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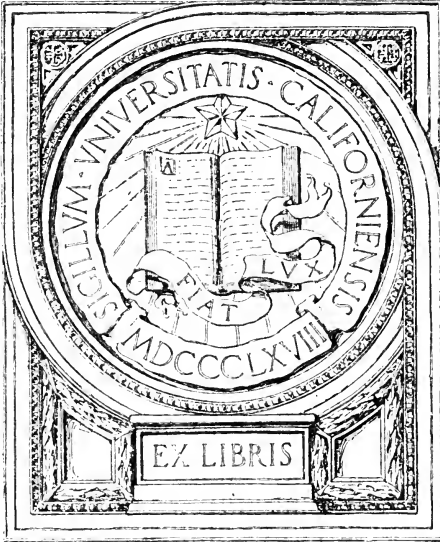
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WAR DEPARTMENT
OFFICE OF THE ADJUTANT GENERAL

UNIT EQUIPMENT MANUAL

FOR THE

Aviation Section

Signal Corps



JULY, 1917



WASHINGTON
GOVERNMENT PRINTING OFFICE
1917

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WAR DEPARTMENT,

Document No. 627.

Office of The Adjutant General.

WAR DEPARTMENT,
WASHINGTON, *July 13, 1917.*

The following Unit Equipment Manual for the Aviation Section, Signal Corps, is published for the information and guidance of all concerned.

[062.11 A. G. O.]

By order of the Secretary of War :

TASKER H. BLISS,
Major General, Acting Chief of Staff.

OFFICIAL :

H. P. McCAIN,
The Adjutant General.

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INITIAL EQUIPMENT FOR AN AERO SQUADRON.

SMALL TOOLS NECESSARY FOR THE EQUIPMENT OF AN AERO SQUADRON.

- 2 anvils, Hay-Budden, 50-pound.
- 2 anvils, Hay-Budden, 58-pound.
- 2 arbors, cutting, screw slotting, $\frac{7}{8}$ -inch, No. 2 Morse taper shank, and adapted to use between centers.
- 2 axes, medium weight, Jack Frost.
- 2 bars, Armstrong, self-hardening steel, $\frac{5}{16}$ -inch.
- 4 bars, Armstrong, self-hardening steel blades, $\frac{1}{2}$ by $\frac{3}{4}$ inch.
- 2 bars, boring, Armstrong, No. 10.
- 12 bevels, carpenter, Stanley.
- 1 binder, $\frac{1}{4}$ -inch, for Singer sewing machine.
- 12 bits, auger, $\frac{1}{4}$ -inch, Jennings.
- 2 bits, expansion, $\frac{1}{2}$ inch to $1\frac{1}{2}$ inches, Clark's, sets.
- 1 bit, screw driver, 4-inch, No. 4.
- 1 bit, screw driver, 6-inch, No. 4.
- 2 bits, wood, 4 to 16, in sixteenths, in canvas roll, sets.
- 2 blocks, drill and clamps, No. 271-C, Starrett.
- 2 blocks, snatch, $5\frac{1}{2}$ by $1\frac{1}{4}$ inches by $\frac{1}{2}$ inch, Hartz's.
- 60 boxes, tool, steel, 36 by 18 by 18 inches (Cleveland Wire & Spring Co.).
- 28 braces, Stanley, 8-inch.
- 8 brushes, file with card and scorer.
- 2 brushes, glue, No. 2, Manning, Maxwell & Moore.
- 2 brushes, wheel, circular scratch.
- 12 calipers, double, Starrett, No. 44.
- 10 calipers, pocket slide, Starrett, No. 425, 3-inch.
- 7 calipers, pocket slide, Starrett, No. 425, 6-inch.
- 6 cards, file.
- 16 chisels, cold, $\frac{1}{4}$ -inch.
- 2 chisels, cold, $\frac{3}{8}$ -inch.
- 38 chisels, cold, $\frac{1}{2}$ -inch.
- 2 chisels, cold, $\frac{5}{8}$ -inch.
- 2 chisels, cold, $\frac{3}{4}$ -inch.
- 2 chisels, cold, 1-inch.
- 2 chisels, cold, with handle, $1\frac{1}{4}$ -inch bit.
- 2 chisels, hot, with handle, $1\frac{1}{4}$ -inch bit.
- 12 chisels, wood, Stanley, $\frac{1}{2}$ -inch.
- 2 chisels, wood, each set in fourths, $\frac{1}{4}$ -inch to $1\frac{1}{4}$ inches, sets.
- 4 clamps, iron, C, 4-inch.
- 28 clamps, iron, C, 6-inch.
- 4 clamps, iron, C, 8-inch.
- 4 clamps, Armstrong, drop-forged, light design, C No. 4.
- 4 clamps, toolmaker's, 5-inch.
- 2 clippers, bolt, Porter's New Easy, No. 3.
- 4 combination sets, Starrett, No. 433, hardened, No. 4 graduation.
- 12 coppers, soldering, $\frac{1}{2}$ -pound.

6 UNIT EQUIPMENT MANUAL FOR AVIATION SECTION.

- 14 coppers, soldering, 1½-pounds.
- 12 countersinks, 30°, ¼-inch.
- 12 countersinks, 60°, ¼-inch.
- 6 calipers, micrometer, set No. 135, B. & S., with standard and ratchet stop, with case.
- 2 calipers, micrometer, No. 221 (pocket sheet-metal gauge), with ratchet stops and case.
- 2 calipers, outside, 3-inch, B. & S., No. 801.
- 2 calipers, outside, 6-inch, B. & S., No. 801.
- 2 calipers, inside, 3-inch, B. & S., No. 802.
- 2 calipers, inside, 6-inch, B. & S., No. 802.
- 2 calipers, inside, transfer, firm joint, 10-inch, B. & S., No. 827.
- 2 calipers, outside, transfer, firm joint, 10-inch, B. & S., No. 826.
- 8 clamps, toolmaker's, 1½-inch, B. & S., No. 754, B. & S.
- 8 clamps, toolmaker's, 3½-inch, No. 754, B. & S.
- 2 combination sets, 12-inch blade, B. & S., No. 438, No. 7 graduation, square heads, hardened and tempered blades.
- 2 cutters, angular, J-10, 2½ by ½ inch, 45-degree, high speed, right hand, ⅜-inch hole, B. & S.
- 2 cutters, angular, J-10, 2½ by ½ inch, 60-degree, high speed, right hand, ⅜-inch hole, B. & S.
- 2 cutters, convex, ⅜ by 2 inches, No. C-10, high speed, ⅜-inch arbor, B. & S.
- 2 cutters, convex, ¼ by 2 inches, No. C-12, high speed, ⅜-inch arbor, B. & S.
- 2 cutters, convex, ⅜ by 2 inches, No. C-14, high speed, ⅜-inch arbor, B. & S.
- 2 cutters, convex, ½ by 2 inches, No. C-16, high speed, ⅜-inch arbor, B. & S.
- 4 cutters, side milling, ¼ by 2½ inches, No. S-16, high speed, ⅜-inch arbor, B. & S.
- 4 cutters, side milling, ⅜ by 2½ inches, No. S-18, high speed, ⅜-inch arbor, B. & S.
- 4 cutters, side milling, ½ by 2½ inches, No. S-20, high speed, ⅜-inch arbor, B. & S.
- 2 cutters, spiral end mill, with No. 2 Morse taper shank, spiral flute, high speed, right hand, No. E-100, B. & S.
- 2 cutters, spiral end mill, with No. 2 Morse taper shank, spiral flute, high speed, right hand, No. E-103, B. & S.
- 2 cutters, spiral end mill, with No. 2 Morse taper shank, spiral flute, high speed, right hand, No. E-105, B. & S.
- 2 cutters, spiral end mill, with No. 2 Morse taper shank, spiral flute, high speed, right hand, No. E-108, B. & S.
- 2 cutters, spiral end mill, with No. 2 Morse taper shank, spiral flute, high speed, right hand, No. E-113, B. & S.
- 2 cutters, spiral end mill, with No. 2 Morse taper shank, spiral flute, high speed, right hand, No. E-117, B. & S.
- 2 cutters, spiral end mill, with No. 2 Morse taper shank, spiral flute, high speed, right hand, No. E-125, B. & S.
- 2 cutters, spiral end mill, with No. 2 Morse taper shank, spiral flute, high speed, left hand, No. E-100, B. & S.
- 2 cutters, spiral end mill, with No. 2 Morse taper shank, spiral flute, high speed, left hand, No. E-103, B. & S.
- 2 cutters, spiral end mill, with No. 2 Morse taper shank, spiral flute, high speed, left hand, No. E-105, B. & S.
- 2 cutters, spiral end mill, with No. 2 Morse taper shank, spiral flute, high speed, left hand, No. E-108, B. & S.
- 2 cutters, spiral end mill, with No. 2 Morse taper shank, spiral flute, high speed, left hand, No. E-113, B. & S.

