18-1544	Saddle Feed Plate—Front
18-1935	Automatic Cut-off Treadle Pipe



Rear Close-Up View

18-1 Bed
18-311 Presser Plate Bar Bracket
18-314 Presser Plate Bar Connecting Bar
18-336 Platform—Plain
18-601 Knife Holder—R.H.
18-602 Knife Holder—L.H.
18-1034 Cam Lever Shaft
18-1287 Push Back Finger—L.H. End
18-1364 Tension Releasing Shaft
18-1368 Thread Pull-off Shaft
18-1479 Presser Plate Bar Adjusting Shaft
18-1545 Saddle Feed Plate—Rear—With Strip
18-1650 Take-up Shaft
18-1701 Knife Bar Stop Screw
18-1702 Knife Holder "T" Bolt
18-1709 Knife Bar—L.H.
18-1710 Knife Bar—R.H.
18-2858 Knife Holder "T" Bolt Washer

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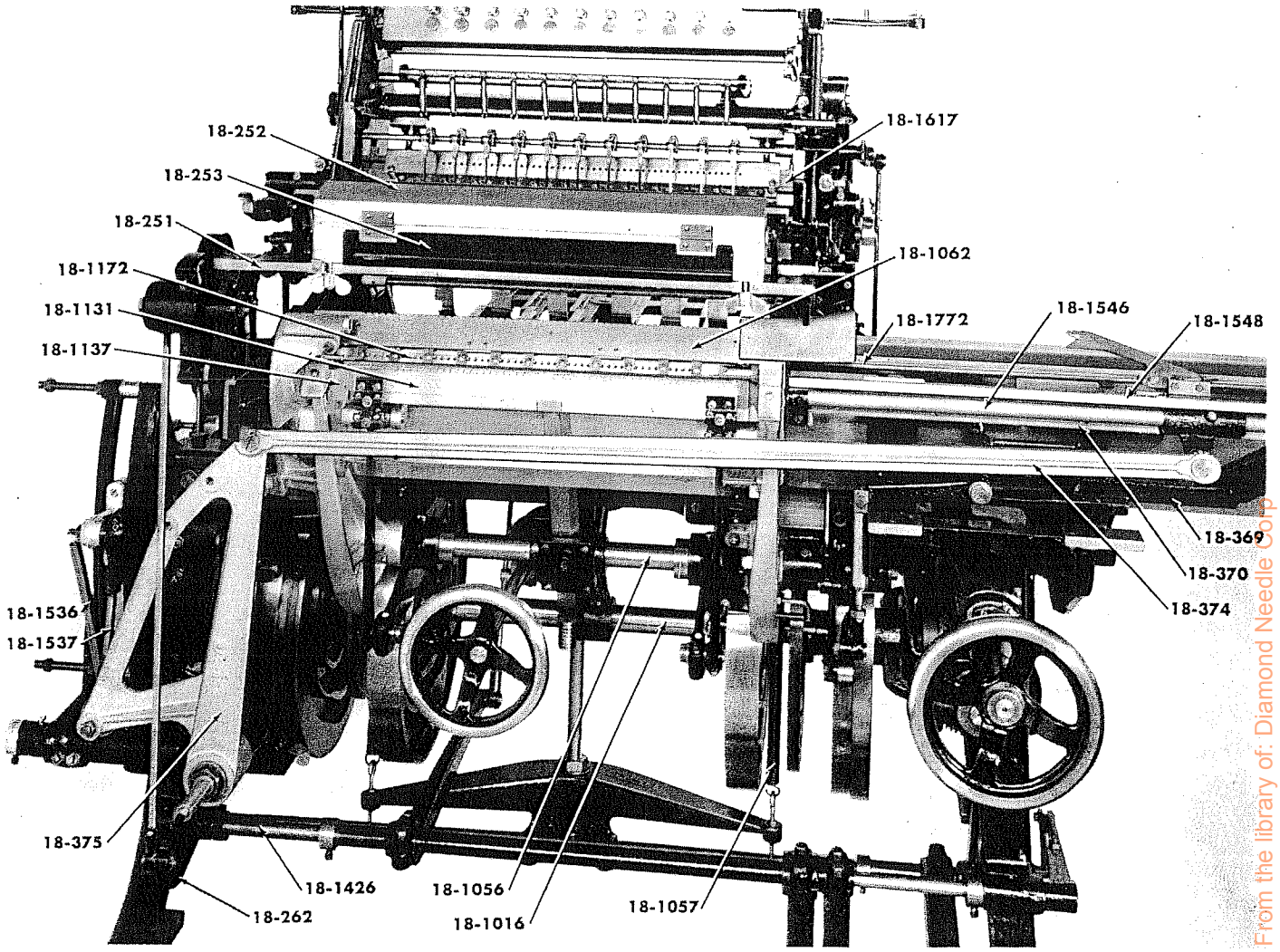
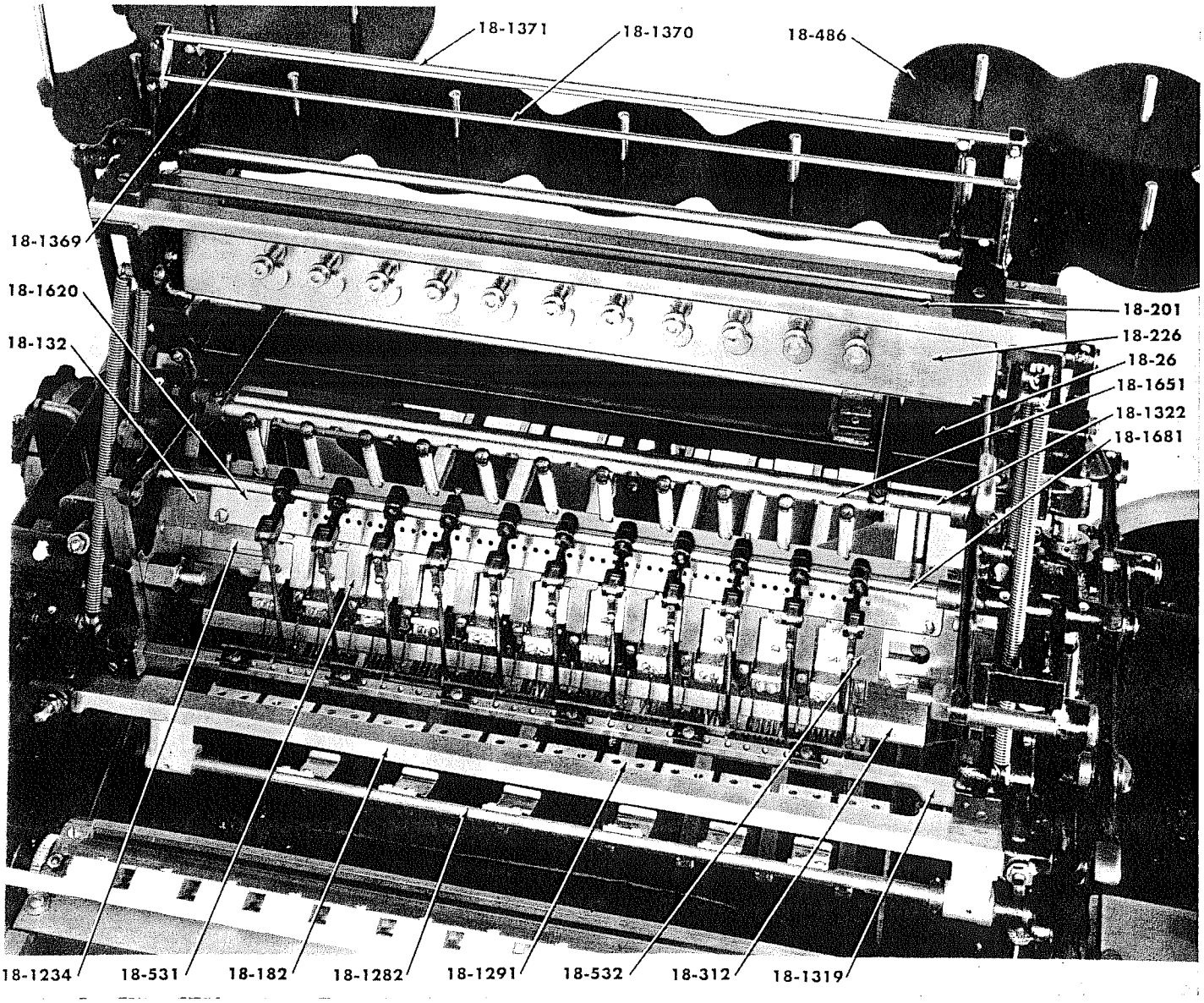


Front View—Arm and Saddle Plates Removed

18-251	Paste Box Bar
18-252	Paste Box Cover
18-253	Paste Box—Plain—Without Ends
18-262	Paste Box Connecting Lever—Lower
18-369	Saddle Feed Bracket—Rear
18-370	Saddle Feed Slide Bar
18-374	Saddle Feed Connecting Rod
18-375	Saddle Feed Bell Crank
18-1016	Cam Shaft
18-1056	Signature Arm Lever Shaft
18-1057	Signature Arm Balance Spring
18-1062	Signature Arm Top Plate—Narrow
18-1131	Punch Slide
18-1137	Punch Slide Shoe—L.H.
18-1172	Loop Carrier Rod
18-1426	Paste Box Treadle Shaft
18-1536	Saddle Feed Connection Rod Spring
18-1537	Saddle Feed Connection Rod
18-1546	Saddle Feed Slide Rod
18-1548	Saddle Feed Slide Block Safety Strip
18-1617	Hook Revolving Rack
18-1772	Signature Pusher Lifter



Front View of Upper Section

18-26	Cross Head
18-132	Needle Cross Head
18-182	Push Back Bar
18-201	Tape Box Bar
18-226	Tension Bar
18-312	Presser Plate Bar
18-486	Thread Rack
18-531	Hook Block—Adjustable
18-532	Hook Block—R.H. End
18-1234	Needle Shifting Rack
18-1282	Push Back Finger Shaft
18-1291	Push Back Bar Block
18-1319	Tape Guide Bar
18-1322	Tape Looper Shaft
18-1369	Thread Pull-off Rod—Short
18-1370	Thread Pull-off Rod—Long
18-1371	Thread Pull-off Rod—Large
18-1620	Hook Block Guard
18-1651	Take-up Rod
18-1681	Hold Back Rod

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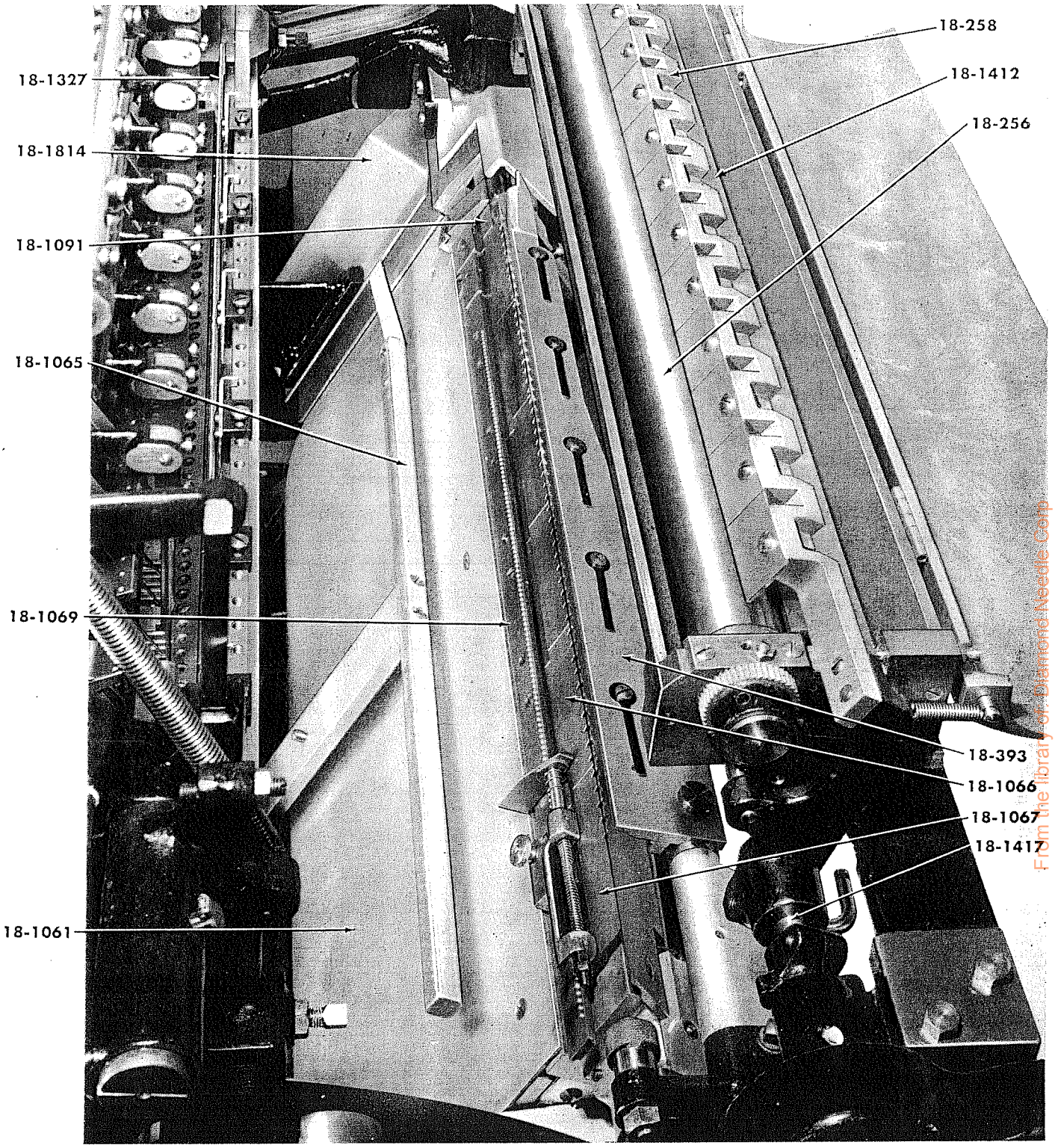
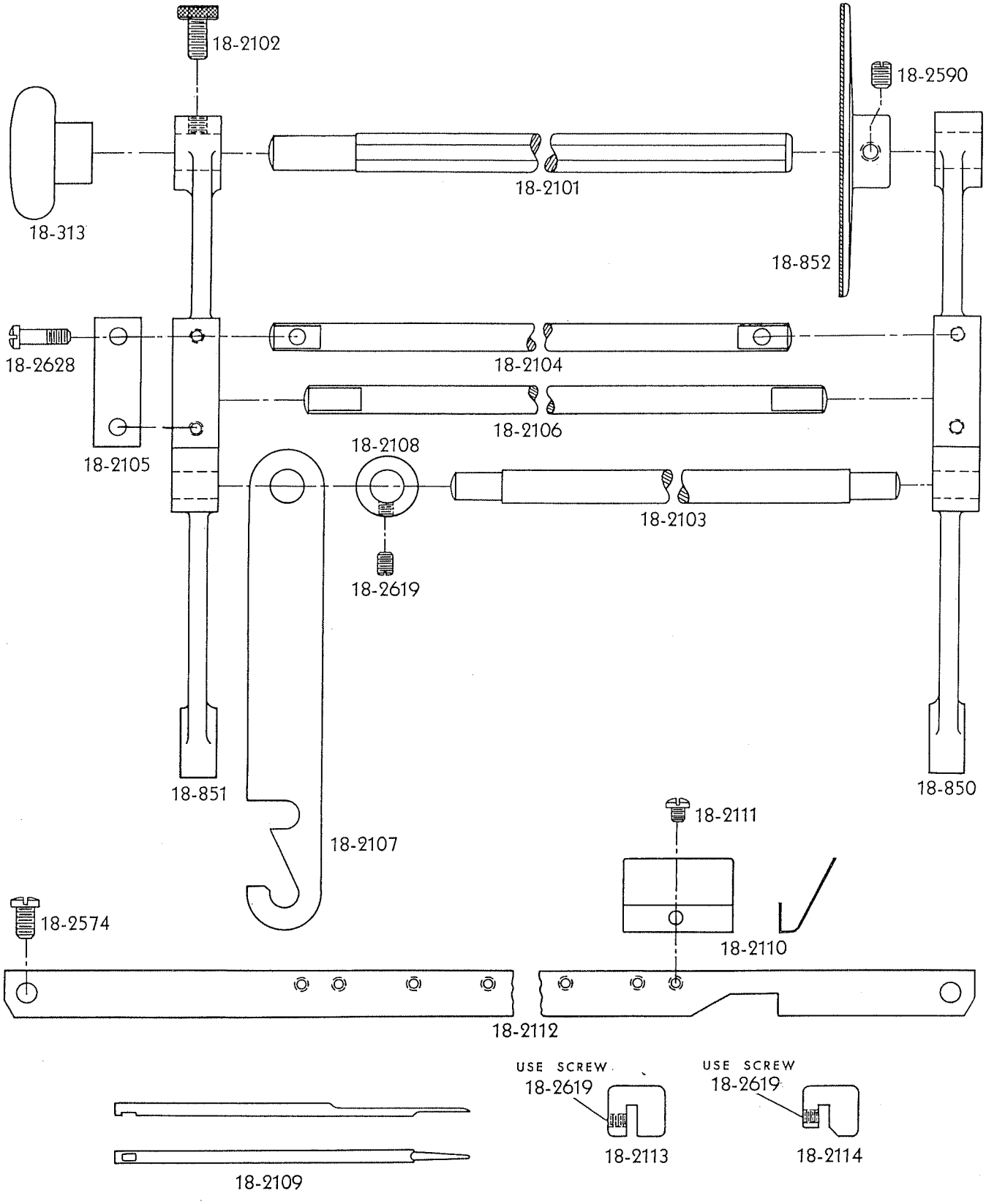


Left End View of Signature Arm

18-256 Paste Roll
18-258 Paste Carrier Bar
18-393 Signature Leveler—Short Taper End*
18-1061 Signature Arm Back Plate
18-1065 Signature Arm Back Guide
18-1066 Signature Arm Needle Guide Plate
18-1067 Signature Arm Needle Guide Plate—L.H.
18-1069 Signature Stop "T" Strip
18-1091 Signature Arm Needle Guide Plate—R.H.
18-1327 Tape Looper Bar
18-1412 Paste Roll Scraper
18-1417 Paste Carrier Shaft
18-1814 Signature Guide Plate

*__18-394__ Signature Leveler—Long Taper End—not illustrated



Crash Attachment Parts (approximately ½ size)

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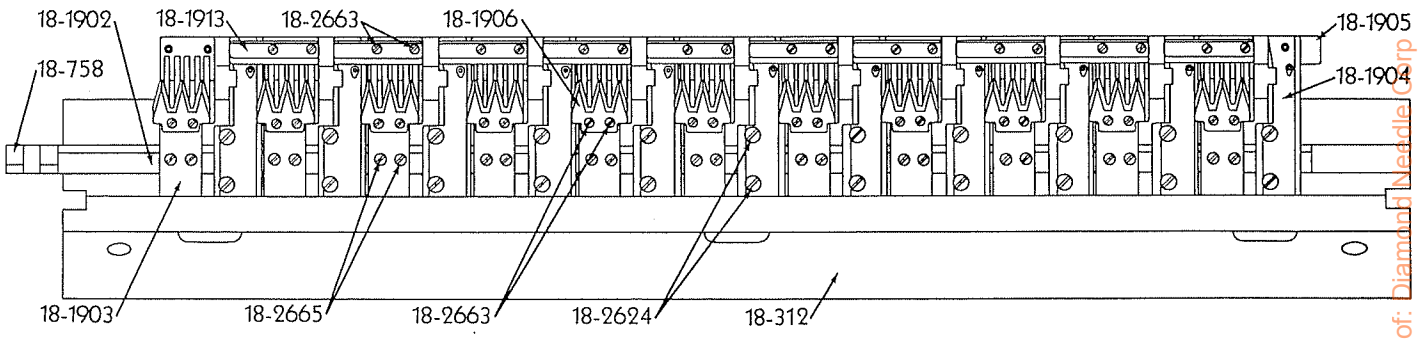
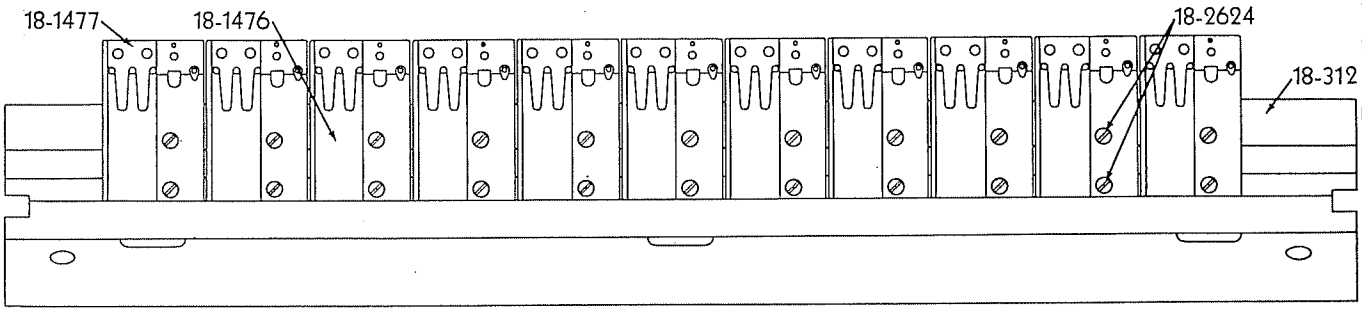
Crash Attachment Parts Shown on Page H

18-313 Crash Roll Shaft Knob
18-850 Crash Attachment End—R.H.
18-851 Crash Attachment End—L.H.
18-852 Crash Attachment Disc
18-2101 Crash Roll Shaft
18-2102 Crash Roll Shaft Screw
18-2103 Crash Attachment Tie Rod
18-2104 Crash Rod
18-2105 Crash Rod Cap
18-2106 Crash Tension Rod
18-2107 Crash Attachment Latch
18-2108 Crash Attachment Latch Collar
18-2109 Crash Attachment Holdback
18-2110 Crash Spring
18-2111 Crash Spring Screw
18-2112 Crash Spring Bar
18-2113 Crash Guide—L.H.
18-2114 Crash Guide—R.H.
18-2574 Crash Spring Bar Screw
18-2590 Crash Roll Disc Screw
18-2619 Crash Attachment Latch Collar Screw; Crash Guide Screw
18-2628 Crash Rod Cap Screw

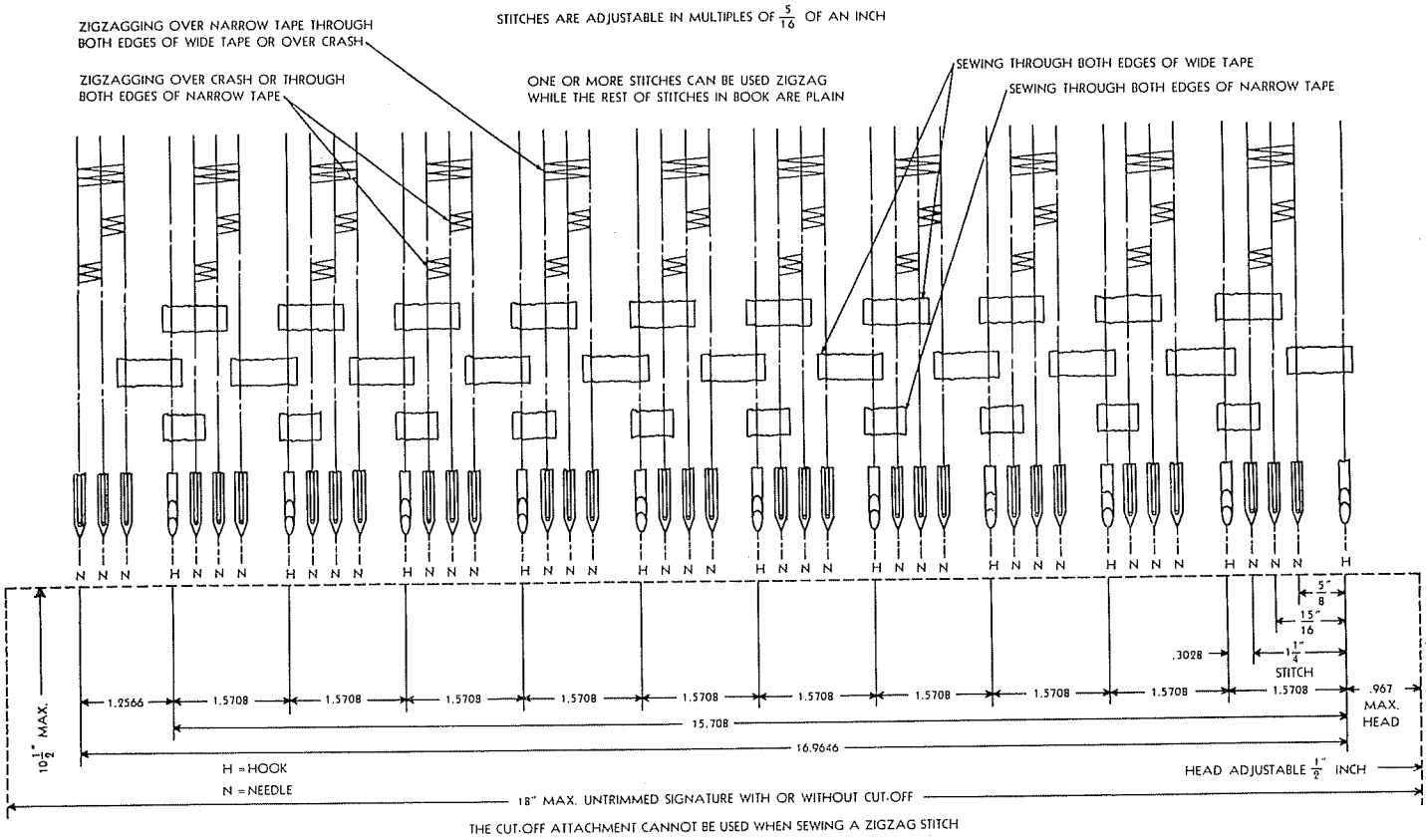


Automatic Cut-Off Presser Plate Bar Assembly



Standard Presser Plate Bar Assembly

18-312 Presser Plate Bar
18-758 Automatic Cut-off Bar Block
18-1476 Presser Plate
18-1477 Presser Plate Spring
18-1902 Automatic Cut-off Bar
18-1903 Automatic Cut-off Needle Presser Plate
18-1904 Automatic Cut-off Hook Presser Plate
18-1905 Automatic Cut-off Hold Back Support Bar
18-1906 Automatic Cut-off Needle Presser Plate Knife
18-1913 Automatic Cut-off Needle Presser Plate Strip
18-2624 Automatic Cut-off Hook Presser Plate Screw; Presser Plate Screw
18-2663 Automatic Cut-Off Needle Presser Plate Screw; Automatic Cut-Off Needle Presser Plate Strip Screw
18-2665 Automatic Cut-Off Needle Presser Plate Screw



Layout of Stitches

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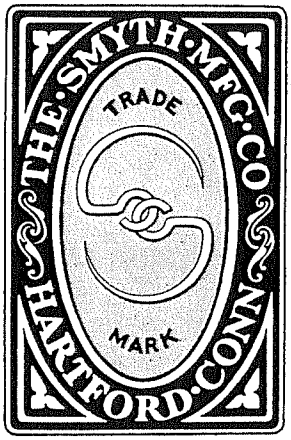

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FOREWORD

The Smyth No. 12 Semi-Automatic Book Sewing Machine is a precision machine into which have gone the finest in materials and engineering knowledge. In order to obtain maximum production, the operating and maintenance personnel must thoroughly understand the machine and what it can do.

The purpose of this book is to furnish a ready reference for personnel who operate and maintain Smyth Book Sewing Machines. The book contains a description of the machine and the necessary instructions and illustrations for operation, setting up, and maintenance. Parts lists are included for identification of repair parts to facilitate ordering.

The local sales agent or The Smyth Manufacturing Company should be consulted in cases where operating troubles are not readily corrected by shop maintenance personnel.

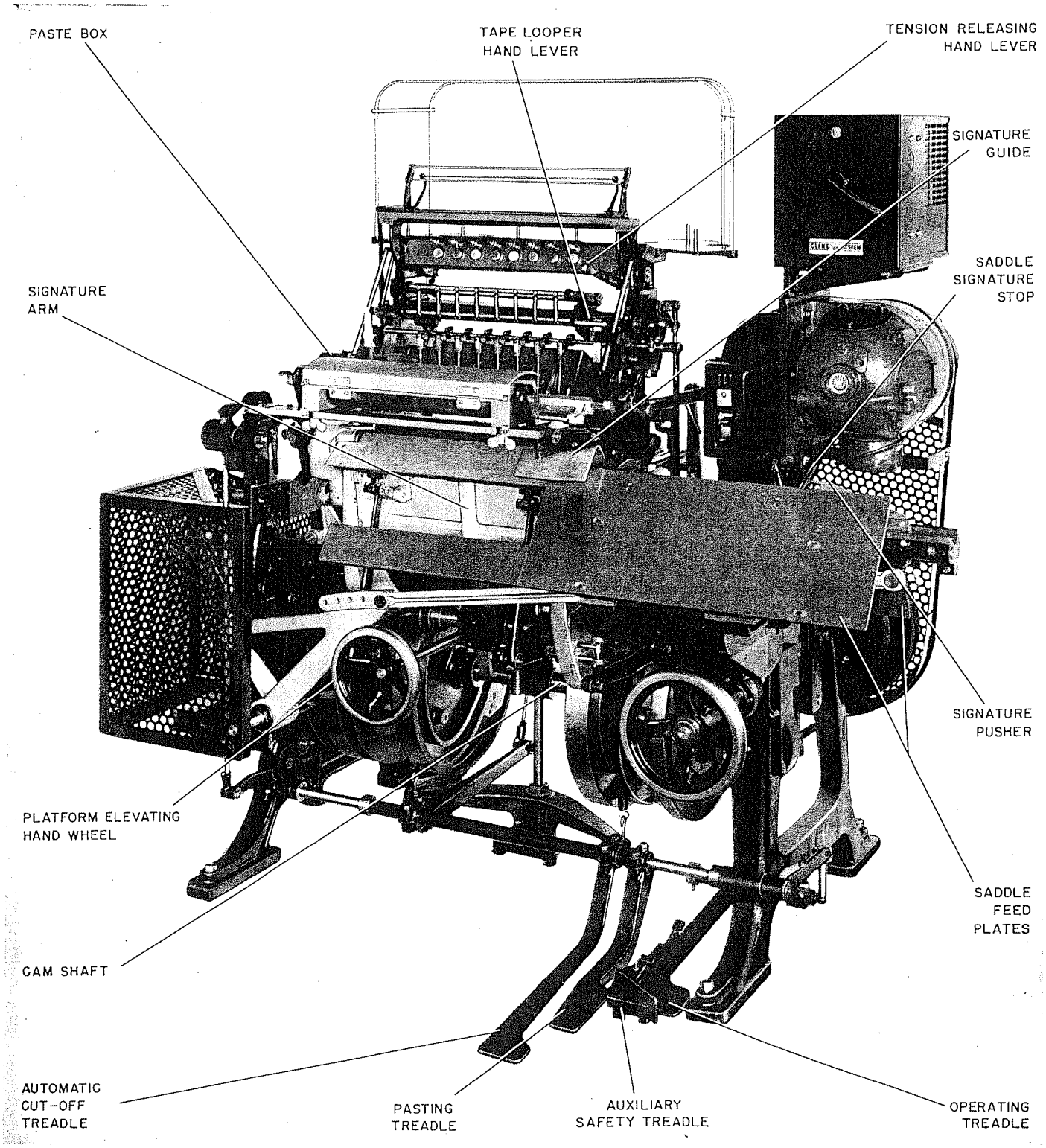


Figure 1—Right Front View

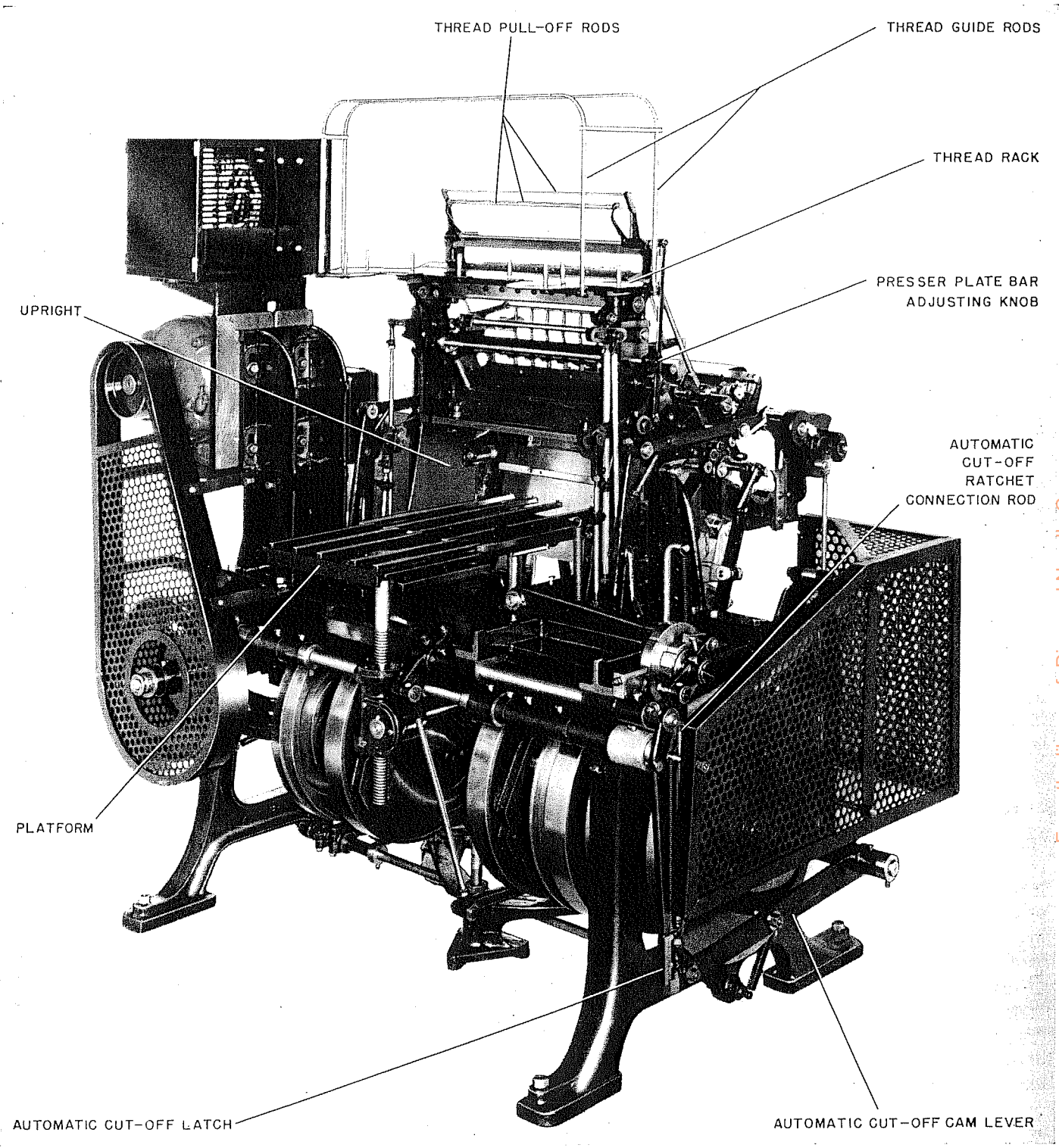


Figure 2—Left Rear View

DESCRIPTION

The Smyth No. 12 Semi-Automatic Book Sewing Machine is a straight-needle, single-arm sewer, which will produce various types of the finest quality sewing while maintaining high rates of production.

ARRANGEMENT

The principal components of the machine are shown in Figures 1 and 2. One signature at a time is fed by hand onto the stationary saddle. The signature pusher carries the signature to the left onto the signature arm, where the signature is headed and leveled while the arm is moving up to the sewing position. In this position the signature is punched and sewn and then moved out the back of the machine onto the platform.

The automatic pasting mechanism, which is located above the arm, pastes a signature whenever the pasting treadle is depressed by the operator. Tape sewing equipment for sewing through tapes or slip tapes is standard. An automatic cut-off attachment and a crash attachment are available as optional equipment.

DATA

The specifications for the No. 12 machines are as follows:

Range-Signature Sizes	3″ x 3½″ to 10½″ x 14″
Production Rate — Signatures per Minute	85
Driving Pulley Diameter	12″
Driving Pulley Speed — rpm	510
Belt Width	1¼″
Floor Space	36″ x 62″
Gross Shipping Weight — lbs.	1950
Net Weight — lbs.	1438
Space Boxed — cu. ft.	110
Motor (Variable Speed)	A.C. or D.C.
Power required — hp	½
Motor Speed — rpm	1150
Motor Pulley Diameter (For indicated driving pulley speed)	5¼″

OPERATION

Standard machines are provided with an operating treadle, an auxiliary safety treadle, and a pasting treadle. When the automatic cut-off attachment is furnished, an automatic cut-off treadle is provided.

FEED TABLE

The feed table, which is furnished with each machine, should be placed parallel to the front of the machine with the narrow end just above the pasting treadle. The operator should sit facing the narrow end of the feed table with the stationary saddle to the right. The book to be sewn is placed on the feed table directly in front of the operator with the head of the book toward the operator and the front of the book toward the machine. When positioned in this manner the book will be sewn backward, that is the first section to be sewn will be the last section of the book after it is sewn.

TREADLES

(See Figure 1)

After the motor has been started the machine begins its cycle when the operating treadle is depressed. The machine continues to run as long as this treadle is held down, and will stop when the treadle is released. The auxiliary safety treadle limits the downward movement of the operating treadle so that the machine can be easily turned over by hand, and prevents stepping on the operating treadle and accidentally starting the machine when making adjustments.

When a section in the book is to be pasted the operator depresses the pasting treadle as the signature to be pasted is placed on the stationary saddle. The treadle should not be released until the signature is passing under the signature guide.

