

1901

...Catalogue No. 8...

Bicycle Parts

AND SUNDRIES.



THE VOKES HARDWARE CO., LIMITED

111 and 113 Yonge St., cor. Adelaide

TORONTO, CANADA.

Standard American Price List of Bicycle Tubing

STOCK SIZES

English Standard Wire Gauge.	DIAMETER OF EXTERIOR IN INCHES.										PRICE IN CENTS PER FOOT.
	$\frac{5}{16}$	$\frac{3}{8}$	$\frac{13}{16}$	$\frac{7}{8}$	$\frac{15}{16}$	1	$1\frac{1}{16}$	$1\frac{1}{8}$	$1\frac{3}{16}$	$1\frac{1}{2}$	$1\frac{3}{8}$
22	....	36	....	....	....	40	....	42	....	44	48
21	....	....	....	....	....	....	....	42	....	....	....
20	34	38	....	39	....	41	....	43	45	46	49
18	....	39	....	42	43	....	....	....	....	....	....
16	....	43	45	47	49	50	53	....	....	....	....
13	45	....	....	....	....	....	....	....	....	....	....
10	74	....	....	....	....	....	....	....	....	....	....

BICYCLE GEAR TABLE.

BASIS, 28-INCH WHEEL

Teeth on Front Sprocket Wheel.	Teeth on Back Sprocket Wheel.				GEARS.
	7	8	9	10	
19	76	66 $\frac{1}{2}$	59 $\frac{1}{2}$	53 $\frac{1}{2}$	
20	80	70	62 $\frac{1}{2}$	56	
21	84	73 $\frac{1}{2}$	65 $\frac{1}{2}$	58 $\frac{1}{2}$	
22	88	77	68 $\frac{1}{2}$	61 $\frac{1}{2}$	
23	92	80 $\frac{1}{2}$	71 $\frac{1}{2}$	64 $\frac{1}{2}$	
24	96	84	74 $\frac{1}{2}$	67 $\frac{1}{2}$	
25	100	87 $\frac{1}{2}$	77 $\frac{1}{2}$	70	
26	104	91	80 $\frac{1}{2}$	72 $\frac{1}{2}$	
27	108	94 $\frac{1}{2}$	84	75 $\frac{1}{2}$	
28	112	98	87 $\frac{1}{2}$	78 $\frac{1}{2}$	
29	116	101 $\frac{1}{2}$	90 $\frac{1}{2}$	81 $\frac{1}{2}$	
30	120	105	93 $\frac{1}{2}$	84	
31	124	108 $\frac{1}{2}$	96 $\frac{1}{2}$	86	
32	128	112	99 $\frac{1}{2}$	89 $\frac{1}{2}$	

To find the gear of any wheel, multiply the diameter of the rear wheel by the number of teeth in the front sprocket, and divide the product by the number of teeth in the rear sprocket. The answer is the gear of the wheel.

...ERRATA...

PAGE 5—

Front and middle lugs, $1\frac{1}{3}$ should read, $1\frac{1}{8}$.

Chain line, $1\frac{7}{8}$ should read, $1\frac{5}{8}$.

PAGE 20—

No. 157, size $\frac{1}{16}$ should read, $1\frac{1}{16}$.

PAGE 22—

No. 56, Chain should read, Block polished and plated nickel steel $\frac{3}{16}$, price per foot 24 cents.

PAGE 25—

No. 77, Reduction should read, 10 cents per pair in lots of 6 pair or over.

PAGE 26—

No. 4, Grip, should read, No. 114.

PAGE 30—

No. 179, price each should read, price per pair.

PAGE 41—

Valve Stems should read, \$15.80 per 100.

1901

CATALOGUE No. 8.

CONTAINING

BICYCLE PARTS AND SUNDRIES

—OF—

THE Vokes Hardware Co. LIMITED

111 & 113 Yonge St. (Cor Adelaide)

TORONTO, CANADA.

SELLING AGENTS FOR THE FOLLOWING MANUFACTURERS:

WORCESTER FERRULE CO., Frame Fittings.

W. H. FAUBER,
One Piece Hangers.

WIRE GOODS CO.
High Grade Spokes and Nipples.

MORGAN and WRIGHT TIRES.

ECLIPSE BICYCLE CO., Morrow Automatic Coaster and Brake.

McKINNON DASH & HARDWARE CO.,
Carbon, Nickel Steel Bicycle Chains. Shelby Seamless Tubing.

NOTICE.

PRICE LIST AND DISCOUNTS.—As prices change frequently we purpose issuing, when necessary, up-to-date Price Lists which will be the retail price to the public, but subject to a liberal discount to the trade, which it will be our aim to protect as far as possible. Lists and discounts subject to change without notice.

QUOTATIONS.—Will be for immediate acceptance, otherwise subject to change without notice.

SPECIAL QUOTATIONS.—It will pay you to ask for Special Quotations on large quantities when required.

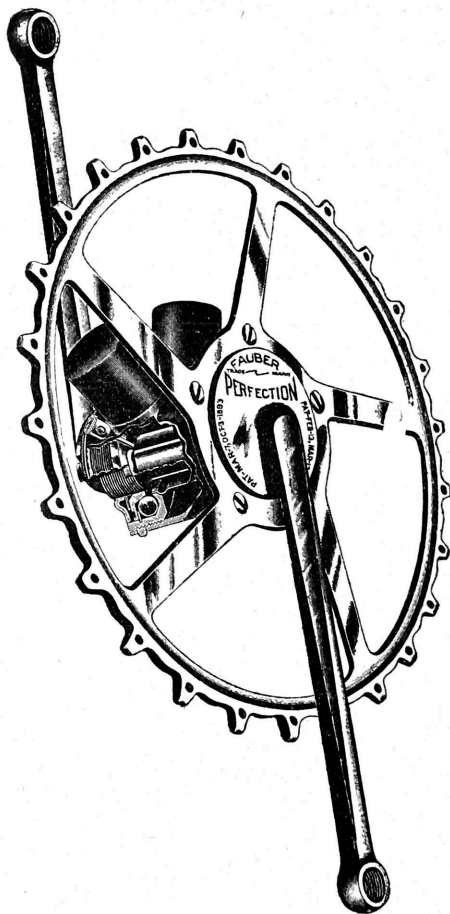
WHEN ORDERING.—Order by number, giving size when necessary, and when full amount does not accompany order send sufficient to cover Transportation or Postage charges both ways.

SHIPMENTS.—Our responsibility ceases when goods are delivered for Transportation, all goods F.O.B. our Warehouse.

TERMS.—Net Cash, payable at par in Toronto.

JANUARY, 1901.

Fauber Perfection Hanger.



SPECIAL FEATURES.

The diamond square crank.

Tangent spoke sprocket.

3 point bearings.

Drawn metal brackets.

Patent oiler.

Specifications.

Cranks, 7 in.

Chain line, $4\frac{1}{2}$ inches only.

Sprockets, 24, 26, 28 in $\frac{3}{16}$ or $\frac{1}{8}$.

Brackets, 3 lug, $1\frac{1}{8} \times 1\frac{1}{8}$ for
Fauber Forks ; 4 lug, $1\frac{1}{8} \times 1\frac{1}{8} \times$
 $\frac{7}{8}$ flush.

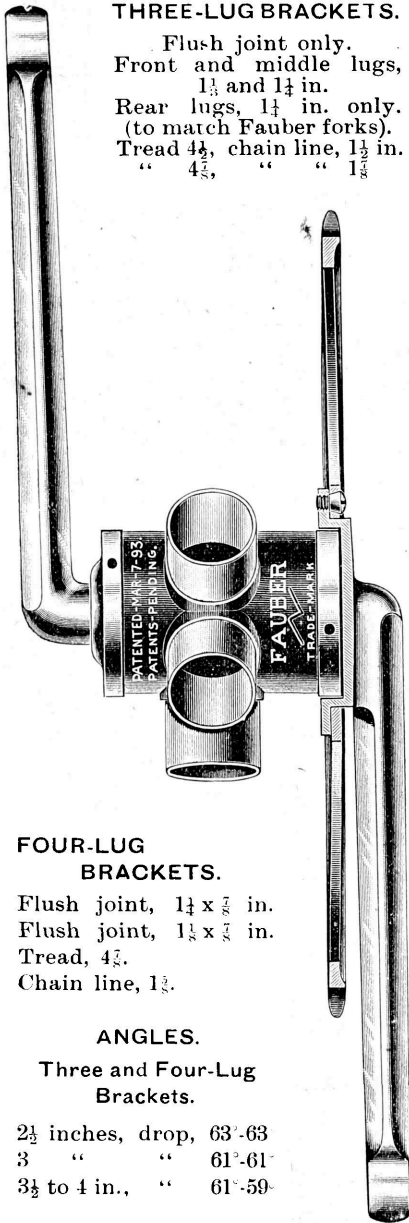
Price, each, \$5.40.

**Extra 5% over regular discount for Cash on
Fauber Hangers.**

Fauber Standard Hanger

THREE-LUG BRACKETS.

Flush joint only.
Front and middle lugs,
1 $\frac{1}{2}$ and 1 $\frac{1}{2}$ in.
Rear lugs, 1 $\frac{1}{2}$ in. only.
(to match Fauber forks).
Tread 4 $\frac{1}{2}$, chain line, 1 $\frac{1}{2}$ in.
" 4 $\frac{7}{8}$, " " 1 $\frac{1}{8}$



FOUR-LUG BRACKETS.

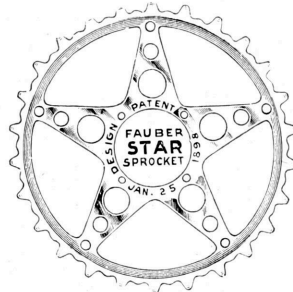
Flush joint, 1 $\frac{1}{2}$ x $\frac{7}{8}$ in.
Flush joint, 1 $\frac{1}{2}$ x $\frac{7}{8}$ in.
Tread, 4 $\frac{7}{8}$.
Chain line, 1 $\frac{1}{2}$.

ANGLES.

Three and Four-Lug
Brackets.

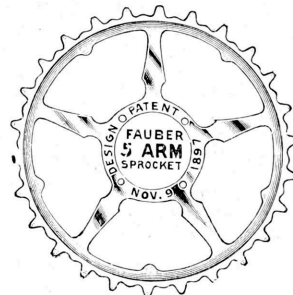
2 $\frac{1}{2}$ inches, drop, 63°-63
3 " " 61°-61
3 $\frac{1}{2}$ to 4 in., " 61°-59

No. 21. Up to 28 teeth, each **\$3.80**.
Add 15c. for every additional 2 teeth.



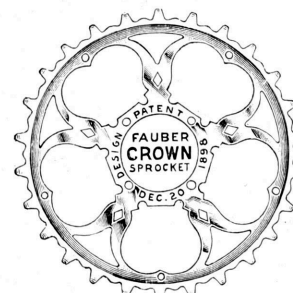
STAR SPROCKET.

Sizes, 22, 24, 26, 28, 30 and 32.
Thickness, 3-16.



FIVE-ARM SPROCKET.

Sizes, 22, 24, 25, 26, 28, 30 and 32
Thickness, 3-16.

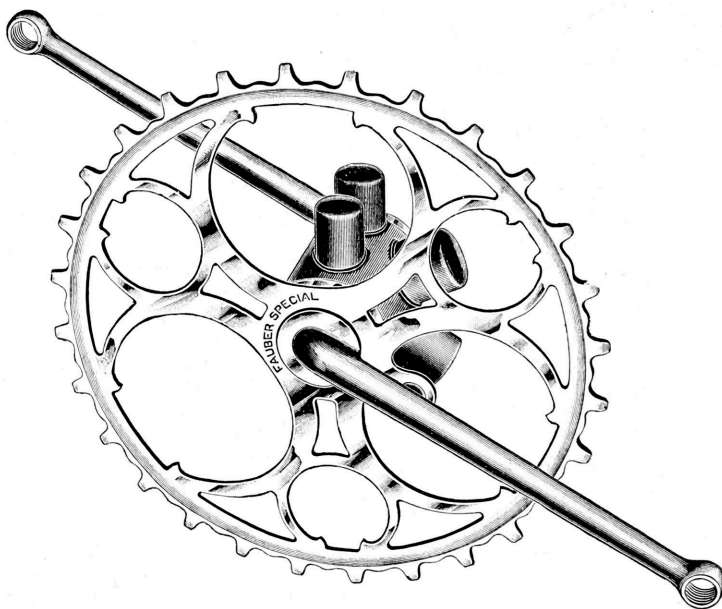


CROWN SPROCKET.

Sizes, 22, 24, 28, 30 and 32.
Thickness, 3 16.

Extra 5% over regular discount for cash on **Fauber Hangers**.

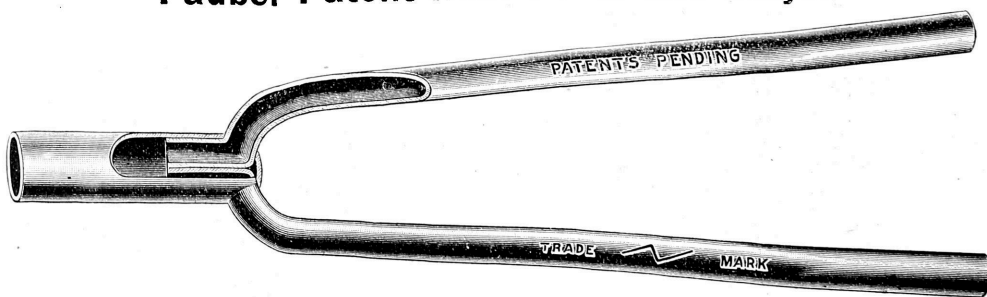
Fauber Special Hanger



No. 23, up to 28 tooth price each, \$2 73

Extra discount of 5% over regular discount for cash on Fauber Hangers.