- 2 cutters, spiral end mill, with No. 2 Morse taper shank, spiral flute, high speed, left hand, No. E-117, B. & S.
- 2 cutters, spiral end mill, with No. 2 Morse taper shank, spiral flute, high speed, left hand, No. E-125, B. & S.
- 2 cutters, "T" slot, high speed, right hand, No. 2, Morse, taper shank, diameter $\frac{1}{2}$ inch, thickness $\frac{3}{8}$ inch, B. & S.
- 2 cutters, "T" slot, high speed, right hand, No. 2, Morse, taper shank, diameter $\frac{1}{4}$ inch, thickness $\frac{3}{8}$ inch, B. & S.
- 2 dogs, lathe, drop forged, Armstrong, No. 11.
- 2 dogs, lathe, drop forged, Armstrong, No. 13.
- 2 dividers, 3 inch, No. 800, B. & S.
- 2 dividers, 6 inch, No. 800, B. & S.
- 12 drills and countersinks, combined, No. 109-B, $\frac{1}{8}$ by 0.073 by 0.082 inch, Morse.
- 12 drills and countersinks, combined, No. 109-B, $\frac{3}{16}$ by 0.093 by 0.128 inch, Morse.
- 12 drills and countersinks, combined, No. 109-B, $\frac{7}{16}$ by 0.157 by 0.157 inch, Morse.
- 2 drifts, drill, Armstrong, No. 1-A.
- 2 drills, automatic, Yankee, No. 42.
- 22 drills, breast, Yankee, No. 1530.
- 2 drills, hand, ratchet with chain drill attachment, Yankee, No. 555.
- 124 drills, S. S., $\frac{3}{8}$ inch.
- 320 drills, S. S., $\frac{1}{8}$ inch.
- 440 drills, S. S., $\frac{1}{16}$ inch.
- 440 drills, S. S., $\frac{1}{4}$ inch.
- 320 drills, S. S., $\frac{1}{8}$ inch.
- 60 drills, S. S., $\frac{1}{8}$ inch.
- 120 drills, S. S., 0.161, No. 20.
- 120 drills, S. S., 0.152, No. 24.
- 120 drills, S. S., $\frac{7}{16}$ inch.
- 2 drills, Morse, S. S., $1\frac{1}{2}$ inch.
- 2 drills, Morse, S. S., $1\frac{1}{8}$ inch.
- 2 drills, Morse, S. S., $1\frac{1}{4}$ inch.
- 2 drills, Morse, S. S., $1\frac{3}{8}$ inch.
- 2 drills, Morse, S. S., $1\frac{1}{2}$ inch.
- 2 drills, Morse, S. S., $1\frac{5}{8}$ inch.
- 2 drills, Morse, S. S., $1\frac{3}{4}$ inch.
- 2 drills, Morse, S. S., $1\frac{7}{8}$ inch.
- 2 drills, Morse, S. S., $1\frac{1}{2}$ inch.
- 2 drill sets, Morse, style 106, No. 16-B, A to Z, straight shank, without holder.
- 2 drill sets, Morse, style 106, No. 15-B, A to Z, straight shank, folding holder.
- 2 drill sets, Morse, style 107, No. 8-B, 1 to 60, straight shank, folding holder.
- 2 drill sets, Morse, style 107, No. 8-B, 1 to 60, straight shank, without holder.
- 2 drill sets and revolving stand, Morse, taper shank, style 102, sets to be from $\frac{1}{8}$ to 1 inch by sixty-fourths.
- 2 dressers, Huntington, with 8 extra blades.
- 2 edges, straight, hardened steel, 39 inch, No. 527, B. & S.
- 2 figures, Standwell, $\frac{3}{8}$ inch, steel, sets.
- 4 files, Nicholson, 8 inch, half round, coarse, with handles.
- 4 files, Nicholson, 8 inch, half round, smooth, without handles.
- 8 files, Nicholson, 8 inch, mill bastard, with handles.
- 4 files, Nicholson, 8 inch, mill smooth, without handles.
- 10 files, Nicholson, 8 inch, round bastard, with handles.
- 4 files, Nicholson, 8 inch, round, smooth, without handles.
- 24 files, Nicholson, flat bastard, 8 inch.

- 14 files, wood, rasps, 10 inch.
- 12 files, cabinet, wood, 10 inch.
- 12 files, wood, bastard, 10 inch.
- 12 files, rat tail, 8 inch.
- 12 files, knife edge, bastard, 8-inch.
- 12 files, smooth cut, 8-inch.
- 12 files, smooth cut, 6-inch.
- 12 files, smooth cut, half round, 8-inch.
- 12 files, rat tail, second cut, 8-inch.
- 12 files, rat tail, smooth, 6-inch.
- 12 files, three cornered, 6-inch.
- 12 files, half round, smooth, 4-inch.
- 2 files, half round, smooth, 10-inch.
- 2 files, half round, bastard, 12-inch.
- 2 files, hand, smooth, safe edge, 10-inch.
- 2 files, Nicholson, mill, 8-inch.
- 2 files, Nicholson, mill, 12-inch.
- 2 files, round, bastard, 4-inch.
- 2 files, round, second cut, 6-inch.
- 4 files, fine feather edge, 4-inch.
- 4 files, fine, round, Grobet, 4-inch.
- 4 files, fine, three cornered, Grobet, 4-inch.
- 4 files, fine, square, Grobet, 4-inch.
- 4 files, bastard, round, 6-inch, Grobet.
- 2 files bastard half round 6-inch, Grobet.
- 2 files, bastard, key, 6-inch, Grobet.
- 2 files, bastard, mill flat, 6-inch, Grobet.
- 4 files, bastard, square, 6-inch, Grobet.
- 2 files, bastard, three cornered, 6-inch, Grobet.
- 2 files bastard, half round, 8-inch, Nicholson.
- 2 files, bastard, square, Nicholson, 8-inch.
- 2 files, bastard, three cornered, Nicholson, 8-inch.
- 2 files, dead smooth, flat, 6-cut, 8-inch, Nicholson.
- 4 files, mill bastard, flat, 8-inch, Nicholson.
- 4 files, second cut, flat, Nicholson, 8-inch.
- 4 files, smooth, flat, 4-cut, 8-inch, Nicholson.
- 2 files, mill bastard, half round, Nicholson, 10-inch.
- 2 files, mill bastard, round, Nicholson, 10-inch.
- 4 files, mill bastard, flat, Nicholson, 12-inch.
- 2 files, rasp, wood, half round 12-inch.
- 2 flatters square, 2-inch.
- 2 forges, Buffalo, No. 625.
- 26 frames, hacksaw, Starrett, No. 145, 10-inch.
- 2 gauges, center, tempered, No. 650, English, B. & S.
- 2 gauges, compressometer.
- 2 gauges, screw, No. 630, English, B. & S.
- 2 gauges, screw, No. 636, metric, B. & S.
- 6 gauges, screw pitch, Starrett, No. 5.
- 2 gauges, thickness, No. 640, English, B. & S.
- 2 gauges, thickness, No. 641, metric, B. & S.
- 22 gauges, thickness, Starrett, No. 72.
- 2 gauges screw thread, standard, No. 724, B. & S.
- 4 grinders, valve, oscillating.
- 12 grinders, wheel, 6-inch, carborundum.
- 14 hammers, ball peen, machinists, $\frac{1}{2}$ -pound.
- 4 hammers, ball peen, machinists, $\frac{1}{4}$ -pound.
- 2 hammers, ball peen, machinists, 10-ounce.
- 2 hammers, ball peen, machinist's, $\frac{3}{4}$ -pound.
- 2 hammers, machinist's, ball peen, 1-pound.
- 2 hammers, ball peen, machinist's, $1\frac{1}{2}$ -pound.

- 12 hammers, brass, 8-ounce, with handles.
- 2 hammers, brass, solid, 2-pound, with handles.
- 20 hammers, claw, Maydole, adz-eye.
- 2 hammers, cross peen, machinist's, $\frac{1}{2}$ -pound.
- 2 hammers, cross peen, machinist's, 2-pound.
- 2 hammers, riveting, 7-ounce, No. 1.
- 2 hammers, machinist's, plain riveting. $\frac{1}{2}$ -pound, No. 2.
- 2 hammers, hand sledge, cross peen, $2\frac{1}{2}$ -pound.
- 48 handles, file, assorted.
- 24 handles, hammer, assorted to fit Maydole hammers.
- 6 hatchets, claw, half.
- 12 hatchets, claw, $2\frac{1}{2}$ -inch.
- 2 hatchets, claw, 2-pound.
- 2 hammers, solid copper, 2-pound, with handles.
- 2 hardies, straight shank, $\frac{3}{4}$ -inch shank.
- 12 hoists, chain, differential, $\frac{1}{2}$ -ton, Yale & Towne.
- 1 hoist, chain, differential, $1\frac{1}{2}$ -ton, Yale & Towne.
- 1 hydrometer, battery syringe, Autocrat.
- 2 hydrometers, gasoline, with connection scale and thermometer
- 2 indicators, speed, Veeder.
- 2 indicators, tool post, B. & S.
- 14 knives, drawing, folding handle.
- 36 knives, pocket, 3-bladed, 3-inch blade.
- 2 ladles, cast iron, 2-gallon, with shanks.
- 2 ladles, hand, with shanks.
- 2 letters, steel, Standwell, $\frac{5}{8}$ -inch, sets.
- 12 levels, carpenter's, steel, 18-inch.
- 2 levels, machinist's, Eclipse, No. 34-V-4.
- 2 mandrels, Champion, No. 1, $\frac{1}{2}$ -inch to $\frac{9}{16}$ -inch.
- 2 mandrels, Champion, No. 2, $\frac{9}{16}$ -inch to $\frac{3}{4}$ -inch.
- 2 mandrels, Champion, No. 3, $\frac{3}{4}$ -inch to $\frac{7}{8}$ -inch.
- 2 mandrels, Champion, No. 4, $\frac{7}{8}$ -inch to 1-inch.
- 2 mandrels, Champion, No. 5, $\frac{7}{8}$ -inch to 1-inch.
- 2 mandrels, Champion, No. 6, 1-inch to $1\frac{1}{8}$ -inch.
- 2 mandrels, Champion, No. 7, $1\frac{1}{8}$ -inch to $1\frac{1}{4}$ -inch.
- 2 mandrels, Champion, No. 7, $1\frac{1}{4}$ -inch to 2-inch.
- 2 mandrels, old, No. 123, $\frac{1}{2}$ -inch, B. & S.
- 2 mandrels, old, No. 123, $\frac{5}{8}$ -inch, B. & S.
- 2 mandrels, old, No. 123, $\frac{3}{4}$ -inch, B. & S.
- 2 mandrels, old, No. 123, $\frac{7}{8}$ -inch, B. & S.
- 4 mallets, brass, $\frac{3}{4}$ -inch.
- 2 mallets, rawhide, No. 4, Manning, Maxwell & Moore.
- 2 micrometers, inside, Starrett, No. 124-B, with case and handle.
- 2 nail pullers, Jumbo.
- 12 nail sets.
- 4 nail sets, B. & S., No. 762 (5 in set).
- 12 nippers, end cut, 10-inch, $1\frac{1}{2}$ -inch end cut, with 2 extra blades each.
- 4 oilstones, Hard Arkansas, 1 by $1\frac{1}{2}$ by 6 inches.
- 25 picks.
- 2 picks, mattock, No. 6.
- 12 planes, block, Stanley, $2\frac{3}{8}$ -inch.
- 2 planes, wood, Bailey's, No. 1.
- 2 planes, wood, Bailey's, No. 5.
- 2 planes, block, Bailey's, No. 15.
- 2 planes, Jack, Bailey's, No. $27\frac{1}{2}$.
- 8 padlocks, R. F. D., with 2 keys each and 1 master key for the lot.
- 68 pliers, auto combination, Billings & Spencer, 6-inch, nickel-plated.
- 50 pliers, auto combination, Billings & Spencer, 8-inch, nickel-plated.
- 13 pliers, side cutting, 8-inch, pairs.
- 6 pliers, Klein, Swedish oblique, cutting, No. 3167-A, $5\frac{1}{2}$ -inch.