AUTOMATIC CUT-OFF ATTACHMENT

(See Figure 3)

The automatic cut-off attachment is designed to cut the threads between the books so that the books may be readily separated when taken from the machine. The cutting of the thread is accomplished by movable automatic cut-off needle presser plates equipped with knives. After a complete book has been sewn, the operator depresses the automatic cut-off treadle as the first signature of the following book is placed on the stationary saddle, and releases the treadle as the signature passes under the signature guide. The automatic cut-off needle presser plates move either to the right or to the left, so that each thread loops over one of the webs of the plate before the thread enters the signature. As the rest of the book is sewn, each loop is gradually brought

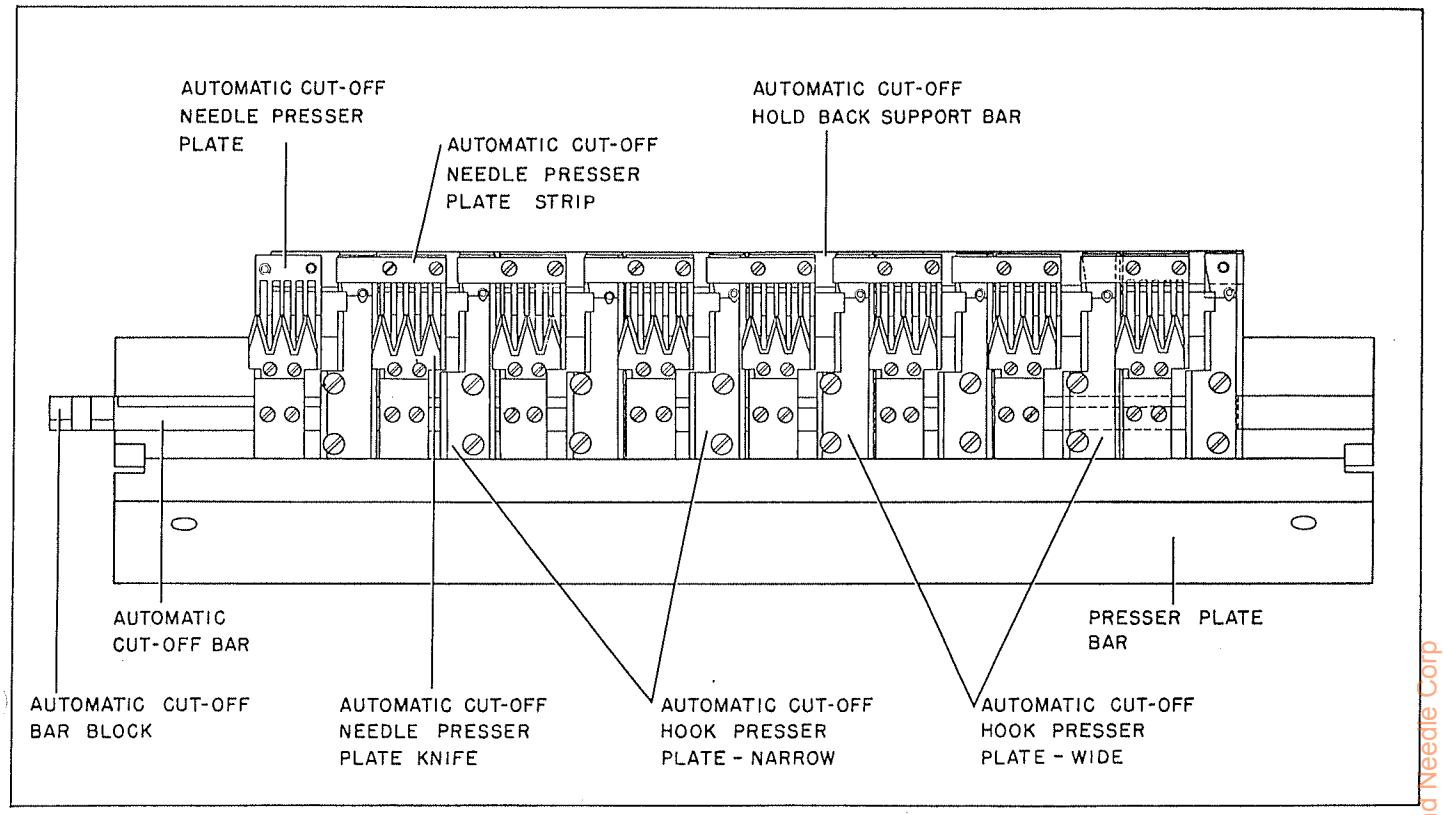


Figure 3—Automatic Cut-Off Presser Plate Bar Assembly

back against the edge of the automatic cut-off needle presser plate knife and finally severed. When the sewed books are removed from the machine, a slight manual push on the head end of one book will separate it from the next.

The automatic cut-off attachment can be used when sewing through tape, but cannot be used when braiding over tape. When braiding it is necessary to replace the automatic cut-off hook presser plates and automatic cut-off needle presser plates with the standard presser plates furnished with the machine. It is also necessary to remove the upper part from the lower part of the automatic cut-off front lever (see Figure 9).

TAPE SEWING EQUIPMENT

(See Figures 4 and 5)

When using tapes the tape boxes and the tape guides should be so positioned that the needles will pass through the tapes. The tapes pass under the tape tension springs on the tape boxes, through the tape guides on the tape guide bar, under the tape looper bar, under the presser plates, and then on to the backs of the signatures. In order to loop the tape between each book, the operator should stop the machine after the last signature of the book has been sewn and the push back bar has returned to its rest position. At this time, the operator should depress the tape looper hand lever to pull down the required amount of tape to form loops between the books. These loops must be cut by hand when the books are being separated.

When slip tapes are to be used, it will be necessary to remove the same number of stationary needle blocks as there are tapes to be sewn, and substitute a like number of shifting needle blocks. With these shifting needle blocks, two lengths of braiding stitch can be obtained, namely 5/16-inch and 5/8-inch, which permit braiding over tape from 1/4 inch wide up to and including tape 1/2 inch wide. If the 5/16-inch stitch is required, the needle shifting connection stud should be loosened and its nut positioned at the back line marked on the long needle shifting lever (see Figure 9). If the 5/8-inch stitch is required, the needle shifting connection stud nut should be positioned at the front line. At all times this nut must be positioned at either line, otherwise the needles will not line up with the punches (see Figure 6).

Each shifting needle block has two positions for the needle. The left position must always be used when making the 5/8-inch braiding stitch, and either position may be used when making the 5/16-inch braiding stitch.

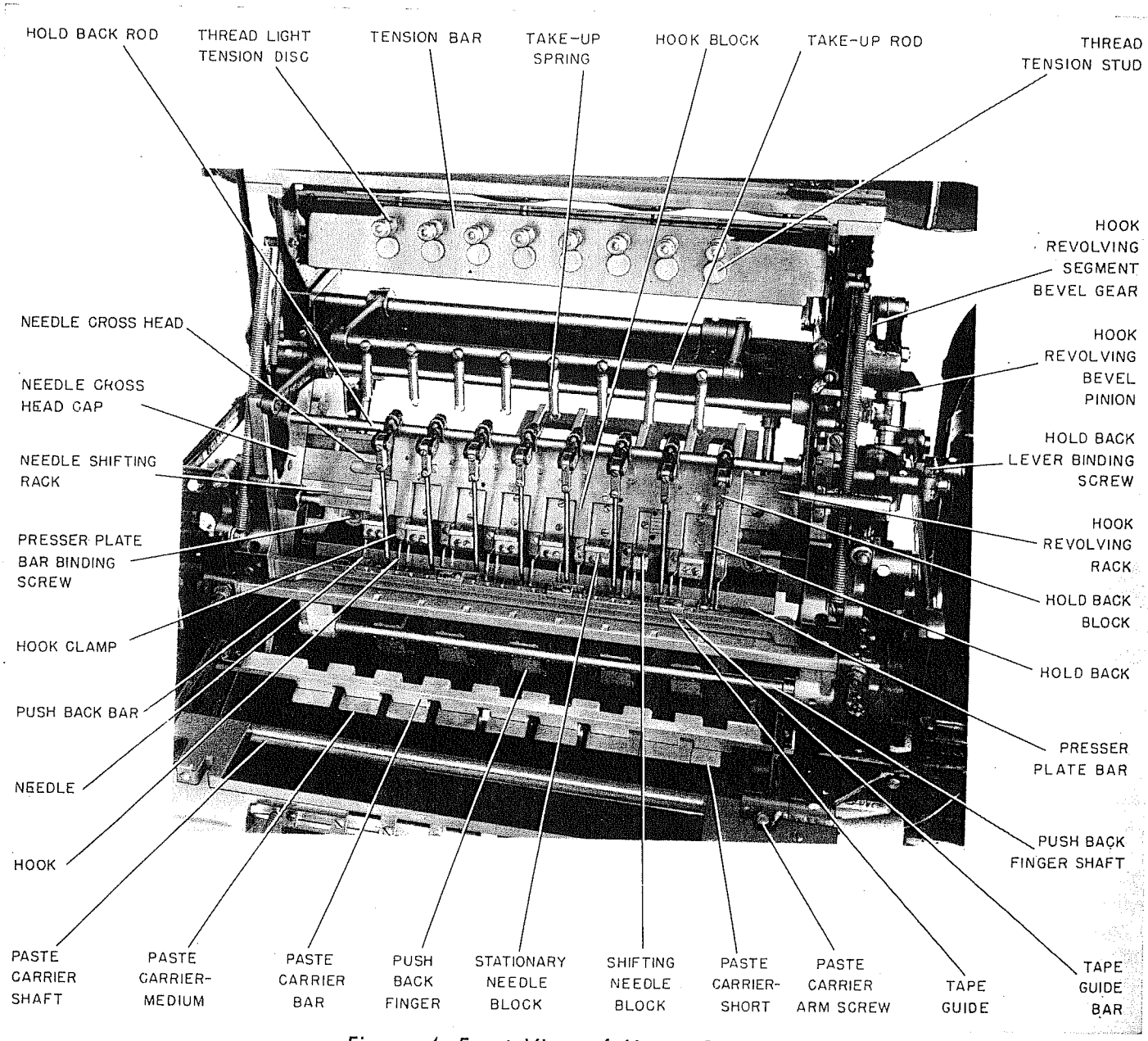


Figure 4—Front View of Upper Section

The needle shifting mechanism is connected by moving the needle shifting lever clamp screw in the short needle shifting lever (see Figure 9) from the non-operating position to the operating position. The non-operating position is the upper hole in the short needle shifting lever. When the shifting needle blocks are not in use, the clamp screw should be returned to the non-operating position.

SETTING UP

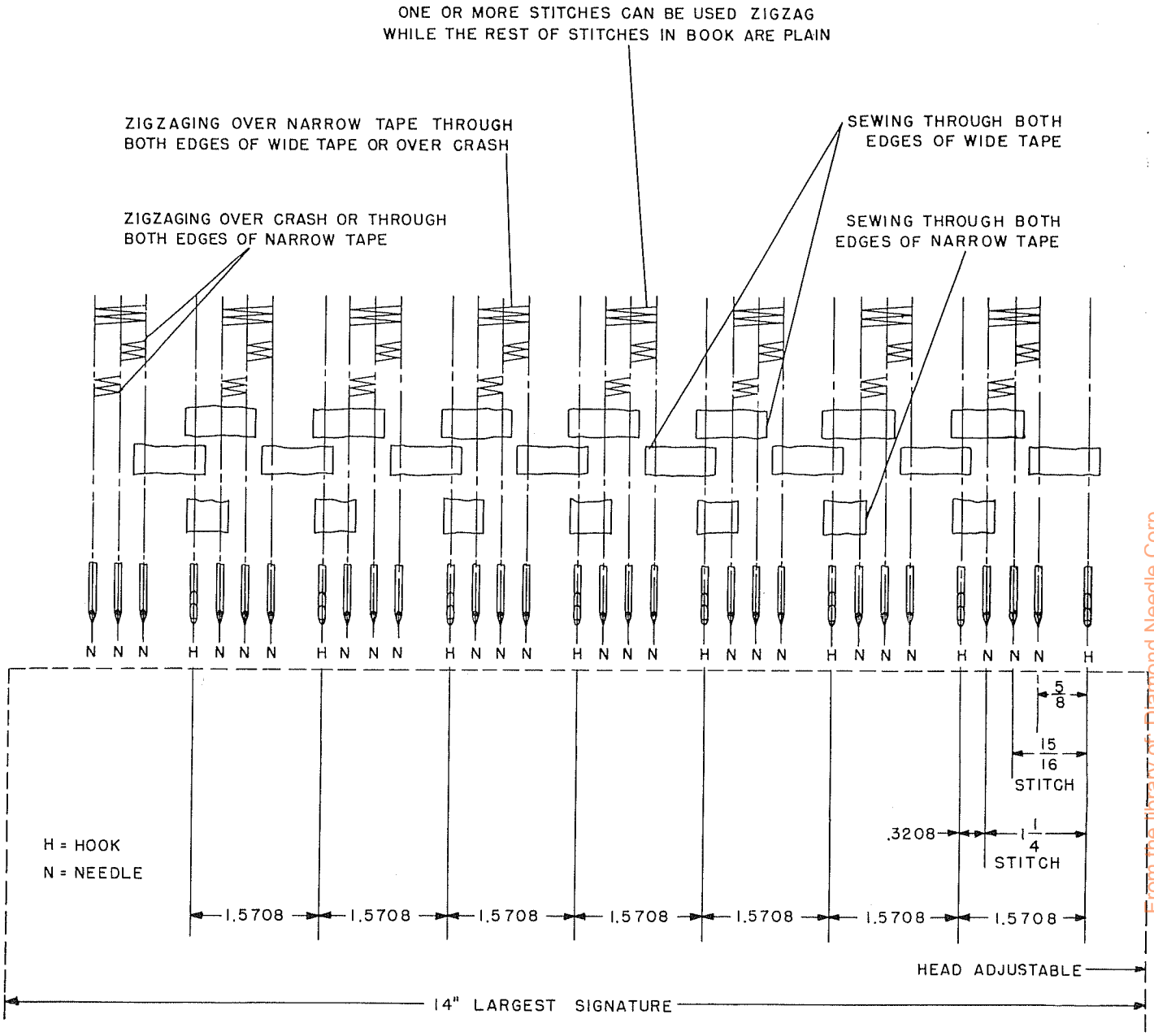
The correct procedure for setting up the machine is described in this section.

NEEDLES, HOOKS, AND PUNCHES

(See Figures 4 and 6)

The needles, hooks, and punches are set up as follows:

1. Select the heaviest signature in the book to be sewn and determine the number, length, and position of the stitches to be used.
2. Insert the needles in the selected needle blocks and the hooks in the proper hook arbors. When inserting the hooks and needles be sure that the flats



Layout of Stitches

on the shanks face up, and that they are pushed up under the clamps as far as possible.

3. Remove the wide signature arm top plate and turn the machine over until the signature arm moves under the clamps as far as possible.

4. Now remove the narrow signature arm top plate (see Figure 7) to expose the punch slide, which has a series of vertical grooves corresponding to the hooks and needles.

5. Loosen the punch clamp screws and slide a punch up the groove and under the punch clamp until the head of the punch drops into the longitudinal groove. A punch must be positioned directly opposite each hook and each needle.

6. Tighten the punch clamp screws and replace the signature arm top plates.

THREADING

(See Figures 2 and 5)

The proper method of threading the machine is described below:

1. Select the proper thread for the book to be sewn.

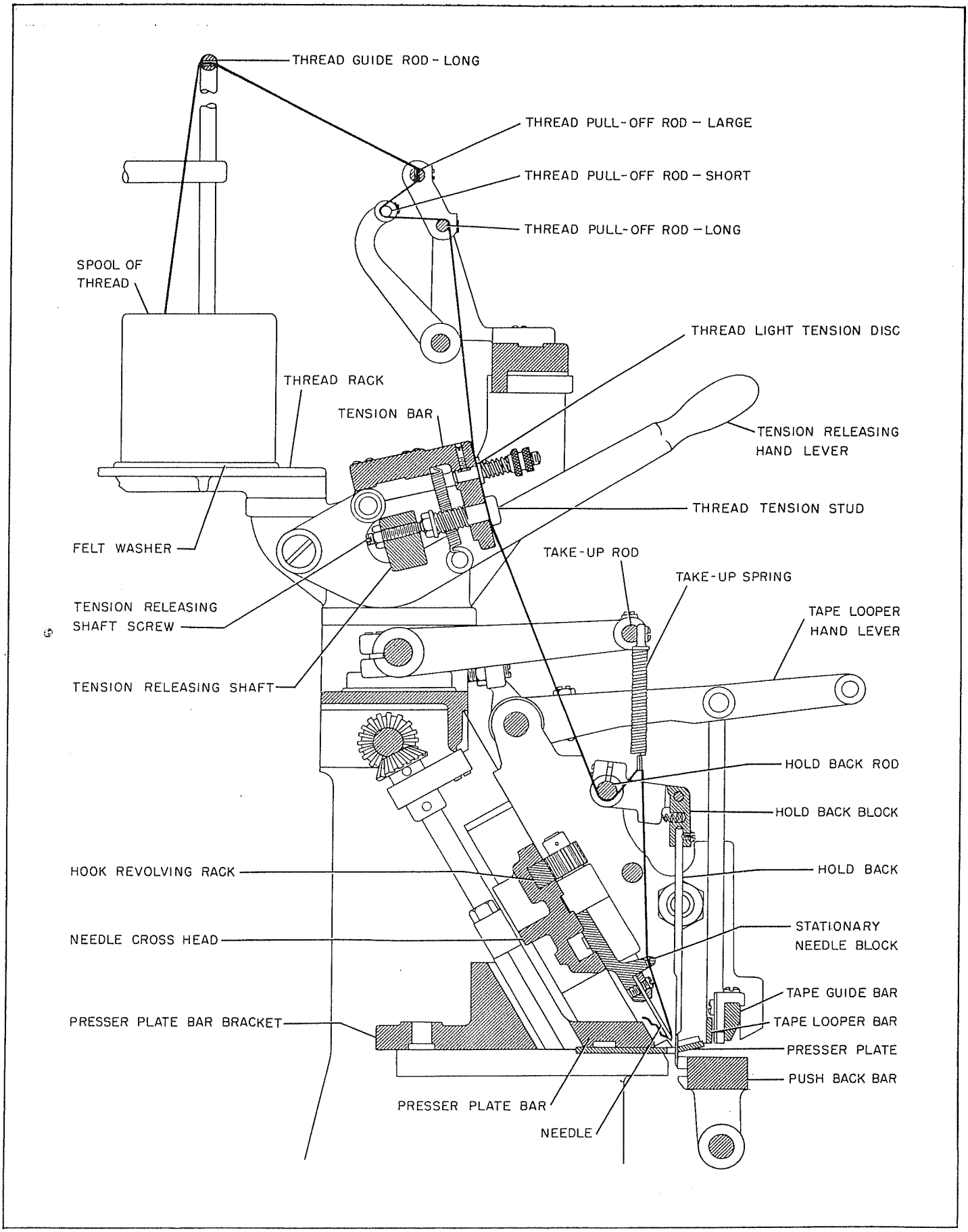


Figure 5—Threading Up Machine

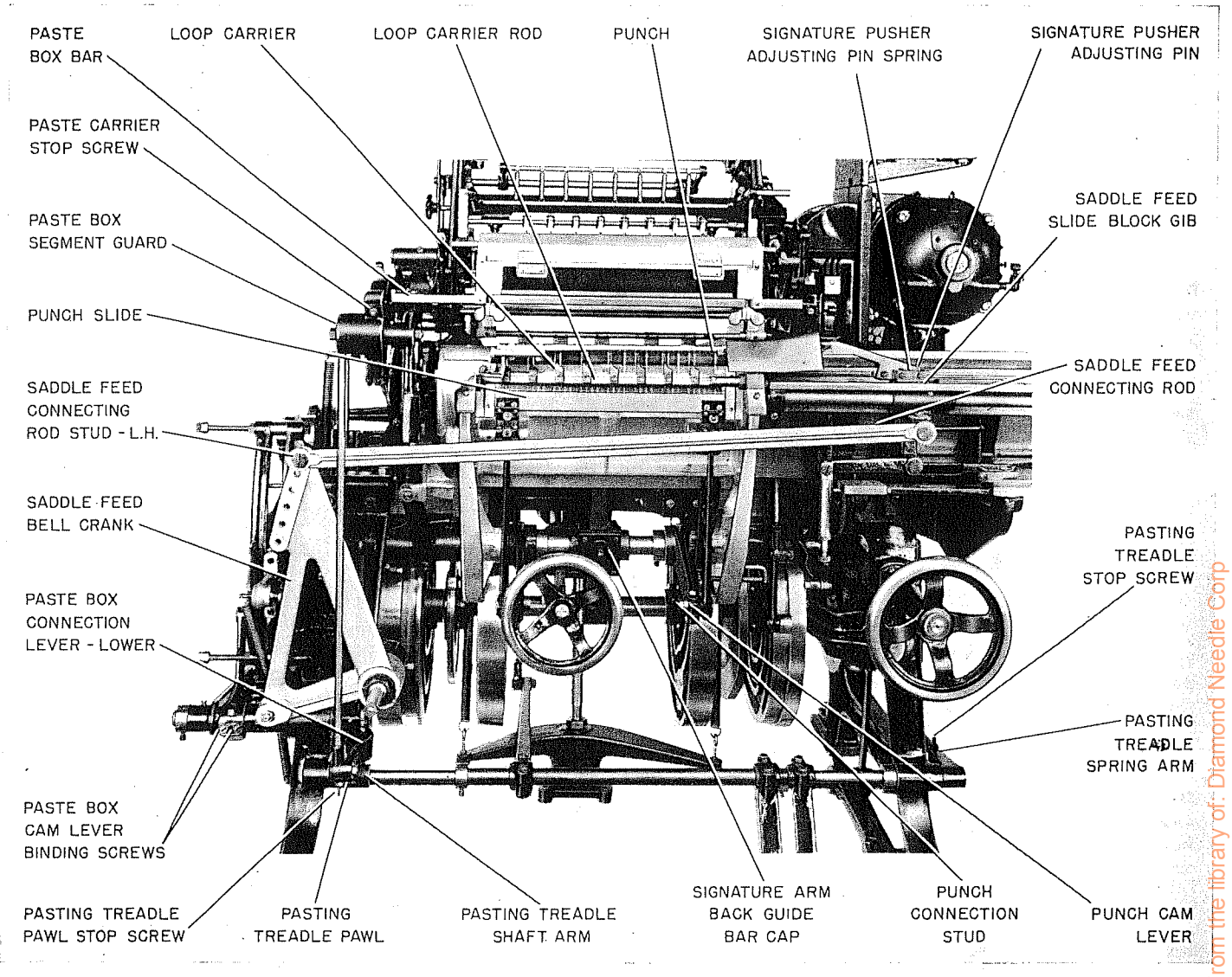


Figure 6—Front Close-Up View

2. Place a felt washer on the thread rack under each spool of thread.

3. Pass the thread upward through the holes in the thread guide rods, down through the holes in the large thread pull-off rod, in back of the short thread pull-off rod, then over and down in front of the long thread pull-off rod.

4. Depress the tension releasing hand lever to open the thread tension studs.

5. Insert the thread hook (supplied with each machine, see part 12—1179, Figure 24) upward through the holes in the thread tension studs and under the thread light tension discs.

6. Loop the thread around the barb of the thread hook and pull it down through.

7. Now pass the thread down under the hold back rod, up through the loops in the take-up springs, down through the holes in the needle blocks (stationary or shifting), and then through the eyes of the needles from the front.

PLATFORM AND KNIFE HOLDERS

(Initial Setting)

The signature stop bracket should be moved (see Figure 7) as far as possible to the left. The platform should be lowered by the platform elevating hand wheel (see Figure 1) so that the signature will be able to pass freely between the platform and the presser plate bar (see Figure 4). The right hand knife holder (see Figure 9) should be moved as far to the right as possible, and the left hand knife holder as far to the left as possible.

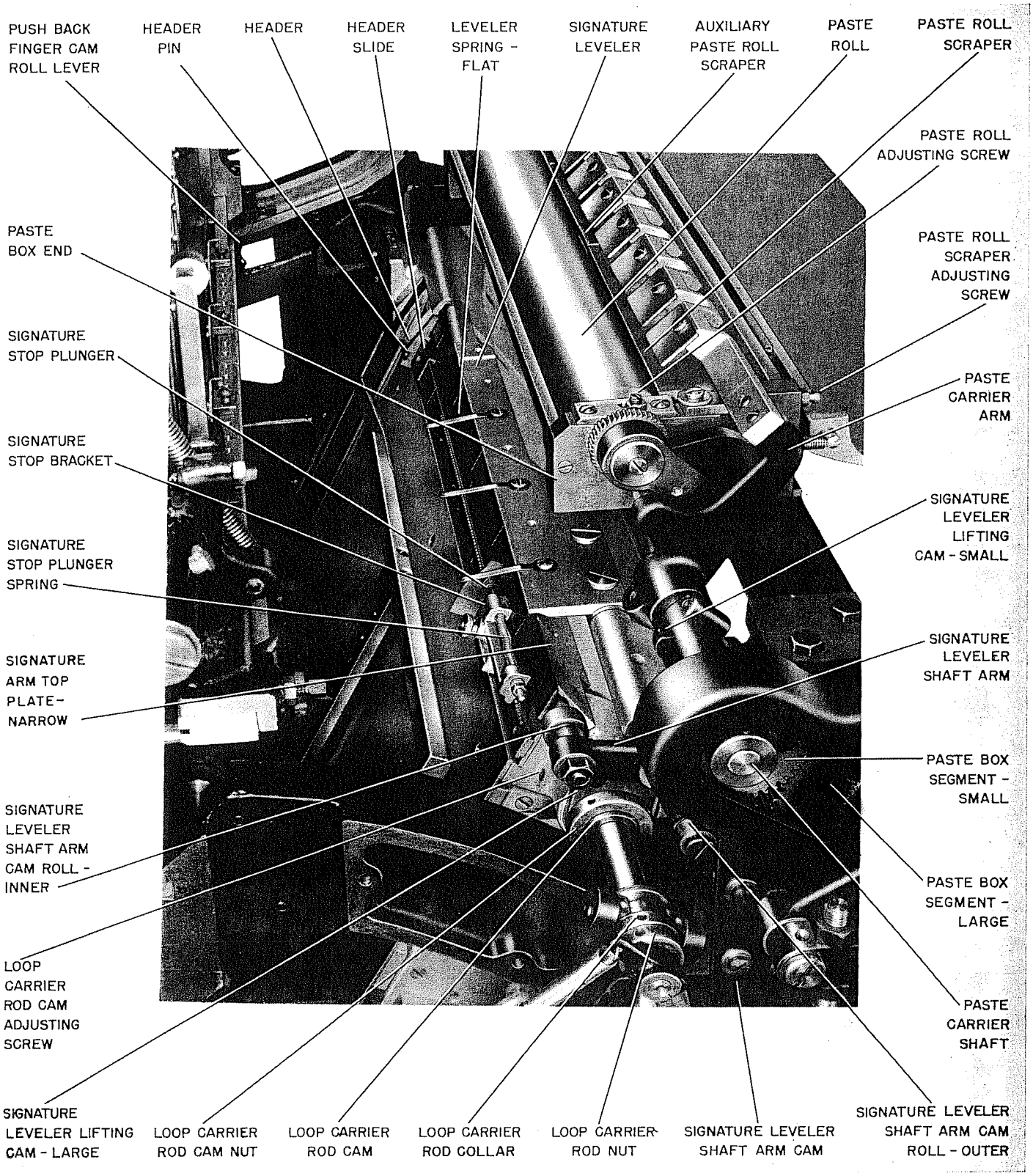


Figure 7—Left End View of Signature Arm

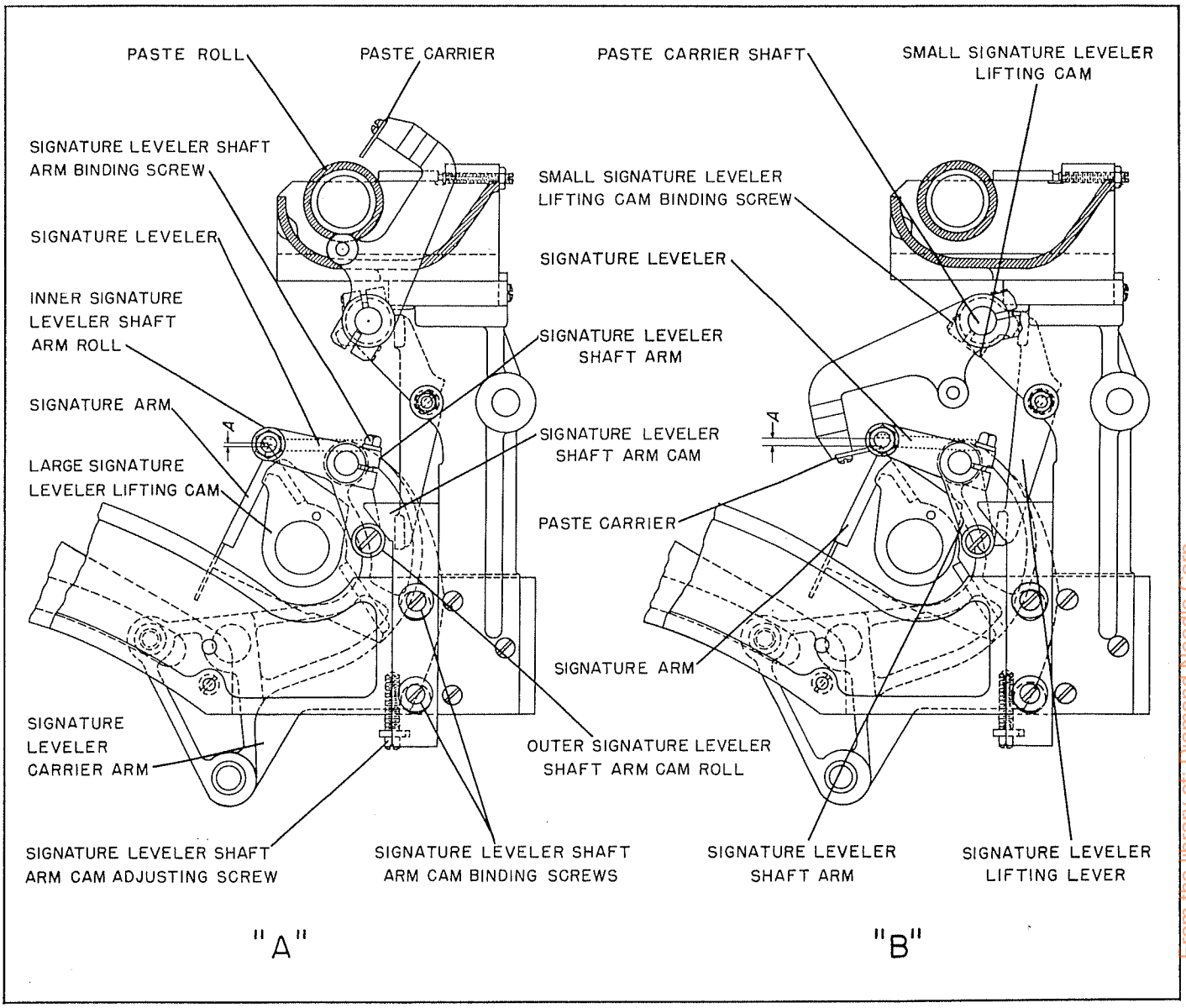


Figure 8—Signature Leveler Adjustments

HEADER

(See Figure 7)

The signatures are headed up by the header (short or long), which is positioned on the header slide in accordance with the length of head desired. The header slide has five holes for five different lengths of head. If the signature to be sewn requires the minimum length of head (7/16"), the header pin should be positioned in the hole farthest to the left. The header is held in position by the spring-loaded header pin, which fits in one of the five holes in the header slide.

SIGNATURE PUSHER

(See Figures 1 and 6)

The signature pusher is the flat steel piece that pushes the signature from the stationary saddle onto the signature arm.

The throw of the signature pusher is set by connecting the left end of the saddle feed connecting rod to one of the six holes in the saddle feed bell crank. When the connecting rod is connected to the lowest hole in the bell crank the pusher throw is shortest. The shortest throw is used for small signatures, because the travel of the pusher is slower.

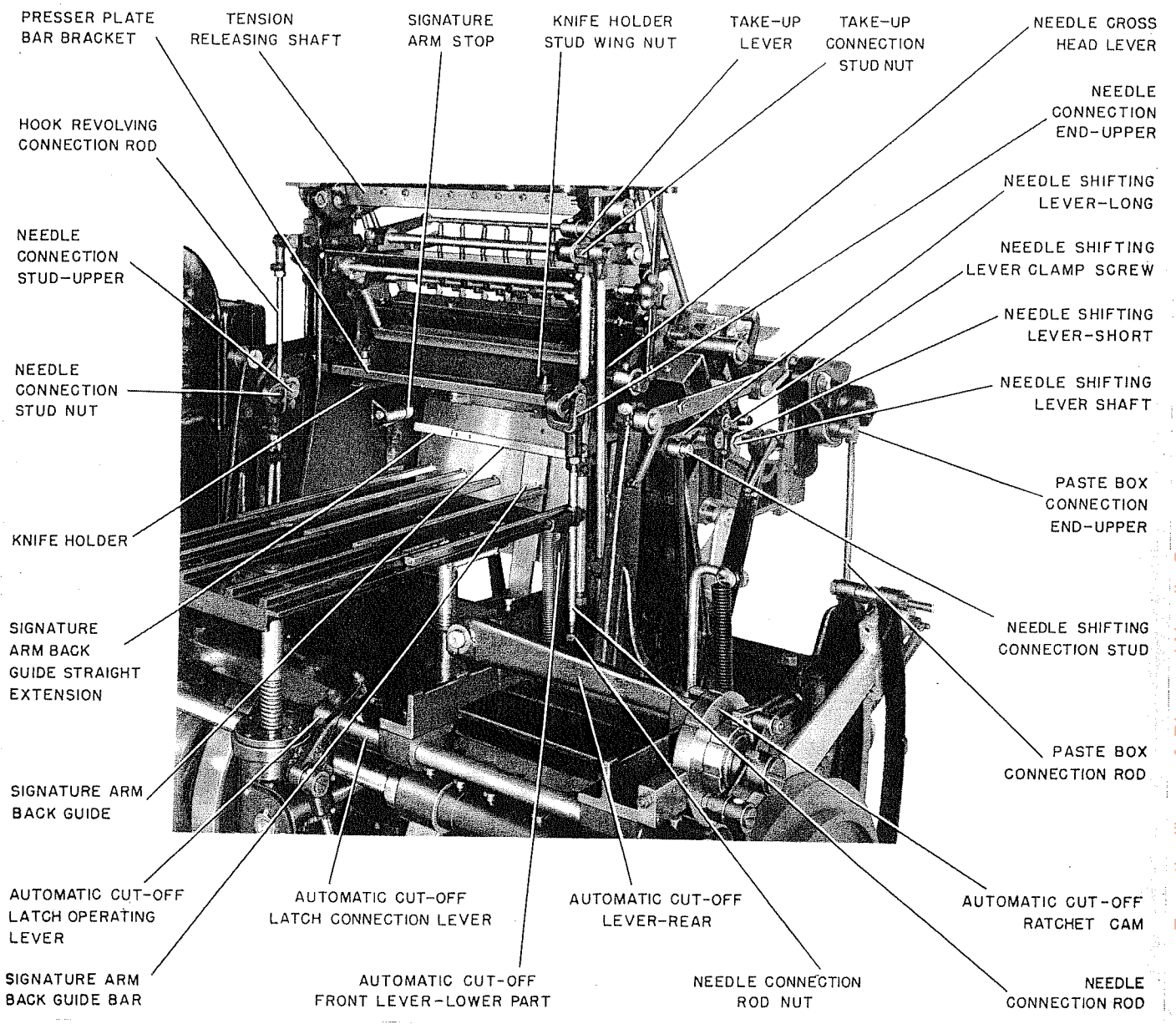


Figure 9—Rear Close-Up View

The signature pusher is held in position by the spring-loaded signature pusher adjusting pin. There are five holes in the saddle feed slide block gib corresponding to the five holes in the header slide. If the signature has a 7/16-inch head, the signature pusher adjusting pin should be located in the hole farthest to the left. When sewing a longer head, for example one requiring the header pin to be located in the third hole, the signature pusher adjusting pin should also be located in the third hole. At all times these two pins should be located in the same relative holes so that the signature will be pushed on to the signature arm beyond the header spring.

SADDLE SIGNATURE STOP

(See Figure 1)

The saddle signature stop is located on the saddle feed plate strip. A series of holes in this strip permit lateral adjustment of the stop to suit the position of the signature pusher. This stop should be positioned far enough to the left so that a signature placed on the stationary saddle against the stop will not be

contacted by the pusher as it rises to its pushing position.

SIGNATURE LEVELER

(See Figures 7 and 8)

The signature leveler guides the signature on to the signature arm and retains the top of the signature as low as possible on the arm. Occasionally it may be necessary to use the flat leveler springs as an additional help in holding the signature down on the top of the signature arm as the arm moves from under the leveler to the sewing position under the presser plates.

The signature leveler should always be positioned with the groove on its under side parallel to and directly above the apex of the signature arm. After the leveler has been set parallel, a signature is placed on the arm under the leveler and the machine is turned over until the signature arm is approximately half way between the feeding position and the sewing position. At this point, the binding screw in the signature leveler shaft arm is loosened and the leveler is set (see Figure 8 "A", Point "A") so that the signature is free to slide from left to right but cannot move up and down. The binding screw is then tightened, making sure that the inner signature leveler shaft arm cam roll is in contact with the large signature leveler lifting cam. The machine is reversed until the signature arm moves back to the feeding position. At this point the outer signature leveler shaft arm cam roll should contact the signature leveler shaft arm cam. This cam should now be adjusted so that the leveler will raise slightly. This adjustment gives the signature a little freedom as it is pushed onto the signature arm. It is necessary to check these two adjustments when setting up for different signatures.

SIGNATURE ARM BACK GUIDE

(See Figure 9)

The signature arm back guide bar, located directly in back of the signature arm, should be set with the top of the bar about 1 inch above the lower edge of the signature and 1/4-inch space between it and the signature. In order to raise or lower the guide bar, the binding screw in the signature arm back guide bar cap (see Figure 6) should be loosened and the guide bar moved to the correct position. In order to move the guide bar forward or backward the binding screws in the signature arm back guide bar holder (see Figure 11) should be loosened, and the bar moved as required.

Two types of signature arm back guide extension are furnished with the machine; a straight extension and a curved extension. The curved extension is required when small books (measuring less than 4 inches from back to front) are being sewn, because if the straight extension were used, it would interfere with the right hand signature arm stop as the signature moves arm into sewing position.

PRESSER PLATES

After the machine has been turned over by hand until the signature arm reaches its uppermost position, the two presser plate bar binding screws (see Figure 4) are loosened. The presser plates (see Figure 5) are then positioned just above the signature with the presser plate bar adjusting knob (see Figure 2). There should be enough room between the top of the signature and the bottom of the presser plates so that the signature will not be pinched as the signature arm moves into the sewing position. If the presser plate bar is set too low, the signature will rub on the bottom of the presser plates as the signature arm moves into sewing position, and will be rolled back so that it will not be punched in the center. If the bar is set too high, loose sewing will result. After adjusting the presser plate bar the binding screws must be tightened before running the machine.

SIGNATURE STOP BRACKET

(See Figure 7)

When the machine has been turned over by hand until the hooks and needles (see Figure 4) start their downward motion the signature stop bracket should be moved to the right until the signature stop plunger is bearing against the tail of the signature with enough pressure to hold the head of the signature against the header. If the signature stop bracket is set too close to the signature, the signature will rise or buckle on the signature arm, and the signature will roll backwards when the signature arm moves into sewing position. When sewing light weight paper, the light signature stop plunger spring should be substituted for the heavy spring that is shipped assembled on the machine.

PASTING MECHANISM

(See Figures 4, 6 and 7)

The procedure for setting the automatic pasting device is as follows:

1. Position the short paste carrier at the extreme right end of the paste carrier bar. If either of the longer carriers were used at this end, the signature pusher would contact them at the end of its stroke.
2. Hold a signature up to the paste carrier bar with the head end at the edge of the short paste carrier, and assemble the correct number of long and

medium paste carriers on the bar to correspond with the length of the signature.