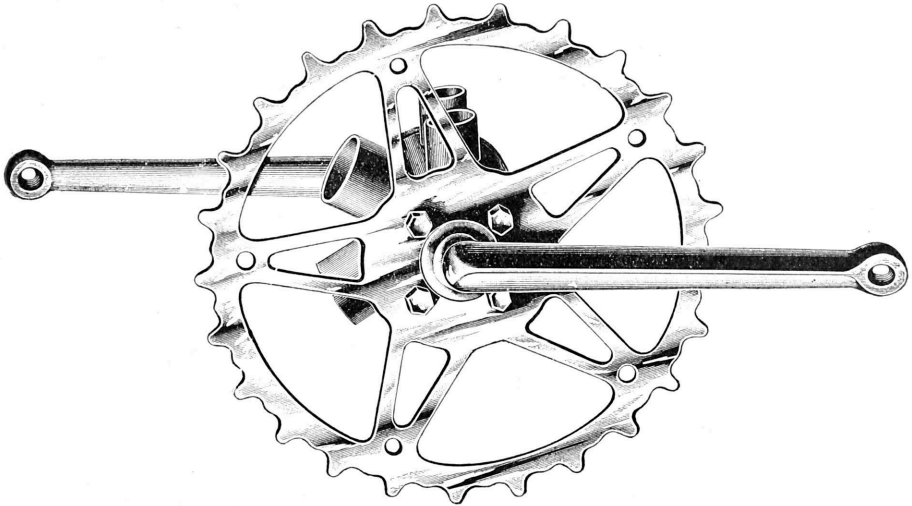
Fauber Patent Rear Forks and Stays.



No. 28. Rear Forks, Stem $1\frac{1}{4}$ inch, 16 ga., Sides 18 ga., tapered	Drawn. Brazed.
to $\frac{3}{4}$ inch round	price per set \$1.20 \$.80

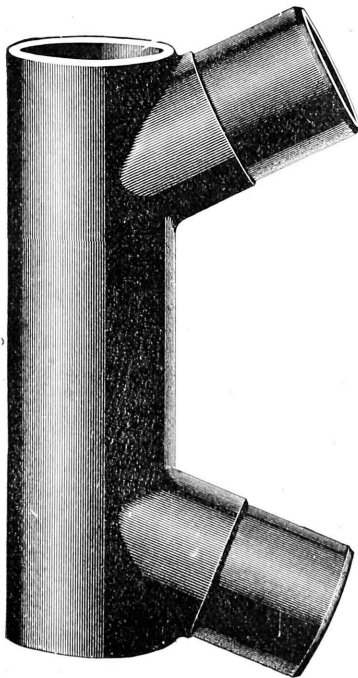
No. 29. Rear Back Stays, Stem $1\frac{1}{8}$, 22 ga, Sides 20 ga.. tapered	
to $\frac{3}{4}$ inch round	price per set \$1.20 \$.80

Springfield Crank Hangers



The Springfield Hangers have the hanger shells forged, are very carefully constructed to guages, and are made for $1\frac{1}{4}$ to $1\frac{1}{2}$ tubes, in both cases $\frac{3}{8}$ rear. The sprockets are forged, and we can easily say there is no better sprocket made.

No. 30. Up to 28 tooth, each \$5.35.



One-piece Forged Steering Head

Used in all high grade bicycles where absolute safety is required.

Drop forged from one solid piece of steel, without any welding or brazing. Flush joints. Weight only 9 ounces. Light, strong, durable. For $1\frac{3}{8}$ head and $1\frac{1}{4}$ and $1\frac{1}{2}$ branches.

No. 10. For $1\frac{3}{8}$ head and $1\frac{1}{4}$ branches, 5 or 7 inches.

No. 11. For $1\frac{3}{8}$ head and $1\frac{1}{2}$ branches, 7 inches.

Price.....each 80c.

Model 13, Flush Joint

For 22 inch frame and 28 inch wheels.

Has 5 inch head and 3 inch drop.

This model consists of the following parts :—

- | | |
|--|--------------------------------------|
| 1 Fauber Special Hanger, nickeled, 1 piece, with $\frac{1}{16}$ sprocket up to 26 tooth. | |
| 1 One-piece stamped head, No. 7. | 1 Pair adjustments. |
| 1 Set head Fittings, No. 25, plated. | 2 Frame braces. |
| 1 Steering tube, threaded. | 1 Pair brazed fork sides. |
| 1 Arch crown. | 1 Pair brazed rear forks. |
| 1 Seat post cluster. | 1 Pair brazed rear stays. |
| 1 Expanding seat post, plated. | 1 Complete set Shelby tubing, cut to |
| 1 Pair rear fork ends, No. 848. | proper length. |

Price for Complete Set, \$7.00.

Set 45c. extra with machined forged head.

Seamless Front and Rear Forks and Rear Stays, 80c. per set extra.

NOTE—Model 14 same as above, except for 24 inch frames.

Model 15, Flush Joint (Lady's)

For 22 inch flush lady's frame and 28 inch wheels.

Has 3 inch drop and 5 inch head.

This model consists of the following parts :—

- | | |
|---|--------------------------------------|
| 1 Fauber Special Hanger, 1 piece, plated, $\frac{3}{16}$ sprocket up to 24 tooth. | |
| 1 One-piece stamped head, No. 7. | 2 Frame braces. |
| 1 Set head fittings, plated, No. 25. | 1 Flanged brace. |
| 1 Steering tube, machined. | 1 Curved bar. |
| 1 Arch crown. | 1 Pair brazed fork sides. |
| 1 Seat post cluster. | 1 Pair brazed rear forks. |
| 1 Expanding seat post, plated. | 1 Pair brazed rear stays. |
| 1 Pair fork ends, No. 848. | 1 Set Shelby seamless tubing, cut to |
| 1 Pair of adjustments. | proper length. |

Price for Complete Set, \$7.80.

Price for set 45c. extra with machined forged head.

Seamless Front and Rear Forks and Rear Stays. 80c. per set extra.

Model 16, Flush Joint

For 22 inch frame and 28 inch wheels.

Has 5 inch head and 3 inch drop.

This model consists of the following parts :—

1 Fauber Standard Hanger, plated, 1 piece, $\frac{3}{8}$ sprocket up to 32 tooth.	
1 One piece stamped head, No. 18.	1 Pair brazed rear forks.
1 Set plated head fittings, 1901 pattern.	1 Pair brazed rear stays.
1 Head stem, threaded.	1 Pair frame braces.
1 Box crown.	1 Pair eccentric rear fork ends, with plated adjustments.
1 Seat post cluster.	1 Set Shelby seamless tubing, cut to proper length.
1 Expanding seat post, plated.	
1 Pair brazed fork Sides.	

Price for Complete Set, \$8.55.

Extra for machined forged head, 45c.

Seamless Front and Rear Forks and Rear Stays, 80c. set extra.

NOTE—Model 17 same as above, except for 24 inch frame.

Model 18, Lady's Flush

This model consists of the following parts :—

1 Fauber Standard Hanger, plated, with $\frac{3}{8}$ sprocket up to 24 tooth.	
1 One-piece stamped head, No. 18.	1 Flanged brace.
1 Set 1901 flush head fittings, plated.	1 Pair brazed front forks.
1 Head stem, threaded	1 Pair brazed rear forks.
1 Box crown.	1 Pair brazed rear stays.
1 Seat post cluster.	1 Curved bar.
1 Expanding seat post, plated.	1 Set Shelby seamless tubing, cut to length.
1 Pair Eccentric rear fork ends, with plated adjustments.	1 Flush frame connection.

Price for Frame Set Complete, \$8.90.

Extra for machined forged head, 45c.

Extra for Seamless Front and Rear Forks and Rear Stays, 80c. set.

Model 19, Flush Joint

Has 5 inch Head and 3 inch drop.

For 22 inch frame and 28 inch wheels.

This model consists of the following parts:—

1 Fauber Perfection Hanger, plated, $\frac{3}{16}$ sprocket up to 28 tooth.

- | | |
|--|--|
| 1-5 Inch stamped head, No. 18. | 1 Pair frame braces. |
| 1 Set 1901 flush head fittings, plated. | 1 Pair brazed front forks. |
| 1 Fork stem threaded. | 1 Pair brazed rear forks. |
| 1 Box crown. | 1 Pair brazed rear stays. |
| 1 Seat post cluster. | 1 Set Shelby seamless tubing cut to proper length. |
| 2 Expanding seat post, plated. | |
| 1 Pair Eccentric rear fork ends with plated adjustments. | |

Price for Complete Set, \$10.15.

Extra for forged head, 45 cents.

Extra for seamless front and rear forks and rear stays, 80 cents set.

Price is given up to 28 tooth.

NOTE.—Model 20, same as above except 24 inch frame.

Model 21, Lady's Flush Joint

For 22 inch lady's frame and 28 inch wheels.

Has 3 inch drop and $7\frac{1}{2}$ inch head.

This set consists of the following parts:—

1 Fauber Perfection Hanger, plated, $\frac{3}{16}$ sprocket 22 and 24 tooth.

- | | |
|---|--|
| 1 One-piece stamped Head, No. 18. | 1 Pair brazed front forks. |
| 1 Set 1901 flush head fittings, plated. | 1 Pair brazed rear forks. |
| 1 Fork stem threaded. | 1 Pair brazed rear stays. |
| 1 Box crown. | 1 Curved bar. |
| 1 Seat post cluster. | 1 Flanged brace. |
| 1 Expanding seat post, plated. | 1 Flush connection. |
| 1 Set Eccentric rear fork ends with plated adjustments. | 1 Set Shelby seamless tubing cut to proper length. |
| 2 Frame braces. | |

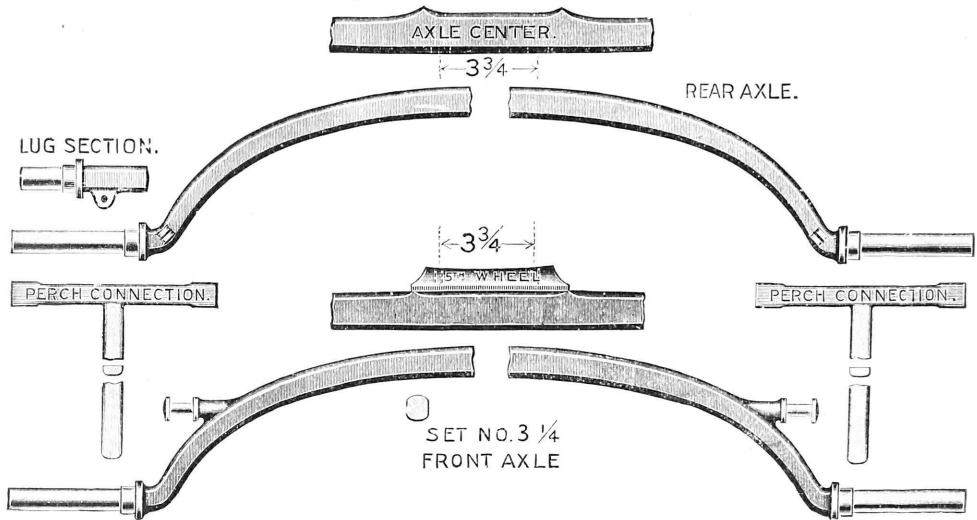
Price for Complete Set up to 28 inch Tooth, \$10.50.

Extra for forged head, 45 cents.

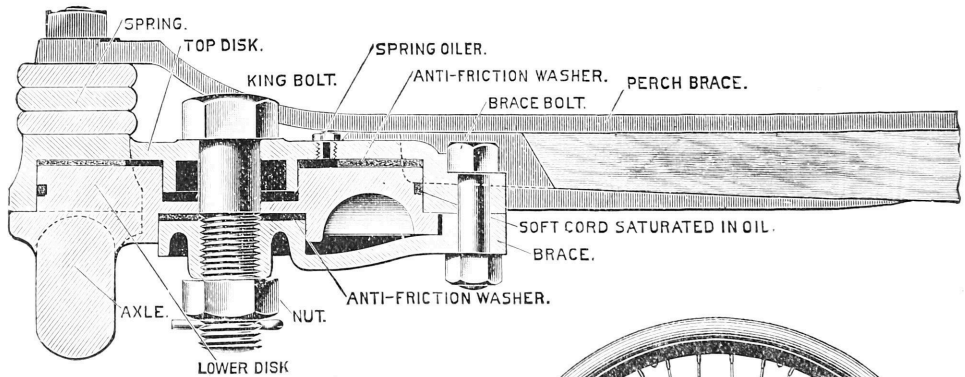
Extra for seamless front and rear forks and rear stays, 80 cents per set.

AUTOMOBILE FITTINGS

Drop Forged Ball Bearing Axles.



Complete as above cut \$14.40.

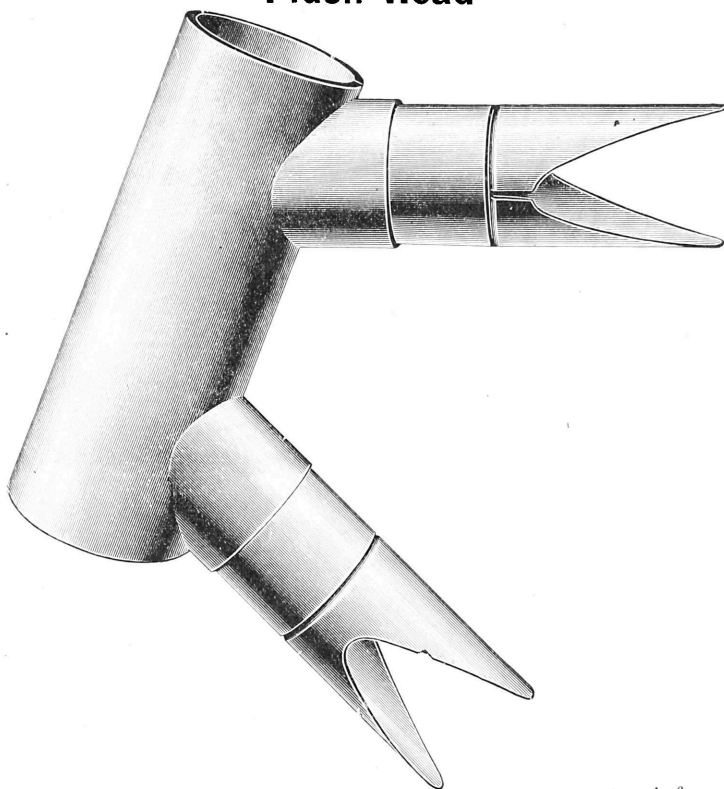


Fifth Wheel, complete as above cut, \$7.20.