- 40 pliers, diagonal cutting, 6-inch, pairs.
- 12 pliers, long nose, 5½-inch, Klein, pairs.
- 13 pliers, round nose, 6-inch, Klein, pairs.
- 12 pliers, round nose, 6½-inch, Klein, pairs.
- 2 pliers, round nose, 8-inch, Bernard, pairs.
- 2 pliers, round nose, 8½-inch, Bernard, pairs.
- 2 pliers, long nose, curved, Klein, No. 1319-C, 6-inch.
- 2 pliers, long nose, duck bill, Klein, No. 318-E, 5-inch.
- 2 pliers, long nose, needle, Klein, No. 319-B, 5½-inch.
- 2 pliers, long nose, oval plain, Klein, No. 319-N, 5-inch.
- 2 pliers, long nose, round, Klein, No. 1810-A, 5-inch.
- 2 pliers, side cutting, Klein, 312-A, 6-inch.
- 2 pliers, side cutting, Klein, 312-C, 8-inch.
- 2 pliers, Swedish oblique, cutting, Klein, No. 3167-C, 4½-inch.
- 1 pipe, blow, Presto, carbon burning.
- 2 pots, glue, enameled, No. 1, Manning, Maxwell & Moore.
- 2 pots, fire, Clayton & Lambert.
- 2 presses, arbor, Greenard, No. 3, with stands.
- 24 pullers, cotter.
- 24 punches, center, ⅜-inch.
- 4 punches, center, Starrett, machinist's, No. 117, style A.
- 4 punches, center, Starrett, machinist's, No. 117, style E.
- 2 punches, center, automatic, No. 771, B. & S.
- 4 punches, center, machinist, No. 765, B. & S., sets (6 in set).
- 2 punches, center, spacing, No. 118.
- 2 punches, double centering, No. 97, Montgomery & Co.
- 2 punches, revolving spring, 6 tubes.
- 2 punches, round, ¼-inch.
- 2 punches, round, ½-inch.
- 2 punches, round, ¾-inch.
- 2 punches, round, 1-inch.
- 2 punches, square, ¼-inch.
- 2 punches, square, ½-inch.
- 2 punches, square, ¾-inch.
- 2 punches, square, 1-inch.
- 36 pumps, hand, triple compound, Kellogg.
- 2 reamers, taper pin, sets (0 to 10, in case) B. & S.
- 2 reamers, taper shank, No. 115-D, spiral flute, from ¼ to 1 inch, inclusive, by thirty-seconds, sets, B. & S.
- 2 reamers, center, No. 120-H, style No. 2, straight shank, ½-inch shank thickness, 60-degree.
- 2 reamers, center, No. 120-H, style No. 2, straight shank, ½-inch shank thickness, 72-degree.
- 2 reamers, center, No. 120-H, style No. 2, straight shank, ½-inch shank thickness, 82-degree.
- 12 reamers, taper-bit stock, Morse, ⅜ inch.
- 12 reamers, taper-bit stock, Morse, ⅜ inch.
- 12 reamers, taper-bit stock, Morse, ¼ inch.
- 2 reseaters, valve, Healy, No. 6.
- 4 rolls, tool, excelsior leather, Buffum, No. 1821, sets.
- 2 rules, boxwood, 2 foot, half bound, No. 84, Stanley.
- 12 rules, folding, boxwood, 2 foot, Stanley, No. 751.
- 16 rules, steel, folding, 4 foot.
- 2 rules, steel, No. 300, 6 inch, No. 7 graduation, B. & S.
- 2 rules, steel, No. 300, 3 inch, No. 7 graduation, B. & S.
- 2 rules, steel, narrow, No. 303, 3 inch, No. 11 graduation, B. & S.
- 2 rules, steel, flexible, No. 308, 30 cm., ½ mm. and sixty-fourths, B. & S.
- 2 rules, steel, with holders, No. 335, English, ¼ inch, B. & S.
- 2 rules, steel, with holders, No. 335, English, ⅜ inch, B. & S.

- 2 rules, steel, with holders, No. 335, English, $\frac{1}{2}$ inch, B. & S.
- 2 rules, steel, with holders, No. 335, English, $\frac{3}{4}$ inch, B. & S.
- 2 rules, steel, with holders, No. 335, English, 1 inch, B. & S.
- 2 rules, depth gauges, 6 inch, No. 615, English, B. & S.
- 2 rules, key seat, No. 374, English, B. & S.
- 4 rules, caliper steel, 4 inch, No. 391, nickel plated, B. & S.
- 4 rules, spring tempered, Starrett, No. 307, No. 7, graduation.
- 20 saws, hand, crosscut, 26 inch.
- 8 saws, rip, hand, 26 inch.
- 14 saws, keyhole.
- 2 saws, metal slitting, $\frac{3}{8}$ inch by $2\frac{1}{2}$ inches, No. G-51, high speed, $\frac{7}{8}$ -inch arbor, B. & S.
- 2 saws, metal slitting, $\frac{1}{2}$ inch by $2\frac{1}{2}$ inches, No. G-50, high speed, $\frac{7}{8}$ -inch arbor, B. & S.
- 2 saws, metal slitting, $\frac{1}{8}$ inch by $2\frac{1}{2}$ inches, No. G-52, high speed, $\frac{7}{8}$ -inch arbor, B. & S.
- 2 saws, metal slitting, $\frac{3}{2}$ inch by $2\frac{1}{2}$ inches, No. G-53, high speed, $\frac{7}{8}$ -inch arbor, B. & S.
- 2 saws, metal slitting, $\frac{1}{2}$ inch by $2\frac{1}{2}$ inches, No. G-54, high speed, $\frac{7}{8}$ -inch arbor, B. & S.
- 2 saws, metal slitting, $\frac{5}{2}$ inch by $2\frac{1}{2}$ inches, No. G-55, high speed, $\frac{7}{8}$ -inch arbor, B. & S.
- 34 screwdrivers, Champion, 3 inch.
- 6 screwdrivers, Champion, 4 inch.
- 24 screwdrivers, Champion, 5 inch.
- 34 screwdrivers, Champion, 6 inch.
- 2 screwdrivers, Champion, 8 inch.
- 22 screwdrivers, Champion, 10 inch.
- 22 screwdrivers, Champion, 12 inch.
- 4 screwdrivers, Champion, 18 inch.
- 12 screwdrivers, Champion, "Baby."
- 12 screwdrivers, bent end, 5 inch.
- 6 screwdrivers, spiral ratchet, Yankee, No. 30, with 3 bits each.
- 12 screwplates, "Little Giant," each to consist of—
 - 1 tap each, $\frac{1}{32}$, $\frac{1}{16}$, $\frac{1}{8}$, $\frac{5}{16}$, $\frac{3}{8}$ inch.
 - 1 die each, $\frac{1}{32}$, $\frac{1}{16}$, $\frac{1}{8}$, $\frac{5}{16}$, $\frac{3}{8}$ inch, last four sizes to be A.L.A.M.
 - 1 stock.
 - 1 wrench.
 - 1 brace attachment.
- 4 scribers, complete, Starrett, No. 67.
- 2 scribers, style 3, No. 778, B. & S.
- 12 sets, combination, Starrett, No. 434.
- 2 shooters, trouble, AMBU, electrical, with instruments, charts, etc.
- 2 shaves, spoke, iron, Bauley's, No. 53.
- 12 shears, office, 10-inch, pairs.
- 2 shears, circular, Samson, No. 50.
- 29 shovels, S. H.
- 2 sledges, blacksmith, cross pien, 8-pound, with handles.
- 2 sleeves, taper, drill, Morse, No. 1 inside and No. 2 outside.
- 2 sleeves, taper, drill, Morse, No. 3 inside and No. 2 outside.
- 2 sleeves, taper, drill, Morse, No. 4 inside and No. 2 outside.
- 26 snips, tinner's, 10-inch, pairs.
- 2 squares, steel, No. 1.
- 2 squares, double, steel, Starrett, No. 14-C.
- 2 stocks and dies, sets, adjustable pipe, Armstrong, with guides, of the following sizes: $\frac{1}{8}$, $\frac{1}{4}$, $\frac{3}{8}$, $\frac{1}{2}$, 1 inch and with taps same size as dies.
- 14 stones, carborundum, $\frac{1}{2}$ inch by $2\frac{1}{2}$ by 3 inches, Niagara.
- 2 swedges, top, $\frac{1}{4}$ -inch.
- 2 swedges, top, $\frac{1}{2}$ -inch.

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- 2 swedges, top, $\frac{3}{4}$ -inch
- 2 swedges, top, 1-inch.
- 2 swedges, bottom, $\frac{1}{4}$ -inch.
- 2 swedges, bottom, $\frac{1}{2}$ -inch.
- 2 swedges, bottom, $\frac{3}{4}$ -inch.
- 2 swedges, bottom, 1-inch.
- 2 tapes, steel, measuring, 50-foot, Starrett, No. 507.
- 14 tapes, steel, 100-foot, in metal container.
- 12 tapes, steel, 8-foot, in metal container.
- 2 taps and dies, each of the following sizes, in case, with adjustable tap wrench (Greenfield Tap & Die Corporation, Greenfield, Mass.):
 - No. 2-56.
 - No. 3-48.
 - No. 4-36, 40, 48.
 - No. 5-36, 40.
 - No. 6-32, 36, 40.
 - No. 7-32.
 - No. 8-32.
 - No. 9-32.
 - No. 10-24, 30, 32.
 - No. 12-24, 32.
 - No. 14-20, 24.
 - No. 15-20, 24.
 - No. 16-18 and 20.
 - No. 18-18 and 20.
 - $\frac{7}{8}$ -inch-56.
 - $\frac{1}{8}$ -inch-40.
 - $\frac{3}{8}$ -inch-40.
 - $\frac{1}{2}$ -inch-32, 38, 40.
 - $\frac{5}{8}$ -inch-32.
 - $\frac{3}{4}$ -inch-24, 32.
 - $\frac{7}{8}$ -inch-28.
 - $\frac{1}{4}$ -inch-20, 24, 32.
 - $\frac{3}{8}$ -inch-20, 24, 32.
- Bottom taps extra for $\frac{5}{8}$ -inch 40, $\frac{3}{4}$ -inch 38, $\frac{7}{8}$ -inch 32, $\frac{1}{2}$ -inch 28.
- Die tap, and extra bottoming tap, left hand thread, $\frac{7}{8}$ -inch 40, $\frac{3}{4}$ -inch 38, $\frac{1}{2}$ -inch 32, $\frac{1}{4}$ -inch 28.
- 2 taps and dies, each as follows (in assortment case of No. 7 $\frac{1}{2}$):