3. Set the auxiliary paste roll scraper directly opposite the tail of the signature. The line of paste should not extend beyond the tail of the signature as the paste would then be deposited on the signature arm. If paste accumulates on the signature arm, the auxiliary paste roll scraper should be moved to the right to shorten the line of paste that is transferred to the signature.

4. Place a signature on the stationary saddle and turn the machine over until the signature pusher completes its travel to the left.

5. Hold the paste carrier bar, step on the pasting treadle, and pull the bar forward until the pasting treadle pawl sets the pasting mechanism free.

6. Then, still holding the bar, allow the mechanism to move through its arc until it comes to rest on the signature.

7. Adjust the paste carrier stop screw, which is in the front of the paste box segment guard, so that the paste carriers touch the signature lightly.

PUSH BACK BAR

(See Figure 4)

The push back bar must be adjusted so that it will push the signatures back just far enough to allow the hold backs to move down without marking the signature. This adjustment is made by loosening the two push back bearing screws (see Figure 13) on the under side of the push back bar and moving the bar with the two push back bar adjusting screws (see Figure 13).

PLATFORM AND KNIFE HOLDERS

(Final Setting)

Hold the thread in the left hand and sew two or three signatures of the book, and then adjust the platform to the sewed signatures. The platform should be high enough to support the signatures, but not so high that the signatures will buckle against the presser plates. If the platform is not high enough, the work will hang and loose sewing will result. The right and left hand knife holders should now be positioned. The right hand supporting or head knife should be moved against the head of the signature, so that it is tight but it should not cut in to the heads. The left hand supporting knife should be moved against the tail with enough pressure to cut in slightly. In order to sew work correctly, the platform and the supporting knives must be adjusted so that the sewed work will be fully supported without causing the signatures to bulge out at the center or pack in too hard at the knives. The excess thread should now be cut off near the presser plates and the platform book stop placed in back of the sewed signatures. After a few books have been sewn by power the adjustment of the platform and knife holders should be checked to make sure that the work is well supported yet able to move freely through the machine.

MAINTENANCE

In order to maintain the machine in its best operating condition it should be lubricated, cleaned, and adjusted in accordance with the instructions in this section.

LUBRICATION

It is essential that the machine be thoroughly lubricated regularly, so that production interruptions and unnecessary repair expenses will be avoided. The following instructions should be followed:

1. Maintenance personnel should become thoroughly familiar with the many lubrication points on the machine, and should make sure that oil holes do not become clogged with paper dust or dirt.

2. A light grade of machine oil should be used, such as Aturbrio 51, because a heavy grade of oil will not flow freely between the closely fitted parts of the machine.

3. All lubrication points should be oiled every morning.

4. The cams should be lubricated with a heavy engine oil, such as Tycol No. 503, once a week. Heav grease should not be used on the cam raceways, because such grease collects paper dust.

CLEANING

All moving parts of the machine must be kept free of dust and other foreign materials at all times. It is advisable to remove all paper dust and particles at the end of each operating day. All dirt and dust must be removed from the oil holes before lubricating.

The paste box should be washed every day after the machine has been shut down, or as often as possible without wasting too much paste. The paste carriers should be cleaned daily. If paste is left in the paste box a wet cloth should be placed over the paste box beneath the cover.

ADJUSTMENTS

All Smyth Book Sewing Machines are completely assembled and run at the factory before shipment. The machines are correctly timed and adjusted to sew the general run of work without further adjustment. However, if further retiming or adjusting is necessary, the following instructions, if carefullly followed, will be of assistance.

PUNCHES

(See Figure 6)

The punches, which are located in the signature arm, must be adjusted for both thick and thin signatures so that the perforations will be the full size of the body of the punch. The punches are raised and lowered to suit signatures of various thicknesses by turning the eccentric punch connection studs that are located in the front end of the punch cam levers.

HOOKS AND NEEDLES

(See Figure 4)

If the punches are raised or lowered, it will be necessary to raise or lower the hooks and needles to correspond. After the machine has been turned over until the needle cross head has completed its downward motion, the upper needle connection stud nuts (see Figure 9), should be loosened and moved in the elongations of the needle cross head levers (see Figure 9). If the punches have been raised the nuts should be moved toward the front of the machine, and if the punches have been lowered the nuts should be moved toward the rear of the machine. Care should be taken to make sure that identical adjustments are made on both right and left hand levers so that the needle cross head will be parallel with the top of the signature arm.

LOOP CARRIER MECHANISM

(See Figures 6 and 7)

The loop carriers transfer the sewing thread from the needles to the hooks. These carriers are attached to the loop carrier rod, which passes through and is controlled by the loop carrier rod cam. This cam is inserted in the upper left end of the signature arm, and is held in position by the two loop carrier rod cam nuts that permit lateral adjustment of the cam in the signature arm. The loop carrier rod cam may be turned in the signature arm hub by the two loop carrier rod cam adjusting screws, which are located opposite each other in the hub.

1. Turn the machine over until the point of a loop carrier is directly in back of the needle. The point of the loop carrier should not touch the needle but should be close enough to pick up the thread loop.
2. If the loop carriers are too far back, loosen one of the loop carrier rod cam nuts, and tilt the loop carriers forward by turning the loop carrier rod cam adjusting screws.
3. Then turn the machine over until the loop carriers have completed their travel to the right and rocked forward just beyond the hooks.
4. Loosen the loop carrier rod nut and move the loop carrier rod to the right or left as required by turning the loop carrier rod collar, which is on the left end of the loop carrier rod.
5. Then adjust the loop carrier rod cam laterally by means of the loop carrier rod cam nuts so that the loop carrier will just clear the points of the hooks as the hooks move upward. Care must be taken when adjusting the rocking motion of the loop carrier rod cam to make sure that the loop carriers rock forward sufficiently to permit the barbs of the hooks to engage only the front part of the loops made by the thread passing around the loop carriers. If the loop carriers rock too far forward, the hooks will pick up both sides of the loops, and a skip will result. If the loop carriers travel too far to the right, the opening between the thread passing around the loop carriers will be diminished, and again skipping will result.
6. After adjusting these parts, be sure to tighten all screws and check nuts before running the machine.

NEEDLE CROSS HEAD

(See Figure 9)

The needle cross head (see Figure 4) is adjusted as follows:

1. Turn the machine over until the needle cross head reaches its highest point.
2. Place a 3/16" block in the bottom of each of the slots in which the cross head moves in the uprights.
3. Disconnect the two upper needle connection ends from the elongations in the needle cross head levers by removing the upper needle connection studs.
4. Position the cross head on the 3/16" blocks.
5. Turn the machine over until the needle connection rods are brought to their highest point.
6. Position the line on each upper needle connection stud nut at "2" on its needle cross head lever.
7. Loosen the two needle connection rod nuts on each rod and turn the rods until the upper needle connection ends are positioned so that the upper

needle connection studs can be replaced without moving the upper needle connection stud nuts.

8. Tighten all nuts and remove the 3/16" blocks before running the machine. Make sure that the lines

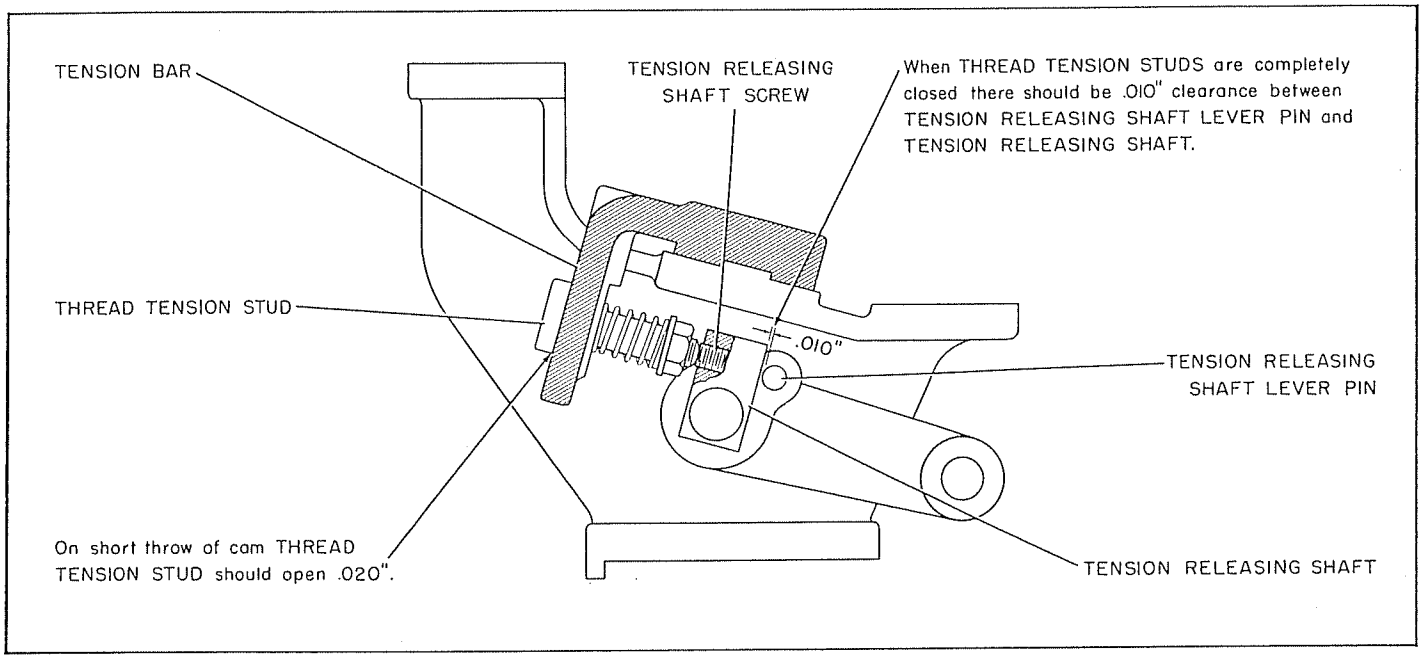


Figure 10—Thread Tension Stud Adjustment

on the upper needle connection stud nuts are always set at the same graduation on each needle cross head lever; otherwise the needle cross head will not be parallel to the signature arm.

THREAD TENSION STUDS

(See Figures 10 and 11)

The eight thread tension studs, which are located in the tension bar, should all clamp down on the thread at the same time. The operation of these studs is controlled by the tension releasing cam, which is adjustable. This cam should be set so that the thread tension studs will close down and clamp the thread at the same instant the loop carrier rod (see Figure 6) completes its travel to the right. The adjustment of the thread tension studs is as follows:

1. Turn the machine over until the loop carrier rod just completes its travel to the right.
2. Loosen the tension releasing cam binding screw and move the cam so that the thread tension studs will clamp down on the thread as the loop carrier rod completes its motion.
3. Adjust the thread tension studs by turning the tension releasing shaft screws after loosening the nuts. As shown in Figure 10 there should be .010" clearance between the tension releasing shaft and the tension releasing shaft lever pin when the thread tension studs are closed. This setting will allow ample clearance between the ends of the tension releasing shaft screws and the thread tension studs so that the thread tension studs can clamp the thread tightly. On the short throw of the tension releasing cam, the thread tension studs should open .020" to allow the thread to pass through freely.

NOTE:—All studs should be set alike to insure that each thread take-up is the same.

THREAD TAKE-UP MECHANISM

(See Figures 4, 9, and 11)

The take-up rod to which the eight take-up springs are attached is controlled by the take-up cam, which is an adjustable cam attached to the right side of the loop carrier and left hand needle cam. The thread take-up mechanism is adjusted as follows:

1. Place the take-up connection stud nut at "4" on the take-up lever.
2. Turn the machine over until the take-up rod moves to its lowest position.
3. Loosen the clamp screw in the take-up lever and position the take-up rod so that the distance from the center of the take-up rod to the top of the hold back rod measures approximately 3". Care should be taken to make sure that the take-up rod is set parallel to the hold back rod.

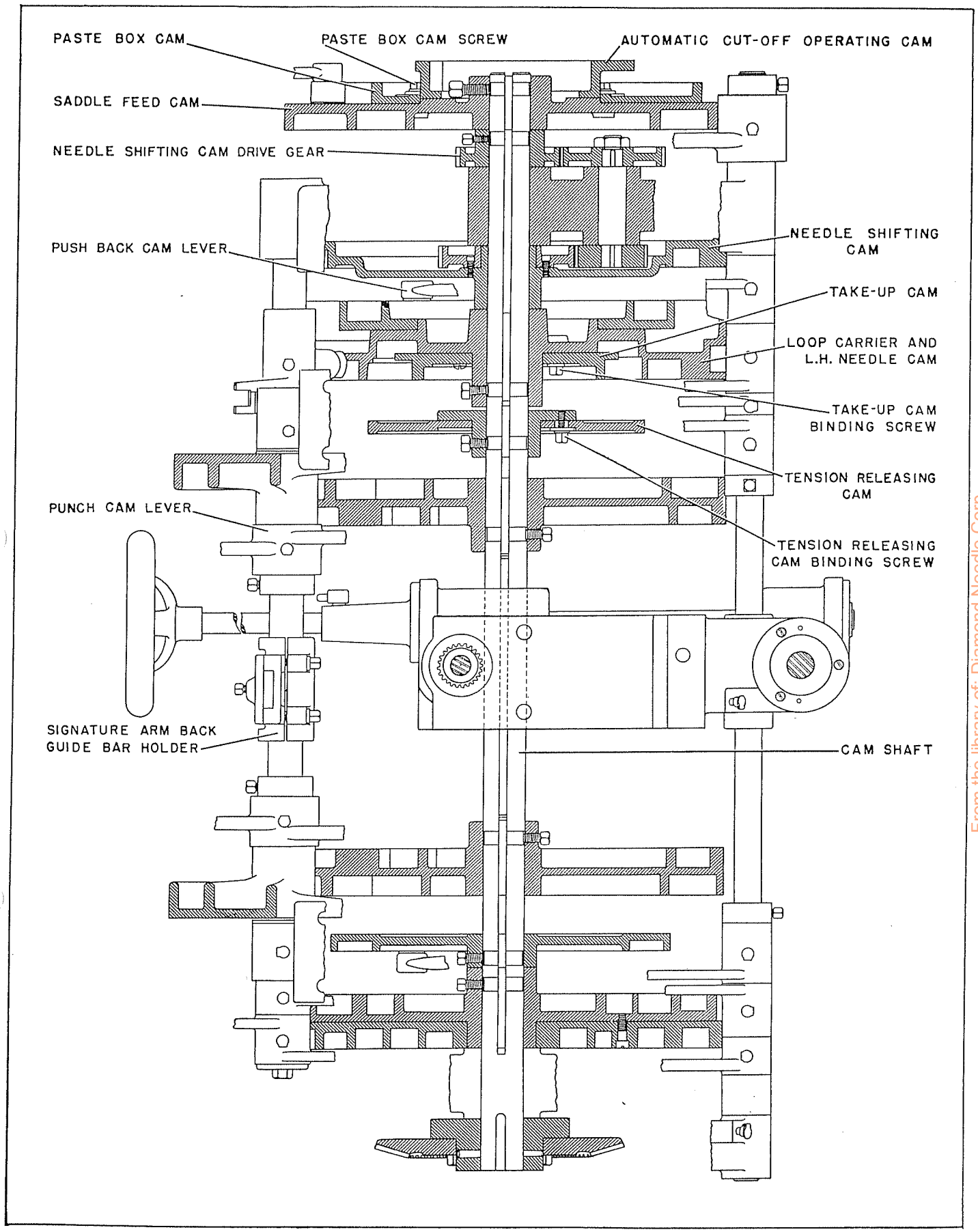


Figure 11—Cam Arrangement

4. Turn the machine over until the needle cross head just starts its downward motion.

5. At this point, loosen the take-up cam binding screw, and move the cam so that the take-up rod will start to move upward at the exact time the cross head starts to move downward. This setting or timing of the take-up cam will enable the machine to sew the general run of work. When sewing books made up of very hard paper and using a large thread, it may be necessary to advance this cam slightly in order to keep the loops of the sewing thread sufficiently tight in the barbs of the hooks to prevent skipping when the cross head starts to move downward.

HOLD BACKS

(See Figure 4)

The hold backs are adjusted as follows:

1. Loosen the presser plate bar binding screws and raise the presser plate bar to its highest position by turning the presser plate bar adjusting knob (see Figure 2).

2. Check each hold back to make sure that it is inserted in the hold back block so that the set screw will engage the flat on the hold back. After engaging the flat, push the hold back up as far as possible and tighten the set screw. This insures the correct positioning of the hold back.

3. Turn the machine over until the hold backs are in their highest position.

4. Loosen the hold back lever binding screw, and position the hold backs as low as possible without their protruding through the under side of the presser plates. With this setting any thickness of signature within the range of the machine can be sewn without further adjustment of the hold backs.

HOOK REVOLVING MECHANISM

(See Figure 4)

The hook revolving mechanism is adjusted as follows:

1. Turn the machine over until the signature arm reaches its highest point.

2. Place the hook revolving rack in the needle cross head so that the right end of the rack extends 1-1/4" from the right hand needle cross head cap.

3. Insert the first tooth of the hook revolving gear in the first space in the hook revolving rack.

4. With the rack still extended 1-1/4" from the cap, insert the fourth tooth of the hook revolving segment bevel gear into the space which is in line with the center of the hook revolving bevel pinion.

5. Install the hook block on the machine and mesh the eight hook revolving pinions in the hook revolving rack so that the hook clamps face forward.

6. If the hook clamps do not face directly forward it will then be necessary to adjust the hook revolving connection rod (see Figure 9) to bring them to their proper position.

PASTING MECHANISM

(See Figures 4, 6, 7, and 12)

The pasting mechanism is adjusted as follows:

1. Place the paste box on the paste box bar, then pull it forward, making sure that the box is against the paste box stops, and tighten the paste box stud nuts.

2. Move the signature pusher so that its adjusting pin engages the hole farthest to the left in the saddle feed slide block gib.

3. Move the header so that its pin engages the hole farthest to the left in the header slide.

4. Position the left hand saddle feed connecting rod stud in the lowermost hole in the saddle feed bell crank.

5. Turn the machine over until the signature pusher has completed its travel to the left.

6. Loosen the paste carrier arm screws, which clamp the arms to the paste carrier shaft, and move the paste carrier bar through its arc until the paste carriers rest on the signature arm. Note: The short paste carrier must be used on the right hand or head end of the paste carrier bar while retiming the mechanism.

7. Back off the paste carrier stop screw, which is in the front of the paste box segment guard, so that the large paste box segment will stop on the guard casting.

8. Position the first tooth of the small paste box segment in the first space of the large paste box segment.

9. Rotate the segments until the large segment strikes against the inside of the paste box segment guard.

10. Hold the large segment against the guard, and with the paste carriers resting on the signature arm, tighten both paste carrier arm screws. Return the paste carriers to the upper position.

11. Loosen the paste box cam lever binding screws, move the lever so that its cam roll is against the raceway of the paste box (see Figure 11), and leave the lever loose on its shaft.

12. Position the pasting treadle spring arm (see Figure 6) by adjusting the paste box treadle stop screw so that the tension on the spring will return the pasting treadle to its normal position after it has

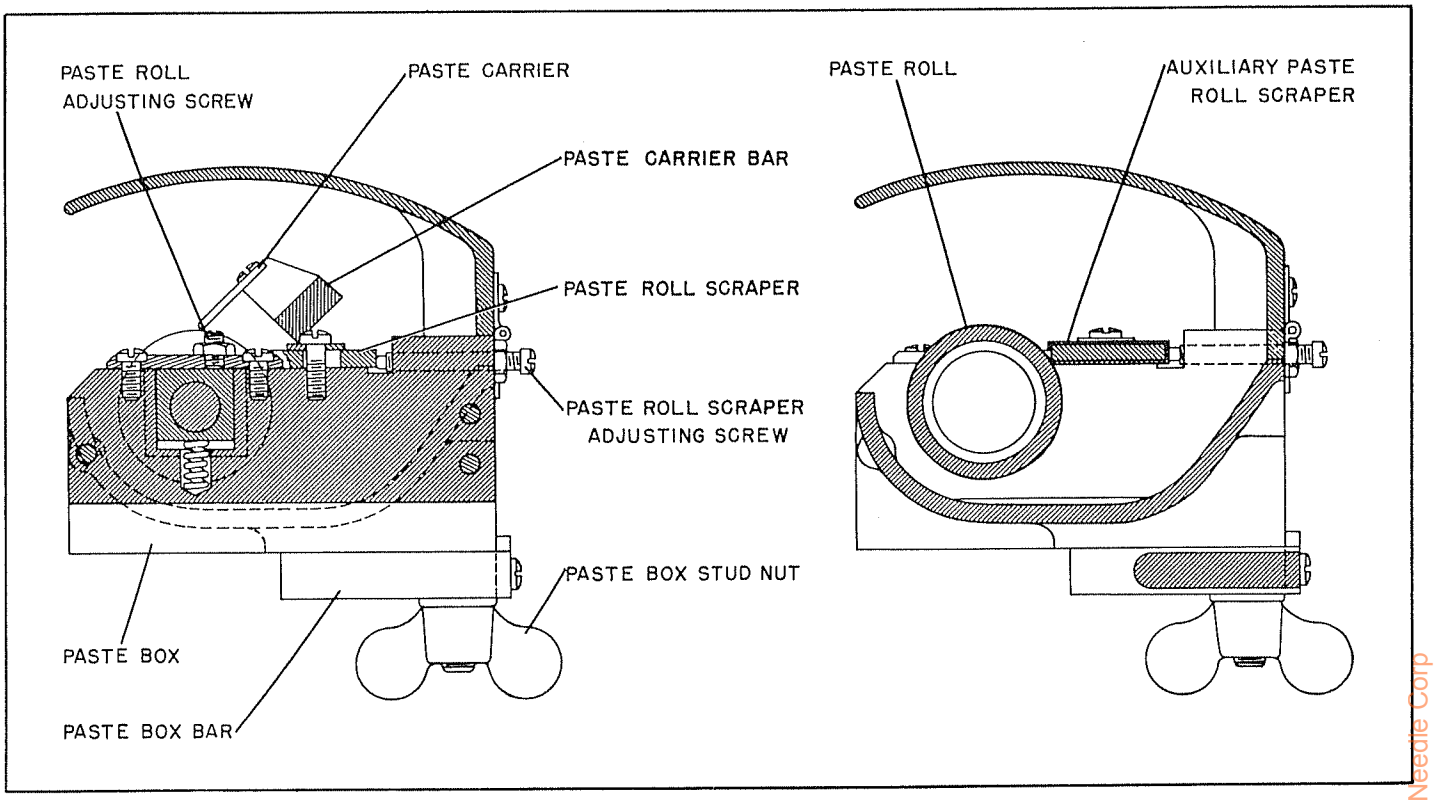


Figure 12—Paste Box and Scraper Adjustments

been depressed. The pasting treadle should be set about 1/2" above the floor.

13. Loosen the screw that holds the pasting treadle shaft arm to the shaft, and adjust the pasting treadle pawl stop screw so that there will be a slight tension on the spring that connects the arm to the pasting pawl.

14. Raise the pasting treadle pawl until it is in contact with the pasting treadle pawl pin located in the lower paste box connection lever, and tighten the pasting treadle shaft arm screw.

15. Lift up on the paste box connection rod until the paste box treadle pawl pin is held by the paste box treadle pawl. Now, by means of the two check nuts, position the upper paste box connection end so that the paste carriers are in front of the paste roll as shown in Figure 8 "A", and then tighten nuts.

16. Disengage the pasting treadle pawl and move the paste carrier bar through its arc until the paste carriers rest on the signature arm.

17. Loosen the three screws that hold the paste box cam to the saddle feed cam (see Figure 11), and move the paste box cam so that the lowest point of the raceway is in contact with the cam roll. Tighten the paste box cam screws and the paste box cam lever binding screws.

18. Check the timing by depressing the pasting treadle and turning the machine over until the signature pusher completes its travel to the left. Note carefully the relation of the tip of the signature pusher to the right hand or short paste carrier. If the paste box cam has been correctly positioned, the signature pusher will move to the right just enough to clear this short paste carrier when the paste carriers are almost in contact with the signature arm. If the signature pusher hits the short paste carrier, the paste box cam should be retarded so that the paste carrier bar will start to move a little later, allowing the signature pusher more time to move out of the path of the paste carriers.

19. Place a signature on the arm under the paste carriers. Adjust the paste carrier stop screw in the paste box segment guard so that the travel of the paste carrier bar is such that the paste carriers will just lightly touch the signature, and then lock the stop screw with its check nut.

20. Set the small signature leveler lifting cam, which is on the paste carrier shaft next to the left hand paste carrier arm, so that it raises the signature leveler out of the way as the paste carriers touch the signature. (See Figure 8 "B", Point "A".)

21. Adjust the paste roll parallel to the paste

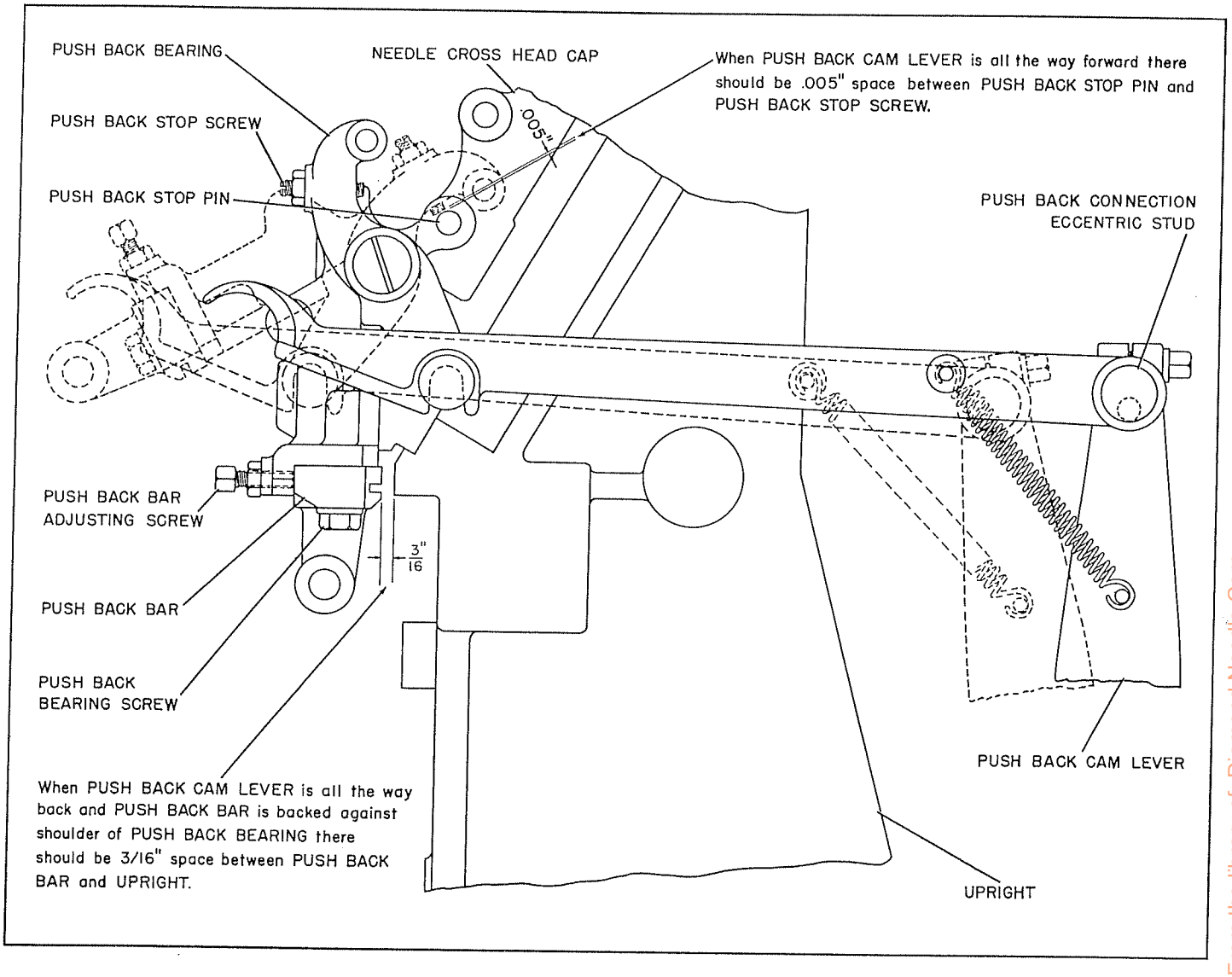


Figure 13—Pushback Mechanism Setting

carriers and just high enough so that the paste carriers will brush the roll but not hit it as they pass over. The height of the paste roll is adjusted by the two paste roll adjusting screws located in the paste roll bearing caps.

22. Adjust the paste roll scraper parellel to the paste roll so that an even line of paste will be transferred to the signature. The scraper is adjusted by the two paste roll scraper adjusting screws on the front of the paste box.

PUSH BACK MECHANISM

(See Figure 13)

The push back mechanism is adjusted as follows:

1. Move the push back bar back against the shoulders of the right and left hand push back bearings, and turn the machine over until the push back cam levers are all the way back.

2. At this point the push back bar should be 3/16" from the uprights, but if it is not 3/16" away, adjust the push back bar by moving the two push back connection eccentric studs located in the tops of the right and left hand push back cam levers. It is important that the 3/16" space be carefully gauged on both ends of the push back bar to insure its being parallel to the needle cross head (see Figure 4).

3. Move the push back cam levers all the way forward by turning the machine over. At this point there should be .005" clearance between the push back stop screws in the top part of the right and left push back bearings and the push back stop pins in the needle cross head caps.

4. With the push back bar in its rest position set the push back fingers so that they just clear the edge of the push back bar.

SHIFTING NEEDLE BLOCK MECHANISM

(See Figures 4, 9, and 11)

The shifting needle block mechanism is adjusted as follows:

1. Position the needle shifting connection stud nut at the front line on the long needle shifting lever.
2. Connect the long needle shifting lever to the short needle shifting lever by placing the needle shifting lever clamp screw in the lower hole of the short lever, and make sure that the short lever is securely clamped to the needle shifting lever shaft.
3. Loosen the two set screws in the needle shifting cam drive gear and turn the machine over until the push back bar has moved to its furthest position under the presser plates.
4. Rotate the needle shifting cam on the cam shaft until the shifting needle blocks start to move toward the right.
5. With the needle shifting cam in this position, tighten the set screws in the needle shifting cam drive gear.
6. Turn the machine over until the shifting needle blocks complete their travel to the right.
7. Check to make sure that the needles in the shifting needle blocks line up with the punches in the signature arm. If they are not in line, loosen the binding screw in the short needle shifting lever, and move the needle shifting rack so that the needles will line up with the punches.
8. Tighten the binding screw in the short lever, and turn the machine over one complete revolution to recheck the setting.

AUTOMATIC CUT-OFF ATTACHMENT

(See Figures 2, 3, and 9)

The automatic cut-off attachment operates only when the automatic cut-off treadle is depressed. Depressing the treadle causes the cut-off latch to release the cam lever, which will then follow the operating cam (see Figure 11) and revolve the ratchet cam one-eighth turn. The ratchet cam in turn raises or lowers the cut-off rear lever, and moves the automatic cut-off needle presser plates to the right or left.

1. The length of the cut-off ratchet connection rod should be adjusted so that at the completion of its stroke the ratchet cam plunger will seat firmly into the notch in the periphery of the ratchet cam.
2. To set the cut-off latch correctly, hold the latch operating lever so that its stop screw is resting on the machine bed, and then clamp the cut-off latch to the shaft so that there is 1/2" between its lower end and the end of the cam lever.
3. The cut-off treadle should be set so that it will raise the latch connection lever just enough to move the cut-off latch 1/2" from the end of the cam lever. If the treadle is set too high it will put too much tension on the cut-off latch spring.
4. To properly position the automatic cut-off needle presser plates, loosen the two binding screws in the cut-off rear lever. Move the automatic cut-off bar so that the needles are above the exact center of the corresponding slots in the needle presser plates. Tighten the two binding screws in the cut-off rear lever and revolve the ratchet cam one-eighth revolution, then check the position of the needles again. This procedure should be repeated three or four times to make sure the cut-off rear lever and the needle presser plates are properly positioned before running the machine. It is very important that the needle presser plates be carefully positioned, because if they are not centered, they will interfere with the movement of the needles. If the needle presser plates do not move 5/32" laterally or if they do not move freely, remove the presser plate bar and check all plates for straightness.
5. The automatic cut-off needle presser plate knives should be kept sharp so that they will cut the thread cleanly and without too much strain.

SERVICE TROUBLE ANALYSES

As explained under Adjustments, all Smyth Book Sewing Machines are adjusted at the factory for the general run of work. The kind of paper, the thread size, and the condition of the work brought to the machines all enter into the quality of the sewing operation. These variations may cause the possible operating troubles that are discussed below.

LOOSE SEWING

Loose sewing may be caused by the following conditions:

1. Needles are set too high. Lower needles (see page 17).
2. Platform is set too low. Raise platform (see page 16).
3. Presser plates are set too high. Lower presser plates (see page 15).
4. Loop carriers travel too far to the right beyond hooks. Adjust lateral motion of loop carriers (see page 17).
5. Thread tension studs do not clamp thread. Adjust tension studs (see page 18).

6. Thread take-up mechanism is not advanced far enough. Advance thread take-up mechanism (see page 18). If every other loop is loose, the tight loop is being pulled so tight that the thread cannot be pulled through it to pull the loose loop down. This condition may be overcome by moving the take-up connection stud nut slightly toward the rear of the machine.

SKIPPING

Skipping may be caused by the following conditions:

1. Thread is snapping off loop carriers because of too much tension. Adjust thread tension studs or take-up mechanism (see page 18).
2. Loop carriers are set too far back of needles so that carriers miss loops as they start their movement to the right. Adjust position of loop carriers by the loop carrier rod cam adjusting screws (see page 17). If this setting is changed check rocking motion before running machine.
3. Loop carriers are set so that they rock too far forward allowing the hooks to pick up both sides of the loops. Adjust rocking motion of loop carrier mechanism (see page 17).

THREAD BREAKING

Thread breaking may be caused by the following conditions:

1. Thread becomes caught coming off spool.
2. Knots in thread cannot go through eye in needle.
3. Hooks and needles are bent or have sharp edges.
4. Punches are set too high and strike hooks. Lower punches (see page 17).
5. Knives are set too tight and crowd signatures. Adjust knives (see page 16).
6. Thread is taken up too much. Adjust take-up lever (see page 18).
7. Push back bar is out of adjustment. Adjust push back bar (see page 22).

SIGNATURE ROLLING

Signature rolling may be caused by the following conditions:

1. The presser plates are set too low. Raise the presser plates (see page 15).
2. Signatures are improperly bundled or stacked so that back edges of signatures curl and cause signatures to rise on signature arm when arm is moving into sewing position. To correct this condition, the flat leveler springs, which are attached to the top of the signature leveler, should be extended at right angles to the leveler so that they will hold the signature down on the apex of the signature arm as it moves from under the leveler to sewing position.

INCORRECT HEADING-UP

Incorrect heading-up of the signatures may be caused by the following conditions:

1. If the signatures do not head up evenly, the signature stop bracket is too far away from the tail. Move the bracket toward the tail of the signature (see page 15).
2. If the signatures are over the header the signature stop bracket is too close to the tail, or the signature pusher is not pushing the signature beyond the header. Move the bracket away from the tail (see page 15), or adjust the signature pusher (see page 13).

PARTS CATALOGUE

When ordering parts for the Smyth No. 12 Semi-Automatic Book Sewing Machine the illustrations and lists in this section should be used as reference for identifying the parts. The photographs (Figures 14 through 19) show the numbers of many of the parts that are visible on the outside of the machine. The cams and associated parts are shown in Figure 20; first and second shaft parts are shown in Figure 21; some thread tension mechanism parts are shown in Figure 22 (others are shown in Figure 31); and some automatic cut-off parts are shown in Figure 23 (others are shown in Figure 32). All cam rolls and cam roll studs are shown in Figure 35. All screws and nuts, except those used only in the special attachments (automatic cut-off, crash, and signature guard), are shown in Figures 36, 37 and 38.

INSTRUCTIONS

The procedure below should be followed when ordering parts:

1. Locate the part to be ordered on one of the illustrations in this section.
2. Obtain the part number from the illustration and obtain the name of the part from the appropriate parts list.
3. Place the part number, the name of the part, and the quantity required on your order.

Accurate and complete information will enable us to fill your order promptly.