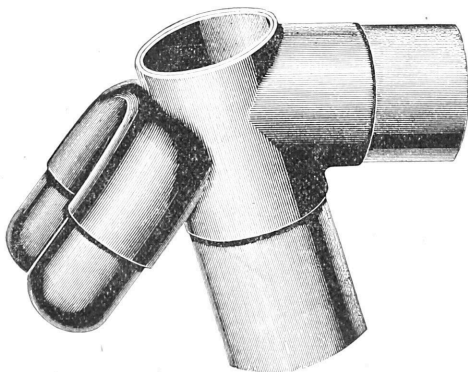
Hubs and wheel strung up, front wheel 34 inches, rear wheel 36 inches. Set ready for tires.
 Price per set... \$22.00



Flush Head



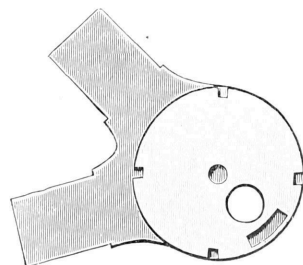
No. 18. Sheet steel, $1\frac{7}{8} \times 1\frac{1}{8}$. Square shoulders and fish-mouth reinforcements.
 Sizes, 5 and 7 inch. Price.....each 33c.



Seat Post Cluster (Stamping)

$1\frac{1}{8}$.

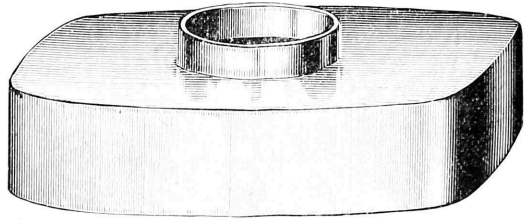
No. 14. Lady's or Gents, price... each 26c.



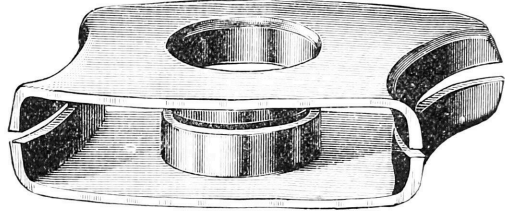
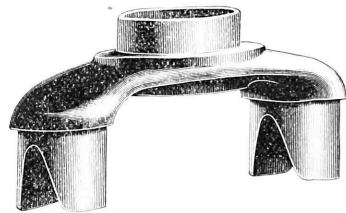
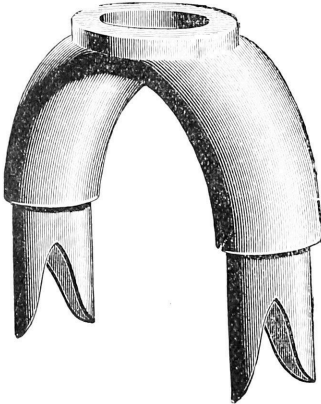
No. 17. Eccentric Rear Fork Ends.

With plated disk adjusters.

Price... ..each 26c.

Box Crown.

No. 19. Priceeach 26c.

**Malleable Arch Crown.****No. 33. Drop Forged Square Arch Crown.**

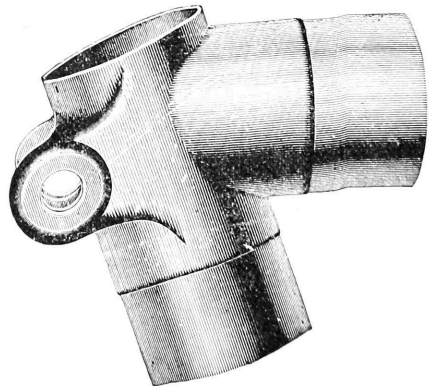
Price.....each 26c.

No. 10. Stem 1 inch, fork sides 1 inch, machined. Each 16c.

Seat Post' Bracket.

$1\frac{1}{4} \times 1\frac{1}{4}$. $1\frac{1}{8} \times 1\frac{1}{8}$.

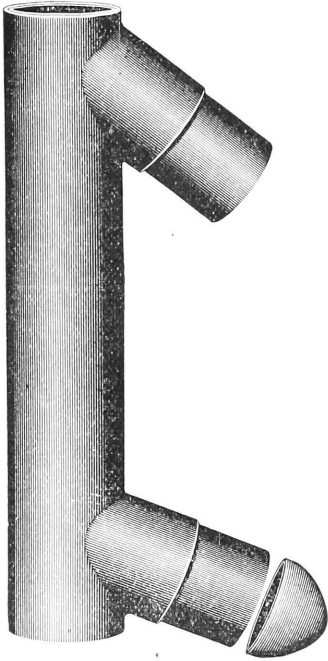
No. 16. Priceeach 20c.

**Steering Tubes.**

No. 53. Threaded, 24 threads to inch.

Price.....each 30c.

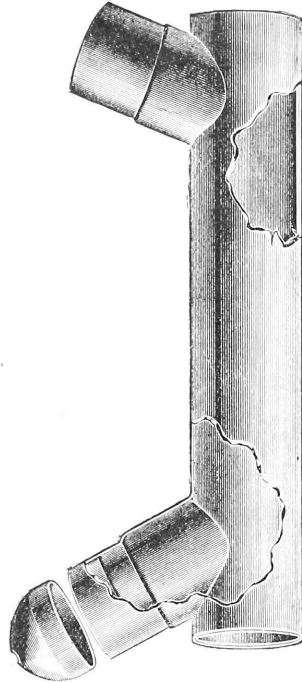
ONE PIECE HEADS.



Ladies' One-Piece Head
(Stamping).

No. 12. $1\frac{3}{8}$ head and $1\frac{1}{4}$ branches.

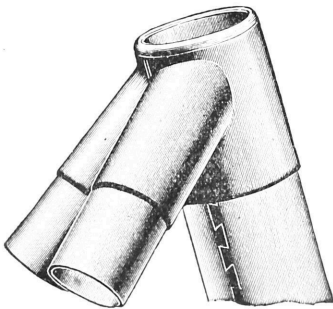
No. 13. $1\frac{3}{8}$ head and $1\frac{1}{8}$ branches.



No. 7 For $1\frac{3}{8}$ head and $1\frac{1}{4}$ branches,
5 or 7 inches.

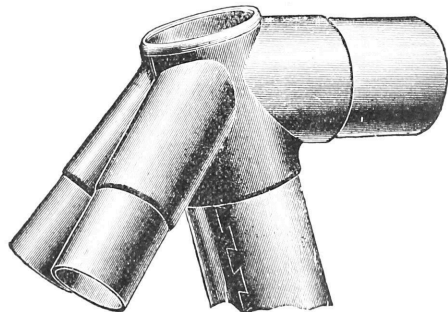
No. 8. For $1\frac{3}{8}$ head and $1\frac{1}{8}$ branches,
5 and 7 inches.

Price.....each 33c.



Lady's Seat Post Cluster

No. 36. Price each, 24c.



Gents' Seat Post Cluster

No. 35. Priceeach 26c.



Rear Forks $\frac{7}{8}$ Oval. (Tapered)

- No. 41. Brazedper pair 33c.
 No. 42. Seamless..... " 60c.



Rear Stays $\frac{3}{4}$ x 22. (Tapered)

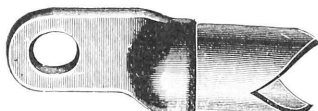
- No. 43. Bent and Deed, Brazed.....per pair 33c.
 No. 44. " " Seamless..... " 60c.



Fork Sides

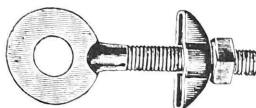
- No. 37. Brazed 1 inch.....pair 24c. No. 38. Seamless 1 inch.....pair 60c.

Frame and Stay Braces



- No. 60. Off-set Brace Tips, per pair 16c. No. 61. Straight Brace Tip, per pair, 10c

Chain Adjusters



- No. 158. Price per dozen pair \$1.00. No. 158. Price..... per pair 12c.

Cranks

Our Cranks are all 40 Carbon Steel.



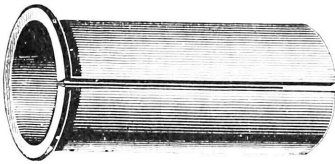
No. 123.



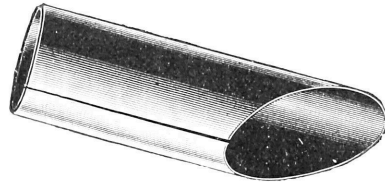
No. 122.

- No. 122. Round Cranks, $5\frac{1}{2}$, 6, $6\frac{1}{2}$ and 7 inch. machined and plated, per pair 53c.
 No. 123. Flat Cranks, 6, $6\frac{1}{2}$ and 7 inch, machined and plated, per pair 73c.

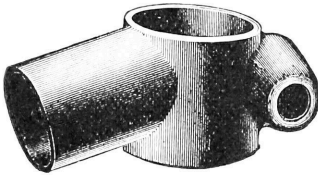
Reinforcements.



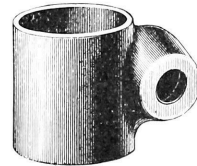
Flanged for $1\frac{1}{8}$ inch tubing.
No. 52.....per 100, \$2 50



No. 55. Plain $1\frac{1}{8}$ inch.....per doz. 32c.
" 57. " $1\frac{1}{4}$ " " 32c.



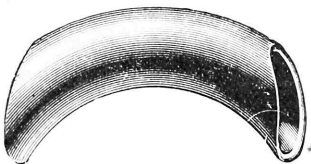
No. 79.
Cent's S.P. Lug Lap Joint.
Price.....each 18c.



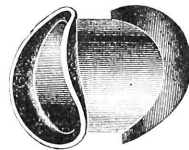
No. 88.
Lady's S.P. Lug Lap Joint.
Price.....each 12c.

Frame and Stay Braces.

To fit $\frac{7}{8}$ inch rear forks and $\frac{3}{4}$ inch stays.

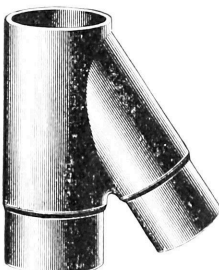


No. 22.
Priceeach 4c.

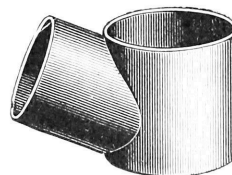


No. 24.
Priceeach 7c.

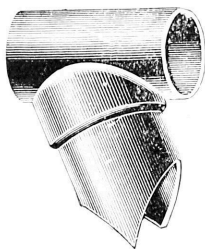
Head Lugs.



No. 48.
No. 48. Flush joint, $1\frac{3}{8}$ x $1\frac{1}{2}$, all angles.
Price.....each 13c.



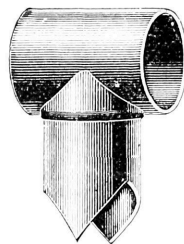
No. 47.
No. 47. Lap joint, $1\frac{1}{4}$ x $1\frac{1}{2}$, all angles.
Price.each 7c.



No. 50.

Seat Post Tee. $\frac{1}{2}$ x $\frac{1}{2}$ inch.

Priceeach 6c.

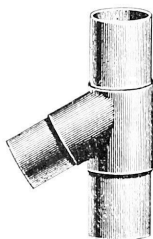


No. 51.

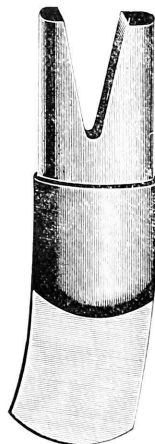
Handle Bar Tee.

Standard sizes.

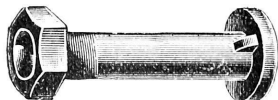
Price.....each 6c.



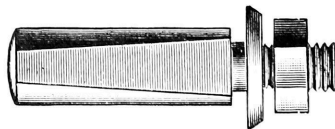
No. 62.

Frame Tee.No. 62. For $1\frac{1}{2}$ x $1\frac{1}{2}$each 13c.No. 63. For $1\frac{1}{4}$ x $1\frac{1}{8}$each 13c.**Fork End Repair Tips.**

No. 39. Priceeach 7c.

**Seat Post Bolt, Nut and Washer.** $\frac{5}{16}$ and $\frac{3}{8}$ inch diameter, standard lengths.

No. 31. Priceeach 8c.

 $\frac{5}{16}$, $\frac{1}{2}$ and $\frac{3}{4}$.**Cotter Pin, Nut and Washer.**

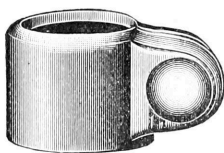
Hardened steel.

No. 32. Priceper dozen 50c.

Head Fittings

Complete set, nine pieces, nickeled.

For $1\frac{1}{4}$, $1\frac{3}{8}$ or $1\frac{5}{8}$ Flush Head.



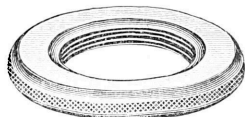
No. A 1. Head Clamp, Bolt and Nut. Price, ea. 20c.



No. A 2. Lock Nut. Priceeach 6c.



No. A 3. Washer. Price.....each 3c.



No. A 4. Top Cone. Priceeach 15c.



No. A 5. Top Cup. Priceeach 10c.



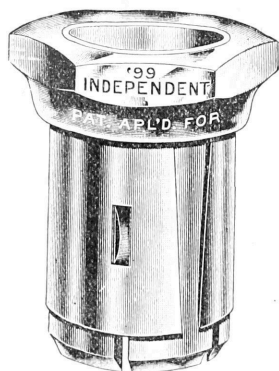
No. A 6. Lower Cup. Priceeach 10c.



No. A 7. Lower Cone. Priceeach 7c.

No. 25. Price.....per set 60c.

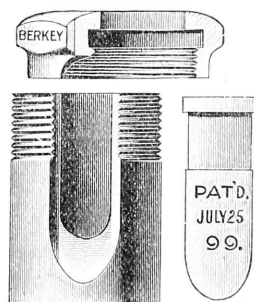
No. 26. Price less Head Clasp, Bolt and Nut.....46c.



No. 55-Seat Post Expander

Size, outside diameter, $1\frac{1}{2}$.

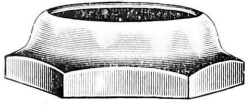
Price, each.....53c.



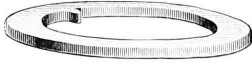
No. 45-Seat Post Expander

Size, outside diameter, $1\frac{1}{4}$.