$\frac{1}{8}$ -inch 20, 24.	$\frac{7}{8}$ -inch 20, 24, 18.
$\frac{3}{8}$ -inch 20, 24.	$\frac{1}{2}$ -inch 20, 24.
$\frac{5}{8}$ -inch 20.	1 each bottoming taps extra.
- 2 plates, screw, sets, No. 5 $\frac{1}{2}$, with bottoming taps extra.
- 12 reamers, pipe tap, Briggs Standard, 2 each: $\frac{1}{8}$, $\frac{1}{4}$, $\frac{3}{8}$, $\frac{1}{2}$, $\frac{3}{4}$, and 1 inch.
- 2 time savers, Starrett, No. 185.
- 2 tongs, straight lip, 16 inch.
- 2 tongs, curved lip, 16-inch.
- 12 tools, boring, automatic, Mr. Punch.
- 2 tools, grinding, Diamond, about \$15 size.
- 2 tools, knurling, with extra set of knurls, $\frac{1}{2}$ -inch by $1\frac{1}{4}$ -inches, revolving head.
- 2 tools, lathe, hand forged, sets, each set 1 to 23 inclusive, $\frac{5}{8}$ -inch by $1\frac{1}{2}$ -inches, carbon tool steel, figures 2682-A, and 2682-B, Manning, Maxwell & Moore catalogue.
- 2 tool sets, Armstrong, 10 tools each, with self-hardening cutters, with extra cutters for United States Standard thread, No. 50 holders (sets to include the V thread cutter), with $\frac{1}{2}$ by $\frac{1}{4}$ inch tool holders.
- 1 torch, blow, cutting, Presto.
- 2 torches, hand, for brazing, Presto.

- 14 torches, soldering, Clayton & Lambert, 1-quart capacity.
 12 vises, hand.
 12 vises, Prentiss, No. 807.
 2 vises, Prentiss, No. 19.
 2 vises, Prentiss, No. 19½.
 2 vises, quick action, drill, Armstrong, No. 2-V.
 2 welding equipment, Prestolite, complete.
 2 wheels, grinding, 9 by ¼ by ½ inch, style A, 40-M.
 2 wheels, grinding, 6 by ¼ by ½ inch, style A, 60-M.
 2 wheels, grinding, 6 by ¼ by ½ inch, style A, 40-K.
 2 wheels, grinding, 6 by ¼ by ½ inch, style A, 60-K.
 2 wheels, grinding, 6 by ⅜ by ½ inch, style A, 40-M.
 2 wheels, grinding, 6 by ⅜ by ½ inch, style A, 60-M.
 2 wheels, grinding, 6 by ⅜ by ½ inch, style A, 40-K.
 2 wheels, grinding, 6 by ⅜ by ½ inch, style A, 60-K.
 2 wheels, grinding, 4½ by ⅜ by ½ inch, style C, 40-M.
 2 wheels, grinding, 4½ by ⅜ by ½ inch, style C, 60-M.
 2 wheels, grinding, 4½ by ⅜ by ½ inch, style C, 40-K.
 2 wheels, grinding, 4½ by ⅜ by ½ inch, style C, 60-K.
 2 wheels, grinding, 4½ by ⅜ by ½ inch, style D, 40-M.
 2 wheels, grinding, 4½ by ⅜ by ½ inch, style D, 60-M.
 2 wheels, grinding, 4½ by ⅜ by ½ inch, style D, 40-K.
 2 wheels, grinding, 4½ by ⅜ by ½ inch, style D, 60-K.
 2 wheels, grinding, 4½ by ⅜ by ½ inch, style H, 40-M.
 2 wheels, grinding, 4½ by ⅜ by ½ inch, style H, 60-M.
 2 wheels, grinding, 4½ by ⅜ by ½ inch, style H, 40-K.
 2 wheels, grinding, 4½ by ⅜ by ½ inch, style H, 60-K.
 2 wheels, grinding, 1½ by ⅜ by ⅜ inch, style A, 40-M.
 2 wheels, grinding, 1½ by ⅜ by ⅜ inch, style A, 60-M.
 2 wheels, grinding, 1½ by ⅜ by ⅜ inch, style C, 40-M.
 2 wheels, grinding, 1½ by ⅜ by ⅜ inch, style C, 60-M.
 2 wheels, grinding, 1½ by ⅜ by ⅜ inch, style D, 40-M.
 2 wheels, grinding, 1½ by ⅜ by ⅜ inch, style D, 60-M.
 2 wheels, grinding, 1½ by ⅜ by ⅜ inch, style H, 40-M.
 2 wheels, grinding, 1½ by ⅜ by ⅜ inch, style H, 60-M.
 2 wheels, grinding, 8 by ¾ by ⅝ inch, style A, 20-O.
 2 wheels, grinding, 8 by ¾ by ⅝ inch, style A, 30-P.
 2 wheels, grinding, 8 by ¾ by ⅝ inch, style A, 36-Q.
 2 wheels, grinding, 8 by ¾ by ⅝ inch, style A, 40-M.
 2 wheels, grinding, 8 by ¾ by ⅝ inch, style A, 60-M.
 1 wheel, polishing, solid canvas, 6 inches by 1 inch.
 1 wheel, polishing, solid canvas, 6 by 2 inches.
 2 wrenches, Baxter S, 6-inch.
 2 wrenches, Coes all-steel, 6-inch.
 2 wrenches, Coes all-steel, 8-inch.
 2 wrenches, Coes all-steel, 12-inch.
 4 wrenches, Armstrong, 22½-degree, single-head socket, No. 671-D.
 4 wrenches, Armstrong, 22½-degree, single-head socket, No. 671-E.
 4 wrenches, Armstrong, 22½-degree, single-head socket, No. 672-D.
 4 wrenches, Armstrong, 22½-degree, single-head socket, No. 672-E.
 4 wrenches, Armstrong, 22½-degree, single-head socket, No. 673-D.
 4 wrenches, Armstrong, 22½-degree, single-head socket, No. 673-E.
 4 wrenches, Armstrong, 22½-degree, single-head socket, No. 674-D.
 4 wrenches, Armstrong, 22½-degree, single-head socket, No. 674-E.
 4 wrenches, Armstrong, 22½-degree, single-head socket, No. 675-D.
 4 wrenches, Armstrong, 22½-degree, single-head socket, No. 675-E.
 4 wrenches, Armstrong, 22½-degree, single-head socket, No. 676-D.
 4 wrenches, Armstrong, single-head socket, with pin handle finished, No. 962-D.

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- 4 wrenches, Armstrong, single-head socket, with pin handle, finished, No. 962-H.
- 4 wrenches, Armstrong, single-head socket, with pin handle, finished, No. 964-A.
- 4 wrenches, Armstrong, single-head socket, with pin handle, finished, No. 967-A.
- 4 wrenches, Armstrong, single-head socket, with pin handle, finished, No. 967-D.
- 4 wrenches, Armstrong, single-head socket, with pin handle, finished, No. 969-A.
- 2 wrenches, Armstrong, 22½-degree angle, double head for hexagonal cap screws, finished, No. 671-D.
- 2 wrenches, Armstrong, 22½-degree angle, double head, for hexagonal cap screws, finished, No. 671-E.
- 2 wrenches, Armstrong, 22½-degree angle, double head, for hexagonal cap screws, finished, No. 672-E.
- 2 wrenches, Armstrong, 22½-degree angle, double head, for hexagonal cap screws, finished, No. 673-D.
- 2 wrenches, Armstrong, 22½-degree angle, double head, for hexagonal cap screws, finished, No. 673-E.
- 2 wrenches, Armstrong, 22½-degree angle, double head, for hexagonal cap screws, finished, No. 674-D.
- 2 wrenches, Armstrong, 22½-degree angle, double head, for hexagonal cap screws, finished, No. 674-E.
- 2 wrenches, Armstrong, 22½-degree angle, double head, for hexagonal cap screws, finished, No. 675-E.
- 2 wrenches, Armstrong, 22½-degree angle, double head, for hexagonal cap screws, finished, No. 676-D.
- 24 wrenches, Crescent, 4-inch.
- 26 wrenches, Crescent, 6-inch.
- 16 wrenches, Crescent, 8-inch.
- 12 wrenches, Crescent, 10-inch.
- 2 wrenches, monkey, 12-inch.
- 24 wrenches, monkey, Billings & Spencer, No. A, nickel-plated.
- 24 wrenches, monkey, Billings & Spencer, No. E, nickel-plated.
- 12 wrenches, open-end, No. 25.
- 12 wrenches, open-end, No. 28.
- 12 wrenches, open-end, No. 731-A.
- 12 wrenches, open-end, Billings & Spencer, No. 499.
- 12 wrenches, open-end, Billings & Spencer, No. 1104.
- 12 wrenches, open-end, Billings & Spencer, No. 1109.
- 12 wrenches, open-end, Billings & Spencer, No. 1125.
- 2 wrenches, pipe, Stillson, 10-inch, solid handle.
- 2 wrenches, patent ratchet, Starrett, No. 443-A, sets.
- 12 wrenches, Sterling, No. 5.
- 12 wrenches, Sterling, No. 1.
- 2 wrenches, tap T, 4-inch.
- 2 wrenches, tap T, 5½-inch.

MACHINERY.

- 2 lathes, 9 or 11 inch, screw-cutting engine, 5 or 6 foot bed, complete with attachments, with bench legs and without countershaft, 1-horsepower, 110-volt motor, direct current (motor to be mounted under lathe by the Signal Corps), with rheostat belts, etc; motor, rheostat, and starting switch to be furnished by the manufacturer, together with the following equipment for each lathe:
 - 1 center, half.
 - 4 centers, point.
 - 1 center, spur.