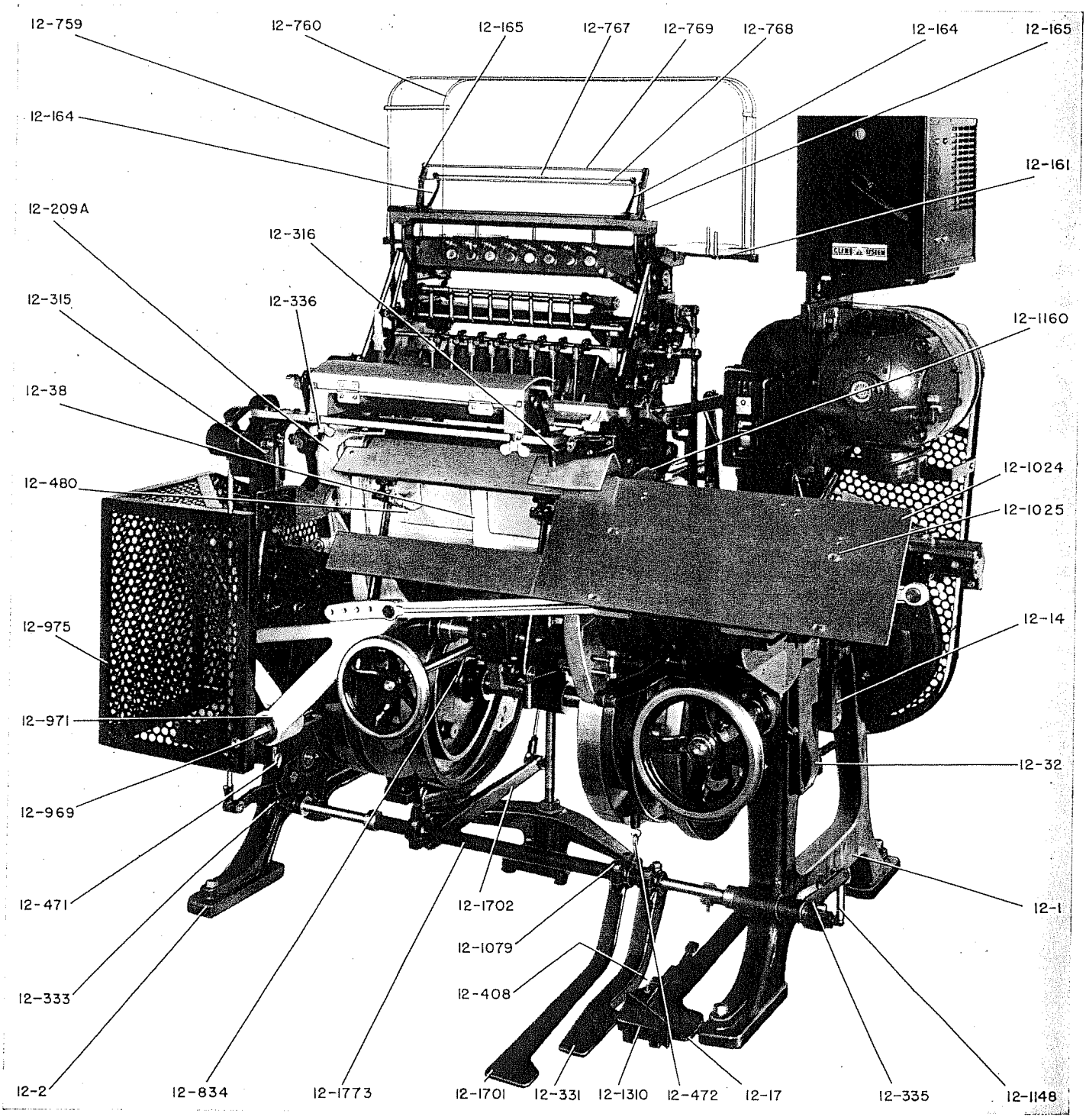


Figure 14—Right Front View (Parts)

PARTS LIST FOR FIGURE 14

PART NO.	PART NAME
12-1	Leg — R.H.
12-2	Leg — L.H.
12-14	Forked Shipper Lever Bracket
12-17	Operating Treadle and Cap
12-32	Driving Gear Guard
12-38	Signature Arm
12-161	Thread Rack
12-164	Thread Pull-off Arm
12-165	Thread Pull-off Bracket
12-209A	Signature Leveler Carrier Arm
12-315	Paste Box Bracket — L.H.
12-316	Paste Box Bracket — R.H.
12-331	Pasting Treadle
12-333	Pasting Treadle Shaft Arm
12-335	Pasting Treadle Spring Arm
12-336	Paste Box Stud Wing Nut
12-408	Auxiliary Safety Treadle Stud
12-471	Paste Box Connection Lever Spring Eye
12-472	Signature Arm Balance Spring Eye — Long
12-480	Signature Arm Back Plate
12-759	Thread Guide Rod — Long
12-760	Thread Guide Rod — Short
12-767	Thread Pull-off Rod — Short
12-768	Thread Pull-off Rod — Long
12-769	Thread Pull-off Rod — Large
12-834	Platform Elevation Binding Screw Pin
12-969	Saddle Feed Bell Crank Stud Nut
12-971	Saddle Feed Bell Crank Stud Washer
12-975	Saddle Feed Connection Rod Guard
12-1024	Saddle Feed Plate — Front
12-1025	Saddle Feed Plate Screw
12-1079	Automatic Cut-off Treadle Screw
12-1148	Pasting Treadle Spring
12-1160	Signature Guide Plate
12-1310	Auxiliary Safety Treadle
12-1701	Automatic Cut-off Treadle
12-1702	Automatic Cut-off Treadle Lever
12-1773	Automatic Cut-off Treadle Pipe

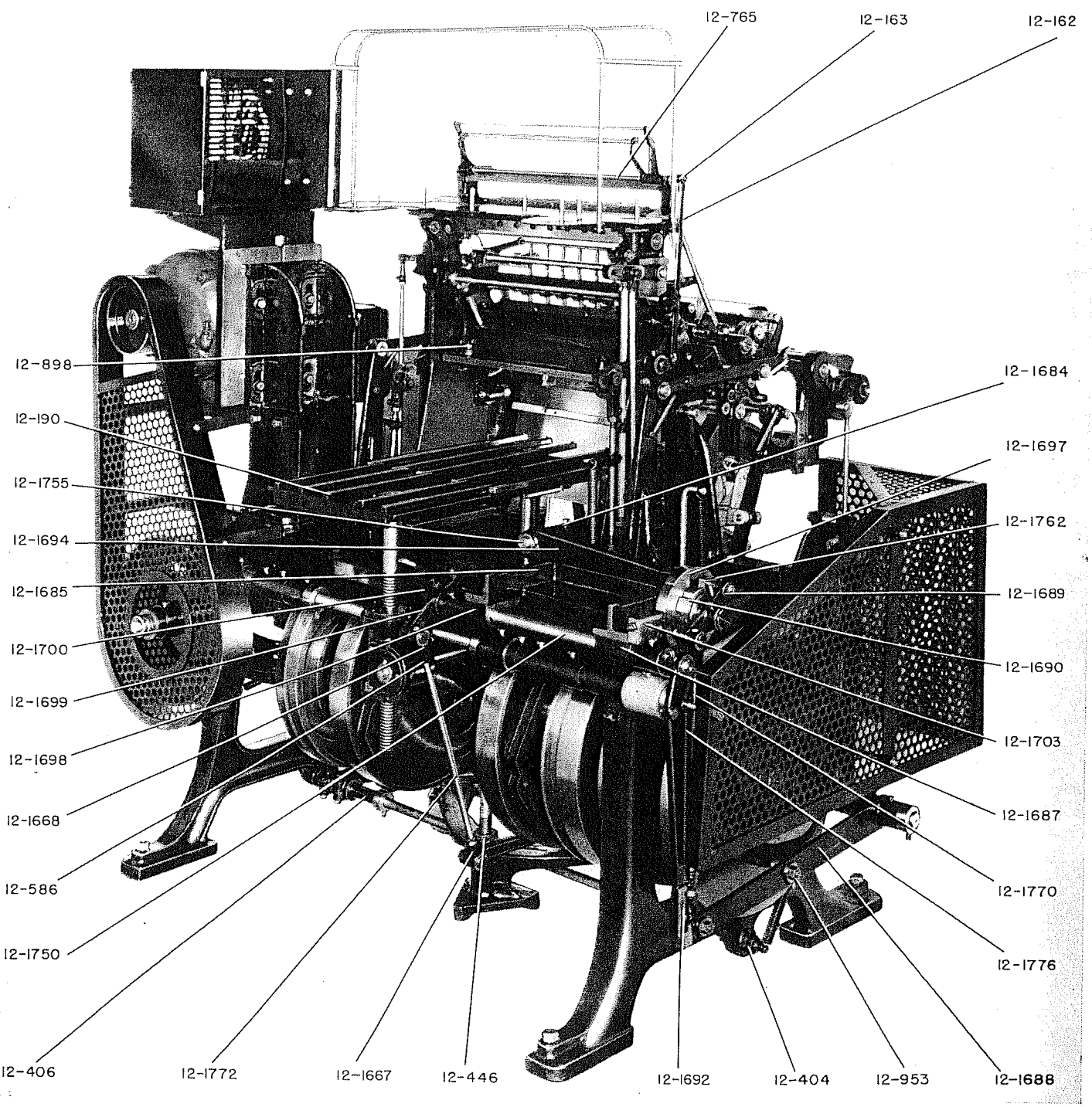


Figure 15—Left Rear View (Parts)

PARTS LIST FOR FIGURE 15

PART NO.	PART NAME
12-162	Thread Pull-off Connection Rod
12-163	Thread Pull-off Lever
12-190	Platform
12-404	Brace Rod Nut
12-406	Operating Treadle Pipe
12-446	Cam Shaft Bracket Rod Nut
12-586	Automatic Cut-off Treadle Connection Rod Nut — L.H.
12-765	Thread Pull-off Shaft
12-898	Knife Holder Stud Wing Nut
12-953	Automatic Cut-off Cam Roll Eccentric Stud Nut
12-1667	Automatic Cut-off Connection Rod End — R.H.
12-1668	Automatic Cut-off Connection Rod End — L.H.
12-1684	Automatic Cut-off Lever Bracket Bearing
12-1685	Automatic Cut-off Lever Bracket
12-1687	Automatic Cut-off Lever Shaft Bearing — Long
12-1688	Automatic Cut-off Cam Lever
12-1689	Automatic Cut-off Ratchet Pawl Carrier
12-1690	Automatic Cut-off Ratchet
12-1692	Automatic Cut-off Latch
12-1694	Automatic Cut-off Lever — Rear
12-1697	Automatic Cut-off Ratchet Cam
12-1698	Automatic Cut-off Lever Shaft Bearing — Short
12-1699	Automatic Cut-off Latch Connection Lever
12-1700	Automatic Cut-off Latch Operating Lever
12-1703	Automatic Cut-off Ratchet Cam Plunger Block
12-1750	Automatic Cut-off Latch Shaft
12-1755	Automatic Cut-off Lever Shaft
12-1762	Automatic Cut-off Ratchet Pawl
12-1770	Automatic Cut-off Ratchet Connection Rod
12-1772	Automatic Cut-off Treadle Connection Rod
12-1776	Automatic Cut-off Ratchet Connection Spring

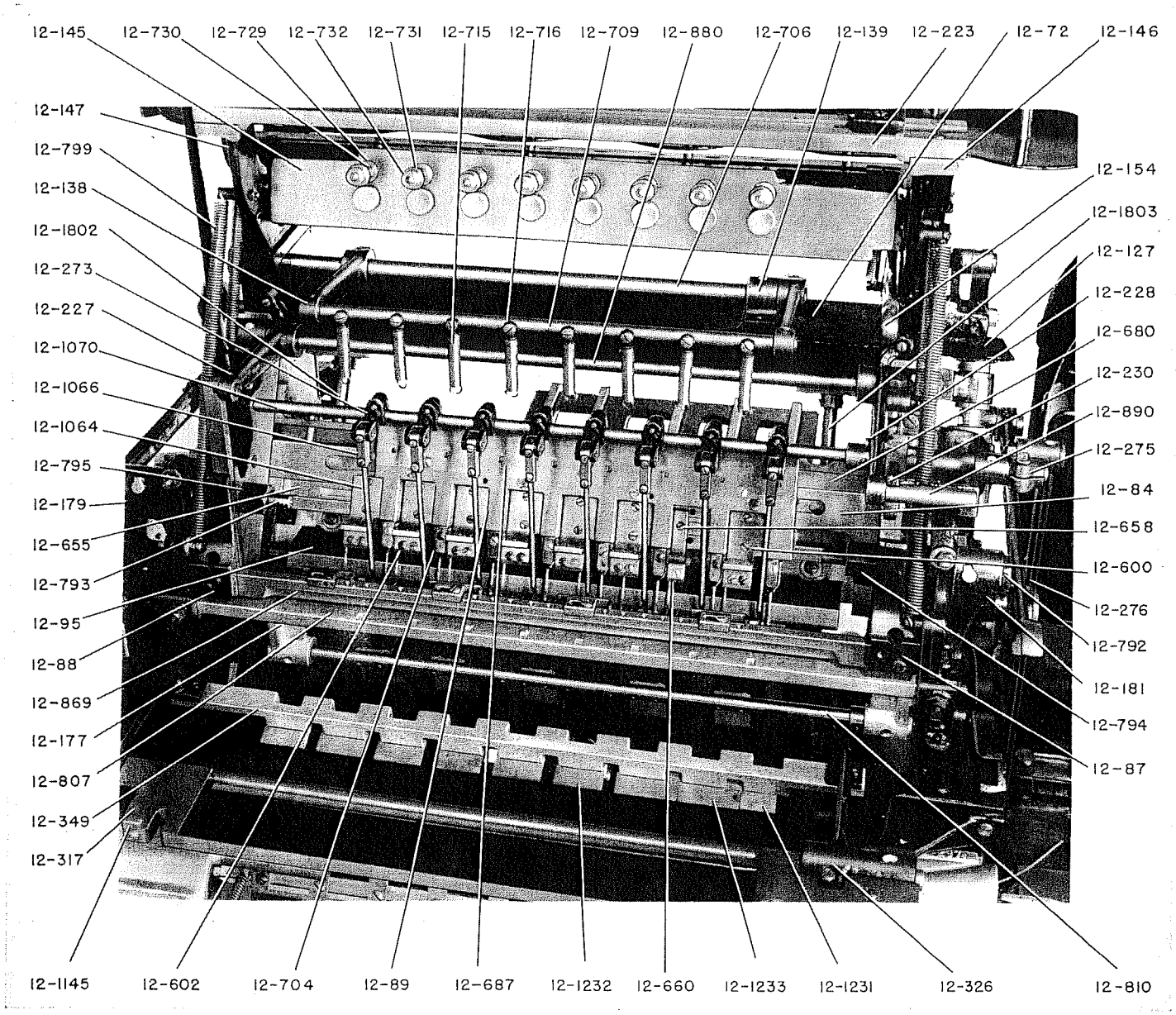


Figure 16—Front View of Upper Section (Parts)

PARTS LIST FOR FIGURE 16

PART NO.	PART NAME
12-72	Cross Head
12-84	Needle Cross Head
12-87	Needle Cross Head Cap — R.H.
12-88	Needle Cross Head Cap — L.H.
12-89	Hook Block
12-95	Presser Plate Bar
12-127	Hook Revolving Bevel Gear Guard
12-138	Take-up Arm
12-139	Take-up Shaft Bracket
12-145	Tension Bar
12-146	Tension Bar Bracket — R.H.
12-147	Tension Bar Bracket — L.H.
12-154	Tension Releasing Hand Lever
12-177	Push Back Bar
12-179	Push Back Bearing — L.H.
12-181	Push Back Bearing — R.H.
12-223	Tape Box Bar
12-227	Tape Looper Lever
12-228	Tape Looper Hand Lever
12-230	Tape Looping Safety Lever
12-273	Hold Back Arm
12-275	Hold Back Lever
12-276	Hold Back Connection Rod
12-317	Paste Box Bar
12-326	Paste Carrier Arm — R.H.
12-349	Paste Carrier Bar
12-600	Stationary Needle Block
12-602	Stationary Needle Clamp
12-655	Needle Shifting Rack
12-658	Shifting Needle Block
12-660	Shifting Needle Clamp

PART NO.	PART NAME
12-680	Hook Revolving Rack
12-687	Hook Block Guard
12-704	Hook Clamp
12-706	Take-up Shaft
12-709	Take-up Rod
12-715	Take-up Spring
12-716	Take-up Spring Holder
12-729	Thread Light Tension Disc
12-730	Thread Light Tension Spring
12-731	Thread Light Tension Nut
12-732	Thread Light Tension Check Nut
12-792	Push Back Bearing Stud — R.H.
12-793	Push Back Bearing Stud — L.H.
12-794	Push Back Bearing Nut — R.H.
12-795	Push Back Bearing Nut — L.H.
12-799	Push Back Spring
12-807	Push Back Bar Plate (Brass)
12-810	Push Back Finger Shaft
12-869	Tape Guide Bar
12-880	Tape Looper Shaft
12-890	Tape Looper Handle
12-1064	Hold Back
12-1066	Hold Back Block
12-1070	Hold Back Rod
12-1145	Paste Box Stop
12-1231	Paste Carrier — Short
12-1232	Paste Carrier — Medium
12-1233	Paste Carrier — Long
12-1802	Presser Plate Bar Adjusting Screw — R.H. Thread
12-1803	Presser Plate Bar Adjusting Screw — L.H. Thread

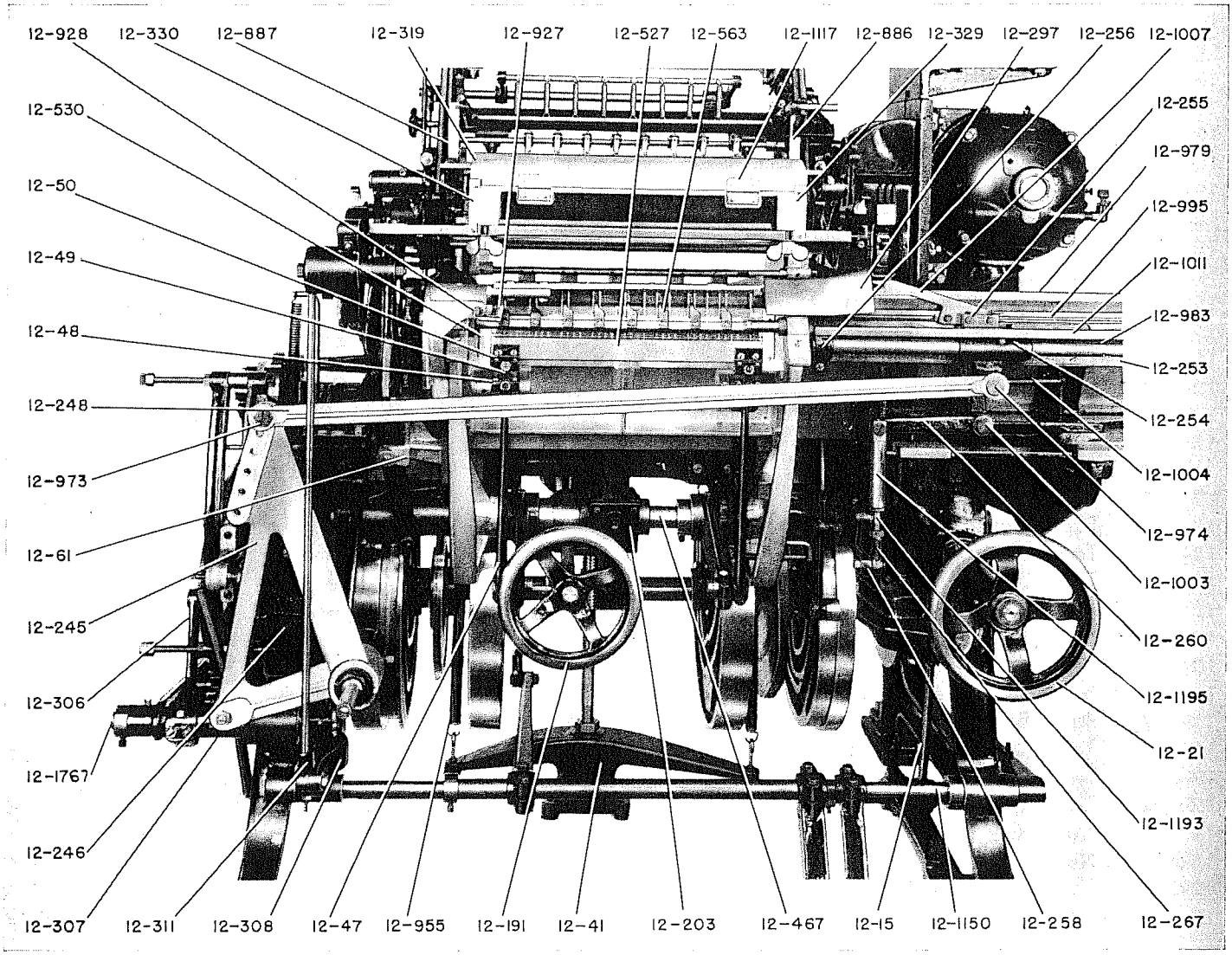


Figure 17—Front Close-Up View (Parts)

PARTS LIST FOR FIGURE 17

PART NO.	PART NAME
12-15	Treadle Lever and Cap
12-21	Hand Wheel
12-41	Signature Arm Balance Spring Bracket
12-47	Punch Connection
12-48	Punch Connection Lever
12-49	Punch Slide Link
12-50	Punch Slide Bracket
12-61	Loop Carrier Lever Bracket
12-191	Platform Elevating Hand Wheel
12-203	Signature Arm Back Guide Bar Cap
12-245	Saddle Feed Bell Crank
12-246	Saddle Feed Bell Crank Bracket
12-248	Saddle Feed Connecting Rod
12-253	Saddle Feed Slide Bar
12-254	Saddle Feed Slide
12-255	Saddle Feed Slide Block
12-256	Saddle Feed Slide Rod Bracket
12-258	Signature Pusher Lifter Cam Lever
12-260	Signature Pusher Lifter Bell Crank
12-267	Signature Pusher Lifter Connection Rod End — Lower
12-297	Signature Guide
12-306	Paste Box Cam Lever
12-307	Paste Box Cam Lever Shaft Bushing
12-308	Paste Box Connection Lever — Lower
12-311	Paste Box Connection End — Lower
12-319	Paste Box Cover
12-329	Paste Box End — R.H.
12-330	Paste Box End — L.H.
12-467	Signature Arm Lever Shaft
12-527	Punch Slide
12-530	Punch Slide Cap
12-563	Loop Carrier
12-886	Tape Looper Slide — R.H.
12-887	Tape Looper Slide — L.H.
12-927	Signature Leveler Spring
12-928	Signature Leveler Spring Hook
12-955	Signature Arm Balance Spring
12-973	Saddle Feed Connecting Rod Stud — L.H.
12-974	Saddle Feed Connecting Rod Stud — R.H.
12-979	Saddle Feed Plate — Rear
12-983	Saddle Feed Slide Rod
12-995	Signature Pusher Lifter
12-1003	Signature Pusher Lifter Bell Crank Stud
12-1004	Signature Pusher Lifter Bell Crank Spring
12-1007	Signature Pusher
12-1011	Saddle Feed Slide Block Safety Strip
12-1117	Paste Box Cover Butt
12-1150	Pasting Treadle Shaft
12-1193	Signature Pusher Lifter Connection Rod
12-1195	Signature Pusher Lifter Connection Rod End — Upper
12-1767	Automatic Cut-off Paste Box Cam Lever Shaft

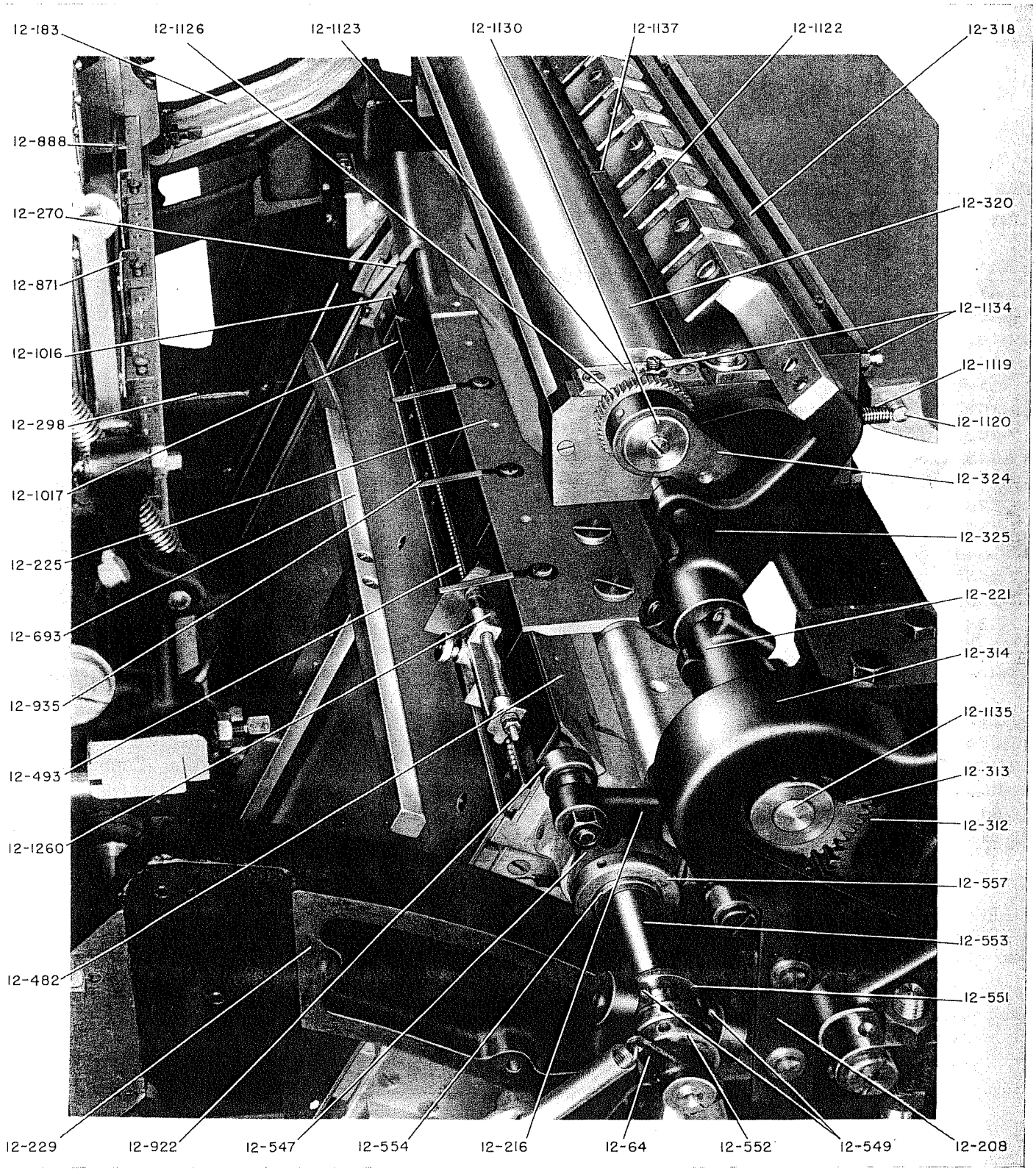


Figure 18—Left End View of Signature Arm (Parts)

PARTS LIST FOR FIGURE 18

PART NO.	PART NAME
12-64	Loop Carrier Rod Spring Arm
12-183	Push Back Finger Cam
12-208	Signature Leveler Shaft Arm Cam
12-216	Signature Leveler Shaft Arm
12-221	Signature Leveler Lifting Cam — Small
12-225	Signature Leveler
12-229	Signature Leveler Cam Bracket
12-270	Header — Short
12-298	Signature Guide Bracket
12-312	Paste Box Segment — Large
12-313	Paste Box Segment — Small
12-314	Paste Box Segment Guard
12-318	Paste Box
12-320	Paste Roll
12-324	Paste Box Ratchet Arm
12-325	Paste Carrier Arm — L.H.
12-482	Signature Arm Top Plate — Narrow
12-493	Signature Stop "T" Strip
12-547	Signature Leveler Lifting Cam — Large
12-549	Loop Carrier Rod Collar Block
12-551	Loop Carrier Rod Collar
12-552	Loop Carrier Rod Nut
12-553	Loop Carrier Rod
12-554	Loop Carrier Rod Cam
12-557	Loop Carrier Rod Cam Nut
12-693	Signature Arm Back Guide
12-871	Tape Guide Plate
12-888	Tape Looper Bar
12-922	Signature Leveler Shaft Arm Fiber Collar
12-935	Leveler Spring — Flat
12-1016	Header Slide
12-1017	Header Slide "T" Strip
12-1119	Paste Box Cover Spring
12-1120	Paste Box Cover Spring Stud
12-1122	Paste Roll Scraper
12-1123	Paste Roll Bearing Cap
12-1126	Paste Roll Ratchet
12-1130	Paste Roll Washer
12-1134	Paste Roll Adjusting Screw Nut Paste Roll Scraper Adjusting Screw Nut
12-1135	Paste Carrier Shaft
12-1137	Auxiliary Paste Roll Scraper
12-1260	Signature Stop Bracket — Complete with Plunger

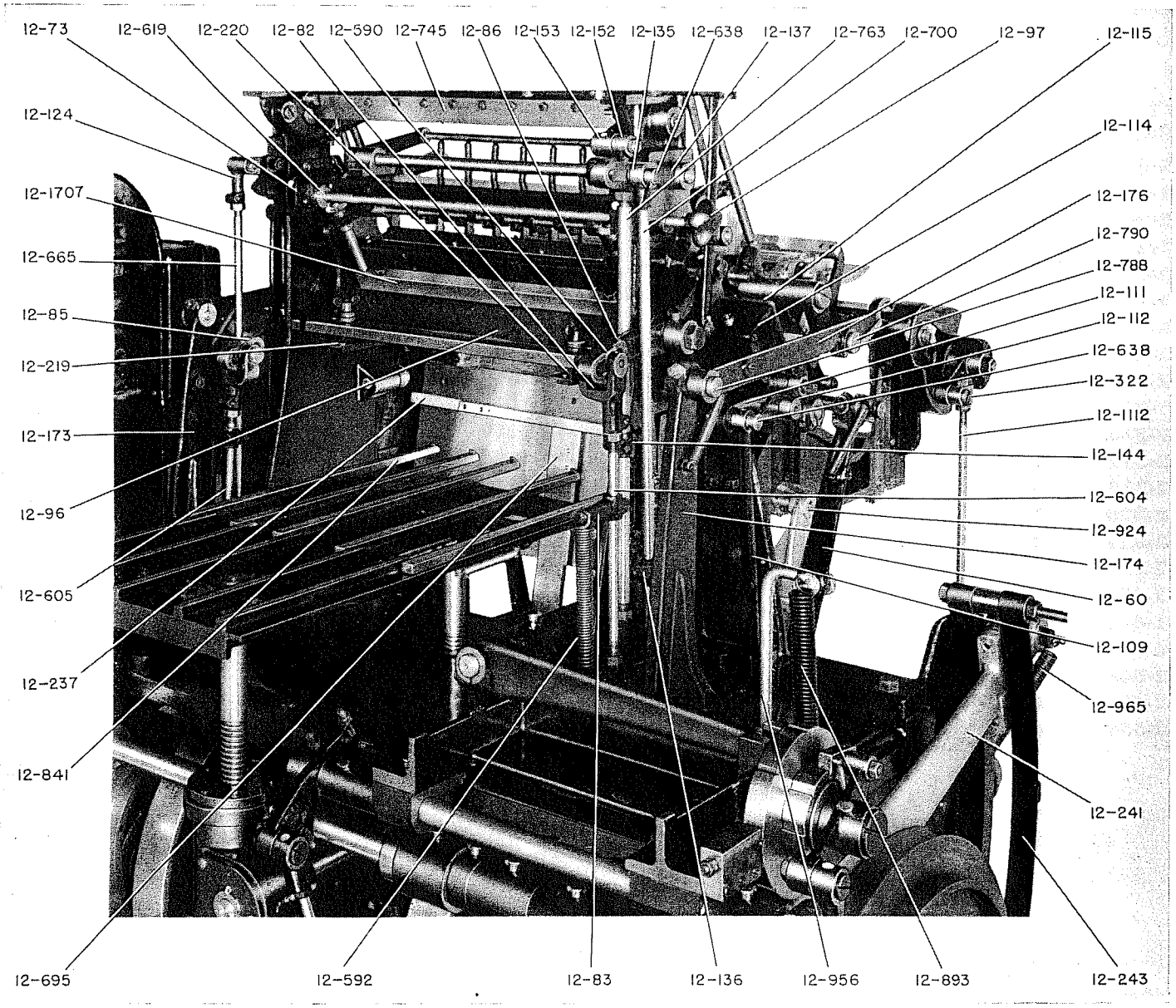


Figure 19—Rear Close-Up View (Parts)

PARTS LIST FOR FIGURE 19

PART NO.	PART NAME
12-60	Loop Carrier Lever
12-73	Cross Head Bracket
12-82	Needle Connection End — Upper
12-83	Needle Connection Spring Clamp
12-85	Needle Cross Head Lever — R.H.
12-86	Needle Cross Head Lever — L.H.
12-96	Presser Plate Bar Bracket
12-97	Presser Plate Bar Adjusting Knob
12-109	Needle Shifting Connection Rod
12-111	Needle Shifting Lever — Long
12-112	Needle Shifting Lever — Short
12-114	Needle Shifting Bracket
12-115	Needle Shifting Bracket Cover
12-124	Hook Revolving Connection End — Upper
12-135	Take-up Connection End — Upper
12-136	Take-up Connection Spring Clamp
12-137	Take-up Lever
12-144	Tension Releasing Connection Rod Spring Clamp
12-152	Tension Releasing Connection End — Upper
12-153	Tension Releasing Shaft Lever
12-173	Push Back Cam Lever — R.H.
12-174	Push Back Cam Lever — L.H.
12-176	Push Back Connection
12-219	Knife Holder — R.H.
12-220	Knife Holder — L.H.

PART NO.	PART NAME
12-237	Signature Arm Back Guide Straight Extension
12-241	Saddle Feed Cam Lever
12-243	Saddle Feed Cam Lever Guard
12-322	Paste Box Connection End — Upper
12-590	Needle Connection Stud (Upper) Nut
12-592	Needle Cross Head Balance Spring
12-604	Needle Connection Rod — Long
12-605	Needle Connection Rod — Short
12-619	Presser Plate Bar Adjusting Screw Miter Gear
12-638	Needle Shifting Connection Stud Take-up Connection Stud
12-665	Hook Revolving Connection Rod
12-695	Signature Arm Back Guide Bar
12-700	Take-up Connection Rod
12-745	Tension Releasing Shaft
12-763	Tension Releasing Connection Rod
12-788	Push Back Connection Eccentric Stud
12-790	Push Back Connection Stud
12-841	Platform Strip
12-893	Saddle Feed Cam Lever Spring
12-924	Signature Leveler Carrier Arm Pin
12-956	Saddle Feed Cam Lever Spring Rod
12-965	Saddle Feed Connection Rod Spring
12-1112	Paste Box Connection Rod
12-1707	Automatic Cut-off Presser Plate Bar Connection Bar

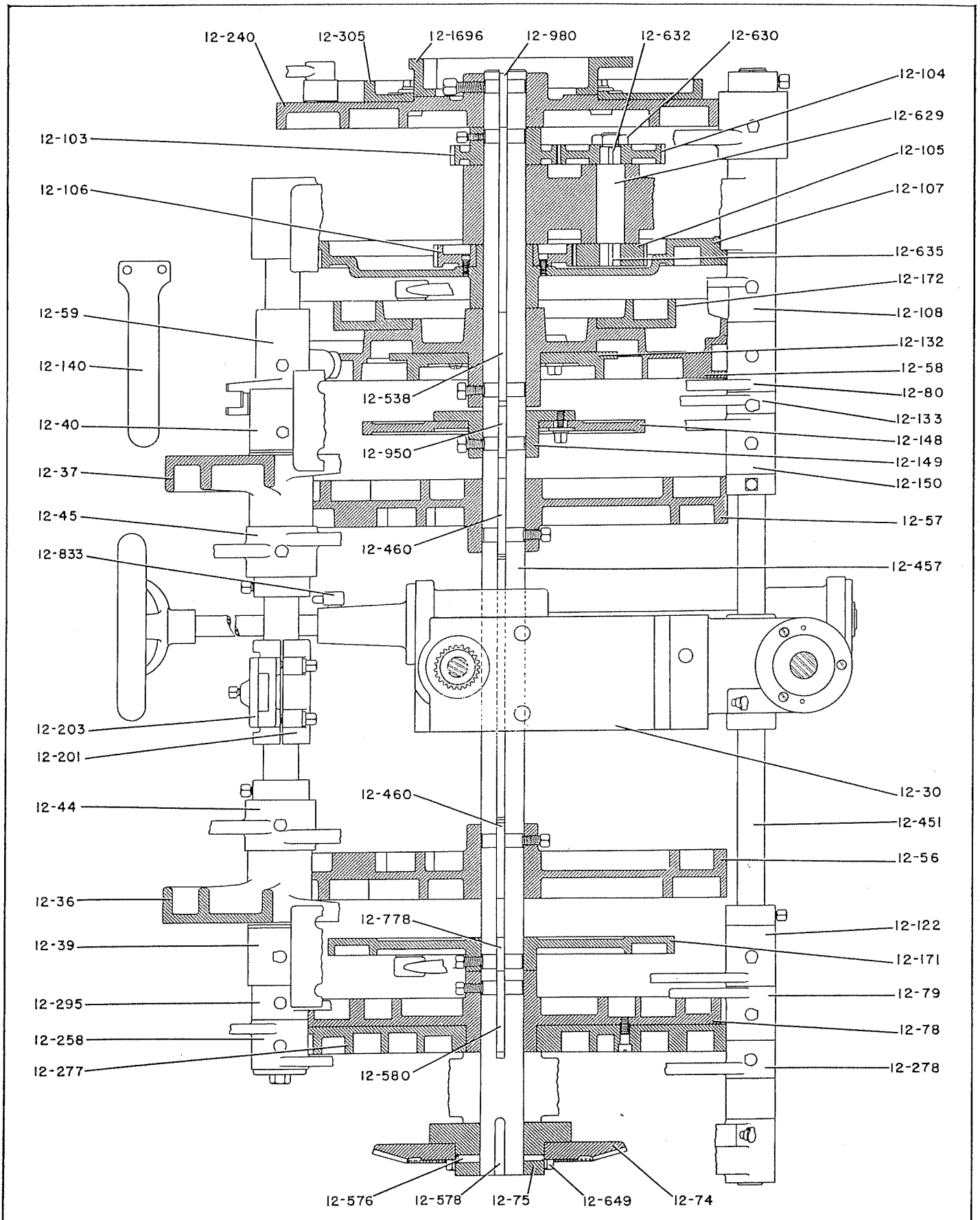


Figure 20—Cam Arrangement (Parts)

PARTS LIST FOR FIGURE 20

PART NO.	PART NAME
12-30	Cam Shaft Bracket
12-36	Signature Arm Lever — R.H.
12-37	Signature Arm Lever — L.H.
12-39	Signature Arm Bracket — R.H.
12-40	Signature Arm Bracket — L.H.
12-44	Punch Cam Lever — R.H.
12-45	Punch Cam Lever — L.H.
12-56	Signature Arm and Punch Cam — R.H.
12-57	Signature Arm and Punch Cam — L.H.
12-58	Loop Carrier and L.H. Needle Cam
12-59	Loop Carrier Cam Roll Block
12-74	Cam Shaft Bevel Gear
12-75	Cam Shaft Bevel Gear Hub
12-78	R.H. Needle and Hook Revolving Cam
12-79	Needle Cam Lever — R.H.
12-80	Needle Cam Lever — L.H.
12-103	Needle Shifting Cam Drive Gear
12-104	Needle Shifting Cam Driven Gear
12-105	Needle Shifting Cam Pinion
12-106	Needle Shifting Cam Gear
12-107	Needle Shifting Cam
12-108	Needle Shifting Cam Lever
12-122	Hook Revolving Cam Lever
12-132	Take-up Cam
12-133	Take-up Cam Lever
12-140	Take-up Cam and Tension Releasing Cam Spanner
12-148	Tension Releasing Cam
12-149	Tension Releasing Cam Flange
12-150	Tension Releasing Cam Lever
12-171	Push Back Cam — R.H.
12-172	Push Back Cam — L.H.
12-201	Signature Arm Back Guide Bar Holder
12-203	Signature Arm Back Guide Bar Cap
12-240	Saddle Feed Cam
12-258	Signature Pusher Lifter Cam Lever
12-277	Hold Back, Signature Pusher Lifter, and Signature Guard Cam
12-278	Hold Back Cam Lever
12-295	Signature Guide Cam Lever
12-305	Paste Box Cam
12-451	Cam Lever Shaft
12-457	Cam Shaft
12-460	Signature Arm and Punch Cam Key
12-538	Loop Carrier and L.H. Needle Cam Key
12-576	Cam Shaft Gear Hub Taper Pin
12-578	Cam Shaft Bevel Gear Hub Key
12-580	R.H. Needle and Hook Revolving Cam Key
12-629	Needle Shifting Cam Pinion Shaft
12-630	Needle Shifting Cam Pinion Shaft Nut
12-632	Needle Shifting Cam Driven Gear Key
12-635	Needle Shifting Cam Gear Pinion Dowel
12-649	Cam Shaft Bevel Gear Screw
12-778	Push Back Cam (R.H.) Key
12-833	Platform Elvation Binding Screw
12-950	Tension Releasing Cam Key
12-980	Saddle Feed Cam Key
12-1696	Automatic Cut-off Operating Cam