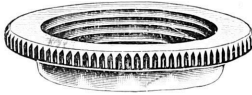
Price, each.....48c.

Head fittings, 1901, flush, plated.For $1\frac{7}{16}$ head, No. 18.

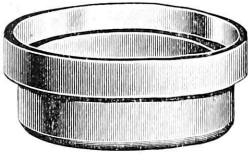
B. 1. Lock nut. Price.....each 20c.



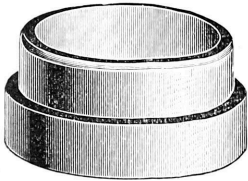
B. 2. Washer. Price.....each 6c.



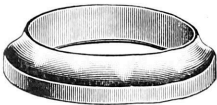
B. 3. Top cone. Price.....each 24c.



B. 4. Top cup. Price.....each 16c.

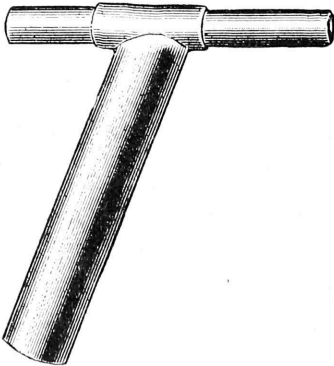


B. 5. Lower cup. Price.....each 16c.



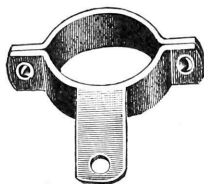
B. 6. Lower cone. Price.....each 10c.

No. 53. Per set complete. 53c.

No. 156—Price, each 40c.
Sizes $\frac{3}{4}$, $1\frac{1}{8}$, $1\frac{1}{4}$, $1\frac{1}{2}$, $1\frac{3}{4}$ and $1\frac{1}{2}$.No. 157—Expansion Seat Post.
Size $\frac{3}{4}$, $1\frac{1}{8}$ and $1\frac{1}{4}$. Price, each 40c.

Chain and Mud Guard Connections

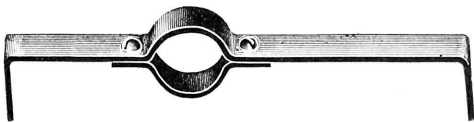
(Polished and Nickel Plated.)



Front Chain Guard Connection
No. 80 is 1½ inch. No. 81 is 1¼ inch.



No. 84. Rear Brace.



Rear Chain Guard Connections
No. 82 is ¾ inch. D or Round.



Rear Lacing Loop
No. 83 is ¾ inch. D or Round.

Connections

No. 80.....	price each 20c.	No. 83.....	per pair 20c.
No. 81.....	price each 20c.	No. 84.....	each 20c.
No. 82.....	price each 20c.	No. 85.....	per Set 73c.



No. 149.

Sprockets

No. 149. Milled and Bored ⅝ inch hole.			
19 teeth.....	\$1 00	each.	
20 "	1 06	"	
21 "	1 17	"	
22 "	1 25	"	
23 "	1 35	"	
24 "	1 40	"	
25 "	1 54	"	
28 "	1 80	"	
30 "	2 30	"	
32 "	3 20	"	

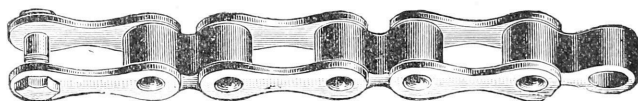
Selling Agents for

McKinnon Dash and Hardware Co.'s

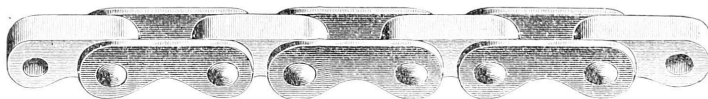
Bicycle Chains.

Every Chain warranted to give satisfaction. Every Chain warranted Hard Blocks and Hard Rivets. Every Chain warranted True to 1 inch Pitch.

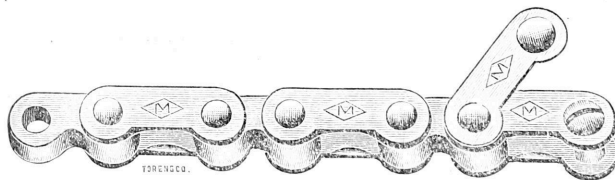
Made $\frac{3}{16}$ inch, and $\frac{1}{4}$ inch wide.



No. 40. Blue cold rolled steel side plates, dark block, per foot, 13c.



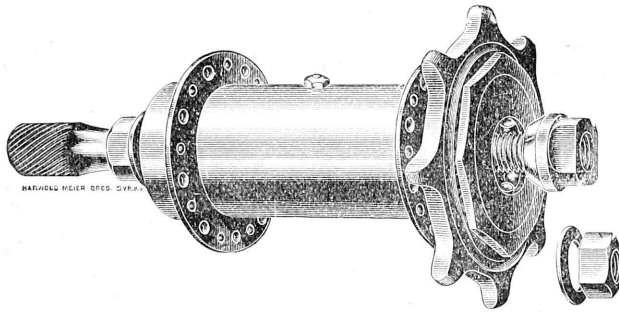
No. 46. Blued cold rolled side plates, brown block, per foot, 20c.



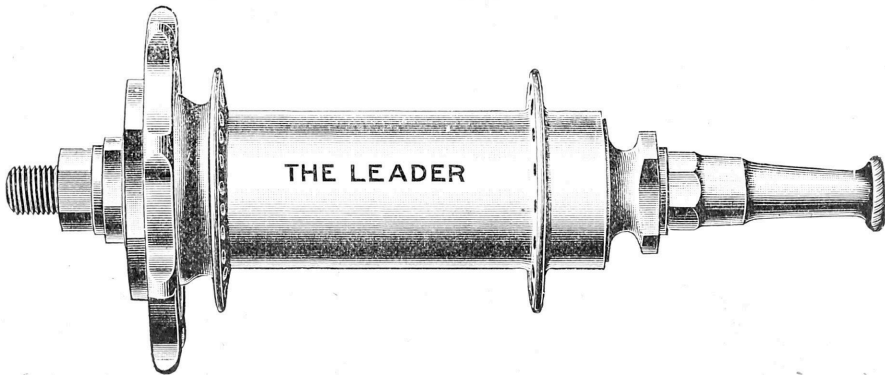
No. 27. Per foot, 17c.

- No. 56. Block plated and polished nickel steel, $\frac{1}{4}$ and $\frac{3}{16}$.
- No. 9. Roller, Fig. 8, pat. bright sides and dark rolls, per foot, 56c.
- No. 49. " Fig. 8, pat. polished blue sides and brown rolls, per foot, 60c.
- No. 59. " Fig. 8, pat. polished nickel plated sides and rolls, per foot, 72c.

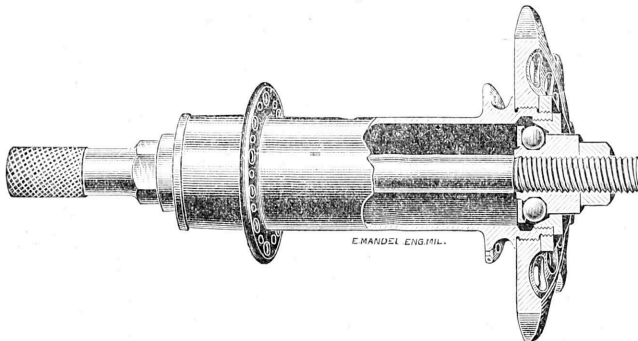
No. 46 can be supplied in $\frac{1}{4}$ width, price per foot, 48c.



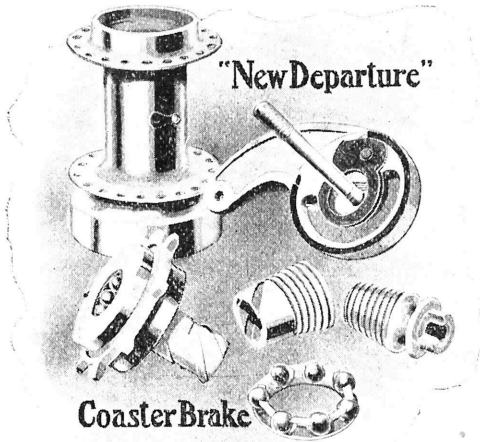
No. 65. Kensington Hub. Price per pair, \$2.00
Standard pattern, $1\frac{1}{2}$ chain line, $\frac{3}{16}$ sprocket, 7, 8, 9 and 10 tooth.



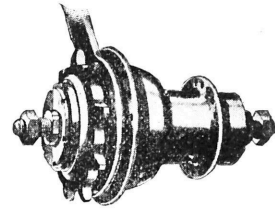
No. 71. Price per pair, \$2.25.
Barrel turned from solid bar, turned cones, caged bearings in $1\frac{1}{2}$ chain line
8, 9, 10 tooth sprockets.



No. 75. K.O.A. Hub. 8, 9 and 10, $\frac{3}{16}$ tooth sprocket.
Price per pair, \$2.80.



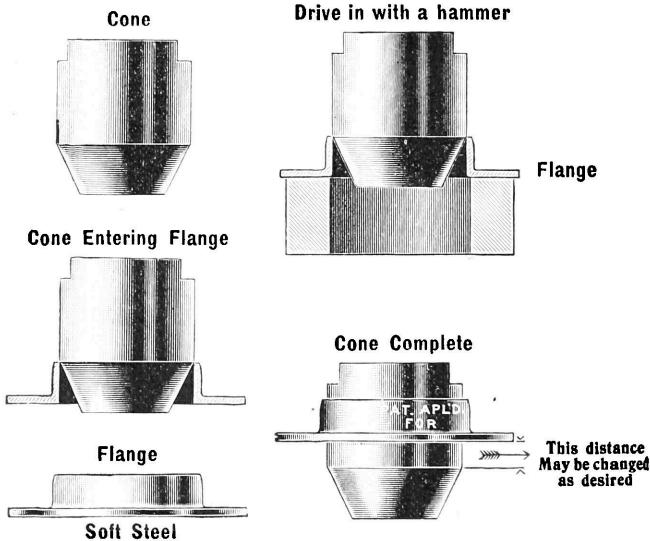
Price each \$6.66



No. 76.

**Morrow Coaster
and Brake.**

Price each \$7.00



Improved
Adjustable
Cones
Instantaneous
Adjustment
No Wrench
Or Clamp
Or Special
Tools
Required

**CAN BE FITTED TO ANY HUB IN
THREE TO FIVE MINUTES**

No. 89. Price each 24c.

**GREATEST IMPROVEMENT FOR REPAIR MEN EVER
INVENTED.**

Clarksburg Wood Rims

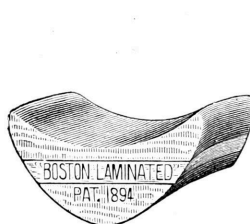
No. 86.	1-piece Rims, Crescent $1\frac{1}{2}$ or $1\frac{5}{8}$ x 28 Drilled.....	per pair \$.86
" 87.	" " Dunlop " " " "	" 1 00
" 92.	3-piece Rims, Crescent or Dunlop, $1\frac{1}{2}$ or $1\frac{5}{8}$ x 28 Drilled...	" 1 26

Wood, Mud and Chain Guards

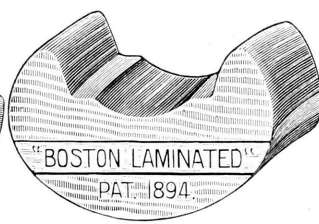
No. 77.	Mud and Chain Guards in Maple	per set 46c
"	" " Birds Eye Maple.....	" 53c
"	" " $\frac{1}{4}$ Cut Oak.....	" 60c

N. B.—Net reduction of 5c per pair in lots of six pair or over.

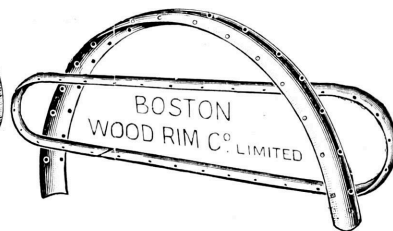
Boston Wood Rims



No. 109.



No. 110.



No. 77.

Laminated Crescent Rim.

Laminated Dunlop Rim.

Mud and Chain Guard.

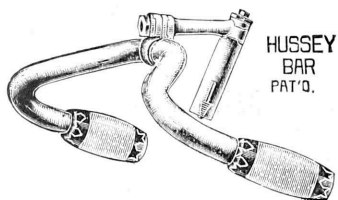
One-piece Crescent Rims, $1\frac{1}{2}$ or $1\frac{5}{8}$ x 28, Bored 32 and 36.....	per pair \$.86
" Dunlop " " " " " " "	" 1 00

Net reduction of 10c. per pair in lots of six pair.

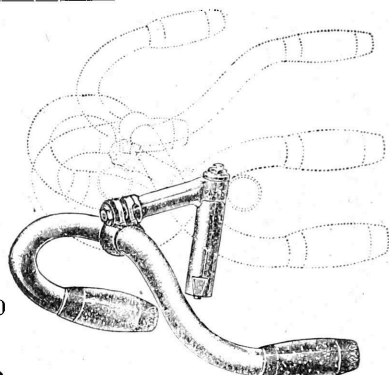
Laminated Crescent $1\frac{1}{2}$ or $1\frac{5}{8}$ x 28 Bored 32 and 36.....	per pair \$1 26
" Dunlop " " " " " " "	" 1 40

Net reduction of 10c. per pair in lots of six pair.

N. B.—These rims are put up in six, twelve and eighteen pairs of one kind.
To obtain the discount full crates must be ordered.

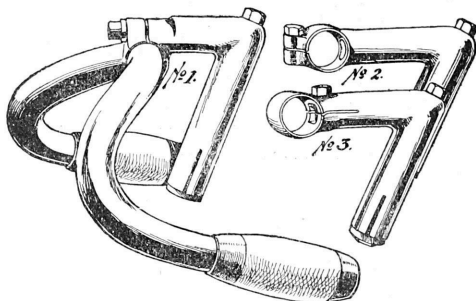
HUSSEY
BAR
PAT'D.No. 1. 20" WIDE 3½" DROP.
2" FORWARD BEND.**Hussey Bar** 7/8 Stem.