- 1 center, square.
- 1 chuck, combination, scroll, Westcott, spur geared, 10½-inch, four-jawed.
- 1 chuck, combination, scroll, Westcott, spur geared, 10½-inch, three-jawed.
- 1 chuck, drill, 0 to ½ inch, Jacobs.
- 1 chuck attachment, draw-in.
- 13 collets for draw-in chuck attachment, 1 each of the following sizes: ⅜, 0.15, 0.20, ⅜, ⅜, ½, ⅝, ⅝, ⅝, ⅝, ⅝, ⅝, ⅝, ⅝, ⅝ inch.
- 1 gears, change, set.
- 1 gears, metric, transferring, with index, set.
- 1 milling attachment, complete, with draw-in chuck, ⅝-inch arbors, and collars.
- 1 pad, drill.
- 1 plate, face, large.
- 1 plate, face, small.
- 1 post, tool, with rings and gibs.
- 1 rest, follow.
- 1 rest, steady.
- 1 taper attachment.
- 2 drills, hand, portable, electric, Little Giant, for 110-volts direct current, fitted with chuck to take up to ½-inch S. S. drills.
- 2 drills, bench, Hisey-Wolf, electric, sensitive, type X, 110-volts, direct current, fitted with No. 2 Morse taper. (It is understood that regular drill as supplied with No. 1 Morse taper, but for Signal Corps work is absolutely necessary that the No. 2 Morse taper be furnished, with V cup and point centers. To be furnished with 4 extra sets of brushes for motor. 2 chucks drill, Jacobs, 0 to ⅜ inch, to be fitted to drill by the manufacturer, chuck to have No. 2 Morse taper shanks.
- 2 grinders, tool post, Hisey-Wolf, type 2-A. S. D., 110-volts, direct-current motor, ¼ horsepower, with two extra sets of brushes for motors and extra fuses for attachment plug.
- 2 grinders, pedestal, Hisey-Wolf, type F, ½-horsepower motor, 110-volts, direct current, fitted with a twist-drill grinder to grind drills from ⅜ to 2 inches; 2 mandrels for internal grinding.

ELECTRICAL SUPPLIES AND INSTRUMENTS FOR THE WIRING OF PORTABLE MACHINE SHOPS.

- 300 cable, stage, No. 14, feet. (Page 1024, No. 660130, 1915 Western Electric catalogue.)
- 300 conductor, duplex, stranded, No. 10, feet. (Page 1011, No. 660130, 1915 Western Electric catalogue.)
- 30 fuses, end, N. E. C., 10 amperes.
- 20 fuses, end, N. E. C., 20 amperes.
- 20 fuses, end, N. E. C., 30 amperes.
- 8 guards, lamp, water-tight, portable, No. 432 (list 105380, bulletin No. 9745, page 15, 1913 Western Electric catalogue).
- 2 instruments, Weston, duplex, model No. 39 (page 115, list No. 320470, 1915 Western Electric catalogue); range for amperes, scale 60 amperes; range for volts, scale 150 volts.
- 20 lamps, incandescent, 110 volts, 16 candlepower, carbon filament.
- 8 reflectors, gangway, guarded, water-tight, No. 451, complete with lamp sockets, globes, etc. (list No. 116341, Bulletin No. 9690, page 103, 1913 Western Electric catalogue).

- 10 switches and receptacles, No. 478, with 4 extra plugs (list No. 111010, page 31, bulletin No. 9750, 1913 Western Electric catalogue).
- 4 switches, double pole, single throw, on slate base, front connected, 250 volts, 30 amperes, fused (No. 540123, page 705, 1915 Western Electric catalogue).

VULCANIZERS AND VULCANIZING MATERIAL.

- 2 bags, air, vulcanizing, sets.
- 10 fabric, friction, Michelin, pounds.
- 5 gum, semicured, Michelin, pounds.
- 5 gum, thread, Michelin, pounds.
- 5 gum, tube, Michelin, pounds.
- 2 lasts, tire, Miller's.
- 1 tool, vulcanizing, Miller's, set.
- 2 vulcanizers, Miller's, to take up to 6½ inches, inclusive.

MISCELLANEOUS HARDWARE AND INSTRUMENTS,

INCLUDING FIELD GLASSES, BAROGRAPHS, WATCHES, ETC.

- 36 bags, water, desert, 5-gallon capacity.
- 10 barographs, pocket, Richards, 20,000 feet.
- 6 barometers, aneroid, 12,000 feet.
- 25 belting, leather, single ply, 1¼-inch, feet.
- 25 belting, leather, single ply, 1½-inch, feet.
- 3 bottles, glass, with glass stoppers, 1-gallon capacity.
- 40 boxes, tool, steel, No. B-2810, Equipment Co. catalogue No. 7.
- 50 brushes, camel hair, flat, 2½-inch.
- 25 brushes, camel hair, flat, 3-inch.
- 2 brushes, stencil.
- 48 cans, galvanized-iron, 2-gallon capacity, with screw top and screw spout.
- 24 cans, galvanized-iron, 5-gallon capacity, with screw top and screw spout.
- 36 cans, squirt, copper, ½-pint capacity.
- 200 checks, brass for wire.
- 2,000 cartridges, Very, assorted colors.
- 24 compasses, pocket, small.
- 4 desks, field, Signal Corps.
- 2 dusters, bench.
- 50 extinguishers, fire, Pyrene, with holders.
- 50 faucets, brass, ¾-inch pipe tap.
- 25 flashlights, electric.
- 36 funnels, copper, Dover, flat, No. 27.
- 12 funnels, copper, Dover, No. 40.
- 12 glasses, field, type EE, with cases and straps.
- 24 gloves, rubber, assorted sizes, pairs.
- 6 holders, barometer with straps.
- 12 kits, inspector's, pocket.
- 12 kits, toll, steel, Kennedy.
- 25 lanterns, Dietz, railroad type.
- 18 measures, copper, 1-quart capacity.
- 12 measures, copper, 1-gallon capacity.
- 18 motometers, Boyce Standard, large size.
- 12 oilers, copper, straight spout, ½-pint capacity.
- 26 oilers, copper, straight spout, 1-pint capacity.
- 25 padlocks, Yale, 1½-inch.

- 12 pistols, Very.
- 2 spotlights, No. 2, S. & M. Lamp Co., Los Angeles, Cal.
- 1 stencil, brass, 2-inch letters and numbers, set.
- 25 tanks, Presto, type "B."
- 2 tanks, welding, Presto, style "WN."
- 2 tanks, welding, oxygen, Superior, large size.

OFFICE SUPPLIES.

- 1 cabinet, filing, to consist of—
 - 1 two-drawer correspondence unit, No. 9010.
 - 1 two-drawer correspondence unit, No. 90102.
 - 1 top unit.
 - 1 base unit.
 - 1 two-tray cabinet, 3 by 5 inch cards.
- 1,000 cards, white, 3 by 5 inches.
- 300 folders, correspondence size, manila.
- Above filing cabinet to be ordered from the Library Bureau, Houston, Tex.. It is suggested that the department aviation officer, Southern Department, be requested to furnish a copy of the last order placed with the Library Bureau for a filing cabinet for use of the third and fourth squadron. This is the most satisfactory cabinet for use of a squadron.
- 5 typewriters, 10-inch carriage.
- 2 typewriters, 14-inch carriage.
- 12 typewriters, portable (Corona).

MAGNETO TOOLS FOR BOSCH MAGNETOS.

- | | |
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| <ul style="list-style-type: none"> 1 die, 2 mm., No. 159. 1 die, 2.6 mm., No. 163. 1 die, 3 mm., No. 165. 1 die, 3.5 mm., No. 167. 1 die, 4 mm., No. 169. 1 die, 4.5 mm., No. 171. 1 die, 5 mm., No. 173. 1 die, 5.5 mm., No. 175. 1 die, 6.55 mm., No. 177. 1 die, $\frac{7}{32}$, No. 179. 1 die, $\frac{7}{16}$, No. 181. 1 die, $\frac{3}{8}$, No. 183. 1 extractor, ring, No. 60. 1 extractor, ring, No. 61. 1 extractor, ring, No. 62. 1 extractor, ring, No. 63. 1 file, slot, No. 140. 1 file, slot, No. 141. 1 file, slot, No. 142. 1 fixture, No. 82. 1 fixture, No. 83. 1 frame, puller bearing ring, No. 68. 4 gaps, spark, double, sets. 1 plug, taper, No. 61b. 1 plug, taper, No. 90. 1 protector, disk, No. 92. 1 protector, disk, No. 93. 1 protector, disk, No. 94. 1 protector, disk, No. 95. | <ul style="list-style-type: none"> 1 protector, disk, No. 96. 1 protector, thread, No. 99. 1 protector, thread, No. 100. 1 punch, gear, No. 89. 1 punch, ring, No. 85. 1 punch, ring, No. 86. 1 punch ring, No. 87. 1 punch, ring, No. 88. 1 reamer, No. 109. 1 reamer, No. 110. 1 reamer, expansion, size 15, No. 123. 1 reamer, expansion, size 17, No. 125. 1 reamer, taper, No. 3—No. 113. 1 reamer, taper, No. 4—No. 114. 1 reamer, taper, No. 5—No. 115. 1 ring, cone, No. 71. 1 ring, cone, No. 72. 1 ring, cone, No. 73. 1 ring, cone, No. 74. 1 ring, cone, No. 75. 1 ring, cone, No. 76. 1 ring, cone, No. 77. 1 ring, cone, No. 78. 1 screwdriver, slotted, No. 47. 1 slot, Miller, No. 1—No. 143. 1 slot, Miller, No. 3—No. 144. 1 slot, Miller, No. 5—No. 145. 1 spanner, No. 40. |
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| 1 spanner, No. 106. | 1 wrench, socket, No. 12. |
| 1 stand, armature, test. | 1 wrench, socket, No. 19. |
| 1 taps, set, 2 mm., No. 158. | 1 wrench, socket, No. 20. |
| 1 taps, set, 2.6 mm., No. 162. | 1 wrench, socket, No. 21. |
| 1 taps, set, 2 mm., No. 164. | 1 wrench, socket, No. 22. |
| 1 taps, set, 3.5 mm., No. 166. | 1 wrench, socket, No. 23. |
| 1 taps, set, 4 mm., No. 168. | 1 wrench, socket, No. 30. |
| 1 taps, set, 4.5 mm., No. 170. | 1 wrench, socket, No. 31. |
| 1 taps, set, 5 mm., No. 172. | 1 wrench, socket, No. 34. |
| 1 taps, set, 5.5 mm., No. 174. | 1 wrench, socket, No. 50. |
| 1 taps, set, 6.55 mm., No. 176. | 1 wrench, No. 151. |
| 1 taps, set, $\frac{7}{32}$, No. 178. | 1 wrench, No. 152. |
| 1 taps, set, $\frac{1}{16}$, No. 180. | 1 wrench, No. 153. |
| 1 taps, set, $\frac{3}{8}$, No. 182. | 1 wrench, No. 154. |
| 1 tap, plug, 19.6 mm., No. 184. | 1 wrench, No. 155. |
| 1 wrench, spanner, No. 102. | 1 wrench, No. 156. |
| 1 wrench, spanner, No. 104. | 1 wrench, No. 157. |
| 1 wrench, socket, No. 11. | |

HANGARS, CANVAS, AND MAINTENANCE PARTS.