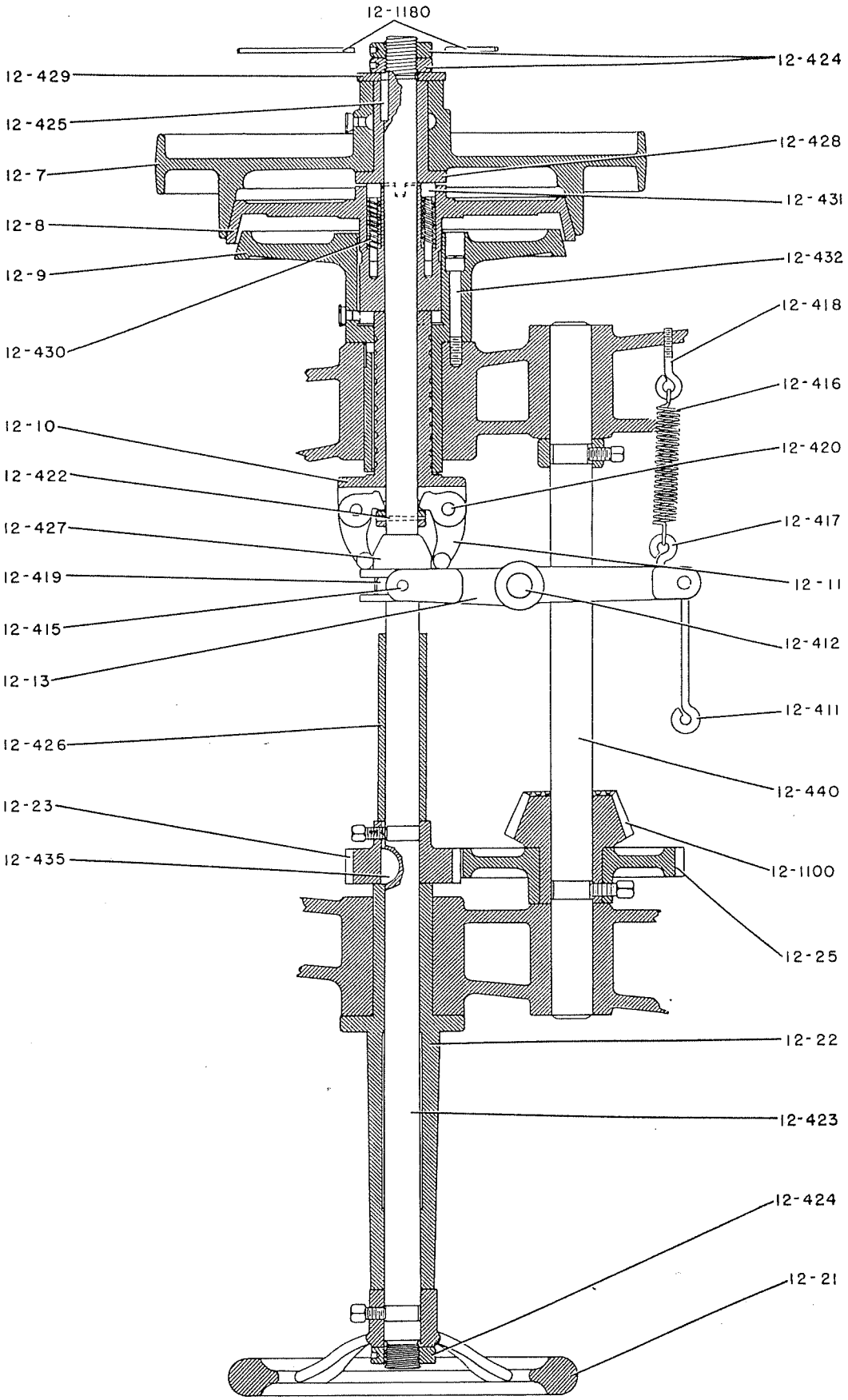


Figure 21—First and Second Shafts Arrangement (Parts)

PARTS LIST FOR FIGURE 21

PART NO.	PART NAME
12-4	Driving Pulley for Reeves Drive 10″ (not illustrated)
12-6	Driving Pulley for Reeves Drive 11″ (not illustrated)
12-7	Driving Pulley
12-8	Driving Friction
12-9	Stop Friction
12-10	Clutch Finger Bushing
12-11	Clutch Finger
12-13	Forked Shipper Lever
12-21	Hand Wheel
12-22	First Shaft Bushing
12-23	First Shaft Pinion
12-25	Second Shaft Gear
12-411	Treadle Link
12-412	Forked Shipper Lever Shaft
12-415	Forked Shipper Lever Pin
12-416	Clutch Spring
12-417	Clutch Spring Eye — Short
12-418	Clutch Spring Eye — Long
12-419	Clutch Wedge Shoe
12-420	Clutch Finger Pin
12-422	Clutch Finger Collar Taper Pin
12-423	First Shaft with Collar and Pin
12-424	First Shaft Nut
12-425	First Shaft Key
12-426	First Shaft Stop Bushing
12-427	Clutch Wedge
12-428	Driving Pulley Bushing
12-429	Driving Pulley Bushing Collar
12-430	Driving Friction Spring
12-431	Driving Friction Spring Plunger
12-432	Stop Friction Screw
12-435	First Shaft Pinion Key
12-440	Second Shaft
12-1100	Second Shaft Bevel Pinion
12-1180	Round Nut Spanners
12-1321	V Belt for Reeves Drive (not illustrated)

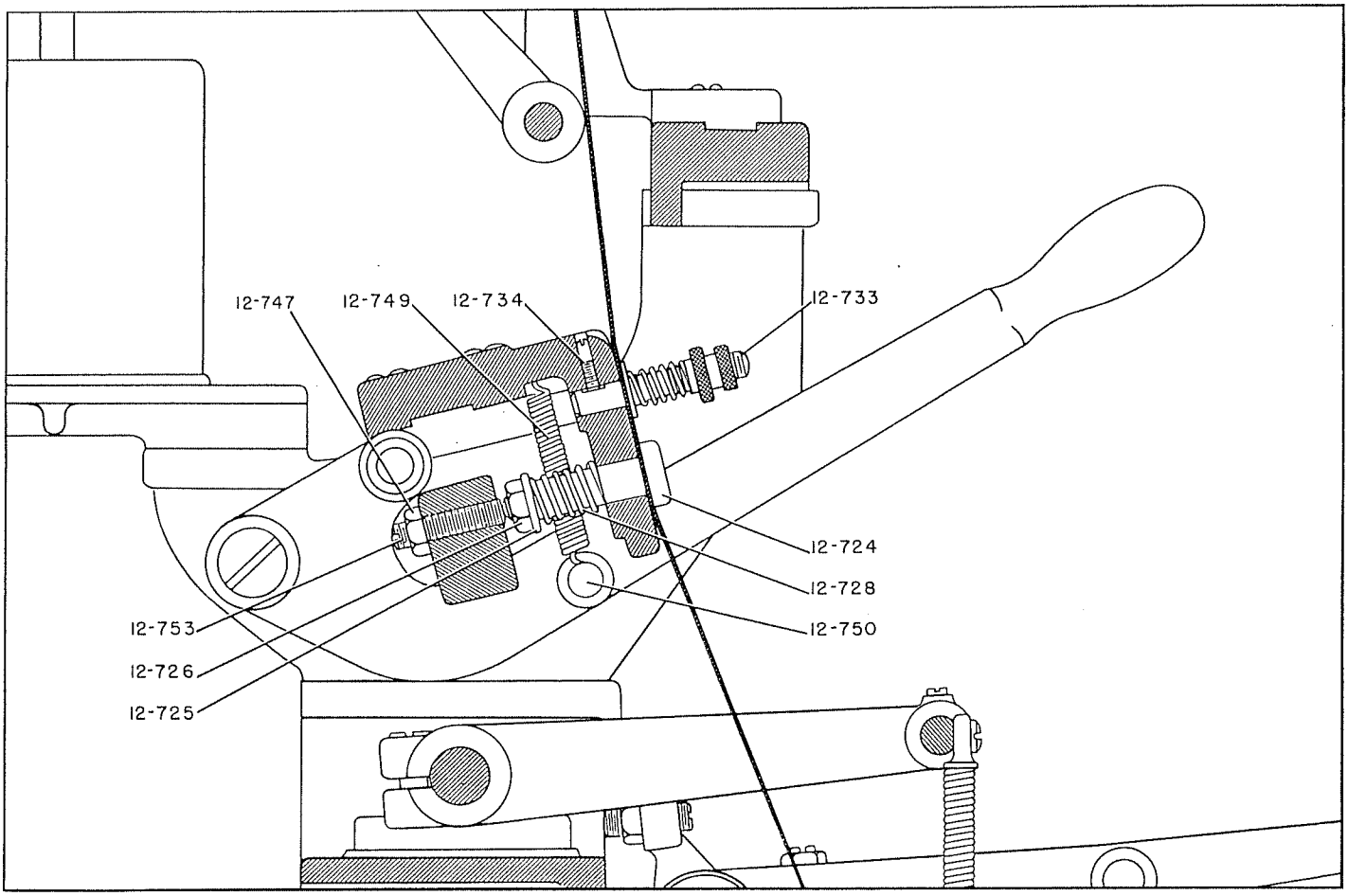


Figure 22—Thread Tension Mechanism (Parts)

PARTS LIST FOR FIGURE 22

PART NO.	PART NAME
12-724	Thread Tension Stud
12-725	Thread Tension Stud Washer
12-726	Thread Tension Stud Nut
12-728	Thread Tension Stud Spring
12-733	Thread Light Tension Stud
12-734	Thread Light Tension Stud Screw
12-747	Tension Releasing Shaft Screw Nut
12-749	Tension Releasing Hand Lever Spring
12-750	Tension Releasing Hand Lever Spring Stud
12-753	Tension Releasing Shaft Screw

USE ONLY SMYTH-BUILT REPLACEMENT PARTS

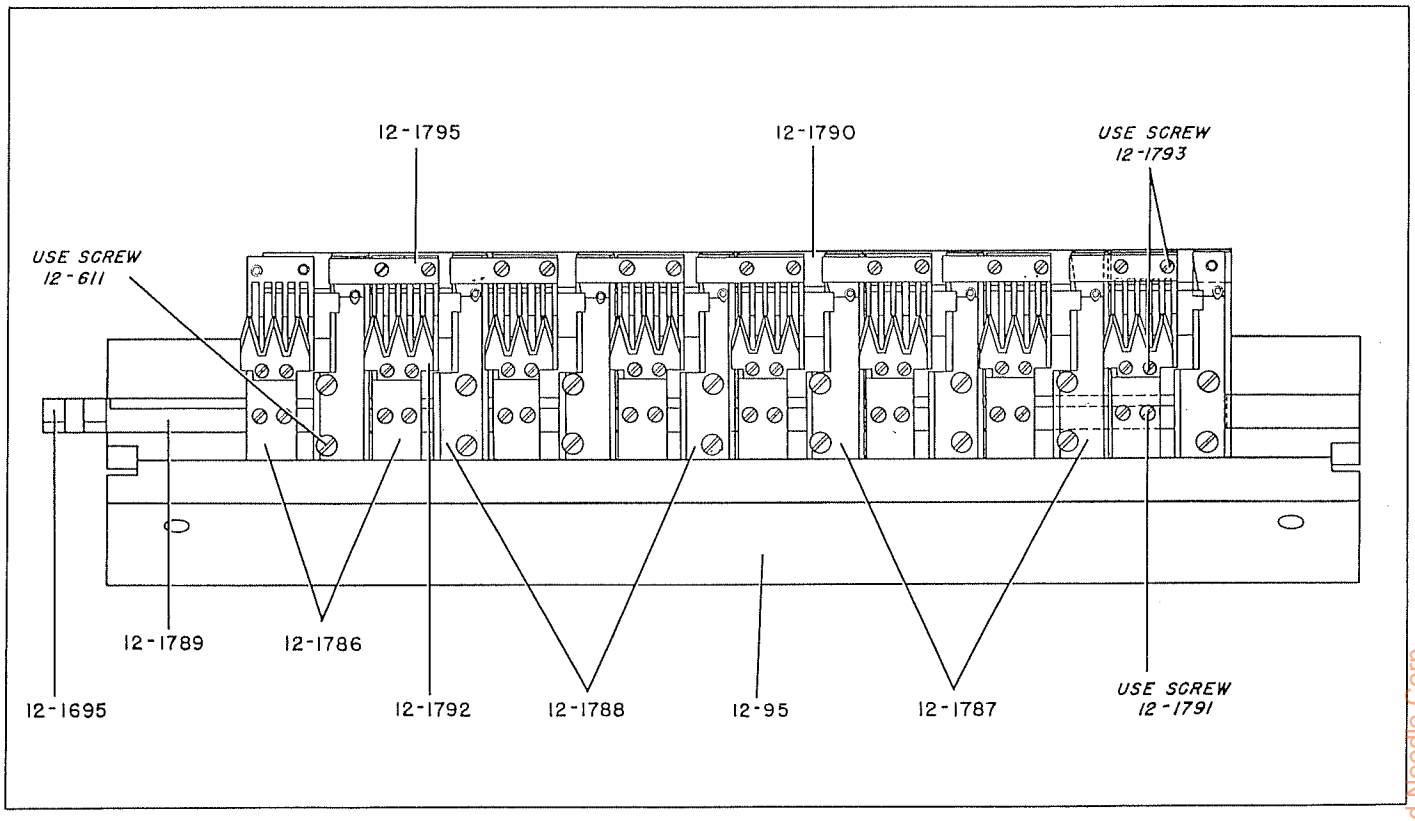


Figure 23—Automatic Cut-Off Presser Plate Bar Assembly (Parts)

PARTS LIST FOR FIGURE 23

PART NO.	PART NAME
12-95	Presser Plate Bar
12-1695	Automatic Cut-off Bar Block
12-1786	Automatic Cut-off Needle Presser Plate
12-1787	Automatic Cut-off Hook Presser Plate — Wide
12-1788	Automatic Cut-off Hook Presser Plate — Narrow
12-1789	Automatic Cut-off Bar
12-1790	Automatic Cutoff Hold Back Support Bar
12-1792	Automatic Cut-off Needle Presser Plate Knife
12-1795	Automatic Cut-off Needle Presser Plate Strip

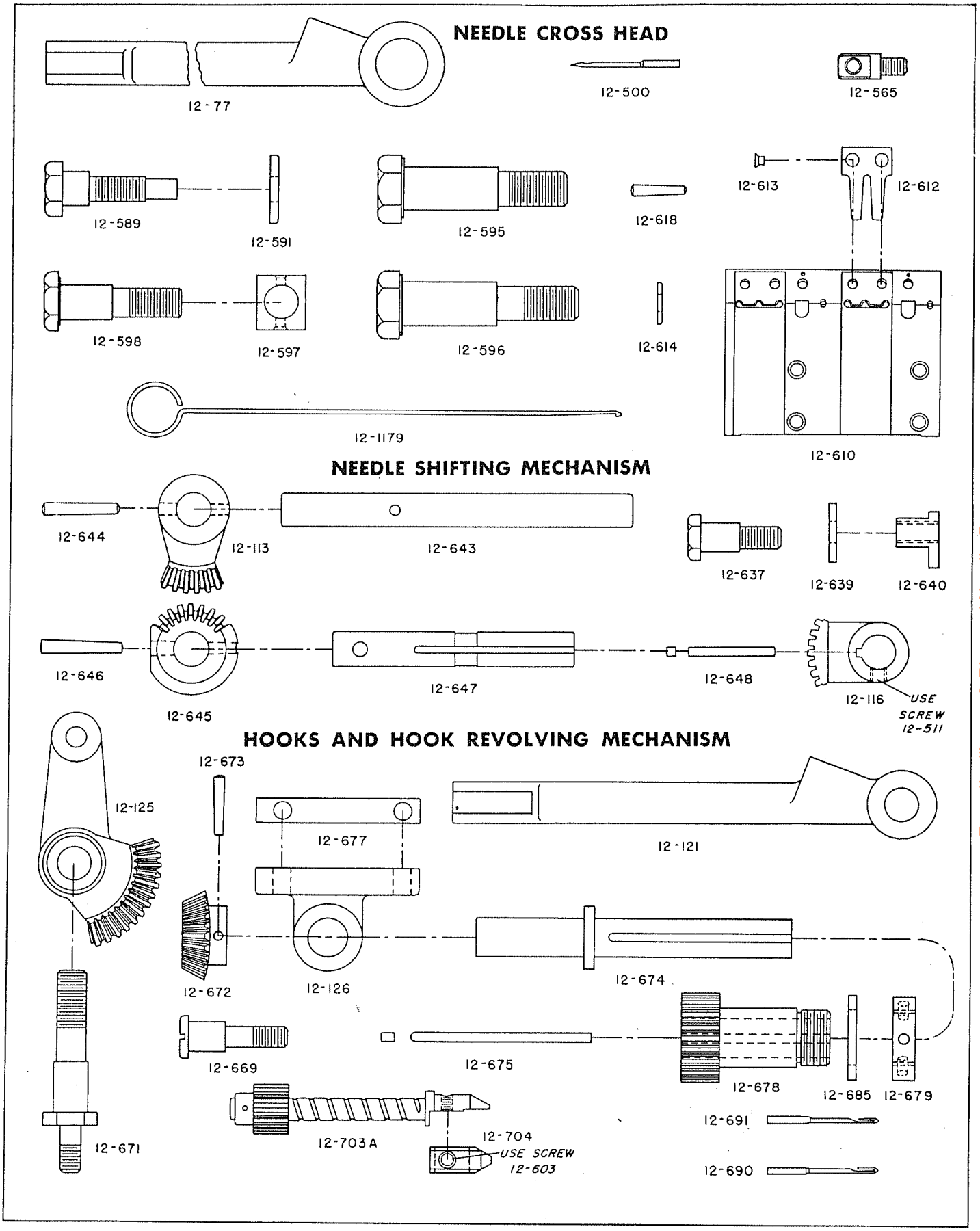


Figure 24—Needle and Hook Mechanisms Parts (approximately ½ size)

PARTS LIST FOR FIGURE 24

PART NO.	PART NAME
Needle Cross Head	
12-77	Needle Connection End — Lower
12-500	Needle
12-565	Needle Cross Head Balance Spring Eye
12-589	Needle Connection Stud — Upper
12-591	Needle Connection Stud Washer
12-595	Needle Cross Head Lever Stud — R.H.
12-596	Needle Cross Head Lever Stud — L.H.
12-597	Needle Cross Head Block
12-598	Needle Cross Head Block Stud
12-610	Presser Plate
12-612	Presser Plate Spring
12-613	Presser Plate Spring Rivet
12-614	Presser Plate Bar Binding Screw Washer
12-618	Presser Plate Bar Adjusting Gear and Collar Taper Pin
12-1179	Thread Hook
Needle Shifting Mechanism	
12-113	Needle Shifting Bevel Segment — Large
12-116	Needle Shifting Segment Gear
12-637	Needle Shifting Connection Stud — Lower
12-639	Needle Shifting Connection Stud Washer
12-640	Needle Shifting Connection Stud (Upper) Nut
12-643	Needle Shifting Lever Shaft
12-644	Needle Shifting Bevel Segment (Large) Taper Pin
12-645	Needle Shifting Bevel Segment — Small
12-646	Needle Shifting Bevel Segment (Small) Taper Pin
12-647	Needle Shifting Segment Shaft
12-648	Needle Shifting Segment Key
Hooks and Hook Revolving Mechanism	
12-121	Hook Revolving Connection End — Lower
12-125	Hook Revolving Segment Bevel Gear
12-126	Hook Revolving Bevel Pinion Shaft Bracket
12-669	Hook Revolving Connection Stud — Upper
12-671	Hook Revolving Segment Stud
12-672	Hook Revolving Bevel Pinion
12-673	Hook Revolving Bevel Pinion Taper Pin
12-674	Hook Revolving Bevel Pinion Shaft
12-675	Hook Revolving Bevel Pinion Shaft Key
12-677	Hook Revolving Bevel Pinion Shaft Bracket Key
12-678	Hook Revolving Gear
12-679	Hook Revolving Gear Nut
12-685	Hook Revolving Gear Washer
12-690	Hook — Large Opening
12-691	Hook — Small Opening
12-703A	Hook Arbor with Pinion and Pin
12-704	Hook Clamp

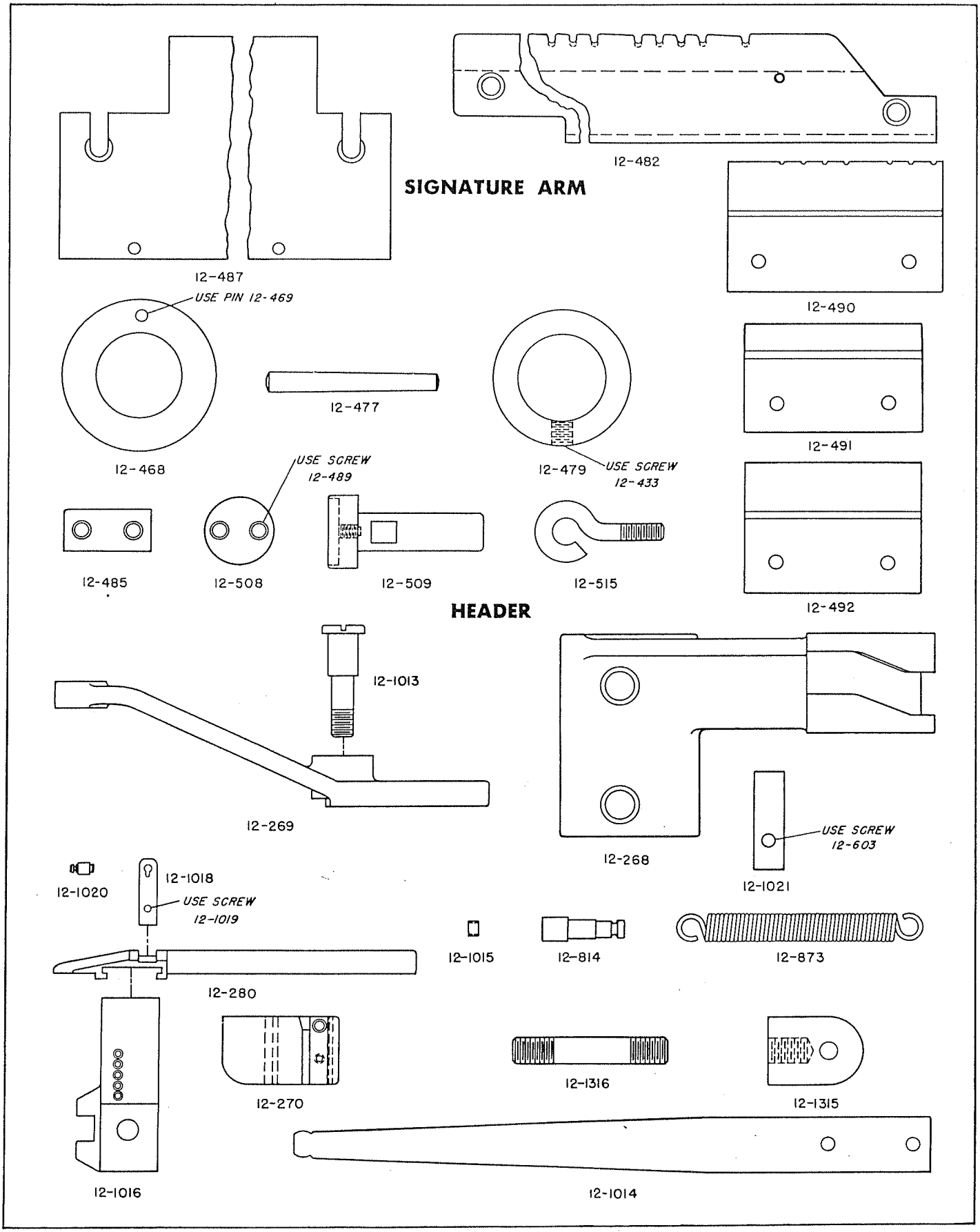


Figure 25—Signature Arm and Header Parts (approximately ½ size)

PARTS LIST FOR FIGURE 25

PART NO.	PART NAME
Signature Arm	
12-468	Signature Arm Lever Washer
12-477	Signature Arm Lever Taper Pin
12-479	Signature Arm Lever Collar
12-482	Signature Arm Top Plate — Narrow
12-485	Signature Arm Top Plate Support
12-487	Signature Arm Top Plate — Wide
12-490	Signature Arm Needle Guide Plate
12-491	Signature Arm End Plate — R.H.
12-492	Signature Arm End Plate — L. H.
12-508	Signature Arm Stop
12-509	Signature Arm Stop Holder
12-515	Signature Arm Balance Spring Eye — Short
Header	
12-268	Header Cam
12-269	Header Cam Lever
12-270	Header — Short
12-280	Header — Long
12-814	Header Cam Roll Spring Stud
12-873	Header Cam Lever Spring
12-1013	Header Cam Lever Stud
12-1014	Header Lever
12-1015	Header Bushing
12-1016	Header Slide
12-1018	Header Spring
12-1020	Header Pin
12-1021	Header Cam Cover
12-1315	Header Lever Block
12-1316	Header Lever Block Stud

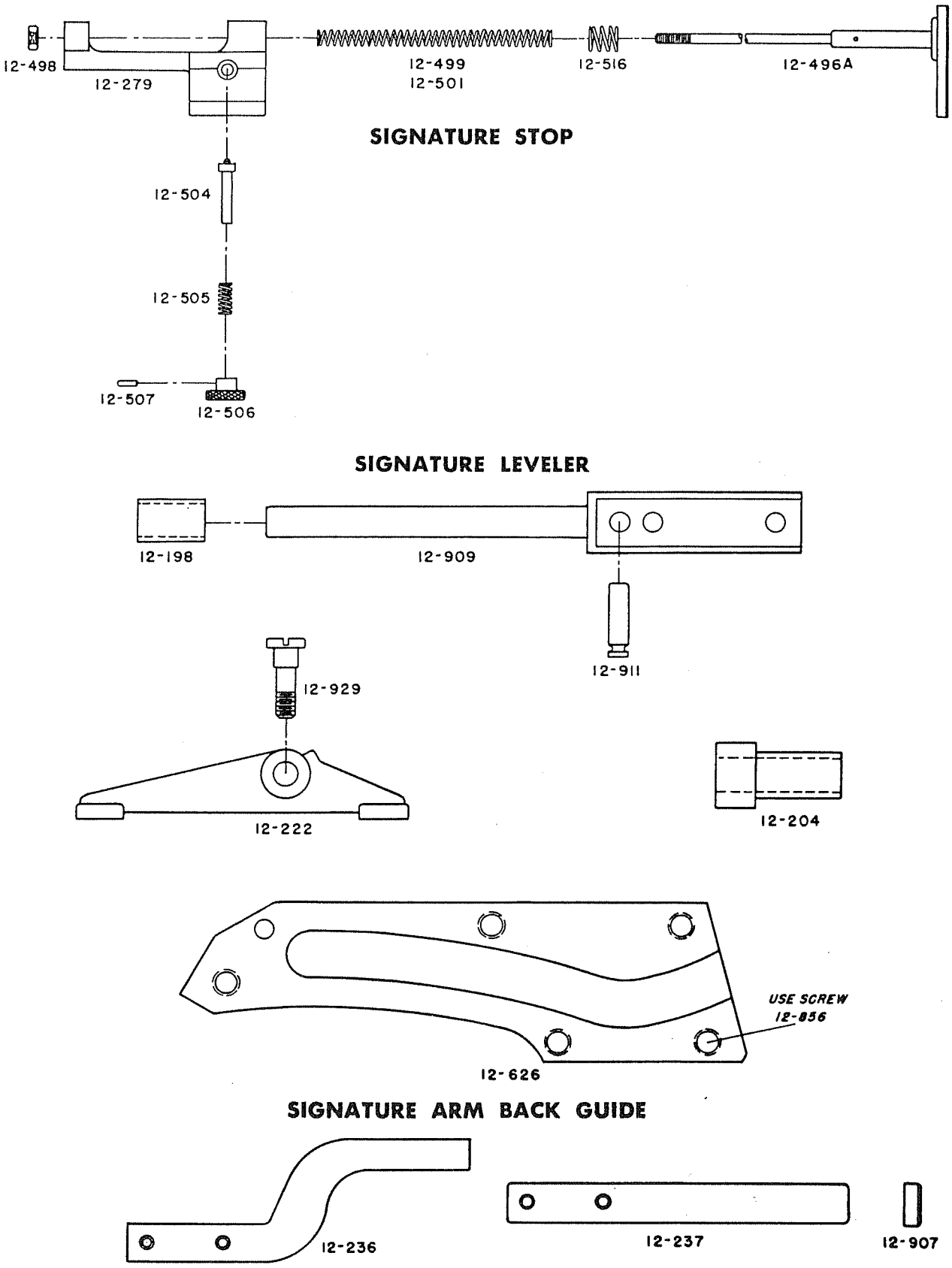


Figure 26—Signature Stop, Signature Leveler, and Back Guide Parts (approximately ½ size)

PARTS LIST FOR FIGURE 26

PART NO.	PART NAME
Signature Stop	
12-279	Signature Stop Bracket
12-496A	Signature Stop Plunger — Complete
12-498	Signature Stop Plunger Nut
12-499	Signature Stop Plunger Spring — Heavy
12-501	Signature Stop Plunger Spring — Light
12-504	Signature Stop Adjusting Pin
12-505	Signature Stop Adjusting Pin Spring
12-506	Signature Stop Adjusting Pin Knob
12-507	Signature Stop Knob Pin
12-516	Signature Stop Plunger Spring — Short
Signature Leveler	
12-198	Signature Leveler Shaft Bushing
12-204	Signature Leveler Carrier Arm Bushing
12-222	Signature Leveler Lifting Lever
12-626	Signature Leveler Bracket Cam
12-909	Signature Leveler Shaft
12-911	Signature Leveler Shaft Spring Pin
12-929	Signature Leveler Lifting Lever Stud
Signature Arm Back Guide	
12-236	Signature Arm Back Guide Curved Extension
12-237	Signature Arm Back Guide Straight Extension
12-907	Signature Arm Back Guide Bar Binder Shoe

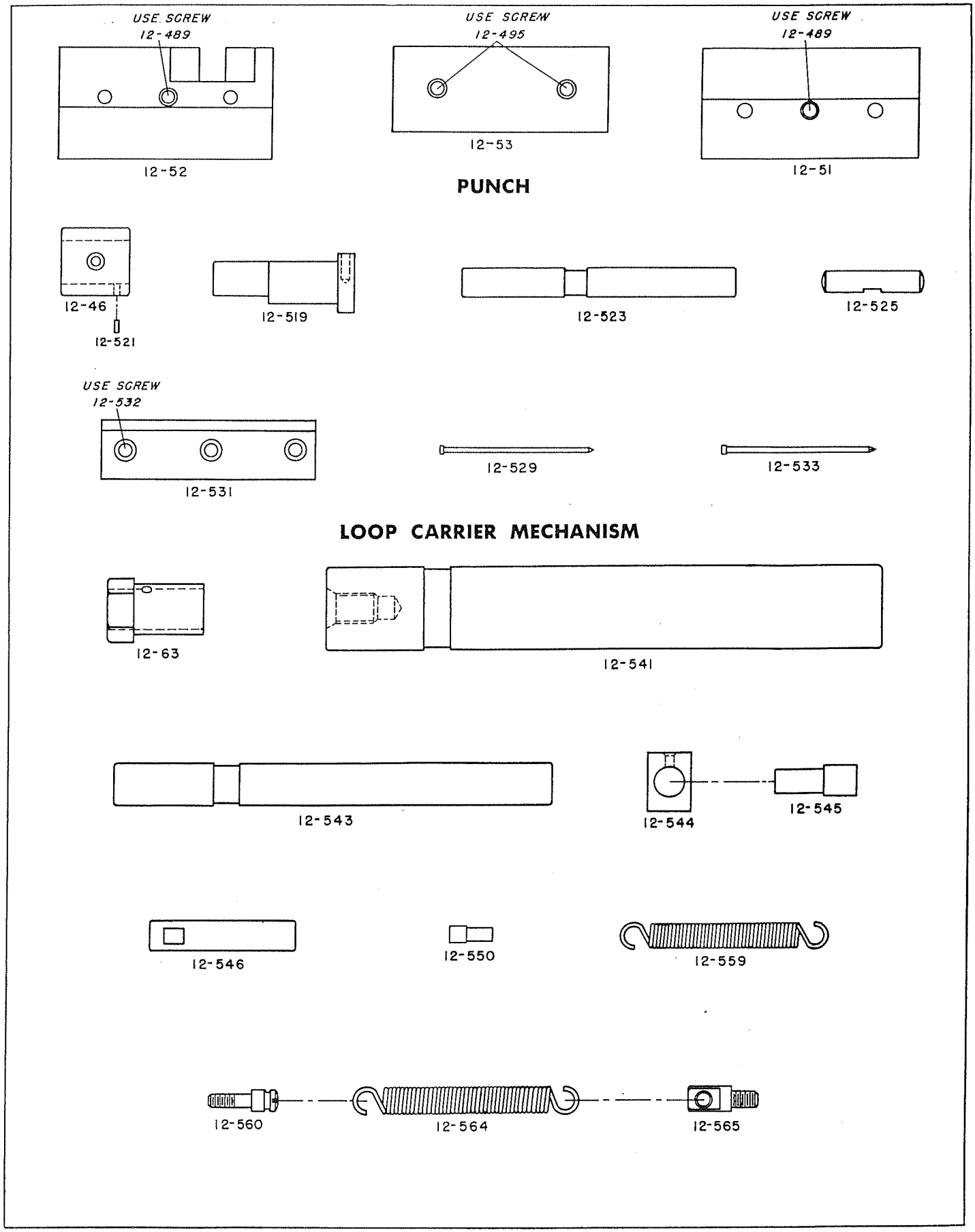


Figure 27—Punch and Loop Carrier Mechanism Parts (approximately ½ size)

PARTS LIST FOR FIGURE 27

PART NO.	PART NAME
Punch	
12-46	Punch Cam Lever Bushing
12-51	Punch Slide Shoe — R.H.
12-52	Punch Slide Shoe — L.H.
12-53	Punch Slide Shoe — Middle
12-519	Punch Connection Stud
12-521	Punch Connection Bushing Pin
12-523	Punch Connection Lever Pin
12-525	Punch Connection Pin
12-529	Punch
12-531	Punch Clamp
12-533	Nail Point Punch
Loop Carrier Mechanism	
12-63	Loop Carrier Rod Bushing
12-541	Loop Carrier Cam Roll Block Stud
12-543	Loop Carrier Cam Roll Block Pin
12-544	Loop Carrier Lever Block
12-545	Loop Carrier Lever Block Stud
12-546	Loop Carrier Lever Pin
12-550	Loop Carrier Rod Collar Block Pin
12-559	Loop Carrier Spring
12-560	Loop Carrier Lever Spring Stud
12-564	Loop Carrier Lever Spring
12-565	Loop Carrier Lever Spring Eye

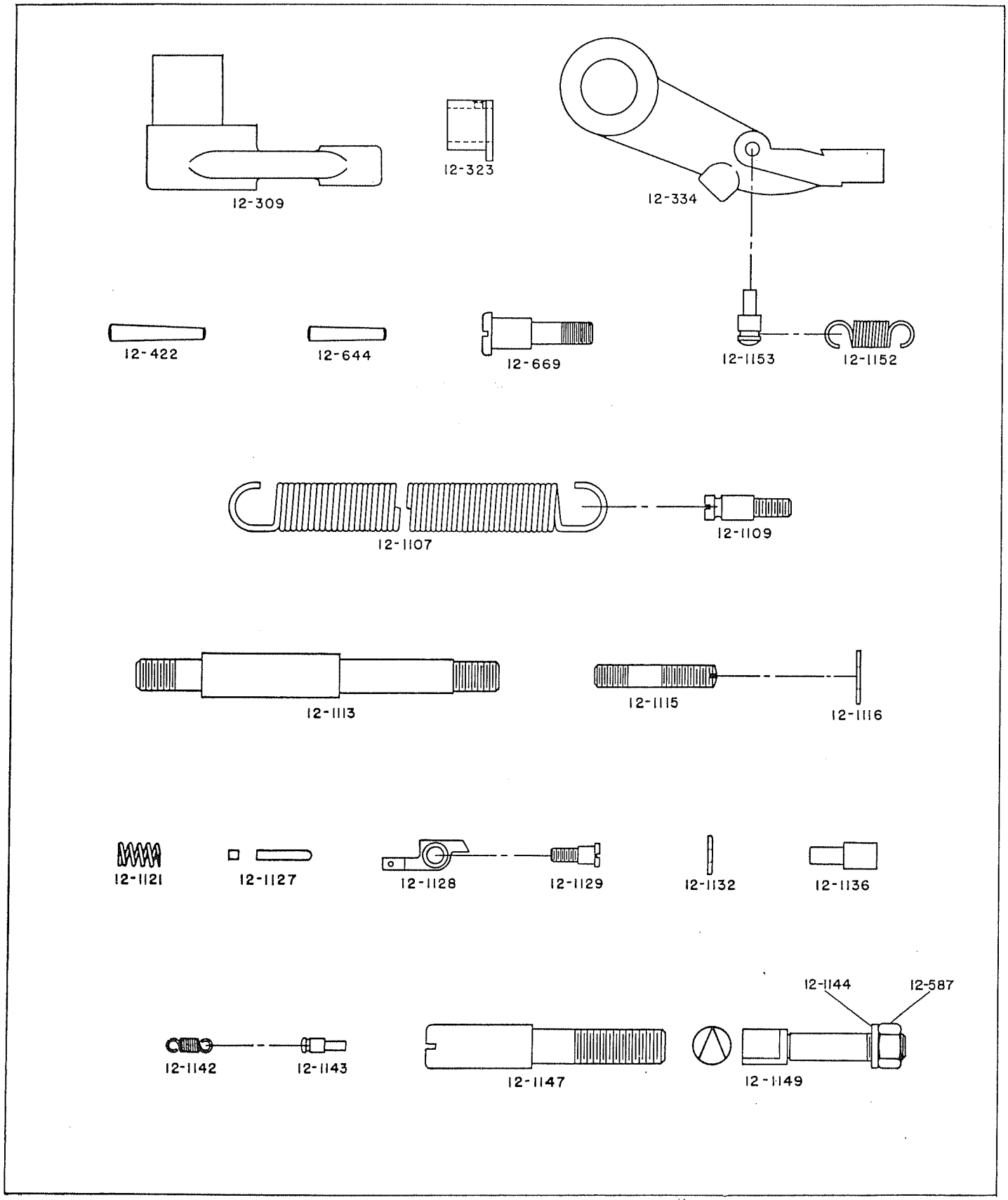


Figure 28—Paste Box and Pasting Mechanism Parts (approximately ½ size)

PARTS LIST FOR FIGURE 28

PART NO.	PART NAME
Paste Box and Pasting Mechanism	
12-309	Paste Box Connection Lever — Upper
12-323	Paste Roll Bearing
12-334	Pasting Treading Pawl
12-422	Pasting Treadle Spring Arm Taper Pin
12-587	Pasting Treadle Pawl Pin Nut
12-644	Paste Box Segment (Small) Taper Pin
12-669	Paste Box Connection Stud
12-1107	Paste Box Cam Lever Spring
12-1109	Paste Box Cam Lever Spring Stud
12-1113	Paste Box Segment Stud
12-1115	Paste Box Stud
12-1116	Paste Box Stud Washer
12-1121	Paste Roll Adjusting Spring
12-1127	Paste Roll Ratchet Key
12-1128	Paste Roll Ratchet Pawl
12-1129	Paste Roll Ratchet Pawl Stud
12-1132	Paste Roll Scraper Screw Washer
12-1136	Paste Carrier Arm Stud
12-1142	Paste Roll Ratchet Pawl Spring
12-1143	Paste Roll Ratchet Pawl Spring Pin
12-1144	Pasting Treadle Pawl Pin Washer
12-1147	Pasting Treadle Stop Stud
12-1149	Pasting Treadle Pawl Pin
12-1152	Pasting Treadle Pawl Spring
12-1153	Pasting Treadle Pawl Spring Pin