No. 100. Price per pair \$2.20

**Hussey Bar** 7/8 Stem.

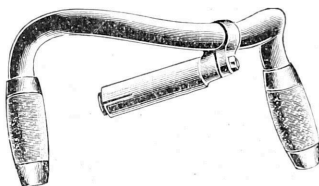
Forty-five different positions.

No. 100. 18 and 20 inch in width.

**Forward Extension**

7/8 Stem.

No. 102. Price each \$1.80

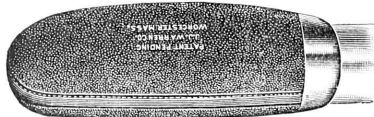
**Perfection Bar**

7/8 Stem.

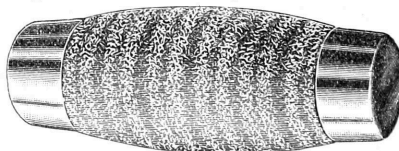
No. 103. Price each \$1.13

Stationary Steel Bars

In up and down turn, Ram's Horn, Schineer patterns, 3/4 stem, price each \$1.00

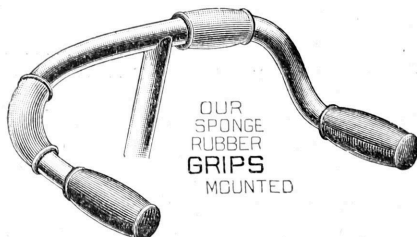


No. 4.

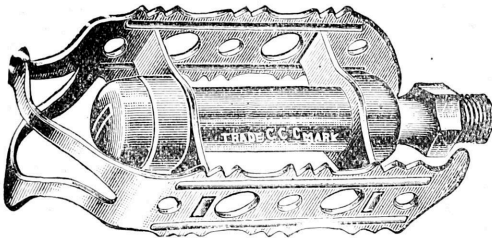


No. 66.

No. 114.	Sewn Leather Grip, 3/4 only, per pair	40c
" 66.	Wound " " " Nickle Tips, per pair	20c
" 67.	" " " " Wood Ends, "	16c
" 101.	Wound All " " " Leather Ends, "	26c
" 119.	" " " " Leather Grips with Stained Ends	18c
" 75.	" " " " Nickle Ferrule	19c

OUR
SPONGE
RUBBER
GRIPS
MOUNTED

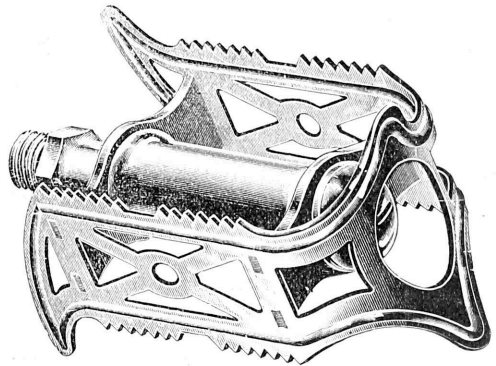
No. 112. Sponge Rubber Grip, Leather Covered per pair 53c



C. C. C.

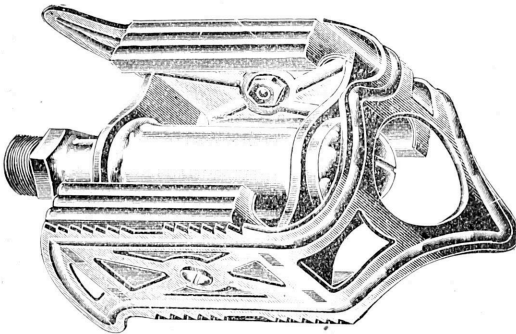
No. 90. Rat trap, Per pair \$1.20

No. 91. Comb or Lady's, Per pair, \$1 45.



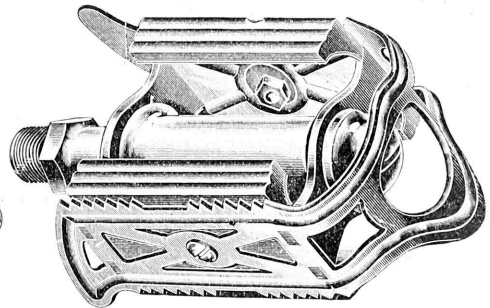
No. 93. Kensington Pedal.

Rat trap, per pair, 93c.



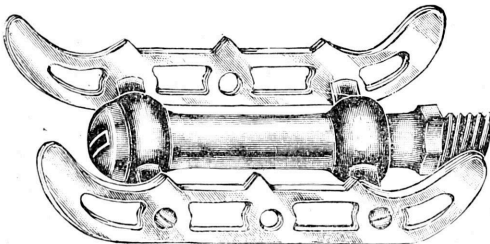
No. 94. Gent's Kensington Comb Pedal.

Price, per pair, \$1.13.



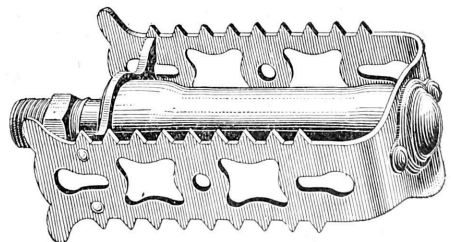
No. 95. Kensington Lady's.

Price, per pair, \$1.13.



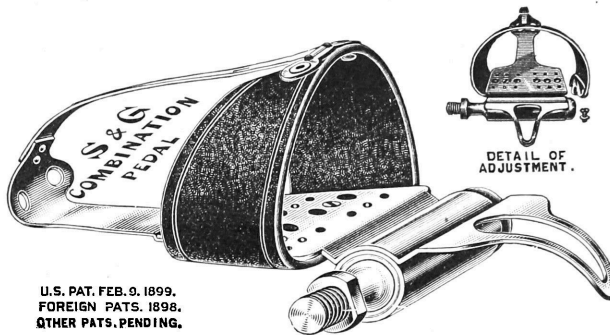
No. 96. Scorcher Pedal.

Price, per pair, \$1.40.

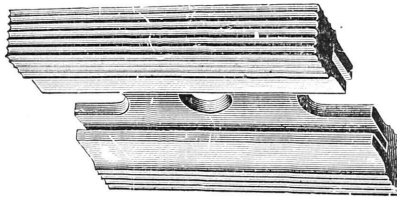


No. 97. Hercules Pedal.

Rat trap..... 93c.

**No. 106—S. & G. Combination Pedal and Toe Clip.**

Price per pair \$2.65.

**No. 78—Strauss Patent Detachable Pedal Rubber.**

Price, set of 4 26c.

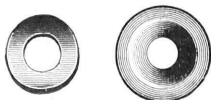
Spokes.

No. 70.

- No. 68—Plain wire, No. 15 gauge, bent, headed, N.P. and threaded with N.P. nipples, per 100 \$1 00
- No. 69—Regular wire, double butted, bent, headed, N.P. and threaded with N.P. nipples, 14-16 gauge, per 100 1 40
- No. 70—Extra wire, double butted, bent, headed, N.P. and threaded with N.P. nipples, 14 x 16 or 15 x 17, per 100 1 60
30 inch spokes 10c. per 100 extra.

Nipples.

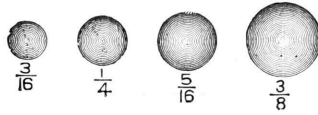
- No. 71—Threaded rolled, Nos. 14⁵⁶ and 15⁵⁶, plated, per 100 46c.
Standard length, $\frac{1}{4}$ inch, extra for every $\frac{1}{16}$, plated, per 100.... .. 10c.



No. 73.

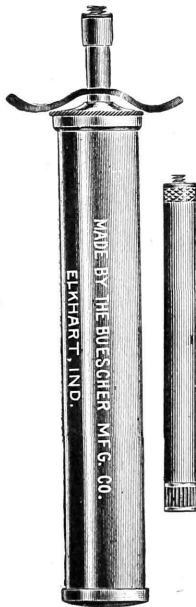
No. 74.

- Washers.**
- No. 73—Circular flat, plain per 100, 10c.; per 1000, 60c.
- No. 75—Circular cupped per 100, 10c.; per 1000, 60c.

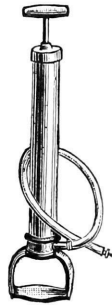


Steel Balls No. 1

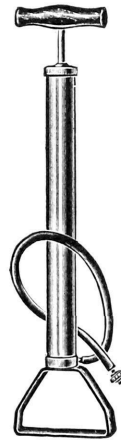
No. 124.	$\frac{1}{8}$	.....	per 100	16c
" 124A.	$\frac{5}{32}$	.....	"	20c
" 125.	$\frac{3}{16}$	.....	"	20c
" 126.	$\frac{1}{4}$ and $\frac{7}{32}$	.....	"	30c
" 127.	$\frac{5}{16}$	.....	"	40c
" 128.	$\frac{3}{8}$ inch	.....	"	80c



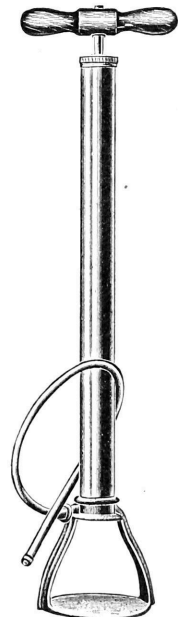
No. 133.



No. 134.



No. 135.



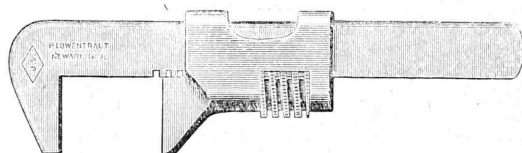
No. 136.

No. 133.	Hand Pump	.....	per dozen	\$1 60
" 134.	Foot Pump, $1\frac{1}{4}$ x 12	.....	each	46
" 135.	" " $1\frac{1}{4}$ x 12, Cast Base	.....	"	53
" 135 $\frac{1}{2}$.	" " $1\frac{1}{2}$ x 12, " "	.....	"	90
" 136 $\frac{1}{2}$.	" " $1\frac{1}{4}$ x 14, " "	.....	"	95
" 136.	" " $1\frac{1}{2}$ x 20, " "	.....	"	2 40



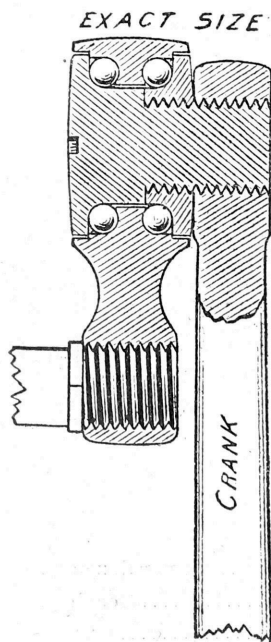
Hexagon Nuts

No. 193.	$\frac{3}{16}$	Blank, plated	per dozen	\$ 0 26
" 194.	$\frac{1}{4}$	" black	"	16
" 195.	$\frac{5}{16}$	" "	"	21
" 196.	$\frac{3}{8}$	" "	"	24
" 197.	$\frac{1}{2}$	Tapped, 32 threads, plated	"	48
" 198.	$\frac{5}{8}$	" 24 " "	"	52
" 199.	$\frac{3}{4}$	" 24 " "	"	57
" 200.	$\frac{7}{8}$	" 20 " "	"	60
" 201.	1	" 22 " "	"	60



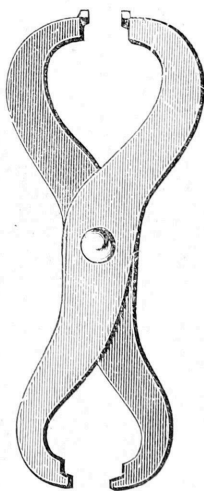
No. 104. U. S. Polished, price each 23c.

Acme Wrench. No. 105. Plated, Price... per dozen \$2.00.



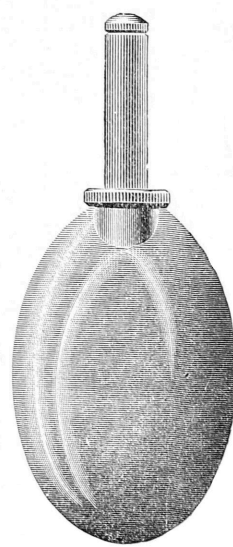
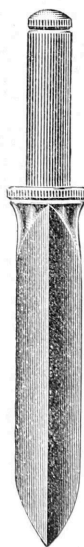
**Jointed Attachment
for Crank.**

No. 179. Price each 50c.



Spanner.

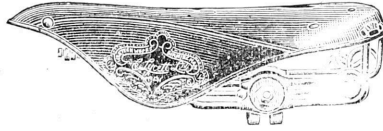
No. 99. Each 13c.



Canteen Oil Can.

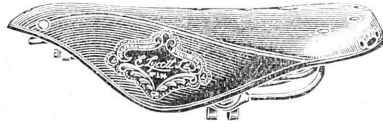
No. 98. Per dozen \$1.00.

Lycett's English Saddles.



L. 11—Road Racer.

The finest saddle of its type on the market, fitted with patent clip and patent adjustment of spring to cantle. No heat is used in the manufacture of the spring of this saddle, and it is practically unbreakable. Perfect tension. Weight under $1\frac{1}{2}$ lbs. **Japanned, \$2.00.**



L. 74—Racing Saddle.

Similar seat to above, but is somewhat lighter. With ordinary top weight $1\frac{1}{4}$ lbs. With race top 1 lb. **Japanned, \$1.87.**

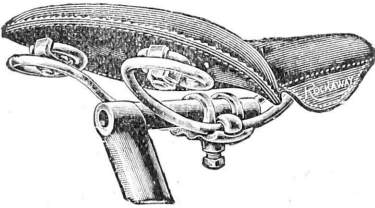


No. 115—Saddle Clamp.

Price, each 20c.; price per doz, \$2.00

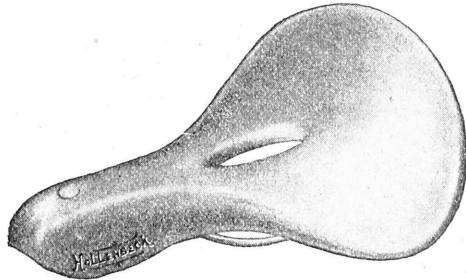
L. 75—Lady's or Gent's.