- 12 hangars, canvas, aeroplane, to be according to latest specifications.
- 24 blocks, double, 4-inch, wooden.
- 24 blocks, single, 4-inch, wooden.
- 200 stakes, 3-foot, as furnished with the hangars.

TRANSPORTATION.

AUTOMOBILES.

- 1 automobile, Cadillac, latest model, with the following maintenance parts:
 - 2 bands, brake.
 - 2 bearings, connecting rod, No. FF321.
 - 2 brushes, motor, FF1107.
 - 1 bumper, front.
 - 1 bumper, rear.
 - 4 chains, weed.
 - 3 clips, water connection, FF576.
 - 6 clips, water connection, FF579.
 - 2 connections, water, FF577.
 - 2 connections, water, FF576.
 - 2 connections, water FF575.
 - 2 covers, tire.
 - 1 pan, oil.
 - 2 pins, wrist, FF317.
 - 2 pistons, FF308.
 - 8 plugs, spark, Splitdorf. $\frac{3}{8}$ -18, A.L.A.M.
 - 6 rings, piston, FF309.
 - 3 rings, piston, FF310.
 - 1 spot light, 5-inch.
 - 2 springs, front, FF2807.
 - 1 spring, left, rear.
 - 1 spring, right, FF2813.
 - 2 springs, valve, FF281.
 - 8 tires, 37 by 5.
 - 8 tubes, inner, 37 by 5.
 - 2 valves, FF279.
 - 2 valves, FF280.
 - 2 wheels, extra.

MOTOR TRUCKS.

25 motor trucks and spare parts (type not known).

Specifications for motor trucks should include the following articles:

- 1 bucket, galvanized-iron, 14-quart capacity.
- 1 can, galvanized-iron, 2-gallon capacity, for oil.
- 1 can, galvanized-iron, 5-gallon capacity, for gasoline.
- 1 chain, tow, 25 feet long, $\frac{3}{8}$ by 1 inch.
- 1 cover, truck.
- 1 extinguisher, fire, Pyrene, with bracket.
- 1 funnel, copper.

MOTOR CYCLES AND SPARE PARTS.

6 motor cycles, Indian, model N-1917, Harley-Davidson, model J, 1917J, electrically equipped, complete with side cars.

Maintenance parts, 6 months' allowance, for total number of machines:

Part No.	Description.	Quantity.
N4.....	Flywheel thrust washer.....	4
N8X.....	Pitman rods, complete.....	1
N20.....	Pitman rods, upper bushings.....	4
N32.....	Pitman rods, roller bearing roller.....	50
N36.....	Pitman rods, roller bearing roller retainer.....	4
N40.....	Crank shaft.....	2
N44.....	Crank shaft nut.....	4
N48.....	Crank shaft nut lock washer.....	4
N52.....	Crank shaft nut lock screw.....	8
N56.....	Driving shaft.....	2
N60.....	Driving shaft flywheel key.....	2
N64.....	Driving shaft oil deflector collar.....	2
N76.....	Driving shaft sprocket.....	2
N80.....	Driving shaft sprocket key.....	4
N98.....	Pinion shaft pinion.....	1
N102.....	Pinion shaft pinion key.....	1
N106.....	Pinion shaft pinion screw.....	4
N166.....	Motor base gear case cover gasket.....	2
N170.....	Motor base gear case cover screw.....	4
N186.....	Motor base left half center bushing.....	1
N198.....	Motor base top center bolt.....	2
N202.....	Motor base top center bolt nut.....	8
N218.....	Motor base from anchor plate bolt, $\frac{5}{16}$ -inch.....	4
N210.....	Motor base front anchor plate bolt, nut.....	50
N222.....	Motor base and kick starter bracket bolt, $\frac{5}{16}$ -inch.....	4
N214.....	Motor base and kick starter bracket bolt lock washer.....	50
N234.....	Motor base short bolt nut.....	50
N238.....	Motor base and frame lug bolt, $\frac{7}{16}$ -inch.....	4
N242.....	Motor base and frame lug bolt nut.....	8
N246.....	Motor base and frame lug bolt lock washer.....	25
N250.....	Motor base and frame lug bolt, rear.....	4
N262.....	Motor base oil drain screw.....	4
N270.....	Motor base oil gauge glass.....	4
N278.....	Motor base oil gauge glass cork washer.....	8
N282.....	Motor base oil gauge glass paper washer.....	8
N286.....	Motor base oil gauge glass ring nut.....	2

20 UNIT EQUIPMENT MANUAL FOR AVIATION SECTION.

Part No.	Description.	Quan- tity.
N290X.....	Motor base air relief tube, complete.....	1
N322.....	Compression release valve and gear.....	1
N326.....	Intermediate gear.....	1
N330.....	Intermediate gear bushing.....	1
N370X.....	Cylinder, front.....	1
N374X.....	Cylinder, rear.....	1
N378.....	Cylinder stud.....	8
N382.....	Cylinder stud nut.....	8
N386.....	Cylinder seat gasket.....	4
N398X.....	Cylinder exhaust tube, rear.....	2
N402X.....	Cylinder exhaust tube, front.....	4
N406.....	Cylinder exhaust tube union nut.....	2
N418.....	Cylinder valve hole plug gasket.....	20
N422.....	Pistons.....	4
N424.....	Piston rings.....	12
N428.....	Piston crosshead pins.....	2
N432.....	Piston crosshead pins, dowel.....	4
N450.....	Intake valve.....	2
N454.....	Exhaust valve.....	2
N458.....	Intake and exhaust valve spring.....	8
N462.....	Intake and exhaust valve spring collar.....	4
N466.....	Intake and exhaust valve spring collar key.....	4
N474.....	Dust cover sleeve, upper.....	2
N478.....	Dust cover sleeve, lower.....	2
N482.....	Intake and exhaust cam.....	1
N486.....	Intake and exhaust cam shaft.....	1
N498.....	Intake valve guide.....	2
N502.....	Intake push rod.....	2
N506.....	Intake push rod adjusting screw.....	4
N510.....	Intake push rod adjusting screw lock nut.....	8
N518.....	Intake valve lift, front.....	1
N522.....	Intake valve lift, rear.....	1
N534.....	Intake valve lift lever, front.....	1
N538.....	Intake valve lift lever, rear.....	1
N582.....	Intake valve lift lever stud.....	2
N546.....	Intake valve lift lever stud bushing.....	2
N550.....	Intake valve lift lever stud cover bushing.....	2
N554.....	Exhaust valve guide.....	2
N558.....	Exhaust valve push rod.....	2
N566X.....	Exhaust valve lift, front.....	1
N570X.....	Exhaust valve lift, rear.....	1
N582.....	Exhaust valve relief pinion shaft.....	1
N616.....	Exhaust valve relief cam.....	1
N630X.....	Spark plug, complete.....	10
N638.....	Spark plug cable clip.....	4
N700.....	Muffler, complete.....	2
N720.....	Muffler shell.....	2
N732.....	Muffler rear head clip screw.....	4
N800X.....	Speed and throttle control lever.....	4
N808.....	Speed and throttle control shaft.....	2
N812.....	Speed and throttle control lever screw.....	4
N820.....	Speed and throttle control upper clevis.....	2
N824.....	Speed and throttle control upper screw.....	4
N616.....	Small cotter pins.....	50
N836.....	Speed control rod lower clevis.....	2
N1000X.....	Carburetor, complete.....	1

Part No.	Description.	Quantity.
N1072.....	Needle valve lift lever.....	2
N1112.....	Cam, complete.....	1
N1116.....	Low speed lock screw.....	1
N1168.....	Friction spring.....	1
N1124X1....	Air valve, complete.....	1
N1196.....	Manifold clamping screw.....	3
N1208.....	Manifold tubes.....	2
N1212.....	Manifold tubes nuts.....	2
N1250X.....	Gasoline injector.....	1
N1304X.....	Primer cup, complete.....	4
N1350X.....	Handlebar, complete.....	1
N1354X.....	Handlebar top only.....	1
N1370.....	Handlebar clamp, upper.....	1
N1374.....	Handlebar clamp, lower.....	1
N1378.....	Handlebar clamp screw.....	4
N1386.....	Handlebar clamp screw, rear.....	4
N1392.....	Handlebar grips.....	4
N1428X.....	Handlebar grips control, flexible shaft.....	2
N1436.....	Handlebar universal connection.....	2
N1440.....	Handlebar universal connection rivet.....	8
N1448.....	Flexible shaft milled connection.....	12
N1452.....	Flexible shaft milled connection rivet.....	12
N1456.....	Flexible shaft link, long.....	4
N1460.....	Flexible shaft link, short.....	4
N1464.....	Upper universal connection.....	4
N1468.....	Outer telescoping shaft.....	4
N1472.....	Inner telescoping shaft.....	4
N1476.....	Control ball.....	4
N1480.....	Control ball straight pin.....	20
N1500.....	Head, upper, cup.....	2
N1504.....	Head, lower, cup.....	2
N1508.....	Head adjusting cone.....	2
N1516.....	Head, lower, fork cone.....	2
N1520.....	Head ball.....	50
N1550X.....	Fork, complete.....	1
N1554X.....	Fork frame.....	1
N1598.....	Fork stem plate screw.....	4
N1622.....	Fork mainspring.....	2
N1626.....	Fork mainspring reinforcing spring.....	2
N1620.....	Fork mainspring stud.....	2
N1634.....	Fork mainspring stud oil screw.....	4
N1638.....	Fork mainspring stud oil washer.....	4
N1642.....	Fork mainspring stud nut.....	20
N1646.....	Fork mainspring stud lock ring.....	25
N1654.....	Spring plate.....	2
N1662.....	Fork spring bolt.....	8
N1666.....	Fork bell crank.....	2
N1674.....	Fork bell crank stud.....	4
N1678.....	Fork side stud washer (inside).....	4
N1688.....	Fork side stud washer (outside).....	4
N1690.....	Fork side stud nut.....	8
N1694.....	Lock rings.....	25
N1698X.....	Connection links.....	4
N1704.....	Connection links lower fitting pin.....	4
N1708.....	Lock rings.....	25
N1716.....	Connection link upper fitting stud.....	2