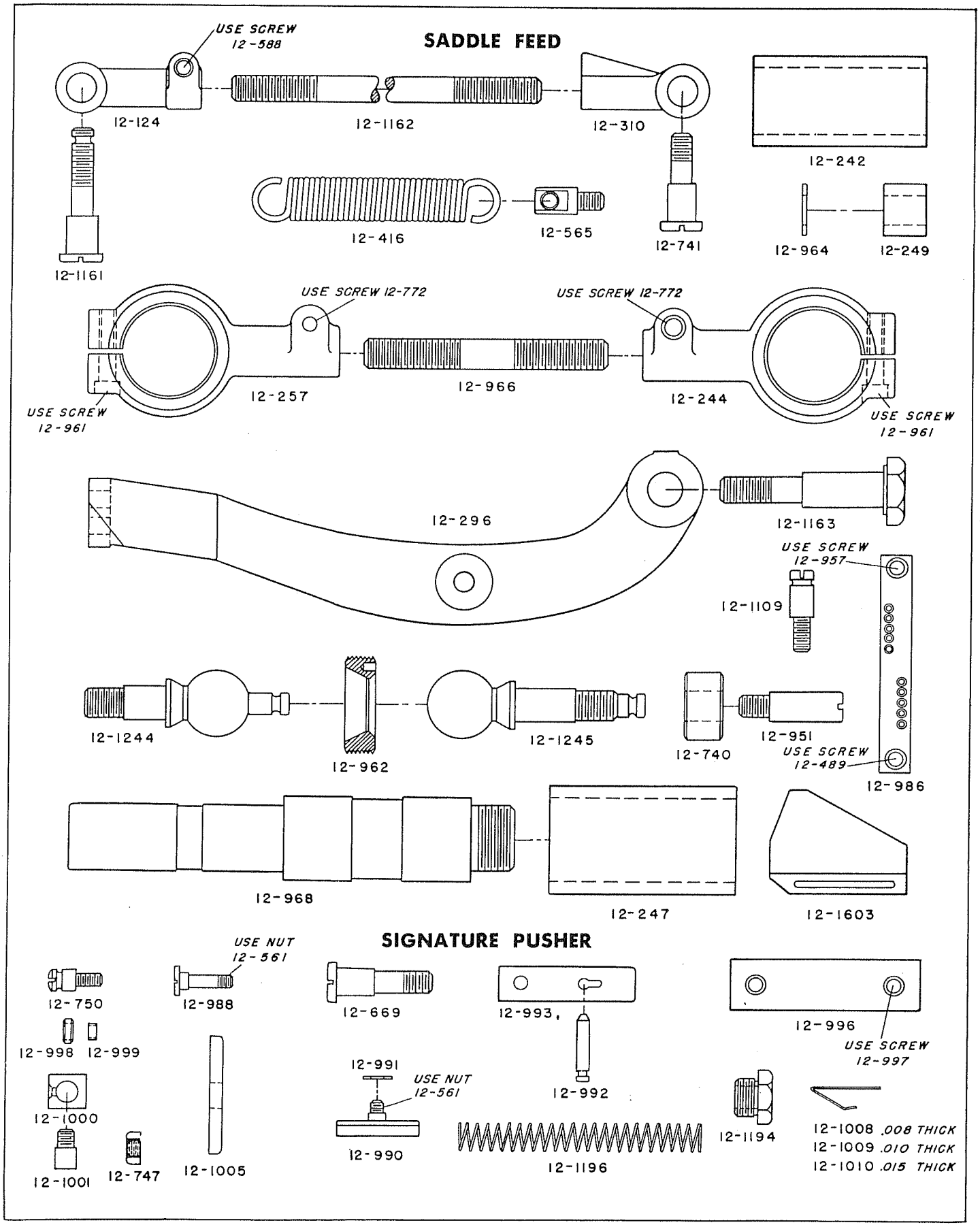


Figure 29—Saddle Feed and Signature Pusher Parts (approximately ½ size)

PARTS LIST FOR FIGURE 29

PART NO.	PART NAME
Saddle Feed	
12-124	Signature Guide Connection End — Upper
12-242	Saddle Feed Cam Lever Bushing
12-244	Saddle Feed Connection End — Upper
12-247	Saddle Feed Bell Crank Bushing
12-249	Saddle Feed Connection Rod Bushing
12-257	Saddle Feed Connection End — Lower
12-296	Signature Guide Lever
12-310	Signature Guide Connection End — Lower
12-416	Signature Guide Connection Spring
12-565	Signature Guide Connection Spring Eye
12-740	Saddle Feed Cam Lever Roll
12-741	Signature Guide Connection Stud — Lower
12-951	Saddle Feed Cam Lever Roll Stud
12-962	Saddle Feed Connection Ball Socket
12-964	Saddle Feed Connecting Rod Stud Washer
12-966	Saddle Feed Connection Rod
12-968	Saddle Feed Bell Crank Stud
12-986	Saddle Feed Slide Block Gib
12-1109	Saddle Feed Cam Lever Spring Stud
12-1161	Signature Guide Connection Stud — Upper
12-1162	Signature Guide Connection Rod
12-1163	Signature Guide Lever Stud
12-1244	Saddle Feed Connection Ball Stud — Lower
12-1245	Saddle Feed Connection Ball Stud — Upper

PART NO.	PART NAME
12-1603	Saddle Signature Stop
Signature Pusher	
12-669	Signature Pusher Lifter Connection Stud
12-747	Signature Pusher Lifter Block Stud Nut
12-750	Signature Pusher Lifter Bell Crank Spring Stud
12-988	Signature Pusher Stud
12-990	Signature Pusher Swivel Stud
12-991	Signature Pusher Swivel Stud Washer
12-992	Signature Pusher Adjusting Pin
12-993	Signature Pusher Adjusting Pin Spring
12-996	Signature Pusher Lifter Holding Plate
12-998	Signature Pusher Lifter Roll
12-999	Signature Pusher Lifter Roll Bushing
12-1000	Signature Pusher Lifter Block
12-1001	Signature Pusher Lifter Block Stud
12-1005	Signature Pusher Lifter Cam Lever Washer
12-1008	Signature Pusher Spring — .008 Thick
12-1009	Signature Pusher Spring — .010 Thick
12-1010	Signature Pusher Spring — .015 Thick
12-1194	Signature Pusher Lifter Connection Rod Bushing
12-1196	Signature Pusher Lifter Connection Rod Spring

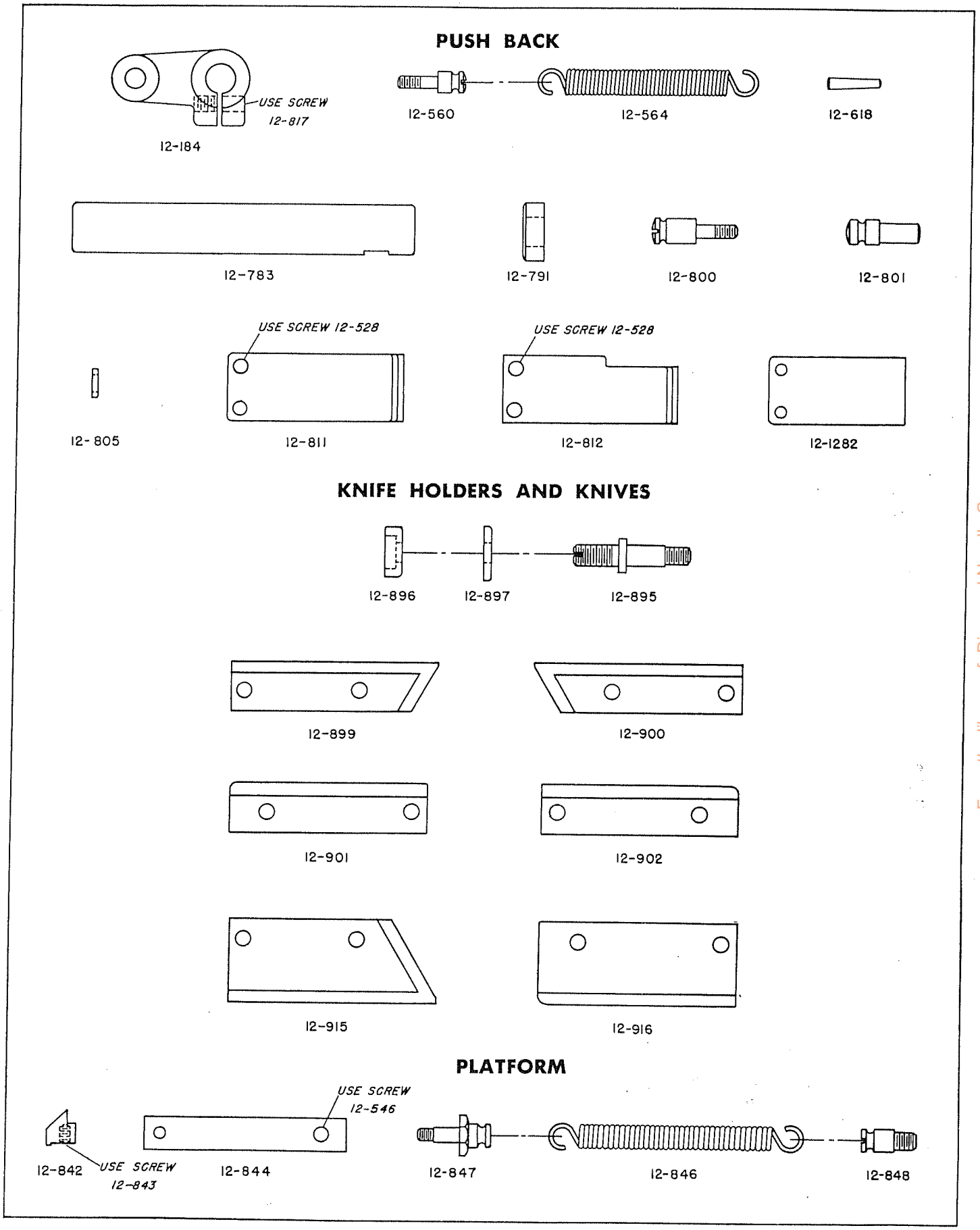


Figure 30—Push Back, Knife Holder and Knife, and Platform Parts (approximately ½ size)

PARTS LIST FOR FIGURE 30

PART NO.	PART NAME
Push Back	
12-184	Push Back Finger Cam Roll Lever
12-560	Push Back Connection Spring Stud
12-564	Push Back Connection Spring
12-618	Push Back Finger Shaft Collar Taper Pin
12-783	Push Back Cam Lever Pin
12-791	Push Back Connection Stud Washer
12-800	Push Back Spring Stud
12-801	Push Back Spring Pin
12-805	Push Back Bearing Screw Washer
12-811	Push Back Finger
12-812	Push Back Finger — L.H. End
12-1282	Push Back Finger — Short
Knife Holders and Knives	
12-895	Knife Holder Stud
12-896	Knife Holder Stud Cupped Washer
12-897	Knife Holder Stud Washer
12-899	Knife — R.H. Front
12-900	Knife — L.H. Front
12-901	Knife — R.H. Rear
12-902	Knife — L.H. Rear
12-915	Knife — L.H. Front — Wide
12-916	Knife — L.H. Rear — Wide
Platform	
12-842	Platform Strip Latch
12-844	Platform Strip Latch Spring
12-846	Platform Strip Spring
12-847	Platform Strip Spring Stud — Long
12-848	Platform Strip Spring Stud — Short

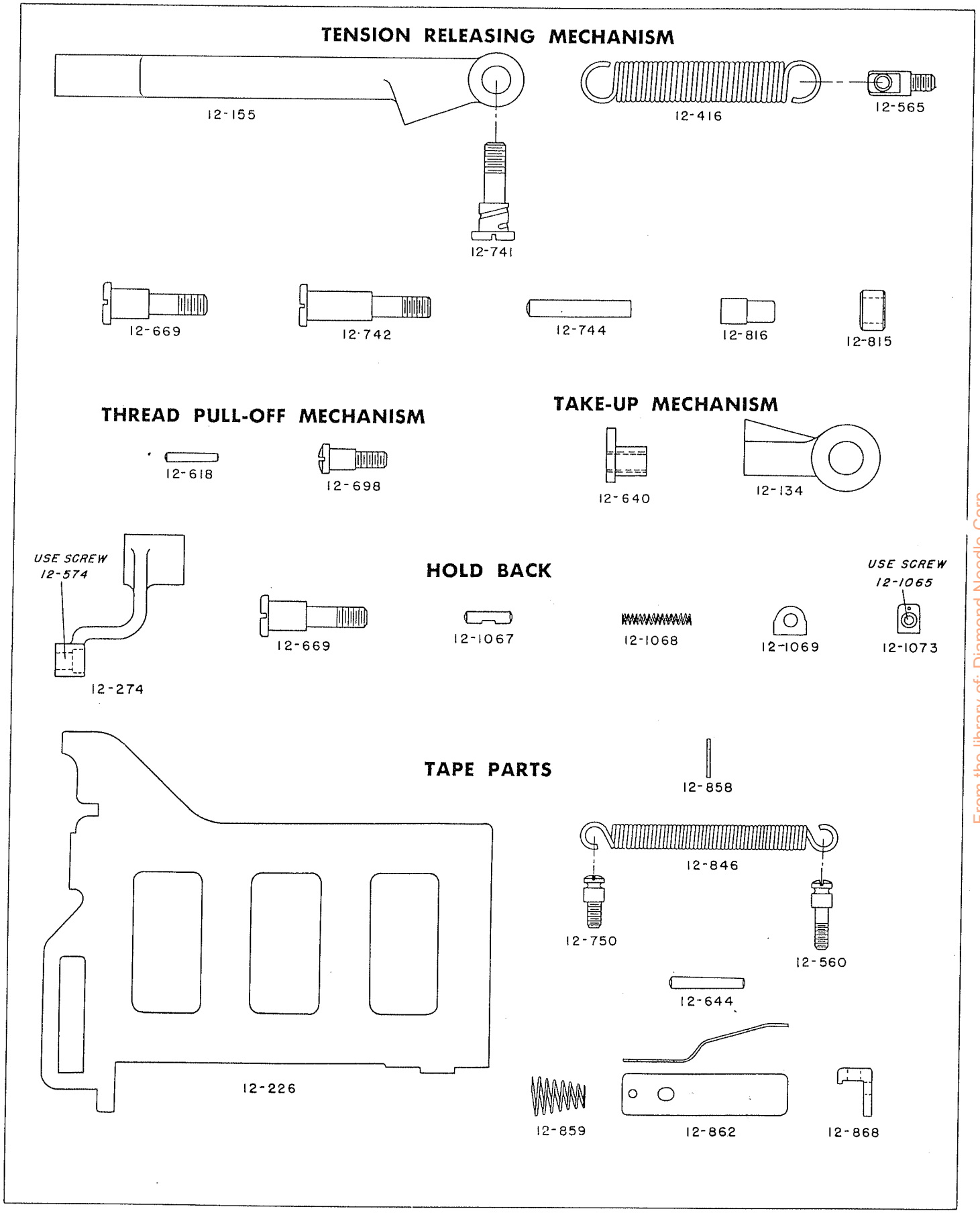


Figure 31—Tension Releasing, Take-Up, and Thread Pull-Off Mechanisms, Hold Back, and Tape Parts (approximately ½ size)

PARTS LIST FOR FIGURE 31

PART NO.	PART NAME
Tension Releasing Mechanism	
12-155	Tension Releasing Connection End — Lower
12-416	Tension Releasing Connection Spring
12-565	Tension Releasing Connection Spring Eye
12-669	Tension Releasing Hand Lever Stud
12-741	Tension Releasing Connection Stud — Lower
12-742	Tension Releasing Connection Stud — Upper
12-744	Tension Releasing Shaft Lever Pin
12-815	Tension Releasing Hand Lever Roll
12-816	Tension Releasing Hand Lever Roll Stud
Take-up Mechanism	
12-134	Take-up Connection End — Lower
12-416	Take-up Connection Spring
12-565	Take-up Connection Spring Eye
12-640	Take-up Connection Stud Nut
Thread Pull-off Mechanism	
12-618	Thread Pull-off Arm Taper Pin
12-698	Thread Pull-off Connection Stud
Hold Back	
12-274	Hold Back Rod Outside Bracket
12-669	Hold Back Connection Stud
12-1067	Hold Back Block Pin
12-1068	Hold Back Spring
12-1069	Hold Back Arm Key
12-1073	Hold Back Support
Tape Parts	
12-226	Tape Box
12-560	Tape Looper Spring Stud — Long
12-644	Tape Looper Lever Taper Pin
12-750	Tape Looper Spring Stud — Short
12-846	Tape Looper Spring
12-858	Tape Box Screw Washer
12-859	Tape Tension Cone Spring
12-862	Tape Tension Spring
12-868	Tape Guide

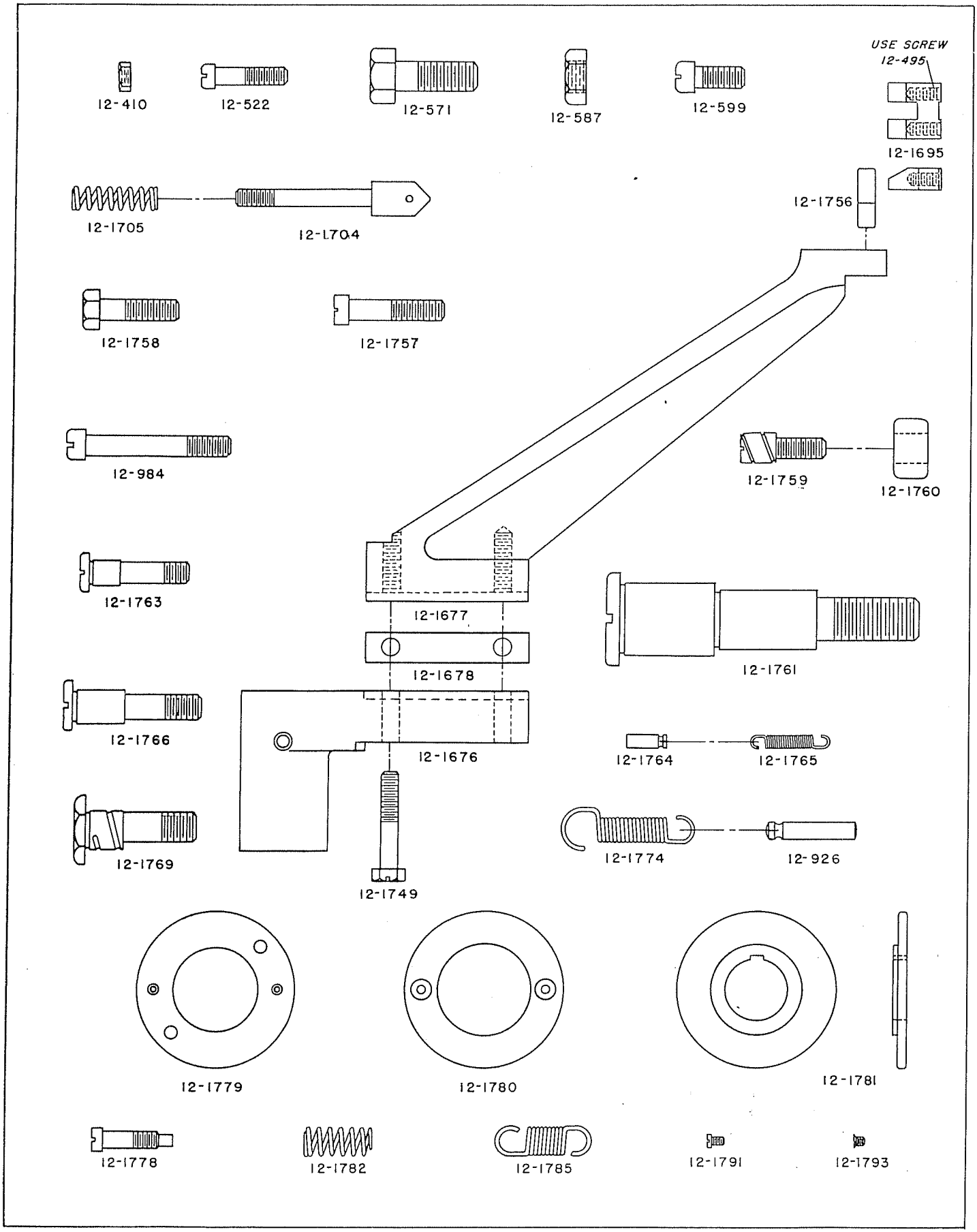


Figure 32—Automatic Cut-Off Parts (approximately ½ size)

PARTS LIST FOR FIGURE 32

PART NO.	PART NAME
Automatic Cut-off	
12-410	Automatic Cut-off Latch Operating Lever Stop Screw Nut
12-522	Automatic Cut-off Ratchet Cam Plunger Block Screws
12-571	Automatic Cut-off Lever Bracket Screw
12-587	Automatic Cut-off Ratchet Connection Rod Nut — R.H. Automatic Cut-off Treadle Connection Rod Nut — R.H.
12-599	Automatic Cut-off Lever Shaft Bearing Screws
12-926	Automatic Cut-off Latch Spring Pin
12-984	Automatic Cut-off Lever Bracket Bearing Screw
12-1676	Automatic Cut-off Front Lever — Lower Part
12-1677	Automatic Cut-off Front Lever — Upper Part
12-1678	Automatic Cut-off Front Lever Key
12-1695	Automatic Cut-off Bar Block
12-1704	Automatic Cut-off Ratchet Cam Plunger
12-1705	Automatic Cut-off Ratchet Cam Plunger Spring
12-1749	Automatic Cut-off Front Lever Screw
12-1756	Automatic Cut-off Front Lever Pin
12-1757	Automatic Cut-off Operating Cam Screw
12-1758	Automatic Cut-off Rear Lever Binding Screw
12-1759	Automatic Cut-off Rear Lever Roll Stud
12-1760	Automatic Cut-off Rear Lever Roll
12-1761	Automatic Cut-off Ratchet Pawl Carrier Stud
12-1763	Automatic Cut-off Ratchet Pawl Stud
12-1764	Automatic Cut-off Ratchet Pawl Spring Pin
12-1765	Automatic Cut-off Ratchet Pawl Spring
12-1766	Automatic Cut-off Treadle Connection Rod End Stud Automatic Cut-off Cam Lever Connection Rod End Stud
12-1769	Automatic Cut-off Cam Roll Eccentric Stud
12-1774	Automatic Cut-off Latch Spring
12-1778	Automatic Cut-off Ratchet Cam Screw
12-1779	Automatic Cut-off Ratchet Cam Friction Collar
12-1780	Automatic Cut-off Ratchet Cam Friction Washer — Leather
12-1781	Automatic Cut-off Ratchet Cam Thrust Collar
12-1782	Automatic Cut-off Ratchet Friction Spring
12-1785	Automatic Cut-off Latch Connection Lever Spring
12-1791	Automatic Cut-off Needle Presser Plate to Bar Screw
12-1793	Automatic Cut-off Needle Presser Plate Knife Screw Automatic Cut-off Needle Presser Plate Strip Screw

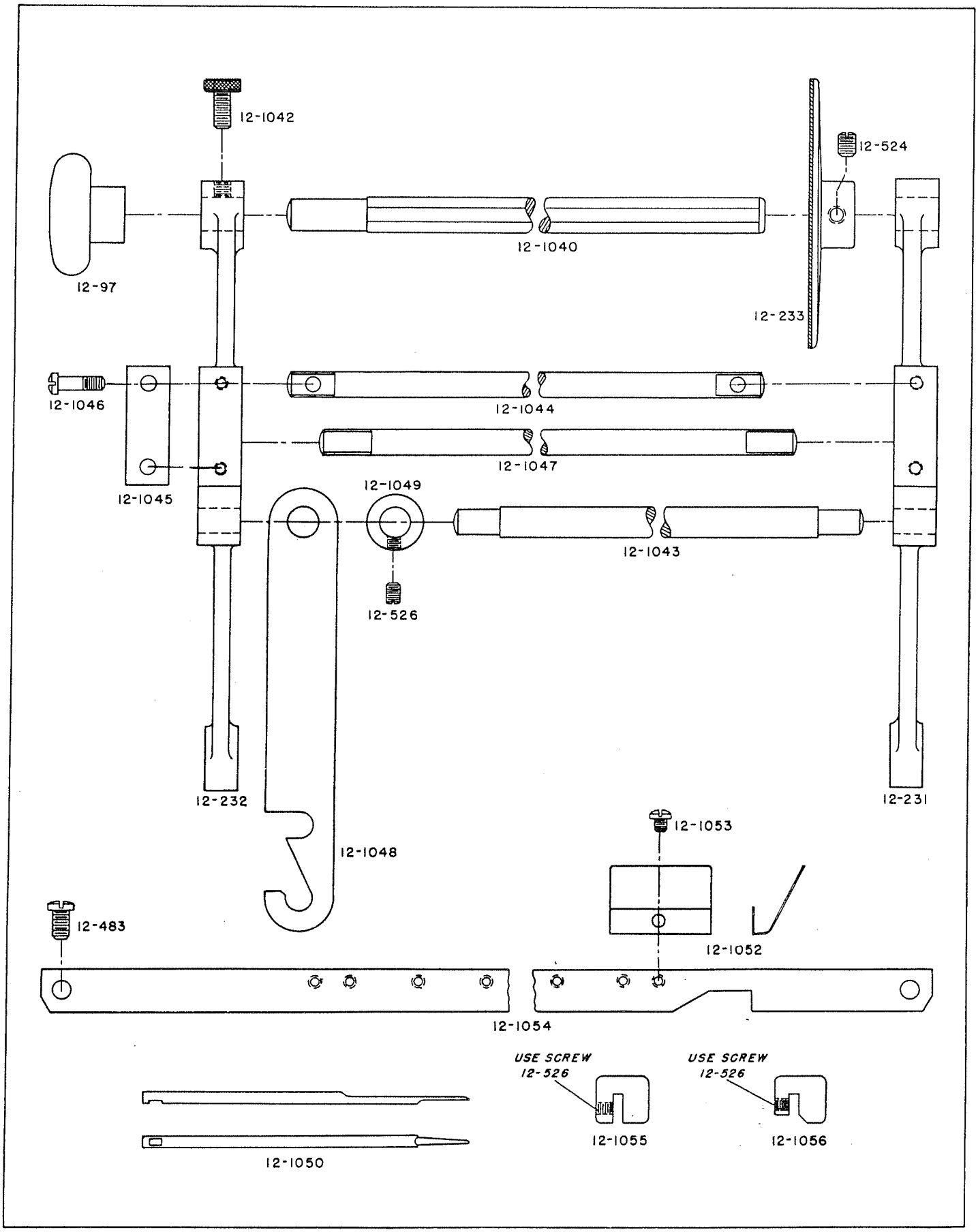


Figure 33—Crash Attachment Parts (approximately ½ size)

PARTS LIST FOR FIGURE 33

PART NO.	PART NAME
Crash Attachment	
12-97	Crash Roll Shaft Knob
12-231	Crash Attachment End — R.H.
12-232	Crash Attachment End — L.H.
12-233	Crash Attachment Disc
12-483	Crash Spring Bar Screw
12-524	Crash Roll Disc Screw
12-526	Crash Attachment Latch Collar Screw Crash Guide Screw
12-1040	Crash Roll Shaft
12-1042	Crash Roll Shaft Screw
12-1043	Crash Attachment Tie Rod
12-1044	Crash Rod
12-1045	Crash Rod Cap
12-1046	Crash Rod Cap Screw
12-1047	Crash Tension Rod
12-1048	Crash Attachment Latch
12-1049	Crash Attachment Latch Collar
12-1050	Crash Attachment Hold Back
12-1052	Crash Spring
12-1053	Crash Spring Screw
12-1054	Crash Spring Bar
12-1055	Crash Guide — L.H.
12-1056	Crash Guide — R.H.

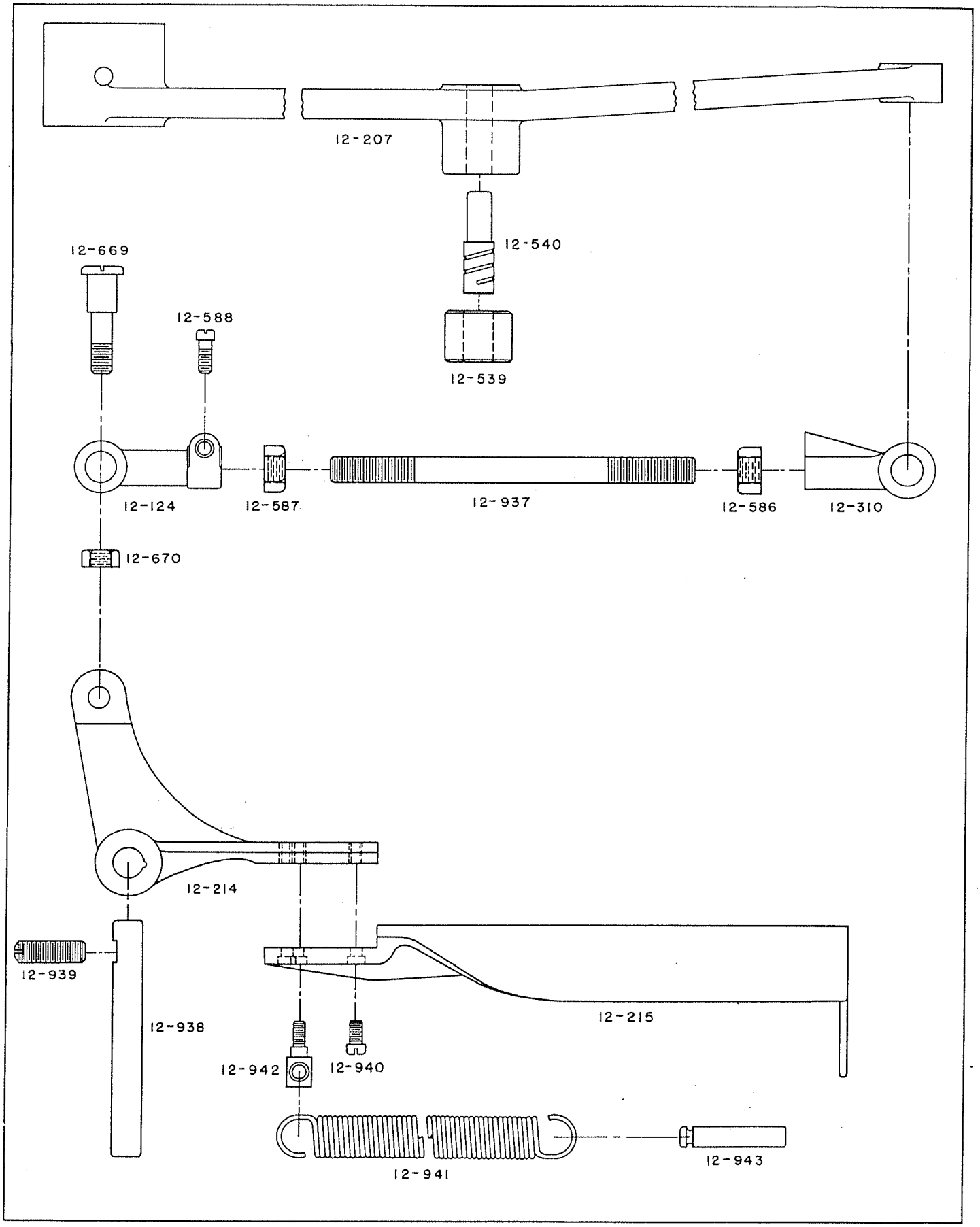


Figure 34—Signature Guard Parts (approximately ½ size)

PARTS LIST FOR FIGURE 34

PART NO.	PART NAME
Signature Guard	
12-124	Signature Guard Connection End — Upper
12-207	Signature Guard Cam Lever
12-214	Signature Guard Body
12-215	Signature Guard Arm
12-310	Signature Guard Connection End — Lower
12-539	Signature Guard Cam Roll
12-540	Signature Guard Cam Roll Stud
12-586	Signature Guard Connection Rod Nut — L.H.
12-587	Signature Guard Connection Rod Nut — R.H.
12-588	Signature Guard Connection End Screw
12-669	Signature Guard Connection Stud
12-670	Signature Guard Connection Stud Nut
12-937	Signature Guard Connection Rod
12-938	Signature Guard Body Pin
12-939	Signature Guard Body Pin Screw
12-940	Signature Guard Arm Screw
12-941	Signature Guard Spring
12-942	Signature Guard Spring Eye
12-943	Signature Guard Spring Pin

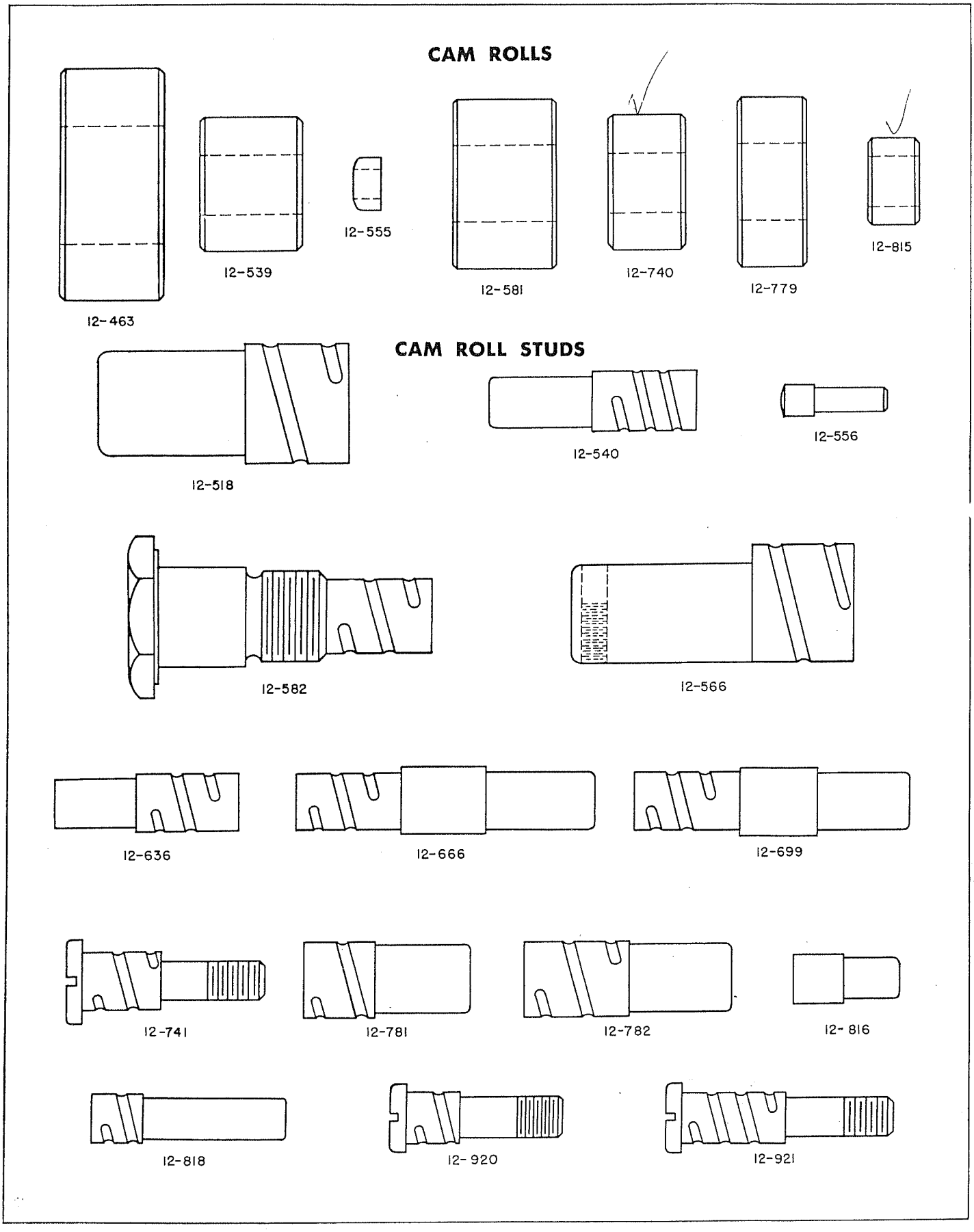


Figure 35—Cam Rolls and Cam Roll Studs, full size

PARTS LIST FOR FIGURE 35

PART NO.	PART NAME
Cam Rolls	
12-463	Saddle Feed Cam Roll
	Signature Arm Cam Roll
12-539	Hold Back Cam Roll
	Hook Revolving Cam Roll
	Loop Carrier Cam Roll
	Needle Shifting Cam Roll
	Signature Pusher Lifter Cam Roll
	Take-up Cam Roll
12-555	Loop Carrier Rod Cam Roll
12-581	Needle Cam Roll
	Paste Box Cam Roll
	Punch Cam Roll
	Push Back Cam Roll — L.H.
	Signature Guide Cam Roll
12-740	Tension Releasing Cam Roll
	Saddle Feed Cam Lever Roll
12-779	Push Back Cam Roll — R.H.
12-815	Header Cam Roll
	Push Back Finger Cam Roll
	Signature Leveler Carrier Arm Cam Roll
	Signature Leveler Shaft Arm Cam Rolls
Cam Roll Studs	
12-518	Saddle Feed Cam Roll Stud
12-540	Hold Back Cam Roll Stud
	Loop Carrier Cam Roll Stud
	Signature Pusher Lifter Cam Roll Stud
12-556	Loop Carrier Rod Cam Roll Stud
12-566	Signature Arm Cam Roll Stud
12-582	Needle Cam Roll Stud
12-636	Needle Shifting Cam Roll Stud
12-666	Hook Revolving Cam Roll Stud
12-699	Take-up Cam Roll Stud
12-741	Tension Releasing Cam Roll Stud
12-781	Push Back Cam Roll Stud — R.H.
12-782	Paste Box Cam Roll Stud
	Punch Cam Roll Stud
	Push Back Cam Roll Stud — L.H.
	Signature Guide Cam Roll Stud
12-816	Push Back Finger Cam Roll Stud
12-818	Signature Leveler Carrier Arm Cam Roll Stud
12-920	Signature Leveler Shaft Arm Cam Roll Stud — Outer
12-921	Signature Leveler Shaft Arm Cam Roll Stud — Inner