Splendid quality saddle, with reversible clip. First rate wearing saddle. Weight $1\frac{3}{4}$ lbs. **Japanned, \$1.66.**



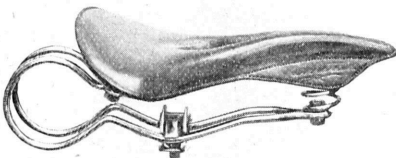
Brown Pattern.

No. 171. Priceeach \$1 00.

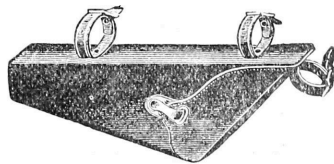


Raw Hide.

No. 172. Priceeach \$1 66

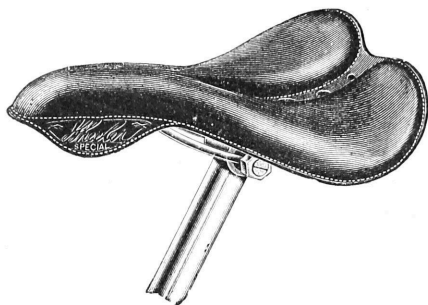


No. 64. Hard top, Kirkpatrick spring.
Price, each \$2 33.



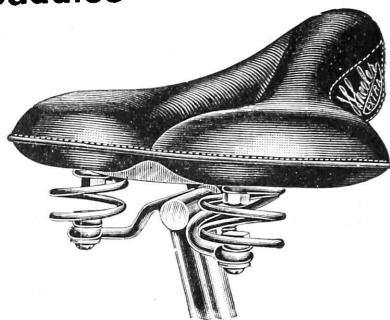
No. 0640.—Black or tan.
Priceeach 38c.

Wheeler Saddles



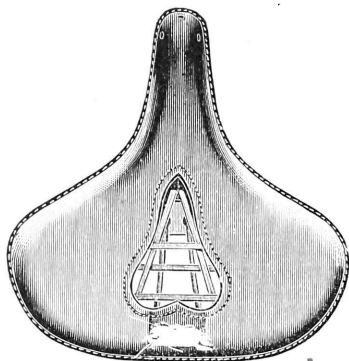
No. 107—Wheeler Regulation.
In gent's only.

Plain spring, price each..... \$1 55
Coil " " " " \$1 65



No. 111—Wheeler Standard.
Lady's or gents'

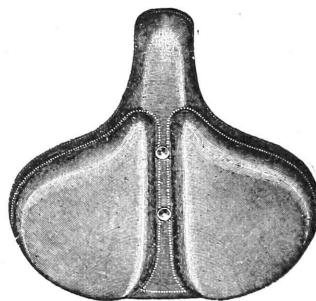
Price with coil spring..... \$1 65



Hunt Pattern.

Laced saddle.

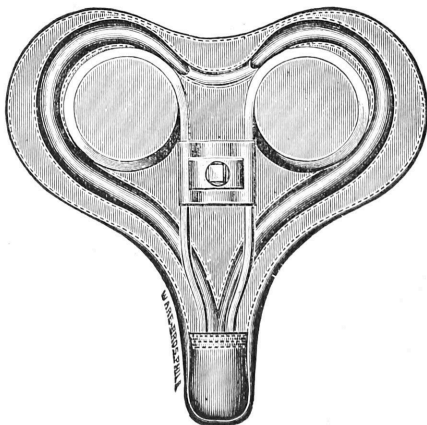
No. 174. Price.....each \$1 35.



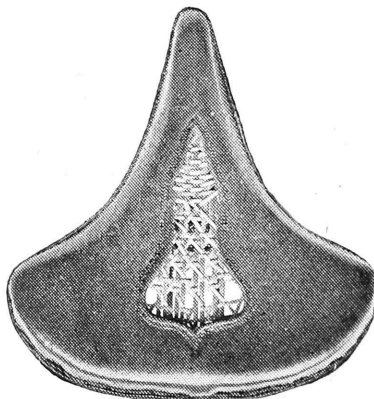
Hunt Pattern.

Padded.

No. 173. Price.... each \$1 70



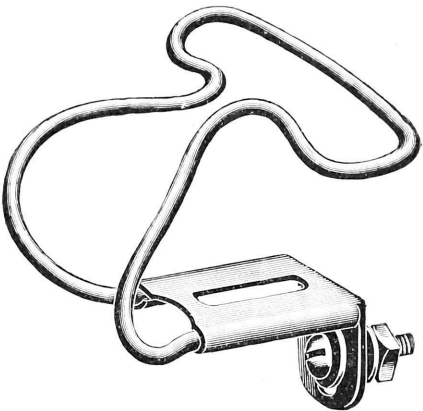
Flexible No. 13. Price, each \$1 33.



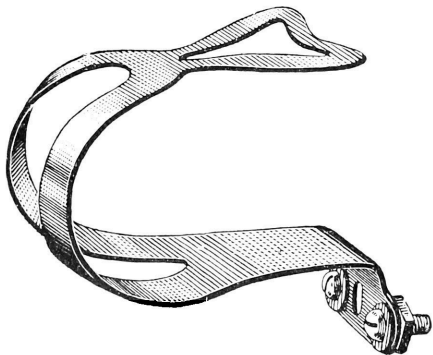
No. 170—Messinger. Price, ea. \$1 20.



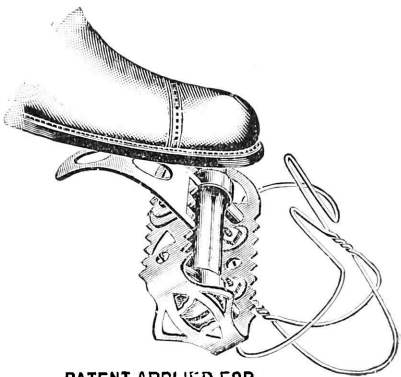
No. 108—Adjustable Stirrup Leather
Toe Clip.
Price, per pair. 50c,



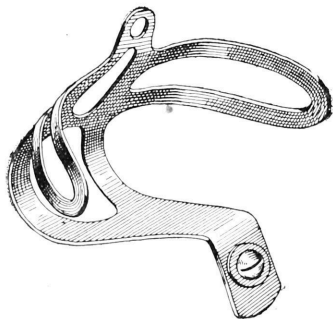
No. 5.—Wire Toe Clip.
Price, per doz. pair \$1.30



No. 3—Toe Clip.
Price, per dozen pair.....\$1 50



PATENT APPLIED FOR.
No. 109—The Handy Foot Guide or
Clip Tripper.
(Will fit any toe clip.)
Per pair\$0 20
" dozen pair..... 2 00

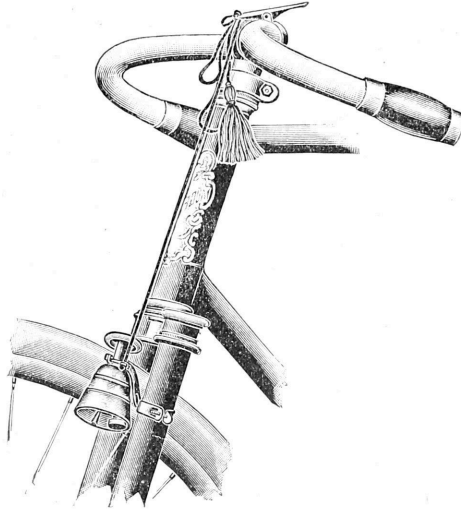


No. 4. Per dozen pair..... \$2 80.

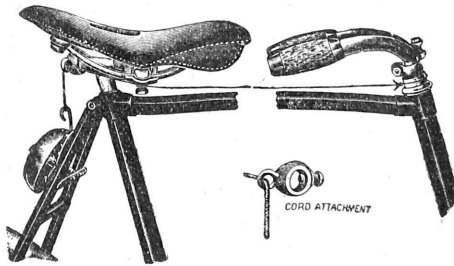


No. 6. Per dozen pair\$2 65

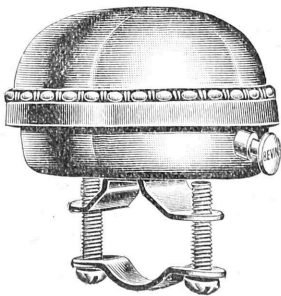
TIRE BELLS.



No. 242—Tire Bell. Priceeach 40c.

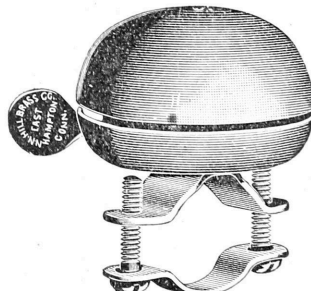


Bicycle Cong. Priceeach 90c.



No. —

Per dozen..... \$7.00



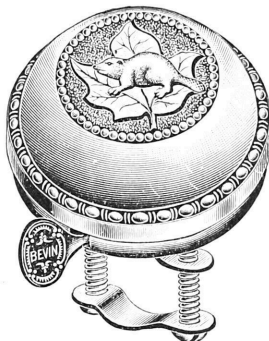
No. 151.

Per dozen, 1½ inches.....\$3 80

BELLS.---Continued.



No. —. Price per doz. \$3.20.



No. —. Price per doz. \$3.30.



No. —. Per doz..... \$3 20.



No. —. Per doz..... ~~\$3.20~~ \$7.00



No. —. Per doz..... \$7.00.



No. —. Per doz..... \$6.60.

The "JANET"
Luggage Carrier,
FOR BICYCLES.

**Fits Any Wheel,
 on Handlebar or Frame.**

Attached or Detached in an Instant.
Weights $2\frac{1}{4}$ ounces. Will carry 50 lbs.
Made of Finest Quality Twine.



No Rubber Bands to Die.
No Straps to Break or Wear Out.

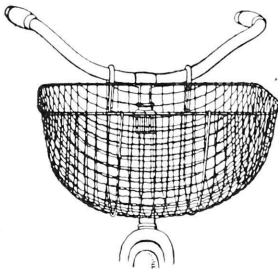
No. 141.

Price.....each 50c.

Enameled Wire Basket
LUGGAGE CARRIER.

WILL NOT RUST.

Fits Any Wheel.



**Supplied with Safety Block, which
 prevents marring the head.**

No. 144. Price, each

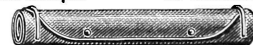
No. 1.	10 x 6	46c.
" 2.	12 x 8	53c.
" 3.	15 x 10	60c.

WALL'S
WATERPROOF
LUGGAGE CARRIER
& SHOPPING BAG.
Fits any Wheel.



**ATTACHED OR DETACHED IN
 AN INSTANT.**

No Straps. No Buckles.

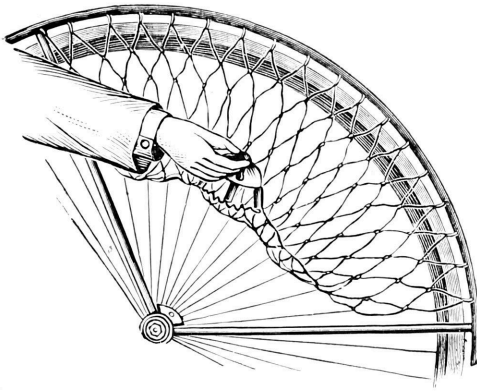


You can carry it in your pocket.

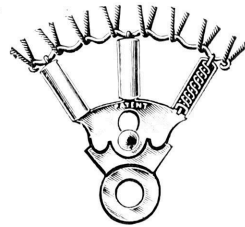
No. 150.

Priceeach 60c.

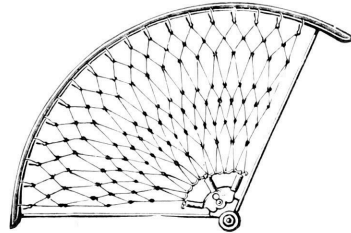
Detachable Dress Guards.



No. 210.



No. 226.



No. 210.

No. 210.	Patent detachable dress guards with patent lacing clip in silk, Black.....	per set,	\$0 70
No. 211.	Patent detachable dress guards with patent lacing clip in silk, Black and Red.....	per set,	\$0 70
No. 215.	Patent detachable dress guards with plain clip in silk, Black.....	per set,	\$0 47
No. 216.	Patent detachable dress guards with plain clip in silk, Maroon.....	per set,	\$0 47
No. 218.	Patent detachable dress guards with plain clip in silk, Black and gold.....	per set,	\$0 47
No. 219.	Patent detachable dress guards with plain clip in silk, Maroon and Gold.....	per set,	\$0 47
No. 220.	Patent detachable dress guards with plain clip in silk, Red and Black.....	per set,	\$0 47
No. 224.	Patent detachable dress guards with plain clip in silk, Olive green and Red.....	per set,	\$0 47

Patent Lacing Clip.

No. 226.	Patent lacing clip.....	per pair,	\$0 26
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Detachable Dress Guards.

No. 212.	Patent detachable dress guards with plain clip in cotton, Black.....	per set,	\$0 33
No. 213.	Patent detachable dress guards with plain clip in cotton, Black and gold.....	per set,	\$0 33
No. 217.	Patent detachable dress guards with plain clip in cotton, Black and red.....	per set,	\$0 33
No. 221.	Patent detachable dress guards with plain clip in cotton, Maroon.....	per set,	\$0 33
No. 223.	Patent detachable dress guards with plain clip in cotton, Blue and white.....	per set,	\$0 33
No. 215.	Patent detachable dress guards with plain clip in cotton, Maroon and gold.....	per set,	\$0 33

Special Cotton Lacing, Cold Wire Twisted.

No. 720.	Black, red and gold.	No. 721.	Black and gold.
Put up in gross spools.....		per gross	90c.

SILK 2 PLY DRESS GUARD LACING.

No. 1001. Black,	No. 1007. Maroon.
“ 1003. Black and red.	“ 1009. Black and gold.
“ 1004. Olive green.	“ 1010. Olive green and gold.
“ 1005. Light maroon.	“ 700. Maroon and gold.
Put up in $\frac{1}{2}$ gross spools.....	per gross \$1 00
“ 18 yard hanks, assorted.....	per dozen hanks \$1 45

COTTON DRESS GUARD LACING.