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Part No.	Description.	Quan- tity.
N1728.....	Connection link stud sleeve.....	4
N1750X.....	Frame.....	1
N1812X.....	Frame, rear fork crown, with sides and ends.....	1
N1832.....	Hinge pin set screw.....	2
N1856.....	Chain adjusting screw.....	2
N1860.....	Chain adjusting screw washer.....	2
N1864X1....	Frame, rear springs, complete.....	1
N1912.....	Rubber bumpers.....	6
N1916.....	Rubber bumpers clip.....	4
N1920.....	Rubber bumpers clip screw.....	4
N1924.....	Rubber bumpers clip screw nut.....	4
N1952.....	Rear spring front bolt.....	4
N2220.....	Clutch tension spring plate lock ring screw washer.....	4
N2288.....	Clutch lever spring strap screw.....	8
N2292.....	Clutch hand operating lever clevis.....	2
N2302.....	Clutch hand operating lever clevis nut.....	20
N2314.....	Clutch plunger adjusting screw.....	4
N2318.....	Clutch plunger adjusting screw nut.....	4
N2322.....	Clutch release foot lever.....	1
N2326.....	Clutch release foot lever spring.....	12
N2330X.....	Clutch release foot lever shaft and lever.....	1
N2342.....	Clutch release foot lever shaft nut.....	2
N2346.....	Clutch release foot lever shaft nut washer.....	8
N2350XL....	Gas tank, left.....	1
N2350XR....	Gas tank, right.....	1
N2352X.....	Gas tank filler cap.....	2
N2358X.....	Gas tank shut-off valve.....	2
N2370.....	Gas tank rear clip.....	2
N2372.....	Gas tank rear squadron screw.....	8
N2376.....	Gas tank rear clip screw.....	8
N2380.....	Gas tank center slip.....	2
N2386.....	Gas tank front clip.....	2
N2390.....	Gas tank magneto cable rear clip.....	2
N2400X.....	Gas tank and carb. tube and nuts.....	2
N2404.....	Gas tank and carb. tube nut.....	4
N2406.....	Gas tank and carb. tube cone.....	4
N2408.....	Gas tank and carb. tube nut.....	4
N2418.....	Gas tank bottom clamping screw.....	8
N2420.....	Gas tank bottom clamping screw nut.....	8
N2452XI....	Oil tank complete.....	1
N2454X.....	Oil tank camp.....	2
N2464.....	Oil tank frame ship.....	2
N2474XI....	Oil pump plunger rod complete.....	2
N2496.....	Oil pump inlet valve spring.....	4
N2498.....	Oil pump inlet valve ball.....	4
N2500.....	Oil pump outlet valve.....	2
N2502.....	Oil pump outlet valve spring.....	2
N2504.....	Oil pump outlet valve ball.....	2
N2506.....	Oil pump outlet tube and nuts.....	2
N2512.....	Oil pump outlet tube motor base elbow.....	2
N2600.....	Automatic oiler worm.....	1
N2604.....	Automatic oiler worm key.....	1
N2612X.....	Automatic oiler worm gear.....	1
N2640X.....	Automatic oiler driving block.....	1
N2712X.....	Automatic oiler and tank tube.....	2
N2796.....	Automatic oiler outlet tube and nuts.....	2

Part No.	Description.	Quantity.
N2724.....	Automatic oiler primer screw.....	12
N2728.....	Automatic oiler primer screw washer.....	12
N2836X.....	Rear mud guard.....	1
N2844.....	Rear mud guard clip.....	1
N2848.....	Rear mud guard clip screw.....	6
N2868.....	Rear mud guard front brace, left.....	1
N2880.....	Rear mud guard front brace, right.....	1
N2908.....	Rear mud guard rear brace, right.....	1
N2924.....	Rear mud guard rear brace, left.....	1
N2912.....	Rear mud guard rear brace screw.....	6
N2928.....	Rear mud guard rear brace screw.....	6
N2950X.....	Front wheel complete.....	1
N2950.....	Front wheel hub complete.....	1
N2958.....	Front wheel hub cone complete.....	2
N2970.....	Hub center axle.....	2
N2994.....	Hub ball.....	100
N2000.....	Wheel rim.....	1
N3004.....	Front hub lock washer.....	4
N2974.....	Front hub axle nuts.....	4
N3012.....	Front hub spokes.....	100
N3020.....	Front hub spokes nipples.....	100
N3050X.....	Rear wheel complete.....	1
N4000X.....	Brake complete.....	2
N4012.....	Stationery cone.....	1
N4024.....	Hub adjusting cone.....	1
N4034.....	Hub ball.....	20
N4044.....	Hub center axle.....	1
N4060.....	Sprockett lock nut.....	1
N4048.....	Hub axle nut.....	2
N4088.....	Clip binding screw.....	3
N4092.....	Clip binding screw nut.....	4
N4096X.....	Bank and lining.....	2
N4164.....	Inside operating shaft.....	2
N4200X.....	External brake band complete.....	3
N4168.....	Internal brake band lever.....	2
N4280.....	Clevis pin.....	2
N4250.....	Foot brake pedal.....	1
N4254.....	Foot brake pedal pin.....	1
N4258.....	Foot brake pedal pin cotter pin.....	6
N4262.....	Foot brake pedal screw.....	6
N4266.....	Foot brake pedal screw nut.....	6
N4270.....	Foot brake pedal spring.....	2
N4274.....	Foot brake pedal clevis, right.....	2
N4278.....	Foot brake pedal clevis nut.....	2
N4282.....	Foot brake pedal clevis pin.....	4
N4290X.....	Brake connection rod.....	1
N4294.....	Foot brake pedal and rod clevis, left.....	2
N4298.....	Foot brake pedal and rod clevis, left, nut.....	2
N4320X.....	Long chain.....	3
N4324X.....	Short chain.....	3
N4348X.....	Double links.....	8
N4360X.....	Half connecting links.....	8
N4448.....	Rear guard screw.....	4
N4500.....	Rear stand.....	1
N4548.....	Rear stand sleeve screw.....	4
N4540.....	Rear stand spring sleeve.....	4

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Part No.	Description.	Quantity.
N4544.....	Rear stand spring sleeve washer.....	4
N4552.....	Rear stand spring carrier.....	2
N4556.....	Rear stand spring carrier rivet, short.....	50
N4560.....	Rear stand spring carrier rivet, long.....	25
N4704X.....	Kick starter and gear segment.....	1
N4716.....	Kick starter crank foot lever.....	1
N4720.....	Kick starter crank foot lever screw.....	2
N4728.....	Kick starter rubber.....	4
N4720.....	Kick starter lever screw.....	2
N4720.....	Kick starter rubber screw.....	8
N4744.....	Kick starter crank spring.....	3
N4752.....	Kick starter crank strap.....	3
N4772.....	Kick starter stud.....	2
N4780.....	Kick starter stud nut.....	2
N4776.....	Kick starter stud washer.....	2
N4784X.....	Kick starter stud sleeve.....	1
N4800.....	Kick starter stud bracket.....	1
N4804.....	Kick starter pinion.....	2
N4808.....	Kick starter pinion spring.....	3
N4812.....	Kick starter pinion spring dust cap.....	3
N4816.....	Kick starter pinion ratchet plate.....	1
N4820.....	Kick starter pinion shaft.....	1
N4824.....	Kick starter pinion shaft and clutch plate rivet.....	50
N4850X1.....	Foot board, complete with mat.....	3
N4874.....	Foot board front bracket.....	2
N4878.....	Foot board front bracket hinge pin.....	25
N4882.....	Foot board front bracket hinge pin.....	50
N4886.....	Foot board rear bracket.....	1
N4889.....	Foot board rear bracket screw.....	6
N4958X.....	Three-speed gear case, complete.....	1
N4966.....	Three-speed gear case anchor stud.....	2
N4970.....	Three-speed gear case anchor stud nut.....	4
N5010.....	Three-speed gear case cover stud nut.....	4
N5022.....	Three-speed oil inlet screw.....	4
N5026.....	Three-speed oil inlet screw washer.....	4
N5030X.....	Three-speed main shaft.....	1
N5042X.....	Three-speed ball-bearing, right.....	1
N5046X.....	Three-speed ball bearing, left.....	1
N5176.....	Safety lock spring.....	4
N5088.....	Counter shaft sprocket.....	2
N5216.....	Plunger rod.....	2
N5232X.....	Plunger worm.....	1
N5292.....	Hand-operating lever stud.....	2
N5296.....	Hand-operating lever stud washer.....	2
N5302.....	Hand-operating lever stud nut.....	8
N5338.....	Upper operating rod clevis.....	2
N5342.....	Upper operating rod clevis pin.....	4
N5354.....	Upper operating rod.....	1
N5500X.....	Magneto complete.....	1
N5538.....	Brush holder support R.....	1
N5540.....	Brush holder support L.....	1
N5558.....	Carbon brushes, spring.....	4
N5634.....	Breaker bar spring.....	2
N5622.....	Buffer spring.....	2
.....	Casings Firestone nonskid or Goodyear Blue Streak.....	21
.....	Tubes, inner, Goodyear but on lap end.....	21

Maintenance parts, six months' allowance in case Harley-Davidson motorcycles are furnished.

Part No.	Description.	Quantity.
FA734.....	Arms, lifter, complete.....	2
FA733.....	Arms, roller, exhaust, complete.....	1
FF8.....	Axles, front.....	7
P29.....	Axles, pedal.....	12
DG355.....	Axles, rear.....	7
DG552.....	Balls, countershaft, sets.....	2
BO4053.....	Balls, $\frac{1}{4}$ inch.....	80
DG536.....	Bearings, pull-rod.....	7
CK688.....	Boards, foot, complete.....	4
EA370.....	Bolts, inlet-lever.....	6
FF48.....	Brakes, coaster, complete.....	2
EA745.....	Bushings, inlet-lever.....	6
DA51.....	Bushings, shaft.....	4
FA742.....	Inlet housings.....	4
FA791.....	Caps, inlet push-rod.....	5
EK30.....	Caps, oil-tank.....	7
EK744.....	Carburetor, Shebler, complete.....	1
FA702.....	Crank case, complete.....	1
DA860.....	Casings, nonskid, Firestone.....	21
CK9.....	Oiler, gear, mechanical.....	2
CK9.....	Clips, adjusting, axle.....	14
DG86.....	Clutches, complete.....	2
AA7.....	Collars, inlet-valve.....	7
AA26.....	Collars, exhaust-valve.....	7
EE66.....	Cones, lower, head.....	2
EE65.....	Cones, upper, head.....	2
CD205.....	Controls, complete.....	10
EG647.....	Cranks, starter.....	2
FE7.....	Clip, left rear axle.....	2
AD700.....	Cylinder, front.....	1
AD701.....	Cylinder, rear.....	1
AG6.....	Friction disks, complete.....	28
CG5.....	Releasing disks, complete.....	7
EC1502.....	Forks, front, sets, complete.....	3
CA763.....	Gaskets, connection.....	14
AD1.....	Grips, handlebar, rubber.....	14
ED300H.....	Handlebar, complete.....	1
EA742.....	Housings, inlet.....	2
BA43.....	Keys, exhaust-valve.....	12
BA750.....	Keys, inlet-valve.....	7
AA749.....	Keys, shaft.....	6
EG551.....	Levers and rods, hand-operated, complete.....	2
EA346A.....	Levers, inlet.....	4
EK309.....	Lines, gasoline, complete.....	3
DK712.....	Links, connecting.....	100
DK315.....	Links, offset.....	100
EK10008.....	Generator, Remy, complete.....	1
DX1037.....	Armature, assembled.....	1
FA783.....	Manifold, intake, complete.....	1
BO663.....	Nuts, inlet-lever.....	6
BO707.....	Nuts, crank-shaft.....	8
CA674.....	Nuts, cylinder, stud.....	8
FO751.....	Nuts, front axle.....	14

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Maintenance parts, six months' allowance in case Harley-Davidson motorcycles are furnished—Continued.