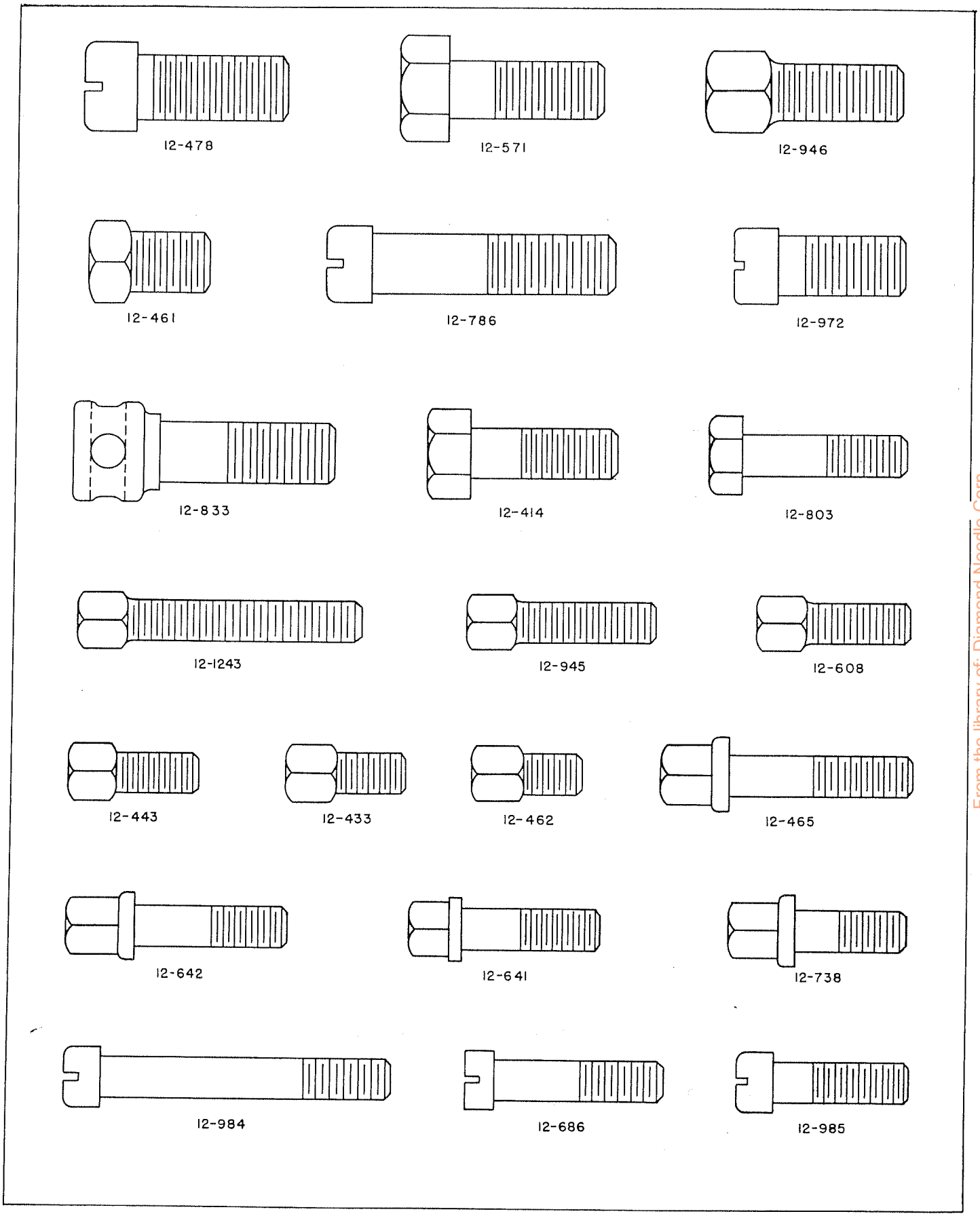


Figure 36—Screws, full size

PARTS LIST FOR FIGURE 36

PART NO.	PART NAME
12-414	Forked Shipper Lever Bracket Screw
	Signature Pusher Lifter Cam Lever Washer Screw
12-433	Brace Rod Collar Set Screw
	Cam Lever Shaft Collar Screw
	First Shaft Pinion Screw
	Hand Wheel Screw
	Pasting Treadle Shaft Collar Screw
	Second Shaft Collar Screw
	Signature Arm Lever Collar Screw
12-443	Cam Lever Shaft Set Screw
	Needle Shifting Cam Drive Gear Screw
	Platform Elevating Screw Binding Screw
	Signature Arm Guide Bar Binding Screw
12-461	Loop Carrier Cam Screw — Large
	Needle Cam (R.H.) Set Screw — Large
	Push Back Cam (R.H.) Set Screw — Large
	Signature Arm and Punch Cam Screw — Large
	Tension Releasing Cam Flange Set Screw — Large
12-462	Loop Carrier Cam Screw — Small
	Needle Cam (R.H.) Set Screw — Small
	Platform Elevating Hand Wheel Set Screw
	Push Back Cam (R.H.) Set Screw — Small
	Signature Arm and Punch Cam Screw — Small
	Tension Releasing Cam Flange Set Screw — Small
12-465	Paste Box Cam Lever Binding Screw
	Signature Arm Cam Roll Stud Binding Screw
	Signature Guide Bar Holder Cap Screw
12-478	Signature Arm Bracket Screw

PART NO.	PART NAME
12-571	Saddle Feed Bell Crank Bracket Screw
	Saddle Feed Large Bracket Screw
	Upright Screw
12-608	Saddle Feed Bell Crank Stud Set Screw
	Second Shaft Gear Set Screw
12-641	Needle Shifting Lever Binding Screw
	Paste Box Cam Screw
	Pasting Treadle Shaft Arm Screw
	Push Back Connection Eccentric Stud Binding Screw
	Take-up Cam Binding Screw
12-642	Needle Shifting Lever Clamp Screw
	Signature Leveler Cam Bracket Screw
12-686	Hold Back Cam Screw
	Hook Block Screw
	Saddle Feed Slide Rod Bracket Screw — Long
12-738	Tension Releasing Cam Binding Screw
12-786	Push Back Cam Lever Bracket Screw
12-803	Presser Plate Bar Connection Bar Screw
	Push Back Bearing Screw
12-833	Platform Elevation Binding Screw
12-945	Saddle Feed Cam Set Screw — Small
12-946	Saddle Feed Cam Set Screw — Large
12-972	Header Cam Screw
	Saddle Feed Bell Crank Bracket Screw
12-984	Automatic Cut-off Lever Bracket Bearing Screw
12-985	Saddle Feed Slide Rod Bracket Screw — Short
12-1243	Cam Shaft Bevel Gear Hub Key Screw
	Loop Carrier Cam Roll Block Pin Set Screw
	Loop Carrier Cam Roll Block Stud Set Screw

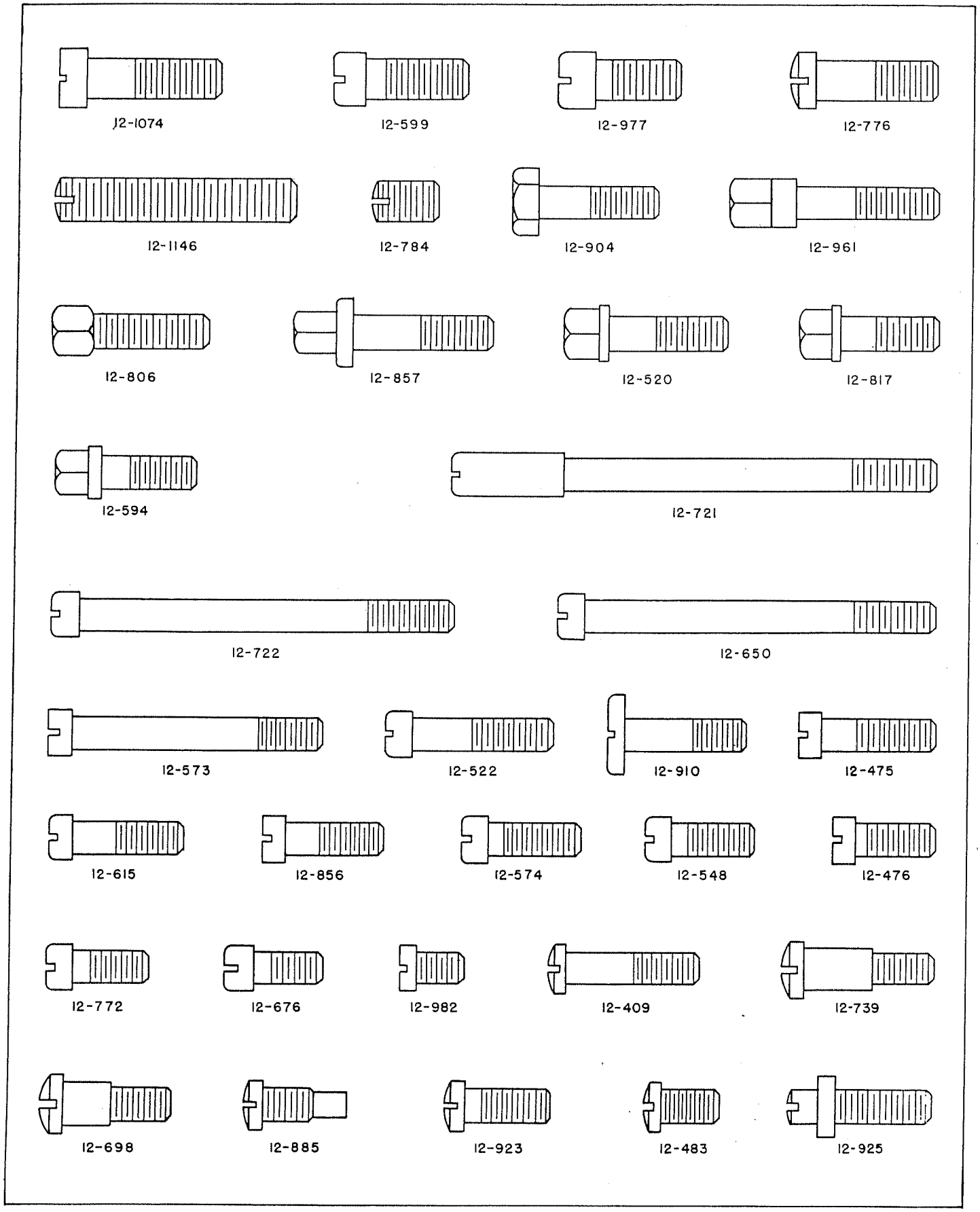


Figure 37—Screws, full size

PARTS LIST FOR FIGURE 37

PART NO.	PART NAME
12-409	Pasting Treadle Spring Screw
	Presser Plate Bar Binding Screw
	Treadle Lever Link Screw
12-475	Signature Arm Lever Screw — Long
12-476	Signature Arm Back Guide Screw
	Signature Arm Lever Screw — Short
12-483	Signature Arm Top Plate (Narrow and Wide) Screw
12-520	Punch Connection Stud Binding Screw
12-522	Punch Connection Stud Bushing Binding Screw
12-548	Loop Carrier Lever Bracket Screw
	Needle Shifting Cam Gear Screw
12-573	Cross Head Screw — Long
12-574	Cross Head Bracket Screw
	Cross Head Screw — Short
	First Shaft Bushing Screw
	Hold Back Outside Bracket Screw
	Hook Revolving Bevel Pinion Bracket Screw
	Paste Box Bar Screw
	Paste Box Bracket (L.H.) Screw
	Paste Carrier Arm Screw
	Push Back Finger Cam Screw
	Take-up Arm Screw
	Take-up Lever Screw
	Tape Box Bar Screw
12-594	Needle Connection Spring Clamp Screw
	Take-up Connection Spring Clamp Screw
	Tension Releasing Connection Spring Clamp Screw
12-599	Needle Cross Head Cap Screw
12-615	Presser Plate Bar Bracket Screw
	Thread Tension Bar Screw
	Thread Rack Screw

PART NO.	PART NAME
12-650	Needle Shifting Bracket Screw
12-676	Tape Guide Bar Screw
12-698	Tension Releasing Cam Holding Screw
12-721	Tension Bar Bracket Screw — Long
12-722	Tension Bar Bracket Screw — Short
12-739	Take-up Cam Holding Screw
12-772	Driving Gear Guard Screw
	Paste Box Bracket (R.H.) Screw
	Saddle Feed Connection End Screw — Short
	Thread Pull-off Bracket Screw
12-776	Push Back Cam Screw
12-784	Push Back Cam Lever Pin Screw
12-806	Push Back Bar Adjusting Screw
12-817	Hold Back Lever Binding Screw
	Push Back Finger Cam Roll Lever Screw
	Signature Leveler Shaft Arm Screw
12-856	Signature Leveler Bracket Cam Screw
	Tape Box Bar Screw
12-857	Tape Box Screw
12-885	Tape Looper Lever Screw
12-904	Paste Box Bar Hex Head Screw
12-910	Signature Leveler Screw
12-923	Signature Guide Screw
	Signature Guide Bracket Screw
	Signature Leveler Shaft Arm Cam Screw
12-925	Signature Leveler Shaft Arm Cam Adjusting Screw
12-961	Saddle Feed Connection End Screw
12-977	Saddle Feed Bracket (Front and Rear) Screw
12-982	Saddle Feed Slide Bar Screw
12-1074	Hold Back Cam Screw — Short
12-1146	Pasting Treadle Stop Screw

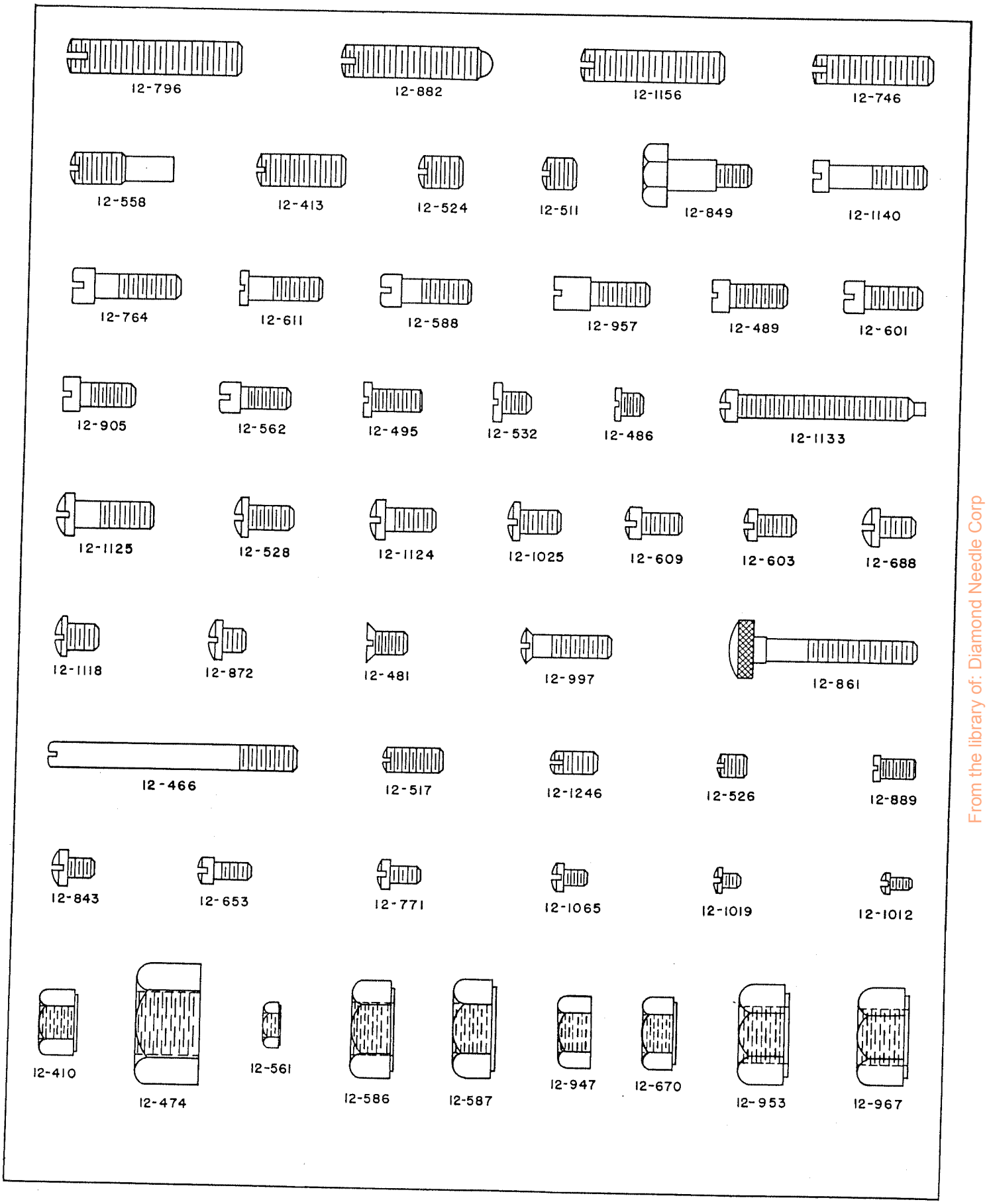


Figure 38—Screws and Nuts, full size

PARTS LIST FOR FIGURE 38

PART NO.	PART NAME
Screws	
12-413	Forked Shipper Lever Shaft Set Screw
12-466	Signature Arm Cam Roll Stud Adjusting Screw
12-481	Push Back Bar Plate Screw Saddle Feed Plate (Rear) Screw Signature Arm Back Plate Screw Signature Guide Plate Screw
12-486	Platform Strip Latch Spring Screw Signature Arm Top Plate Support Screw
12-489	Punch Slide Shoe (R.H. and L.H.) Screw Saddle Feed Slide Block Gib Screw Signature Arm Stop Screw
12-495	Header Lever Screw Header Slide T Strip Screw Punch Slide Shoe (Middle) Screw Signature Stop T Strip Screw
12-511	Needle Shifting Segment Screw
12-517	Punch Slide Link and Connection Screw
12-524	Loop Carrier Bracket Screw Punch Connection Lever Pin Screw Signature Arm Stop Set Screw Signature Leveler Carrier Arm Pin Screw
12-526	Take-up Rod Screw
12-528	Loop Carrier Screw Needle Cross Head Guard Screw Paste Box Stop Screw Paste Carrier Screw Punch Slide Bracket Screw Push Back Finger Screw Take-up Spring Holder Screw Tape Guide Screw
12-532	Punch Clamp Screw
12-558	Loop Carrier Rod Cam Adjusting Screw
12-562	Loop Carrier Rod Spring Arm Screw
12-588	Hold Back Arm Binding Screw Needle Connection End (Upper) Screw Take-up Shaft Bracket Screw
12-601	Paste Carrier Bar Screw Saddle Feed Slide Block Safety Strip Screw Shifting Needle Block Screw Signature Stop Screw Stationary Needle Block Screw

(continued on next page)

PARTS LIST FOR FIGURE 38 (Continued)

PART NO.	PART NAME
12-603	Header Cam Cover Screw Hook Clamp Screw Shifting Needle Clamp Screw
12-609	Stationary Needle Clamp Screw
12-611	Presser Plate Screw Punch Slide Cap Screw
12-653	Needle Shifting Bracket Cover Screw Thread Pull-off Bracket Screw
12-688	Hook Block Guard Screw Knife Screw Signature Pusher Adjusting Pin Screw
12-746	Paste Carrier Stop Screw Tape Looper Lever Stop Screw
12-764	Signature Back Guide Extension Screw Signature Leveler Lifting Cam (Small) Screw Thread Pull-off Lever Screw
12-771	Hold Back Pin Screw Hold Back Screw Thread Pull-off Rod Screw — Short
12-796	Push Back Stop Screw
12-843	Platform Strip Latch Screw
12-849	Platform Strip Shoulder Screw
12-861	Tape Tension Screw
12-872	Signature Leveler Spring Screw Tape Guide Plate Screw
12-882	Tape Looper Stop Screw
12-889	Tape Looper Bar Screw
12-905	Signature Arm Top Plate Strip Screw
12-957	Saddle Feed Slide Block Gib Screw
12-997	Signature Pusher Lifter Holding Screw
12-1012	Signature Pusher Spring Screw
12-1019	Header Spring Screw
12-1025	Saddle Feed Slip-off Plate Screw
12-1065	Hold Back Support Screw
12-1118	Paste Box Cover Butt Screw
12-1124	Paste Roll Bearing Cap Screw
12-1125	Paste Roll Scraper Screw Paste Roll Washer Screw
12-1133	Paste Roll Scraper Adjusting Screw
12-1140	Paste Box End Screw
12-1156	Pasting Treadle Pawl Stop Screw
12-1246	Paste Roll Adjusting Screw Thread Guide Rod Screw

(continued on next page)

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PARTS LIST FOR FIGURE 38 (Continued)

PART NO.	PART NAME
Nuts	
12-410	Paste Carrier Stop Screw Nut
	Pasting Treadle Pawl Stop Screw Nut
	Pasting Treadle Spring Screw Nut
	Push Back Bar Adjusting Screw Nut
	Push Back Stop Screw Nut
	Signature Arm Balance Spring Eye Adjusting Nut
	Signature Leveler Lifting Lever Stud Nut
	Signature Leveler Screw Nut
	Signature Leveler Spring Hook Nut
	Tape Looper Lever Stop Screw Nut
	Tape Looper Stop Screw Nut
	Treadle Lever Link Screw Nut
12-474	Pasting Treadle Stop Stud Nut
12-561	Loop Carrier Lever Spring Stud Nut
	Punch Slide Link and Connection Screw Nut
	Push Back Spring Stud Nut
	Signature Pusher Lifter Holding Screw Nut
	Signature Pusher Stud Nut
	Tape Looper Spring Stud Nut

PART NO.	PART NAME
12-586	Hook Revolving Connection Rod Nut —L.H.
	Needle Connection Rod Nut — L.H.
	Signature Guide Connection Rod Nut — L.H.
	Signature Pusher Lifter Connection Rod Nut — L.H.
	Tension Releasing Connection Rod Nut — L.H.
12-587	Hook Revolving Connection Rod Nut —R.H.
	Needle Connection Rod Nut — R.H.
	Paste Box Connection Rod Nut — R.H.
	Push Back Connection Stud Nut
	Saddle Feed Connection Rod Stud Nut — Large
	Tension Releasing Connection Rod Nut — R.H.
12-670	Header Cam Lever Stud Nut
	Hold Back Connection Stud Nut
12-947	Saddle Feed Cam Small Set Screw Check Nut
12-953	Paste Box Segment Stud Nut
	Saddle Feed Cam Lever Guard Stud Nut
	Saddle Feed Cam Lever Spring Rod Nut
	Saddle Feed Connection Rod Guard Nut
	Saddle Feed Connection Rod Nut — R.H.
	Saddle Feed Connection Stud Nut
12-967	Saddle Feed Connection Rod Nut — L.H.

SMYTH NO. 12C SEWING MACHINE

The 12C model is available for those binders whose work requires extremely exact positioning of the stitches. All hook and needle blocks are adjustable in multiples of 5/16" and therefor may be positioned to suit the work.

Figure 39 identifies all of the parts which are used only on the 12C model. If a 12C model is equipped with an Automatic Cut-off Attachment the following parts are substituted for part 12-3130 Presser Piate:

12-3167 ACO Needle Presser Plate
12-1787 ACO Hook Presser Plate—wide
12-3654 ACO Holdback support Bar

The following part is substituted for 12-1789 Automatic Cut-off Bar:

12-3655 Automatic Cut-Off Bar.

PARTS LIST FOR FIGURE 39

PART NO.	PART NAME
12-483	Hook Block Guard Screw
12-489	Push Back Bar Block Screw
12-3003	Individual Hook Block
12-3004	R.H. End Hook Block
12-3103	Hook Block Guard
12-3104	Hook Block Guard Stud
12-3106	Signature Arm Needle Guide Plate
12-3122	Push Back Bar Block
12-3130	Presser Plates
12-3136	Hook Block Screw
12-3144	Take-up Rod
12-3146	Signature Arm Needle Guide Plate — R.H.
12-3650	Push Back Bar
12-3651	Needle Cross Head
12-3652	Presser Plate Bar
12-3653	Needle Shifting Rack
12-3656	Punch Slide
12-3657	Signature Arm Top Plate — Narrow
12-3658	Loop Carrier Rod

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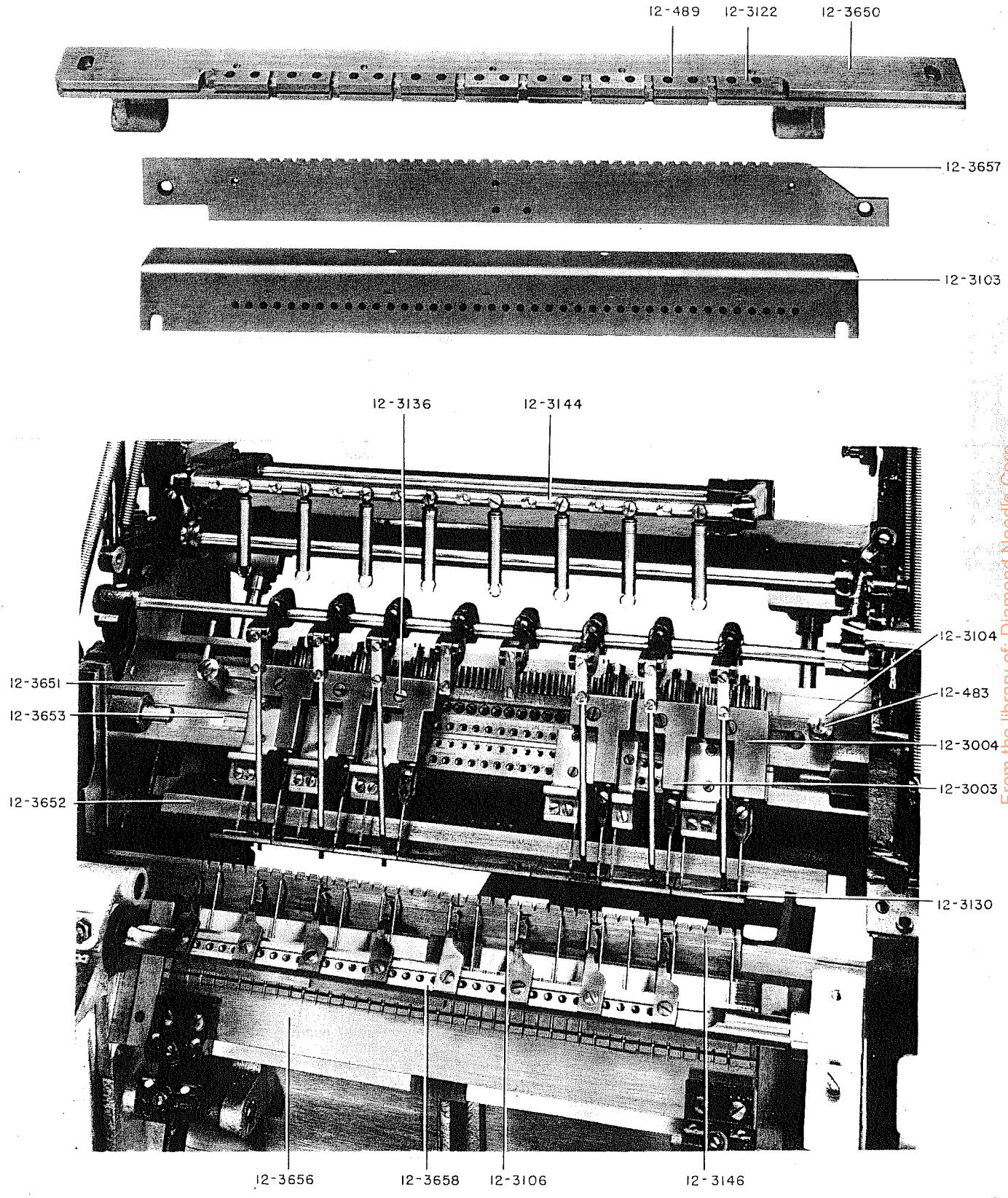

Figure 39—Front View No 12C Model

ALPHABETICAL PARTS LIST

PART NAME	PART No.	See Page
ARBOR, Hook with pinion and pin	12-703A	44
ARM, Hold back	12-273	30
ARM, Loop carrier rod spring	12-64	34
ARM, Paste box ratchet	12-324	34
ARM, Paste carrier — L.H.	12-325	34
ARM, Paste carrier — R.H.	12-326	30
ARM, Pasting treadle shaft	12-333	26
ARM, Pasting treadle spring	12-335	26
ARM, Signature	12-38	26
ARM, Signature guard	12-215	64
ARM, Signature leveler carrier	12-209A	26
ARM, Signature leveler shaft	12-216	34
ARM, Take-up	12-138	30
ARM, Thread pull-off	12-164	26
BAR, Automatic cut-off	12-1789	43
BAR, Automatic cut-off hold back support	12-1790	43
BAR, Automatic cut-off presser plate bar connection	12-1707	36
BAR, Crash spring	12-1054	62
BAR, Paste box	12-317	30
BAR, Paste carrier	12-349	30
BAR, Presser plate	12-95	30
BAR, Push back	12-177	30
BAR, Saddle feed slide	12-253	32
BAR, Signature arm back guide	12-695	36
BAR, Tape box	12-223	30
BAR, Tape looper	12-888	34
BAR, Tension	12-145	30
BAR, Tape guide	12-869	30
BEARING, Automatic cut-off lever bracket	12-1684	28
BEARING, Automatic cut-off lever shaft — long	12-1687	28
BEARING, Automatic cut-off lever shaft — short	12-1698	28
BEARING, Paste roll	12-323	52
BEARING, Push back — L.H.	12-179	30
BEARING, Push back — R.H.	12-181	30
BLOCK, Automatic cut-off bar	12-1695	43
BLOCK, Automatic cut-off ratchet cam plunger	12-1703	28
BLOCK, Header lever	12-1315	46
BLOCK, Hold back	12-1066	30
BLOCK, Hook	12-89	30
BLOCK, Loop carrier cam roll	12-59	38
BLOCK, Loop carrier lever	12-544	50
BLOCK, Loop carrier rod collar	12-549	34
BLOCK, Needle cross head	12-597	44
BLOCK, Saddle feed slide	12-255	32
BLOCK, Signature pusher lifter	12-1000	54
BLOCK, Shifting needle	12-658	30
BLOCK, Stationary needle	12-600	30
BODY, Signature guard	12-214	64
BOX, Paste	12-318	34
BOX, Tape	12-226	58
BRACKET, Automatic cut-off lever	12-1685	28
BRACKET, Cam Shaft	12-30	38
BRACKET, Cross head	12-73	36
BRACKET, Forked shipper lever	12-14	26
BRACKET, Hold back rod outside	12-274	58
BRACKET, Hook revolving bevel pinion shaft	12-126	44
BRACKET, Loop carrier lever	12-61	32
BRACKET, Needle shifting	12-114	36
BRACKET, Paste box — L.H.	12-315	26
BRACKET, Paste box — R.H.	12-316	26
BRACKET, Presser plate bar	12-96	36
BRACKET, Punch slide	12-50	32
BRACKET, Saddle feed bell crank	12-246	32
BRACKET, Saddle feed slide rod	12-256	32
BRACKET, Signature arm — L.H.	12-40	38
BRACKET, Signature arm — R.H.	12-39	38
BRACKET, Signature arm balance spring	12-41	32
BRACKET, Signature guide	12-298	34
BRACKET, Signature leveler cam	12-229	34
BRACKET, Signature stop	12-279	48
BRACKET, Signature stop — complete with plunger	12-1260	34
BRACKET, Take-up shaft	12-139	30
BRACKET, Tension bar — L.H.	12-147	30
BRACKET, Tension bar — R.H.	12-146	30
BRACKET, Thread pull-off	12-165	26
BUSHING, Clutch finger	12-10	40
BUSHING, Driving pulley	12-428	40
BUSHING, First shaft	12-22	40
BUSHING, First shaft stop	12-426	40
BUSHING, Header	12-1015	46
BUSHING, Loop carrier rod	12-63	50
BUSHING, Paste box cam lever shaft	12-307	32
BUSHING, Punch cam lever	12-46	50
BUSHING, Saddle feed bell crank	12-247	54
BUSHING, Saddle feed cam lever	12-242	54
BUSHING, Saddle feed connection rod	12-249	54
BUSHING, Signature leveler carrier arm	12-204	48
BUSHING, Signature leveler shaft	12-198	48
BUSHING, Signature pusher lifter connection rod	12-1194	54
BUSHING, Signature pusher lifter roll	12-999	54
BUTT, Paste box cover	12-1117	32
CAM, Automatic cut-off operating	12-1696	38
CAM, Automatic cut-off ratchet	12-1697	28
CAM, Header	12-268	46
CAM, Hold back, signature pusher lifter, and signature guard	12-277	38
CAM, Loop carrier and L.H. needle	12-58	38
CAM, Loop carrier rod	12-554	34
CAM, Needle shifting	12-107	38
CAM, Paste box	12-305	38
CAM, Push back — L.H.	12-172	38
CAM, Push back — R.H.	12-171	38
CAM, Push back finger	12-183	34
CAM, R.H. needle and hook revolving	12-78	38
CAM, Saddle feed	12-240	38
CAM, Signature arm and punch — L.H.	12-57	38
CAM, Signature arm and punch — R.H.	12-56	38
CAM, Signature leveler bracket	12-626	48
CAM, Signature leveler lifting — large	12-547	34
CAM, Signature leveler lifting — small	12-221	34
CAM, Signature leveler shaft arm	12-208	34
CAM, Take-up	12-132	38
CAM, Tension releasing	12-148	38
CAP, Crash rod	12-1045	62
CAP, Needle cross head — L.H.	12-88	30
CAP, Needle cross head — R.H.	12-87	30
CAP, Paste roll bearing	12-1123	34
CAP, Punch slide	12-530	32
CAP, Signature arm back guide bar	12-203	32
CARRIER, Automatic cut-off ratchet pawl	12-1689	28
CARRIER, Loop	12-563	32
CARRIER, Paste — long	12-1233	30
CARRIER, Paste — medium	12-1232	30
CARRIER, Paste — short	12-1231	30
CLAMP, Hook	12-704	44
CLAMP, Needle connection spring	12-83	36
CLAMP, Punch	12-531	50
CLAMP, Shifting needle	12-660	30
CLAMP, Stationary needle	12-602	30
CLAMP, Take-up connection spring	12-136	36
CLAMP, Tension releasing connection rod spring	12-144	36
COLLAR, Automatic cut-off ratchet cam friction	12-1779	60
COLLAR, Automatic cut-off ratchet cam thrust	12-1781	60
COLLAR, Crash attachment latch	12-1049	62
COLLAR, Driving pulley bushing	12-429	40
COLLAR, Loop carrier rod	12-551	34
COLLAR, Signature arm lever	12-479	46
COLLAR, Signature leveler shaft arm fiber	12-922	34
CONNECTION, Punch	12-47	32
CONNECTION, Push back	12-176	36

ALPHABETICAL PARTS LIST—Continued

PART NAME	PART No.	See Page
COVER, Header cam	12-1021	46
COVER, Needle shifting bracket	12-115	36
COVER, Paste box	12-319	32
CRANK, Saddle feed bell	12-245	32
CRANK, Signature pusher lifter bell	12-260	32
CROSS HEAD	12-72	30
CROSS HEAD, Needle	12-84	30
DISC, Crash attachment	12-233	62
DISC, Thread light tension	12-729	30
DOWEL, Needle shifting cam gear pinion	12-635	38
END, Automatic cut-off connection rod — L.H.	12-1668	28
END, Automatic cut-off connection rod — R.H.	12-1667	28
END, Crash attachment — L.H.	12-232	62
END, Crash attachment — R.H.	12-231	62
END, Hook revolving connection — lower	12-121	44
END, Hook revolving connection — upper	12-124	36
END, Needle connection — lower	12-77	44
END, Needle connection — upper	12-82	36
END, Paste box — L.H.	12-330	32
END, Paste box — R.H.	12-329	32
END, Paste box connection — lower	12-311	32
END, Paste box connection — upper	12-322	36
END, Saddle feed connection — lower	12-257	54
END, Saddle feed connection — upper	12-244	54
END, Signature guard connection — lower	12-310	64
END, Signature guard connection — upper	12-124	64
END, Signature guide connection — lower	12-310	54
END, Signature guide connection — upper	12-124	54
END, Signature pusher lifter connection rod — lower	12-267	32
END, Signature pusher lifter connection rod — upper	12-1195	32
END, Take-up connection — lower	12-134	58
END, Take-up connection — upper	12-135	36
END, Tension releasing connection — lower	12-155	58
END, Tension releasing connection — upper	12-152	36
EXTENSION, Signature arm back guide curved	12-236	48
EXTENSION, Signature arm back guide straight	12-237	48
EYE, Clutch spring — long	12-418	40
EYE, Clutch spring — short	12-417	40
EYE, Loop carrier lever spring	12-565	50
EYE, Needle cross head balance spring	12-565	44
EYE, Paste box connection lever spring	12-471	26
EYE, Signature arm balance spring — long	12-472	26
EYE, Signature arm balance spring — short	12-515	46
EYE, Signature guard spring	12-942	64
EYE, Signature guide connection spring	12-565	54
EYE, Take-up connection spring	12-565	58
EYE, Tension releasing connection spring	12-565	58
FINGER, Clutch	12-11	40
FINGER, Push back	12-811	56
FINGER, Push back — L.H. end	12-812	56
FINGER, Push back — short	12-1282	56
FLANGE, Tension releasing cam	12-149	38
FRICTION, Driving	12-8	40
FRICTION, Stop	12-9	40
GEAR, Cam shaft bevel	12-74	38
GEAR, Hook revolving	12-678	44
GEAR, Hook revolving segment bevel	12-125	44
GEAR, Needle shifting cam	12-106	38
GEAR, Needle shifting cam drive	12-103	38
GEAR, Needle shifting cam driven	12-104	38
GEAR, Needle shifting segment	12-116	44
GEAR, Presser plate bar adjusting screw miter	12-619	36
GEAR, Second shaft	12-25	40
GIB, Saddle feed slide block	12-986	54
GUARD, Driving gear	12-32	26
GUARD, Hook block	12-687	30
GUARD, Hook revolving bevel gear	12-127	30
GUARD, Paste box segment	12-314	34
GUARD, Saddle feed cam lever	12-243	36
GUARD, Saddle feed connection rod	12-975	26
GUIDE, Crash — L.H.	12-1055	62
GUIDE, Crash — R.H.	12-1056	62
GUIDE, Signature	12-297	32
GUIDE, Signature arm back	12-693	34
GUIDE, Tape	12-868	58
HANDLE, Tape looper	12-890	30
HAND WHEEL	12-21	32
HAND WHEEL, Platform elevating	12-191	32
HEADER, Long	12-280	46
HEADER, Short	12-270	46
HOLD BACK	12-1064	30
HOLD BACK, Crash attachment	12-1050	62
HOLDER, Signature arm back guide bar	12-201	38
HOLDER, Knife — L.H.	12-220	36
HOLDER, Knife — R.H.	12-219	36
HOLDER, Take-up spring	12-716	30
HOLDER, Signature arm stop	12-509	46
HOOK, Large opening	12-690	44
HOOK, Small opening	12-691	44
HOOK, Signature leveler spring	12-928	32
HOOK, Thread	12-1179	44
HUB, Cam shaft bevel gear	12-75	38
KEY, Automatic cut-off front lever	12-1678	60
KEY, First shaft	12-425	40
KEY, First shaft pinion	12-435	40
KEY, Hold back arm	12-1069	58
KEY, Hook revolving bevel pinion shaft	12-675	44
KEY, Hook revolving bevel pinion shaft bracket	12-677	44
KEY, Loop carrier and L.H. needle cam	12-538	38
KEY, Needle shifting cam driven gear	12-632	38
KEY, Needle shifting segment	12-648	44
KEY, Paste roll ratchet	12-1127	52
KEY, Push back cam (R.H.)	12-778	38
KEY, R.H. needle and hook revolving cam	12-538	38
KEY, Signature arm and punch cam	12-460	38
KEY, Saddle feed cam	12-980	38
KEY, Tension releasing cam	12-950	38
KNIFE, Automatic cut-off needle presser plate	12-1792	43
KNIFE, L.H. front	12-900	56
KNIFE, L.H. front — wide	12-915	56
KNIFE, L.H. rear	12-902	56
KNIFE, L.H. rear — wide	12-916	56
KNIFE, R.H. front	12-899	56
KNIFE, R.H. rear	12-901	56
KNOB, Crash roll shaft	12-97	62
KNOB, Presser plate bar adjusting	12-97	36
KNOB, Signature stop adjusting pin	12-506	48
LATCH, Automatic cut-off	12-1692	28
LATCH, Crash attachment	12-1048	62
LATCH, Platform strip	12-842	56
LEG, L.H.	12-2	26
LEG, R.H.	12-1	26
LEVELER, Signature	12-225	34
LEVER, Automatic cut-off cam	12-1688	28
LEVER, Automatic cut-off front — lower part	12-1676	60
LEVER, Automatic cut-off front — upper part	12-1677	60
LEVER, Automatic cut-off latch connection	12-1699	28
LEVER, Automatic cut-off latch operating	12-1700	28
LEVER, Automatic cut-off — rear	12-1694	28
LEVER, Automatic cut-off treadle	12-1702	26
LEVER, Forked shipper	12-13	40