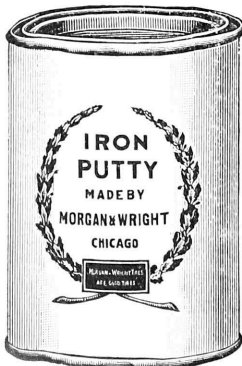
A Black.	G Blue and white.
D Maroon.	H Black and gold.
F Black and red.	K Maroon and gold.
Put up in 18 yard hanks, assorted.....	per dozen hanks \$1 00
“ “ 1 gross spools.....	per gross \$0 60

**MORGAN & WRIGHT AIR DRYING AND BAKING ENAMELS.**

No. 186. Air drying enamels, $\frac{1}{4}$ pint tinlets.....	each, \$0 14
“ “ Air drying enamels, $\frac{1}{4}$ pint tinlets.....	per doz., \$1 20
“ 187. Baking black enamels, quart tinlets	each, \$0 80
“ “ Baking black enamels, $\frac{1}{2}$ gal.....	each, \$1 33
“ “ Baking black enamels, 1 gal.....	each, \$2 20

BRAZING WIRE AND SPELTER.

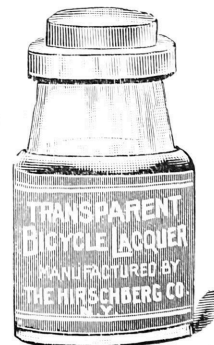
No. 190. Grain spelter	per lb. \$0 36
“ 191. Wire “	“ \$0 36

**MORGAN & WRIGHT IRON PUTTY.**

The latest for filling holes in frames..... per tin \$0 60

TRANSPARENT SPOKE ENAMEL.

No. 202. Blue, $\frac{1}{2}$ oz. bottles, each	20c.
“ 203. Green, “ “	20c.
“ 20. Purple, “ “	20c.





No. 130.

Pure Graphite.

per doz. 20c.
per gross . \$2 00.



No. 137.

Price per box 12c.



No. 270 -M. & W.

Slippery Stuff for Chains.

Per doz., 90c.

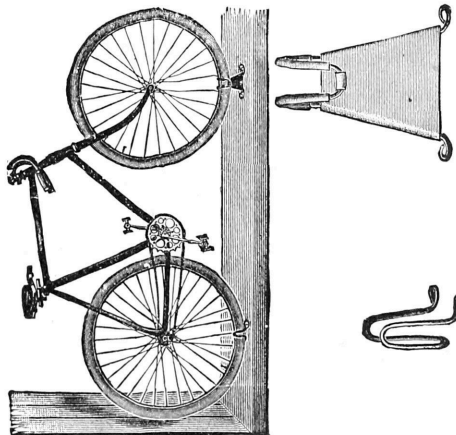
TIRE TAPE.



No. 1 size, per lb. 60c.



No. 2 size, per lb. 60c.



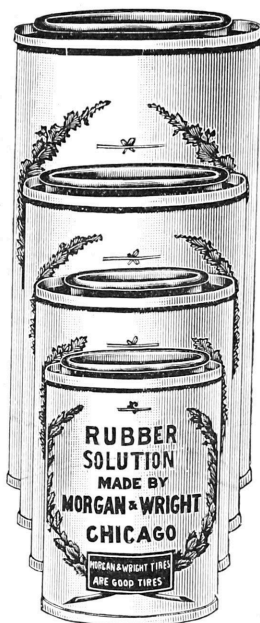
No. 243.	Gem hook	per doz.	\$1 20.
No. 244.	Gem hook, leather bound..	per doz.	\$1 60.



No. 121.

Liquid Rim Cement

$\frac{1}{4}$ pints	each	15c.
$\frac{1}{2}$ "	"	20c.
1 "	"	40c.
1 quart	"	65c.



No. 139.

Rubber Solution.

$\frac{1}{4}$ pints	price each	\$.15
$\frac{1}{2}$ "	"	20
Pints	"	40
Quarts	"	65
$\frac{1}{2}$ gallons	"	1 33
Gallons	"	2 25



No. 140.

Rubber Solution.

 $\frac{3}{4}$ x 4.... per doz. 33c.

Hard Tire Cement.

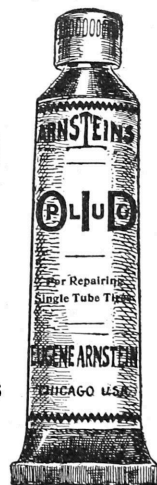
No. 0. Price per doz. \$1.20

No. 141. Morgan & Wright, per lb... 40c



No. 145

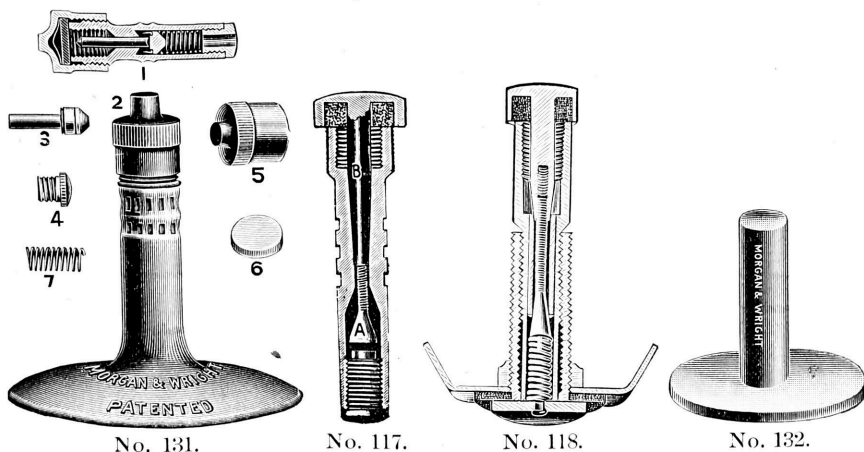
Tireine.

No. 145. $\frac{3}{4}$ x 4, per doz. tubes... \$1.60No. 147. Morgan & Wright Rubber Solution, $\frac{3}{4}$ x 4, per dozen.....47c.No. 148. Morgan & Wright Liquid Rim Cement $\frac{3}{4}$ x 4, per dozen47c.

No. 129.

Plugoid

Per dozen. .. 46c.



VALVES.

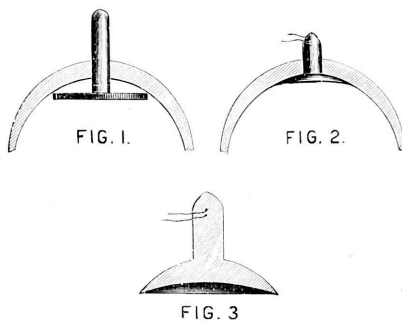
	Each.	Doz.	Per 100.
Wood Schrader or M. & W. with stem.....	\$0 20	\$1 93	\$18 00
“ “ valve only	13	1 33	10 00
“ valve, metal base	17	2 00	15 33
Rubber mushroom		60	4 00

STRAUSS PLUGS.

Latest invention in plugs.

The Strauss curved plug are made in three sizes: $\frac{3}{4}$ inch, 1 inch, and $1\frac{1}{4}$ inch, and come in strips of one dozen each. The special feature of this plug is that it conforms to the shape of the tire and is bound to adhere it. They are provided with a string and are inserted in the usual way.

Price, $\frac{3}{4}$ inch.....	per doz.	24c.
“ 1 “	“	28c.
“ $1\frac{1}{4}$ “	“	40c.



PUMP TUBING.

No. 143.	Pump tubing $\frac{1}{4}$ inch, per foot,	8c.	No. 254.	Price per lb.....	\$1 65
“ 145	“ “ $\frac{3}{8}$ inch, per foot,	12c.			

FRICTION DUCK.

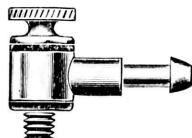
SOAPSTONE.

No. 180.	Price per lb.....	10c.
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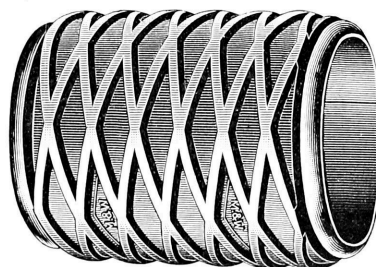


K SWIVEL.

No. 120 K Swivel, per dozen, 60c.



No. 154—RIGHT ANGLE NIPPLE.
Large right angle nipple each 20c.

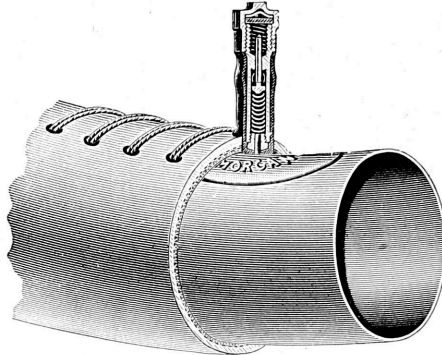


No. 138.

HANDLE BAR BUFFERS.

Price per dozen \$1 20

Morgan & Wright Tires.



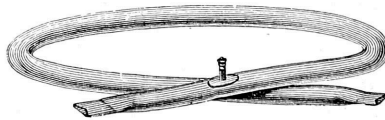
No. 222.

G, 14 to 24 inch	per pair	\$6 80
G, 26 inch	"	7 33
S2, D and X, 26 and 28 inch	"	8 00
S2, D and X, 30 inch	"	9 33

Morgan & Wright Casings.

G, 14 to 24 inch	each	\$2 20
G, 26 inch	"	2 40
S2, D and X, 28 inch	"	2 93
S2, D and X, 30 inch	"	3 60

Inner Tubes.

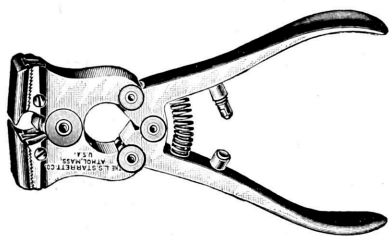


Morgan & Wright, G, 14 to 24 inch	each	\$1 20
" " S2, D and X, 24, 26 and 28 inch	"	1 20
" " No. 2 quality (boxed)	"	1 00
Ben Hur, our special 28 inch	"	1 00

Unguaranteed Tires.

No. 159. Erie double tube corrugated; 1½ or 1¾	per pair	\$6 00
" 160. " single " " "	"	4 40
" 161. " covers " " "	"	2 00

Starrett's Adjustable Jaw Cut-Nippers.



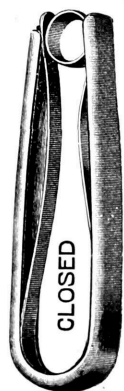
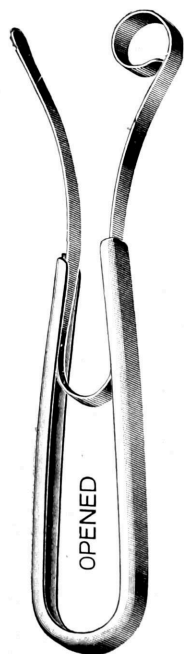
The jaws are detachable, so that they can be removed, ground and adjusted when they have become worn.

No. 1 B.	5½ inch.....	each	\$2 00
"	7 ".....	"	\$2 50

Never Slip.



No. 162.	Per gross.....	\$1 80
"	" " dozen pair	\$0 25



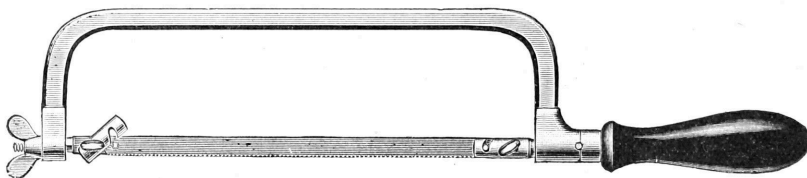
Soliel Pant Clip.

Per gross, nickel plated	\$6.35
" dozen pair.....	.60

Hack Saw Frames.

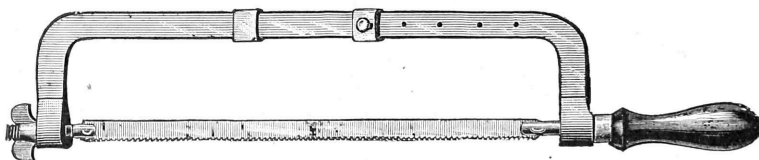


No. 3 H. Spring steel, nickled, with 8 inch blade.....each \$0 53



No. 1 H. Polished frame, reversible, for 8 inch bladeseach \$1 00

“ 2 H. Nickel plated, Cocobola handle, will face the blade in four directions, for 8 inch blades.....each \$1 20



No. 10 H. Extension frame, polished and nickel plated, Cocobola handle will take 6, 7, 8, 9, 10, 11 and 12 inch bladeseach \$1 80

The above prices (excepting No. 3) do not include blades.

Hack Saw Blades.

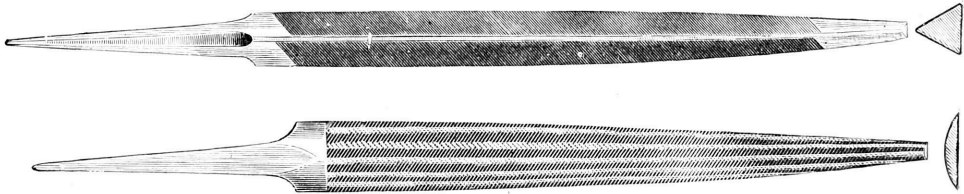


No. 3½. With 14 points, for ordinary work.

“ “ 23 “ flexible for tubing and thin sheet metal.

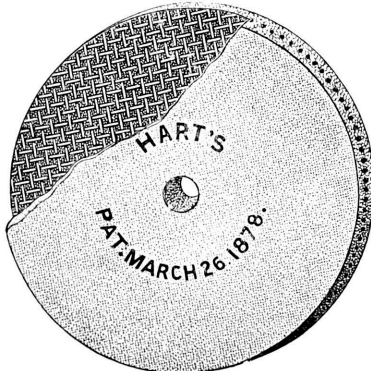
	8	9	10	12 inch.
Thompson's hack saw blades	\$0 88	\$0 93	\$1 00	\$1 20 dozen.
“ “ “	9	10	12	14 each.

Disston Files.