ALPHABETICAL PARTS LIST—Continued

PART NAME	PART No.	See Page
LEVER, Header	12-1014	46
LEVER, Header cam	12-269	46
LEVER, Hold back	12-275	30
LEVER, Hold back cam	12-278	38
LEVER, Hook revolving cam	12-122	38
LEVER, Loop carrier	12-60	36
LEVER, Needle cam — L.H.	12-80	38
LEVER, Needle cam — R.H.	12-79	38
LEVER, Needle cross head — L.H.	12-86	36
LEVER, Needle cross head — R.H.	12-85	36
LEVER, Needle shifting cam	12-108	38
LEVER, Needle shifting — long	12-111	36
LEVER, Needle shifting — short	12-112	36
LEVER, Paste box cam	12-306	32
LEVER, Paste box connection — lower	12-308	32
LEVER, Paste box connection — upper	12-309	52
LEVER, Punch cam — L.H.	12-45	38
LEVER, Punch cam — R.H.	12-44	38
LEVER, Punch connection	12-48	32
LEVER, Push back cam — L.H.	12-174	36
LEVER, Push back cam — R.H.	12-173	36
LEVER, Push back finger cam roll	12-184	56
LEVER, Saddle feed cam	12-241	36
LEVER, Signature arm — L.H.	12-37	38
LEVER, Signature arm — R.H.	12-36	38
LEVER, Signature guard cam	12-207	64
LEVER, Signature guide	12-296	54
LEVER, Signature guide cam	12-295	38
LEVER, Signature leveler lifting	12-222	48
LEVER, Signature pusher lifter cam	12-258	38
LEVER, Take-up	12-137	36
LEVER, Take-up cam	12-133	38
LEVER, Tape looper	12-227	30
LEVER, Tape looper hand	12-228	30
LEVER, Tape looping safety	12-230	30
LEVER, Tension releasing cam	12-150	38
LEVER, Tension releasing hand	12-154	30
LEVER, Tension releasing shaft	12-153	36
LEVER, Thread pull-off	12-163	28
LEVER, Treadle — and cap	12-15	32
LIFTER, Signature pusher	12-995	32
LINK, Punch slide	12-49	32
LINK, Treadle	12-411	40
NEEDLE	12-500	44
NUT, Automatic cut-off cam roll eccentric stud	12-953	28
NUT, Automatic cut-off latch operating lever stop screw	12-410	60
NUT, Automatic cut-off ratchet connection rod — R.H.	12-587	60
NUT, Automatic cut-off treadle connection rod — L.H.	12-586	28
NUT, Automatic cut-off treadle connection rod — R.H.	12-587	60
NUT, Brace rod	12-404	28
NUT, Cam shaft bracket rod	12-446	28
NUT, First shaft	12-424	40
NUT, Header cam lever stud	12-670	72
NUT, Hold back connection stud	12-670	72
NUT, Hook revolving connection rod — L.H.	12-586	72
NUT, Hook revolving connection rod — R.H.	12-587	72
NUT, Hook revolving gear	12-679	44
NUT, Knife holder stud wing	12-898	28
NUT, Loop carrier lever spring stud	12-561	72
NUT, Loop carrier rod	12-552	34
NUT, Loop carrier rod cam	12-557	34
NUT, Needle connection rod — L.H. *	12-586	72
NUT, Needle connection rod — R.H.	12-587	72
NUT, Needle connection stud (upper)	12-590	36
NUT, Needle shifting cam pinion shaft	12-630	38
NUT, Needle shifting connection stud (upper)	12-640	44
NUT, Paste box connection rod — R.H.	12-587	72
NUT, Paste box segment stud	12-953	72
NUT, Paste box stud	12-336	26
NUT, Paste carrier stop screw	12-410	72
NUT, Paste roll adjusting screw	12-1134	34
NUT, Paste roll scraper adjusting screw	12-1134	34
NUT, Pasting treadle pawl pin	12-587	52
NUT, Pasting treadle pawl stop screw	12-410	72
NUT, Pasting treadle spring screw	12-410	72
NUT, Pasting treadle stop stud	12-474	72
NUT, Punch slide link and connection screw	12-561	72
NUT, Push back bar adjusting screw	12-410	72
NUT, Push back bearing — L.H.	12-795	30
NUT, Push back bearing — R.H.	12-794	30
NUT, Push back connection stud	12-587	72
NUT, Push back spring stud	12-561	72
NUT, Push back stop screw	12-410	72
NUT, Saddle feed bell crank stud	12-969	26
NUT, Saddle feed cam lever guard stud	12-953	72
NUT, Saddle feed cam lever spring rod	12-953	72
NUT, Saddle feed cam small set screw check	12-947	72
NUT, Saddle feed connection rod — L.H.	12-967	72
NUT, Saddle feed connection rod — R.H.	12-953	72
NUT, Saddle feed connection rod guard	12-953	72
NUT, Saddle feed connection rod stud — large	12-587	72
NUT, Saddle feed connection stud	12-953	72
NUT, Signature arm balance spring eye adjusting	12-410	72
NUT, Signature guard connection rod — L.H.	12-586	64
NUT, Signature guard connection rod — R.H.	12-587	64
NUT, Signature guard connection stud	12-670	64
NUT, Signature guide connection rod — L.H.	12-586	72
NUT, Signature leveler lifting lever stud	12-410	72
NUT, Signature leveler screw	12-410	72
NUT, Signature leveler spring hook	12-410	72
NUT, Signature pusher lifter block stud	12-747	54
NUT, Signature pusher lifter connection rod — L.H.	12-586	72
NUT, Signature pusher lifter holding screw	12-561	72
NUT, Signature pusher stud	12-561	72
NUT, Signature stop plunger	12-498	48
NUT, Take-up connection stud	12-640	58
NUT, Tape looper lever stop screw	12-410	72
NUT, Tape looper spring stud	12-561	72
NUT, Tape looper stop screw	12-410	72
NUT, Tension releasing connection rod — L.H.	12-586	72
NUT, Tension releasing connection rod — R.H.	12-587	72
NUT, Tension releasing shaft screw	12-747	42
NUT, Thread light tension	12-731	30
NUT, Thread light tension check	12-732	30
NUT, Thread tension stud	12-726	42
NUT, Treadle lever link screw	12-410	72
PAWL, Automatic cut-off ratchet	12-1762	28
PAWL, Paste roll ratchet	12-1128	52
PAWL, Pasting treadle	12-334	52
PIN, Automatic cut-off front lever	12-1756	60
PIN, Automatic cut-off latch spring	12-926	60
PIN, Automatic cut-off ratchet pawl spring	12-1764	60
PIN, Cam shaft gear hub taper	12-576	38
PIN, Clutch finger	12-420	40
PIN, Clutch finger collar taper	12-422	40
PIN, Forked shipper lever	12-415	40
PIN, Header	12-1020	46
PIN, Hold back block	12-1067	58
PIN, Hook revolving bevel pinion taper	12-673	44
PIN, Loop carrier cam roll block	12-543	50
PIN, Loop carrier lever	12-546	50
PIN, Loop carrier rod collar block	12-550	50
PIN, Needle shifting bevel segment (large) taper	12-644	44
PIN, Needle shifting bevel segment (small) taper	12-646	44
PIN, Paste box segment (small) taper	12-644	52
PIN, Paste roll ratchet pawl spring	12-1143	52
PIN, Pasting treadle pawl	12-1149	52
PIN, Pasting treadle pawl spring	12-1153	52
PIN, Pasting treadle spring arm taper	12-422	52
PIN, Platform elevation binding screw	12-834	26
PIN, Presser plate bar adjusting gear and collar taper	12-618	44
PIN, Punch connection	12-525	50
PIN, Punch connection bushing	12-521	50
PIN, Punch connection lever	12-523	50
PIN, Push back cam lever	12-783	56
PIN, Push back finger shaft collar taper	12-618	56

ALPHABETICAL PARTS LIST—Continued

PART NAME	PART No.	See Page
PIN, Push back spring	12-801	56
PIN, Signature arm lever taper	12-477	46
PIN, Signature guard body	12-938	64
PIN, Signature guard spring	12-943	64
PIN, Signature leveler carrier arm	12-924	36
PIN, Signature leveler shaft spring	12-911	48
PIN, Signature pusher adjusting	12-992	54
PIN, Signature stop adjusting	12-504	48
PIN, Signature stop knob	12-507	48
PIN, Tape looper lever taper	12-644	58
PIN, Tension releasing shaft lever	12-744	58
PIN, Thread pull-off arm taper	12-618	58
PINION, First shaft	12-23	40
PINION, Hook revolving bevel	12-672	44
PINION, Needle shifting cam	12-105	38
PINION, Second shaft bevel	12-1100	40
PIPE, Automatic cut-off treadle	12-1773	26
PIPE, Operating treadle	12-406	28
PLATE, Automatic cut-off hook presser — narrow	12-1788	43
PLATE, Automatic cut-off hook presser — wide	12-1787	43
PLATE, Automatic cut-off needle presser	12-1786	43
PLATE, Presser	12-610	44
PLATE, Push back bar	12-807	30
PLATE, Saddle feed — front	12-1024	26
PLATE, Saddle feed — rear	12-979	32
PLATE, Signature arm back	12-480	26
PLATE, Signature arm end — L.H.	12-492	46
PLATE, Signature arm end — R.H.	12-491	46
PLATE, Signature arm needle guide	12-490	46
PLATE, Signature arm top — narrow	12-482	46
PLATE, Signature arm top — wide	12-487	46
PLATE, Signature guide	12-1160	26
PLATE, Signature pusher lifter holding	12-996	54
PLATE, Tape guide	12-871	34
PLATFORM	12-190	28
PLUNGER, Automatic cut-off ratchet cam	12-1704	60
PLUNGER, Driving friction spring	12-431	40
PLUNGER, Signature stop — complete	12-496A	48
PULLEY, Driving	12-7	40
PUNCH	12-529	50
PUNCH, Nail point	12-533	50
PUSHER, Signature	12-1007	32
RACK, Hook revolving	12-680	30
RACK, Needle shifting	12-655	30
RACK, Thread	12-161	26
RATCHET, Automatic cut-off	12-1690	28
RATCHET, Paste roll	12-1126	34
RIVET, Presser plate spring	12-613	44
ROD, Automatic cut-off ratchet connection	12-1770	28
ROD, Automatic cut-off treadle connection	12-1772	28
ROD, Crash	12-1044	62
ROD, Crash attachment tie	12-1043	62
ROD, Crash tension	12-1047	62
ROD, Hold back	12,1070	30
ROD, Hold back connection	12-276	30
ROD, Loop carrier	12-553	34
ROD, Hook revolving connection	12-665	36
ROD, Needle connection — long	12-604	36
ROD, Needle connection — short	12-605	36
ROD, Needle shifting connection	12-109	36
ROD, Paste box connection	12-1112	36
ROD, Saddle feed cam lever spring	12-956	36
ROD, Saddle feed connecting	12-248	32
ROD, Saddle feed connection	12-966	54
ROD, Saddle feed slide	12-983	32
ROD, Signature guard connection	12-937	64
ROD, Signature guide connection	12-1162	54
ROD, Signature pusher lifter connection	12-1193	32
ROD, Take-up	12-709	30
ROD, Take-up connection	12-700	36
ROD, Tension releasing connection	12-763	36
ROD, Thread guide — long	12-759	26
ROD, Thread guide — short	12-760	26
ROD, Thread pull-off — large	12-769	26
ROD, Thread pull-off — long	12-768	26
ROD, Thread pull-off — short	12-767	26
ROD, Thread pull-off connection	12-162	28
ROLL, Automatic cut-off rear lever	12-1760	60
ROLL, Header cam	12-815	66
ROLL, Hold back cam	12-539	66
ROLL, Hook revolving cam	12-539	66
ROLL, Loop carrier cam	12-539	66
ROLL, Loop carrier rod cam	12-555	66
ROLL, Needle cam	12-581	66
ROLL, Needle shifting cam	12-539	66
ROLL, Paste	12-320	34
ROLL, Paste box cam	12-581	66
ROLL, Punch cam	12-581	66
ROLL, Push back cam — L.H.	12-581	66
ROLL, Push back cam — R.H.	12-779	66
ROLL, Push back finger cam	12-815	66
ROLL, Saddle feed cam	12-463	66
ROLL, Saddle feed cam lever	12-740	66
ROLL, Signature arm cam	12-463	66
ROLL, Signature guard cam	12-539	64
ROLL, Signature guide cam	12-581	66
ROLL, Signature leveler carrier arm cam	12-815	66
ROLL, Signature leveler shaft arm cam	12-815	66
ROLL, Signature pusher lifter	12-998	54
ROLL, Signature pusher lifter cam	12-539	66
ROLL, Take-up cam	12-539	66
ROLL, Tension releasing cam	12-581	66
ROLL, Tension releasing hand lever	12-815	58
SCRAPER, Auxiliary paste roll	12-1137	34
SCRAPER, Paste roll	12-1122	34
SCREW, Automatic cut-off front lever	12-1749	60
SCREW, Automatic cut-off lever bracket	12-571	60
SCREW, Automatic cut-off lever bracket bearing	12-984	60
SCREW, Automatic cut-off lever shaft bearing	12-599	60
SCREW, Automatic cut-off needle presser plate knife	12-1793	60
SCREW, Automatic cut-off needle presser plate to bar	12-1791	60
SCREW, Automatic cut-off needle presser plate strip	12-1793	60
SCREW, Automatic cut-off operating cam	12-1757	60
SCREW, Automatic cut-off ratchet cam	12-1778	60
SCREW, Automatic cut-off ratchet cam plunger block	12-522	60
SCREW, Automatic cut-off rear lever binding	12-1758	60
SCREW, Automatic cut-off treadle	12-1079	26
SCREW, Brace rod collar set	12-433	68
SCREW, Cam lever shaft collar	12-433	68
SCREW, Cam lever shaft set	12-443	68
SCREW, Cam Shaft bevel gear	12-649	38
SCREW, Cam shaft bevel gear hub key	12-1243	68
SCREW, Crash attachment latch collar	12-526	62
SCREW, Crash guide	12-526	62
SCREW, Crash rod cap	12-1046	62
SCREW, Crash roll disc	12-524	62
SCREW, Crash roll shaft	12-1042	62
SCREW, Crash spring	12-1053	62
SCREW, Crash spring bar	12-483	62
SCREW, Cross head — long	12-573	70
SCREW, Cross head — short	12-574	70
SCREW, Cross head bracket	12-574	70
SCREW, Driving gear guard	12-772	70
SCREW, First shaft bushing	12-574	70
SCREW, First shaft pinion	12-433	68
SCREW, Forked shipper lever bracket	12-414	68
SCREW, Forked shipper lever shaft set	12-413	68
SCREW, Hand wheel	12-433	68
SCREW, Header cam	12-972	68
SCREW, Header cam cover	12-603	72
SCREW, Header lever	12-495	72

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SCREW, Header spring	12-1019	72
SCREW, Hold back	12-771	72
SCREW, Hold back arm binding	12-588	72
SCREW, Hold back cam	12-686	68
SCREW, Hold back cam — short	12-1074	70
SCREW, Hold back lever binding	12-817	70
SCREW, Hold back outside bracket	12-574	70
SCREW, Hold back pin	12-771	72
SCREW, Hold back support	12-1065	72
SCREW, Hook block	12-686	68
SCREW, Hook block guard	12-688	72
SCREW, Hook clamp	12-603	72
SCREW, Hook revolving bevel pinion bracket	12-574	70
SCREW, Knife	12-688	72
SCREW, Loop carrier	12-528	72
SCREW, Loop carrier bracket	12-524	72
SCREW, Loop carrier cam — large	12-461	68
SCREW, Loop carrier cam — small	12-462	68
SCREW, Loop carrier cam roll block pin set	12-1243	68
SCREW, Loop carrier cam roll block stud set	12-1243	68
SCREW, Loop carrier lever bracket	12-548	70
SCREW, Loop carrier rod cam adjusting screw	12-558	72
SCREW, Loop carrier rod spring arm	12-562	72
SCREW, Needle cam (R.H.) set — large	12-461	68
SCREW, Needle cam (R.H.) set — small	12-462	68
SCREW, Needle connection end (upper)	12-588	72
SCREW, Needle connection spring clamp	12-594	70
SCREW, Needle cross head cap	12-599	70
SCREW, Needle cross head guard	12-528	72
SCREW, Needle shifting bracket	12-650	70
SCREW, Needle shifting bracket cover	12-653	72
SCREW, Needle shifting cam drive gear	12-443	68
SCREW, Needle shifting cam gear	12-548	70
SCREW, Needle shifting lever binding	12-641	68
SCREW, Needle shifting lever clamp	12-642	68
SCREW, Needle shifting segment	12-511	72
SCREW, Paste box bar	12-574	70
SCREW, Paste box bar hex head	12-904	70
SCREW, Paste box bracket (L.H.)	12-574	70
SCREW, Paste box bracket (R.H.)	12-772	70
SCREW, Paste box cam	12-641	68
SCREW, Paste box cam lever binding	12-465	68
SCREW, Paste box cover butt	12-1118	72
SCREW, Paste box end	12-1140	72
SCREW, Paste box stop	12-528	72
SCREW, Paste carrier	12-528	72
SCREW, Paste carrier arm	12-574	70
SCREW, Paste carrier bar	12-601	72
SCREW, Paste carrier stop	12-746	72
SCREW, Paste roll adjusting	12-1246	72
SCREW, Paste roll bearing cap	12-1124	72
SCREW, Paste roll scraper	12-1125	72
SCREW, Paste roll scraper adjusting	12-1133	72
SCREW, Paste roll washer	12-1125	72
SCREW, Pasting treadle pawl stop	12-1156	72
SCREW, Pasting treadle shaft arm	12-641	68
SCREW, Pasting treadle shaft collar	12-433	68
SCREW, Pasting treadle spring	12-409	70
SCREW, Pasting treadle stop	12-1146	70
SCREW, Platform elevating hand wheel set	12-462	68
SCREW, Platform elevating screw binding	12-443	68
SCREW, Platform elevation binding	12-833	68
SCREW, Platform strip latch	12-843	72
SCREW, Platform strip latch spring	12-486	72
SCREW, Platform strip shoulder	12-849	72
SCREW, Presser plate	12-611	72
SCREW, Presser plate bar adjusting — L.H. thread	12-1803	30
SCREW, Presser plate bar adjusting — R.H. thread	12-1802	30
SCREW, Presser plate bar binding	12-409	70
SCREW, Presser plate bar bracket	12-615	70
SCREW, Presser plate bar connection bar	12-803	68
SCREW, Punch clamp	12-532	72
SCREW, Punch connection lever pin	12-524	72
SCREW, Punch connection stud binding	12-520	70
SCREW, Punch connection stud bushing binding	12-522	70
SCREW, Punch slide bracket	12-528	72
SCREW, Punch slide cap	12-611	72
SCREW, Punch slide link and connection	12-517	72
SCREW, Punch slide shoe (middle)	12-495	72
SCREW, Punch slide shoes (R.H. and L.H.)	12-489	72
SCREW, Push back bar adjusting	12-806	70
SCREW, Push back bar plate	12-481	72
SCREW, Push back bearing	12-803	68
SCREW, Push back cam	12-776	70
SCREW, Push back cam lever bracket	12-786	68
SCREW, Push back cam lever pin	12-784	70
SCREW, Push back cam (R.H.) set — large	12-461	68
SCREW, Push back cam (R.H.) set — small	12-462	68
SCREW, Push back connection eccentric stud binding	12-641	68
SCREW, Push back finger	12-528	72
SCREW, Push back finger cam	12-574	70
SCREW, Push back finger cam roll lever	12-817	70
SCREW, Push back stop	12-796	72
SCREW, Saddle feed bell crank bracket (hex head)	12-571	68
SCREW, Saddle feed bell crank bracket	12-972	68
SCREW, Saddle feed bell crank stud set	12-608	68
SCREW, Saddle feed bracket (front and rear)	12-977	70
SCREW, Saddle feed cam set — large	12-946	68
SCREW, Saddle feed cam set — small	12-945	68
SCREW, Saddle feed connection end	12-961	70
SCREW, Saddle feed connection end — short	12-772	70
SCREW, Saddle feed large bracket	12-571	68
SCREW, Saddle feed plate — rear	12-481	72
SCREW, Saddle feed plate — front	12-1025	72
SCREW, Saddle feed slide bar	12-982	70
SCREW, Saddle feed slide block gib (R.H.)	12-489	72
SCREW, Saddle feed slide block gib (L.H.)	12-957	72
SCREW, Saddle feed slide block safety strip	12-601	72
SCREW, Saddle feed slide rod bracket — long	12-686	68
SCREW, Saddle feed slide rod bracket — short	12-985	68
SCREW, Second shaft collar	12-433	68
SCREW, Second shaft gear set	12-608	68
SCREW, Shifting needle block	12-601	72
SCREW, Shifting needle clamp	12-603	72
SCREW, Signature arm and punch cam — large	12-461	68
SCREW, Signature arm and punch cam — small	12-462	68
SCREW, Signature arm back guide	12-476	70
SCREW, Signature arm back plate	12-481	72
SCREW, Signature arm bracket	12-478	68
SCREW, Signature arm cam roll stud adjusting	12-466	72
SCREW, Signature arm cam roll stud binding	12-465	68
SCREW, Signature arm guide bar binding	12-443	68
SCREW, Signature arm lever — long	12-475	70
SCREW, Signature arm lever — short	12-476	70
SCREW, Signature arm lever collar	12-433	68
SCREW, Signature arm stop	12-489	72
SCREW, Signature arm stop set	12-524	72
SCREW, Signature arm top plate (narrow and wide)	12-483	70
SCREW, Signature arm top plate strip	12-905	72
SCREW, Signature arm top plate support	12-486	72
SCREW, Signature back guide extension	12-764	72
SCREW, Signature guard arm	12-940	64
SCREW, Signature guard body pin	12-939	64
SCREW, Signature guard connection end	12-588	64
SCREW, Signature guide and guide bracket	12-923	70
SCREW, Signature guide bar holder cap	12-465	68
SCREW, Signature guide plate	12-481	72
SCREW, Signature leveler	12-910	70
SCREW, Signature leveler bracket cam	12-856	70
SCREW, Signature leveler cam bracket	12-642	68
SCREW, Signature leveler carrier arm pin	12-524	72
SCREW, Signature leveler lifting cam (small)	12-764	72
SCREW, Signature leveler shaft arm	12-817	70
SCREW, Signature leveler shaft arm cam	12-923	70
SCREW, Signature leveler shaft arm cam adjusting	12-925	70
SCREW, Signature leveler spring	12-872	72
SCREW, Signature pusher adjusting pin spring	12-688	72
SCREW, Signature pusher lifter cam lever washer	12-414	68
SCREW, Signature pusher lifter holding	12-997	72
SCREW, Signature pusher spring	12-1012	72
SCREW, Signature stop	12-495	72

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PART NAME	PART No.	See Page
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SCREW, Stationary needle block	12-601	72
SCREW, Stationary needle clamp	12-609	72
SCREW, Stop friction	12-432	40
SCREW, Take-up arm	12-574	70
SCREW, Take-up cam binding	12-641	68
SCREW, Take-up cam holding	12-739	70
SCREW, Take-up connection spring clamp	12-594	70
SCREW, Take-up lever	12-574	70
SCREW, Take-up rod	12-526	72
SCREW, Take-up shaft bracket	12-588	72
SCREW, Take-up spring holder	12-528	72
SCREW, Tape box	12-857	70
SCREW, Tape box bar	12-574	70
SCREW, Tape box bar	12-856	70
SCREW, Tape guide	12-528	72
SCREW, Tape guide bar	12-676	70
SCREW, Tape guide plate	12-872	72
SCREW, Tape looper bar	12-889	72
SCREW, Tape looper lever	12-885	70
SCREW, Tape looper lever stop	12-746	72
SCREW, Tape looper stop	12-882	72
SCREW, Tape tension	12-861	72
SCREW, Tension bar bracket — long	12-721	70
SCREW, Tension bar bracket — short	12-722	70
SCREW, Tension releasing cam binding	12-738	68
SCREW, Tension releasing cam flange set — large	12-461	68
SCREW, Tension releasing cam flange set — small	12-462	68
SCREW, Tension releasing cam holding	12-698	70
SCREW, Tension releasing connection spring clamp	12-594	70
SCREW, Tension releasing shaft	12-753	42
SCREW, Thread guide rod	12-1246	72
SCREW, Thread light tension stud	12-734	42
SCREW, Thread pull-off bracket	12-653	72
SCREW, Thread pull-off bracket attaching	12-772	70
SCREW, Thread pull-off lever	12-764	72
SCREW, Thread pull-off rod — short	12-771	72
SCREW, Thread rack	12-615	70
SCREW, Thread tension bar	12-615	70
SCREW, Treadle lever link	12-409	70
SCREW, Upright	12-571	68
SEGMENT, Needle shifting bevel — large	12-113	44
SEGMENT, Needle shifting bevel — small	12-645	44
SEGMENT, Paste box — large	12-312	34
SEGMENT, Paste box — small	12-313	34
SHAFT, Automatic cut-off latch	12-1750	28
SHAFT, Automatic cut-off lever	12-1755	28
SHAFT, Automatic cut-off paste box cam lever	12-1767	32
SHAFT, Cam	12-457	38
SHAFT, Cam lever	12-451	38
SHAFT, Crash roll	12-1040	62
SHAFT, First — with collar and pin	12-423	40
SHAFT, Forked shipper lever	12-412	40
SHAFT, Hook revolving bevel pinion	12-674	44
SHAFT, Needle shifting cam pinion	12-629	38
SHAFT, Needle shifting lever	12-643	44
SHAFT, Needle shifting segment	12-647	44
SHAFT, Paste carrier	12-1135	34
SHAFT, Pasting treadle	12-1150	32
SHAFT, Push back finger	12-810	30
SHAFT, Second	12-440	40
SHAFT, Signature arm lever	12-467	32
SHAFT, Signature leveler	12-909	48
SHAFT, Take-up	12-706	30
SHAFT, Tape looper	12-880	30
SHAFT, Tension releasing	12-745	36
SHAFT, Thread pull-off	12-765	28
SHOE, Clutch wedge	12-419	40
SHOE, Punch slide — L.H.	12-52	50
SHOE, Punch slide — middle	12-53	50
SHOE, Punch slide — R.H.	12-51	50
SHOE, Signature arm back guide bar binder	12-907	48
SLIDE, Header	12-1016	46
SLIDE, Punch	12-527	32
SLIDE, Saddle feed	12-254	32
SLIDE, Tape looper — L.H.	12-887	32
SLIDE, Tape looper — R.H.	12-886	32
SOCKET, Saddle feed connection ball	12-962	54
SPANNER, Round nut	12-1180	40
SPANNER, Take-up cam and tension releasing cam	12-140	38
SPRING, Automatic cut-off latch	12-1774	60
SPRING, Automatic cut-off latch connection lever	12-1785	60
SPRING, Automatic cut-off ratchet cam plunger	12-1705	60
SPRING, Automatic cut-off ratchet connection	12-1776	28
SPRING, Automatic cut-off ratchet friction	12-1782	60
SPRING, Automatic cut-off ratchet pawl	12-1765	60
SPRING, Clutch	12-416	40
SPRING, Crash	12-1052	62
SPRING, Driving friction	12-430	40
SPRING, Header	12-1018	46
SPRING, Header cam lever	12-873	46
SPRING, Hold back	12-1068	58
SPRING, Leveler — flat	12-935	34
SPRING, Loop carrier	12-559	50
SPRING, Loop carrier lever	12-564	50
SPRING, Needle cross head balance	12-592	36
SPRING, Paste box cam lever	12-1107	52
SPRING, Paste box cover	12-1119	34
SPRING, Paste roll adjusting	12-1121	52
SPRING, Paste roll ratchet pawl	12-1142	52
SPRING, Pasting treadle	12-1148	26
SPRING, Pasting treadle pawl	12-1152	52
SPRING, Platform strip	12-846	56
SPRING, Platform strip latch	12-844	56
SPRING, Presser plate	12-612	44
SPRING, Push back	12-799	30
SPRING, Push back connection	12-564	56
SPRING, Saddle feed cam lever	12-893	36
SPRING, Saddle feed connection rod	12-965	36
SPRING, Signature arm balance	12-955	32
SPRING, Signature guard	12-941	64
SPRING, Signature guide connection	12-416	54
SPRING, Signature leveler	12-927	32
SPRING, Signature pusher — .008" thick	12-1008	54
SPRING, Signature pusher — .010" thick	12-1009	54
SPRING, Signature pusher — .015" thick	12-1010	54
SPRING, Signature pusher adjusting pin	12-993	54
SPRING, Signature pusher bell crank	12-1004	32
SPRING, Signature pusher lifter connection rod	12-1196	54
SPRING, Signature stop adjusting pin	12-505	48
SPRING, Signature stop plunger — heavy	12-499	48
SPRING, Signature stop plunger — light	12-501	48
SPRING, Signature stop plunger — short	12-516	48
SPRING, Take-up	12-715	30
SPRING, Take-up connection	12-416	58
SPRING, Tape looper	12-846	58
SPRING, Tape tension	12-862	58
SPRING, Tape tension cone	12-859	58
SPRING, Tension releasing connection	12-416	58
SPRING, Tension releasing hand lever	12-749	42
SPRING, Thread light tension	12-730	30
SPRING, Thread tension stud	12-728	42
STOP, Paste box	12-1145	30
STOP, Saddle signature	12-1603	54
STOP, Signature arm	12-508	46
STRIP, Automatic cut-off needle presser plate	12-1795	43
STRIP, Header slide T	12-1017	34
STRIP, Platform	12-841	36
STRIP, Saddle feed slide block safety	12-1011	32
STRIP, Signature stop T	12-493	34
STUD, Automatic cut-off cam lever connection rod end	12-1766	60
STUD, Automatic cut-off cam roll eccentric	12-1769	60
STUD, Automatic cut-off ratchet pawl	12-1763	60

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STUD, Automatic cut-off rear lever roll	12-1759	60
STUD, Automatic cut-off treadle connection rod end	12-1766	60
STUD, Auxiliary safety treadle	12-408	26
STUD, Header cam lever	12-1013	46
STUD, Header cam roll spring	12-814	46
STUD, Header lever block	12-1316	46
STUD, Hold back cam roll	12-540	66
STUD, Hold back connection	12-669	58
STUD, Hook revolving cam roll	12-666	66
STUD, Hook revolving connection — upper	12-669	44
STUD, Hook revolving segment	12-671	44
STUD, Knife holder	12-895	56
STUD, Loop carrier cam roll	12-540	66
STUD, Loop carrier cam roll block	12-541	50
STUD, Loop carrier lever block	12-545	50
STUD, Loop carrier lever spring	12-560	50
STUD, Loop carrier rod cam roll	12-556	66
STUD, Needle cam roll	12-582	66
STUD, Needle connection — upper	12-589	44
STUD, Needle cross head block	12-598	44
STUD, Needle cross head lever — L.H.	12-596	44
STUD, Needle cross head lever — R.H.	12-595	44
STUD, Needle shifting cam roll	12-636	66
STUD, Needle shifting connection	12-638	36
STUD, Needle shifting connection — lower	12-637	44
STUD, Paste box	12-1115	52
STUD, Paste box cam lever spring	12-1109	52
STUD, Paste box cam roll	12-782	66
STUD, Paste box connection	12-669	52
STUD, Paste box cover spring	12-1120	34
STUD, Paste box segment	12-1113	52
STUD, Paste carrier arm	12-1136	52
STUD, Paste roll ratchet pawl	12-1129	52
STUD, Pasting treadle stop	12-1147	52
STUD, Platform strip spring — long	12-847	56
STUD, Platform strip spring — short	12-848	56
STUD, Punch cam roll	12-782	66
STUD, Punch connection	12-519	50
STUD, Push back bearing — L.H.	12-793	30
STUD, Push back bearing — R.H.	12-792	30
STUD, Push back cam roll — L.H.	12-782	66
STUD, Push back cam roll — R.H.	12-781	66
STUD, Push back connection	12-790	36
STUD, Push back connection eccentric	12-788	36
STUD, Push back connection spring	12-560	56
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STUD, Push back spring	12-800	56
STUD, Saddle feed bell crank	12-968	54
STUD, Saddle feed cam lever roll	12-951	54
STUD, Saddle feed cam lever spring	12-1109	54
STUD, Saddle feed cam roll	12-518	66
STUD, Saddle feed connecting rod — L.H.	12-973	32
STUD, Saddle feed connecting rod — R.H.	12-974	32
STUD, Saddle feed connection ball — lower	12-1244	54
STUD, Saddle feed connection ball — upper	12-1245	54
STUD, Signature arm cam roll	12-566	66
STUD, Signature guard cam roll	12-540	64
STUD, Signature guard connection	12-669	64
STUD, Signature guide cam roll	12-782	66
STUD, Signature guide connection — lower	12-741	54
STUD, Signature guide connection — upper	12-1161	54
STUD, Signature guide lever	12-1163	54
STUD, Signature leveler carrier arm cam roll	12-818	66
STUD, Signature leveler lifting lever	12-929	48
STUD, Signature leveler shaft arm cam roll — inner	12-921	66
STUD, Signature leveler shaft arm cam roll — outer	12-920	66
STUD, Signature pusher	12-988	54
STUD, Signature pusher lifter bell crank	12-1003	32
STUD, Signature pusher lifter bell crank spring	12-750	54
STUD, Signature pusher lifter block	12-1001	54
STUD, Signature pusher lifter cam roll	12-540	66
STUD, Signature pusher lifter connection	12-669	54
STUD, Signature pusher swivel	12-990	54
STUD, Take-up cam roll	12-699	66
STUD, Take-up connection	12-638	36
STUD, Tape looper spring	12-560	58
STUD, Tape looper spring	12-750	58
STUD, Tension releasing cam roll	12-741	66
STUD, Tension releasing connection — lower	12-741	58
STUD, Tension releasing connection — upper	12-742	58
STUD, Tension releasing hand lever	12-669	58
STUD, Tension releasing hand lever roll.	12-816	58
STUD, Tension releasing hand lever spring	12-750	42
STUD, Thread light tension	12-733	42
STUD, Thread pull-off connection	12-698	58
STUD, Thread tension	12-724	42
SUPPORT, Hold back	12-1073	58
SUPPORT, Signature arm top plate	12-485	46
TREADLE, Automatic cut-off	12-1701	26
TREADLE, Auxiliary safety	12-1310	26
TREADLE, Operating — and cap	12-17	26
TREADLE, Pasting	12-331	26
WASHER, Automatic cut-off ratchet cam friction — leather	12-1780	60
WASHER, Hook revolving gear	12-685	44
WASHER, Knife holder stud	12-897	56
WASHER, Knife holder stud cupped	12-896	56
WASHER, Needle connection stud	12-591	44
WASHER, Needle shifting connection stud	12-639	44
WASHER, Paste box stud	12-1116	52
WASHER, Paste roll	12-1130	34
WASHER, Paste roll scraper screw	12-1132	52
WASHER, Pasting treadle pawl pin	12-1144	52
WASHER, Push back bearing screw	12-805	56
WASHER, Push back connection stud	12-791	56
WASHER, Presser plate bar binding screw	12-614	44
WASHER, Saddle feed bell crank stud	12-971	26
WASHER, Saddle feed connecting rod stud	12-964	54
WASHER, Signature arm lever	12-468	46
WASHER, Signature pusher lifter cam lever	12-1005	54
WASHER, Signature pusher swivel stud	12-991	54
WASHER, Tape box screw	12-858	58
WASHER, Thread tension stud	12-725	42
WEDGE, Clutch	12-427	40

The Smyth Manufacturing Company
produces the following machines for the bookbinding trade

BOOK SEWING MACHINES

No. 3 (Four Arm)	2″ x 2½″ to 9″ x 12″
No. 12 Semi-Automatic	3″ x 3½″ to 10½″ x 14″
No. 12 Fully-Automatic—Sucker Feed	5½″ x 3½″ to 10½″ x 13½″
—Gripper Feed	5½″ x 7½″ to 9½″ x 13½″
No. 18 Semi-Automatic	3″ x 3½″ to 10½″ x 18″
No. 18 Fully-Automatic—Sucker Feed	5½″ x 3½″ to 10½″ x 18″
—Gripper Feed	5½″ x 7½″ to 9½″ x 18″

CLOTH CUTTING MACHINE

No. 3	2″ x 5″ to 36″ x 54″ Spec. Range 72″ x 54″

CASEMAKING MACHINES (Hand Fed or Automatic)

No. 1	5½″ x 7½″ to 9½″ x 15½″
No. 1A	3¾″ x 5½″ to 9½″ x 15½″
No. 2	7″ x 11″ to 14″ x 22″
No. 2A	7″ x 7″ to 16″ x 22″

CASING-IN MACHINES

No. 3	Covers:	4″ x 7″ to 14″ x 22″
	Books:	¼″ to 2½″ in thickness
No. 24 Semi-Automatic Std. Range	Covers:	3¾″ x 5½″ to 9½″ x 15½″
	Books:	¼″ to 1⅝″ in thickness
No. 24 Semi-Automatic Max. Range	Covers:	3¾″ x 7½″ to 11¼″ x 19″
	Books:	¼″ to 2″ in thickness

ROUNDING AND BACKING MACHINE

No. 38 Fully Automatic	2½″ to 11¾″ long, 3¾″ to 9″ wide 3/16″ to 3″ thick
No. 38 Hand Fed	2½″ to 12¾″ long, 3¾″ to 10½″ wide 3/16″ to 3″ thick

TRIPLE LINING AND HEADBANDING MACHINE

No. 32	4″ to 15½″ long 2½″ to 8″ wide ¼″ to 2″ thick

BOOK JACKETING MACHINE

No. 46	4″ to 10″ long 4″ to 8″ wide ⅜″ to 2″ thick

BOOK FORMING AND PRESSING MACHINE

No. 57	3½″ to 12″ long 2½″ to 9″ wide ¼″ to 3″ thick

CONVEYOR FEEDER MECHANISMS FOR THE AUTOMATIC MANUFACTURE OF BOOKS

THE SMYTH MANUFACTURING COMPANY

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