IN.	MILL AND ROUND.			FLAT.			IN.	HALF ROUND & THREE SQ.			WARDING.		
	Bastard	2nd Cut	Smooth	Bastard	2nd Cut	Smooth		Bastard	2nd Cut	Smooth	Bastard	2nd Cut	Smooth
4	3 00	3 50	3 90	3 70	4 30	4 70	4	4 80	5 60	6 10	4 00	4 80	5 40
5	3 20	3 80	4 10	3 90	4 60	4 90	5	5 40	6 10	6 40	4 50	5 30	5 80
6	3 50	4 00	4 50	4 30	4 80	5 30	6	6 10	6 70	7 10	4 90	5 90	6 40
7	3 90	4 60	4 90	4 80	5 50	6 10	7	7 00	7 70	8 20	5 90	6 90	7 50
8	4 30	4 90	5 30	5 30	6 10	6 60	8	7 50	8 30	8 90	6 40	7 50	8 20
9	4 90	5 80	6 30	6 30	7 20	7 90	9	8 50	9 40	9 90	7 80	9 00	9 90
10	5 60	6 40	7 00	7 00	8 10	8 70	10	9 10	10 10	10 70	8 70	10 10	11 00
11	6 70	7 80	8 50	8 60	9 80	0 70	11	10 70	11 80	12 70	10 90	12 70	13 70
12	7 50	8 60	9 40	9 70	11 00	12 10	12	11 80	13 00	13 90	11 30	14 30	15 40
13	9 40	10 70	11 70	11 80	13 60	14 70	13	14 10	15 40	16 60	15 20	17 40	18 70
14	10 70	12 20	13 10	13 30	15 30	16 70	14	15 50	17 00	18 30	17 00	19 40	21 00

INCH.	TAPERS.		SLIM TAPERS.		INCH.	TAPERS.		SLIM TAPERS.	
	Single cut	Double cut	Single cut	Double cut		Single cut	Double cut	Single cut	Double cut
3	2 10	2 50	2 10	2 50	6	3 40	4 70	3 10	3 90
3½	2 10	2 50	2 10	2 50	7	4 30	5 60	3 80	4 50
4	2 20	2 90	2 30	2 60	8	5 40	6 70	4 50	5 30
4½	2 40	3 10	2 30	3 00	9	9 60	8 10	5 40	6 20
5	2 60	3 50	2 50	3 20	10	8 10	9 70	6 40	7 50
5½	3 00	4 00	2 90	3 50	11	10 70	12 10	8 30	9 10



Emery Wheels.

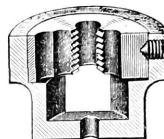
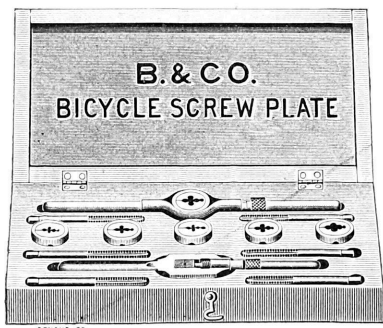
Price, each.

Diameter in inches.	Thickness in inches.							
	1	2	3	4	5	6	7	8
3	\$ 50	\$ 63	\$ 75	\$ 85	\$ 95	\$1 10	\$1 25	
4	80	95	1 10	1 23	1 35	1 60	1 90	
5	1 00	1 20	1 40	1 60	1 80	2 10	2 60	
6	1 40	1 58	1 75	2 13	2 50	3 05	3 70	
7	1 85	2 08	2 30	2 73	3 15	3 95	5 00	
8	2 12	2 36	2 60	3 10	3 60	4 50	5 70	
9	2 50	2 83	3 15	3 50	3 85	4 90	6 80	
10	3 00	3 35	3 70	4 40	5 10	6 60	8 10	
12	3 50	3 75	4 00	5 00	6 00	7 40	9 00	
14			6 20	7 45	8 70	10 70	13 25	

N.B.—When ordering state diameter, thickness, size of mandril, shape of edge and for what use. Wrought or cast iron, steel or brass.

Write for Discount on Files and Emery Wheels.

Bicycle Screw Plates

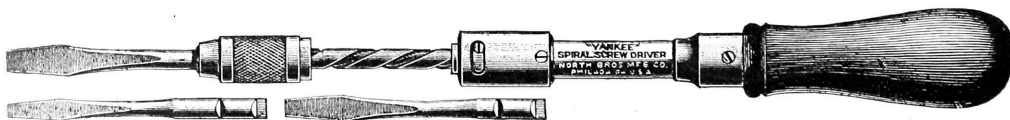


Sectional View of Die and Guide.

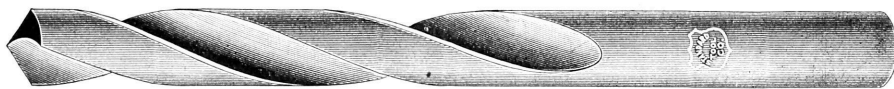
64	{ 6 inches long, Dies $\frac{5}{8}$ inch in diameter; 6 Dies and Guides and 6 Taps; cutting $\frac{3}{32}$, 54; $\frac{1}{4}$, 40; $\frac{1}{2}$, 42; 3, 48; 3, 56; 6, 38. Including 1 Adjustable Tap Wrench.	\$6 00
64A	{ 6 inches long, Dies $\frac{5}{8}$ inch in diameter; 6 Dies and Guides and 6 Taps; cutting 15, 56; Birmingham: 1, 56; $1\frac{1}{2}$, 56; 2, 56; $\frac{3}{32}$, 56; 3, 48. Including 1 Adjustable Tap Wrench.	6 00
65	{ 6 inches long, Dies $\frac{5}{8}$ inch in diameter; 6 Dies and Guides and 6 Taps; cutting $\frac{3}{32}$, 56; $\frac{7}{16}$, 56; $\frac{9}{16}$, 40; 1, 64; $1\frac{1}{2}$, 56; 2, 48. Including 1 Adjustable Tap Wrench.	6 00
65A	{ 6 inches long, Dies $\frac{5}{8}$ inch in diameter; 14 Dies and Guides and 6 Taps; cutting 12, 56; 13, 56; 14, 56; 15, 56; 16, 56; 27, 56; all Birmingham Wire Gauge Sizes. Including 1 Adjustable Tap Wrench.	6 00
66	{ 6 inches long, Dies $\frac{5}{8}$ inch in diameter; 14 Dies and Guides and 14 Taps; cutting $\frac{3}{32}$, 52; $\frac{3}{32}$, 54; $\frac{3}{32}$, 56; $\frac{7}{16}$, 56; $\frac{1}{2}$, 40; $\frac{1}{2}$, 42; $\frac{9}{16}$, 40; 1, 64; $1\frac{1}{2}$, 56; 2, 48; 3, 48; 3, 56; 4, 42; 6, 38. Including 1 Adjustable Tap Wrench.	12 00
67	{ 6 inches long, Dies $\frac{5}{8}$ inch in diameter; 6 Dies and Guides and 6 Taps; cutting 1, 72; 1, 64; $\frac{1}{16}$, 72; 2, 56; 3, 56; 105, 40. Including 1 Adjustable Tap Wrench.	6 00
99	{ 12 inches long, 14 pairs Dies $\frac{1}{4}$ x 24, 32; $\frac{5}{16}$ x 18, 20, 22, 54, 26, 28, 32; $\frac{1}{2}$ x 20, 24, Right hand. $\frac{1}{2}$ x 20, 24, Left hand. 22 Bicycle Taper Taps $\frac{1}{4}$ x 20, 22, 24, 26, 28, 32; $\frac{5}{16}$ x 20, 22, 24, 26, 28, 32; $\frac{3}{8}$ x 18, 20, 22, 24, 36, 28; $\frac{1}{2}$ x 20, 24, Right hand; $\frac{1}{2}$ x 20, 24, Left hand. Including one pair of Tap Wrench Dies.	\$20 00

NOTE.—The sizes and threads in these Plates have been carefully selected, as the most convenient for repairing Bicycles, and they fit many machines. The Guide with each Die insures accurate work. Dies are adjustable for making tight or loose fits. Plug Taps are sent with these Plates.

YANKEE RATCHET SCREW DRIVER No. 30.

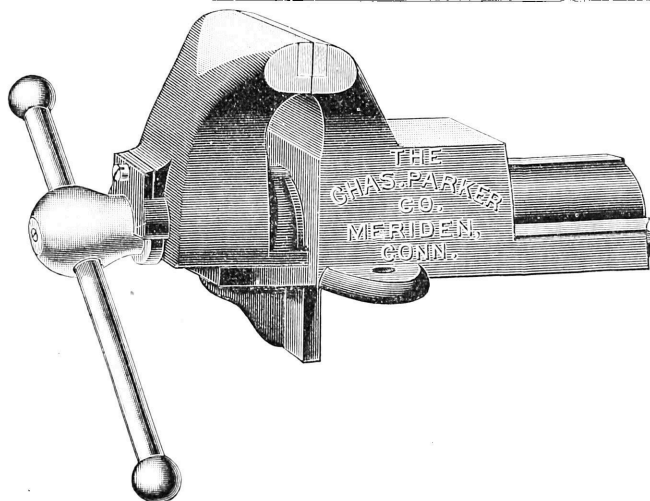


No. 30. Complete with 3 bits.....each \$1.60.

STRAIGHT SHANK DRILLS.

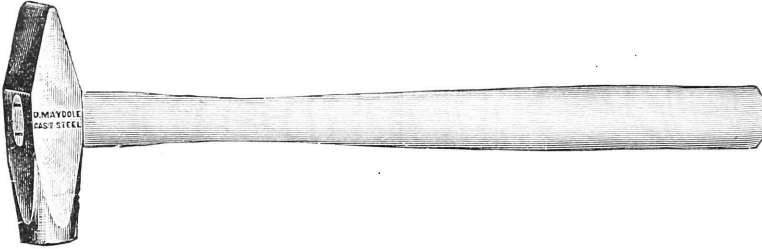
Dia.	Length.	Per doz.	Dia.	Length.	Per Doz.
1-16	2 $\frac{1}{2}$	\$1 00	18-64	4 $\frac{3}{8}$	\$3 90
5-64	2 $\frac{3}{8}$	1 10	5-16	4 $\frac{1}{2}$	4 20
3-32	2 $\frac{3}{4}$	1 20	21-64	4 $\frac{3}{4}$	4 50
7-64	2 $\frac{7}{8}$	1 30	11-32	4 $\frac{3}{4}$	4 80
1-8	3	1 45	23-64	4 $\frac{3}{4}$	5 10
9-64	3 $\frac{1}{8}$	1 60	3-8	5	5 40
6-32	3 $\frac{1}{4}$	1 80	25-54	5 $\frac{1}{8}$	5 70
11-64	3 $\frac{3}{8}$	2 00	13-32	5 $\frac{1}{4}$	6 00
3-16	3 $\frac{1}{2}$	2 20	27-64	5 $\frac{3}{8}$	6 40
13-64	3 $\frac{3}{4}$	2 40	7-16	5 $\frac{1}{2}$	6 80
7-32	3 $\frac{3}{4}$	2 65	20-64	5 $\frac{3}{4}$	7 20
15-64	3 $\frac{5}{8}$	2 90	15-32	5 $\frac{3}{4}$	7 50
1-4	4	3 15	31-64	5 $\frac{7}{8}$	7 75
17-64	4 $\frac{1}{8}$	3 40	1-2	6	8 00
9-32	4 $\frac{1}{4}$	3 65			

Numbers by length.			Numbers by length.		
Guage.	Length.	Per doz.	Guage.	Length.	Per doz.
1 to 5	4	\$2 35	31 to 35	2 $\frac{3}{4}$	\$1 40
6 " 10	3 $\frac{1}{16}$	2 25	36 " 40	2 $\frac{7}{16}$	1 25
11 " 15	3 $\frac{1}{2}$	2 10	41 " 45	2 $\frac{1}{4}$	1 10
16 " 20	3 $\frac{1}{4}$	1 95	46 " 60	2 $\frac{1}{16}$ to 1 $\frac{3}{4}$	95
21 " 25	3 $\frac{1}{16}$	1 75	61 " 69	1 $\frac{1}{2}$	90
26 " 30	2 $\frac{1}{16}$	1 55	70 " 80	1 $\frac{5}{16}$ to 1 $\frac{3}{4}$	1 00



No. 30.	Oval slide, weight 8 $\frac{1}{2}$ lb., jaws 2 $\frac{1}{2}$ in.	\$2 15
" 31.	" " " 13 lbs., 3 in. jaws	2 75
" 32.	" " " 19 " 3 $\frac{1}{4}$ " "	3 50
" 33.	" " " 22 " 3 $\frac{1}{2}$ " "	3 80
" 34.	" " " 28 " 4 " "	5 75
" 35.	" " " 35 " 4 $\frac{3}{4}$ " "	8 75
" 36.	" " " 62 " 5 $\frac{1}{4}$ " "	11 00

Maypole Riveting Hammers.



No.	40	41	42	43	44
Weight	1 lb. 8 oz.	1 lb. 2 oz.	13 oz.	7 oz.	4 oz.
Price each	\$0.75	\$0.65	\$0.55	\$0.50	\$0.45

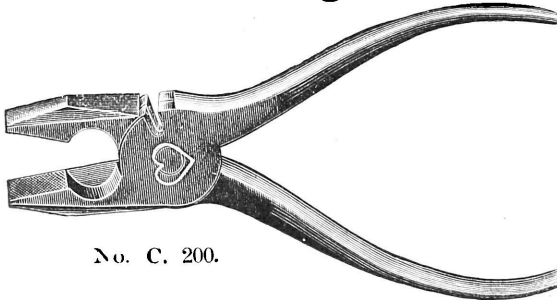
Weights given do not include weight of handle.

Champion Screw Drivers.



Size	2½	3	4	5	6	7	8 inch.
Price each	\$0.20	25	30	35	45	50	55

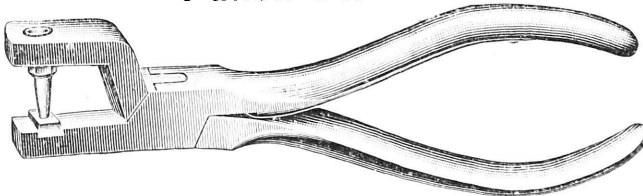
Heart Cutting Pliers.



No. C. 200.

Size	5	5½	6	7	8 inch.
Each	\$0.50	.50	.55	.75	\$1.10

Punch Pliers.



No. C. 384.

6½ inch	each, \$0.50
7 "	" .55

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