Part No.	Description.	Quantity.
BO693.....	Nuts, rear axle.....	14
EO695.....	Nuts, shaft.....	8
EO723.....	Nuts, spare, for gas tank.....	7
EO687.....	Nuts, kick-starter.....	20
FK273.....	Pedals, complete.....	6
DK445.....	Pipes, oil-drive, case.....	3
DA736.....	Pistons.....	2
	Plates, clutch, complete set.....	5
FA741.....	Plugs, cylinder.....	2
DK780.....	Primers, assembled.....	6
DB75.....	Pumps, oil, parts for, complete.....	2
FK469.....	Release, foot, for clutch.....	2
DG534.....	Retainers, clutch-sprocket.....	2
AA11.....	Piston rings.....	42
DG536.....	Rods, clutch, pull.....	7
DA812.....	Rods, connecting with rollers.....	2
FA790.....	Rods, push, inlet-valve.....	5
DA811.....	Rollers, and retainers, sets.....	2
CA807.....	Rollers, clutch-sprocket.....	50
BO154.....	Screws, housing, lock.....	6
DA744.....	Screws, inlet-valve.....	7
CKO8.....	Screws, rear-axle, adjusting, short.....	10
EK8.....	Screws, rear-axle, adjusting, long.....	10
DA711.....	Shafts, crank.....	2
DA709.....	Shafts, gear.....	2
FA710.....	Shafts, sprocket.....	2
	Spokes, and nipples, front.....	80
	Spokes, and nipples, rear.....	80
DG24.....	Springs, clutch, tension.....	25
EA170.....	Springs, exhaust-valve.....	7
EC11.....	Springs, fork.....	6
EA754.....	Springs, inlet-push-rod.....	5
CK700.....	Sprockets, 14-tooth.....	7
DG384.....	Sprockets, 40-tooth.....	3
EG663.....	Starters, rubber, sleeve.....	4
FG660.....	Starters for pedal assembly.....	2
FG662.....	Starter-pedal rubbers.....	10
EC6.....	Studs, rocker.....	10
BC5.....	Studs, front fork.....	25
FA62.....	Studs, cylinder.....	8
ED7007.....	Oil tanks, complete.....	3
FG501.....	Transmission case.....	2
FG500A.....	Transmission, complete.....	3
	Goodyear, cut or lap and inner tubes.....	21
SC63.....	Valves, air, intake, complete.....	7
EA752.....	Valves, exhaust.....	7
EA755.....	Valves, inlet.....	7
BO354.....	Washers, crank-pin lock.....	8
BO315.....	Washers, rear axle.....	14
FF807.....	Wheels, front, complete.....	7
FF42.....	Wheels, rear, complete.....	7
EE3107.....	Wheels, side-car.....	3

AEROPLANES AND SPARE PARTS.

12 aeroplanes (type not known. Spare parts will depend on type of aeroplanes furnished each squadron).

MAGNETOS AND MAGNETO PARTS.

Magnetos and magneto parts will depend on the type of motor furnished each squadron.

MOTORS AND MOTOR PARTS.

Motors and motor parts will depend on the type of motor furnished each squadron.

PHOTOGRAPHIC INSTRUMENTS AND SUPPLIES.

- 10 acid, acetic, pounds.
- 1 acid, hydrochloric, pound.
- 3 acid, pyrogallic, pounds (in 1-ounce packages).
- 1 acid, sulphuric, pound.
- 1 acid, nitric, pound.
- 1 acid, sulphurous, pound.
- 1 album, photography, 10 by 12 inches, loose leaf.
- 5 alum, powdered, pounds.
- 4 ammonia, pounds (strong, 26 per cent).
- 3 ammonia, persulphate of, pounds.
- 4 blotters, 19 by 24 inches, dozen.
- 1 brush, camel's-hair, 3-inch, rubber-set.
- 6 brushes, spotting, sable, Nos. 1 to 6, inclusive.
- 1 brush, paste, 2-inch.
- 5 bags, water, desert, 1-gallon capacity.
- 1 board, drawing, 20 by 20 inches.
- 3 cameras, automatic, artillery type.
- 3 cameras, automatic, reconnoissance type.
- 1 camera, Graflex, 3½ by 5½ inches, with carrying case.
- 1 camera, view, 6½ by 8½ inches, with carrying case.
- ½ copper, sulphate, pound.
- 1 camera, Century, lantern slide.
- 50 clips, wooden photo.
- 12 clips, Eastman, film-developing, 3½-inch.
- 1 cloth, focusing.
- 1 cotton, absorbent, pound.
- 200 developer, H. M., Ansco, tubes.
- 1 dividers, proportional, set.
- 120 films, for automatic aeroplane camera, rolls.
- 24 films, 3½ by 5½ inches, 6-exposure, rolls.
- 10 formaldehyde, pounds.
- 2 frames, printing, heavy, 6½ by 8½ inches.
- 2 frames, printing, 5 by 7 inches.
- 4 funnels, glass.
- 1 fixing, hard-rubber, box, for 6½ by 8½ inch plate.
- 2 graduates, 32-ounce.
- 1 graduate, minum.
- 4 glass bottles, brown, 64-ounce, with glass stoppers.
- 2 glass bottles, brown, 32-ounce, with glass stoppers.
- 1 graduate, 8-ounce.
- 12 glasses, Coner, lantern, slide, dozen.
- 6 holders, plate, 6½ by 8½ inches.

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- 1 house, portable, for developing.
- 1 hydroquinon, pound.
- 1 instrument, drawing, Keuffel & Esser, set.
- 1 ice plant, smallest size.
- 1 ink, India, stick.
- 1 iron, flat, 5-pound.
- 1 lens, anastigmat. $6\frac{1}{2}$ by $8\frac{1}{2}$ inches.
- 1 lantern slide box, Eastman, No. 2.
- 1 lamp, Eastman, studio, oil.
- 1 lamp, flash.
- 1 lens, $3\frac{1}{4}$ by $5\frac{1}{2}$ inches.
- 1 machine, enlarging, 4 by 5 inches, with 110-volts, direct-current arc lamp, lens f. 7. 5. or f. 6. 3, anastigmat lens.
- $\frac{1}{2}$ mercury, bichloride of, pound.
- 1 metol of rhodol, pound.
- 1 mortar and pestle.
- 1 machine, projecting, for lantern-slide work.
- 100 mounts, 22 by 28 inches, double weight.
- $\frac{1}{2}$ nitrate of silver, pound.
- 1 opaque, cake.
- 10 paper, printing, $3\frac{1}{4}$ by $5\frac{1}{2}$ inches, gross.
- 150 paper, printing, 4 by 5 inches, for aeroplane camera.
- 10 paper, printing, $6\frac{1}{2}$ by $8\frac{1}{2}$ inches, gross.
- 200 paper, cross section, 14 by 20 inches, sheets.
- 10 plates, $6\frac{1}{2}$ by $8\frac{1}{2}$ inches, dozen.
- 1 potassium, metabisulphite of, pound.
- 1 printer, amateur, Ansco.
- 1 protractor, celluloid.
- 1 potassium, bromide of, pound.
- 3 potassium, carbonate, pounds.
- $\frac{1}{4}$ potassium, ferricyanide, pound.
- $\frac{1}{4}$ potassium, iodine, pound.
- 12 plates, lantern slide, dozen.
- 1,000 preservers, negative, $6\frac{1}{2}$ by $8\frac{1}{2}$ inches.
- 2,500 preservers, negative, 4 by 5 inches.
- 2 preservers, negative, books, $3\frac{1}{4}$ by $5\frac{1}{2}$ inches.
- 1 powder, flash, pound.
- 1 rule, slide.
- 1 rack, negative, $6\frac{1}{2}$ by $8\frac{1}{2}$ inches.
- 6 rods, glass, stirring, 12-inch.
- 1 roller, photo.
- 3 scales, boxwood (1 architect's, 1 engineer's, 1 metric).
- 50 soda, hyposulphite of, pounds.
- 1 soda, caustic, pound.
- 1 box, washing, for $6\frac{1}{2}$ by $8\frac{1}{2}$ inch plates.
- 10 soda, carbonate, pounds.
- 10 sodium, sulphite, pounds.
- $\frac{1}{2}$ sodium sulphide, pound.
- 1 square, "T."
- 1 shears, 6-inch, pair.
- 1 scale, photo, Eastman, studio.
- 4 thermometers.
- 4 trays, enameled, 8 by 10 inches.
- 4 trays, enamel, 16 by 20 inches.
- 4 trays, wooden, special developing, for use with aeroplane camera.
- 1 triangle, drawing, 45 degrees, celluloid.
- 1 triangle, drawing, 30 and 60 degrees, celluloid.
- 1 tank, film, Kodak, $3\frac{1}{2}$ -inch.

- 10 tape, binding, lantern slide, packages.
- 1 table, folding, for dark room, tent house.
- 2 trays, enamel, 5 by 7 inches.
- 1 trimmer, paper, 10-inch.
- 1 tripod, Crown, No. 2.
- 6 tissues, Kodak, dry mounting, gross.

DRAWING INSTRUMENTS AND DRAWING MATERIAL.

- 1 board, drawing, 36 by 48 inches.
- 1 board, sketch, 14 by 20 inches.
- 1 cloth, tracing, roll.
- 2 curves, irregular.
- 6 erasers, art gum.
- 6 erasers, emerald.
- 1 instruments, drawing, set (best quality).
- 1 lifter, thumb tack.
- 1 paper, detail, roll.
- 2 pencils, 6-H, boxes.
- 2 pencils, B, boxes.
- 2 powder, tracing cloth, cans.
- 2 protractors.
- 1 scale, engineer; graduation, $\frac{1}{2}$, $\frac{3}{4}$, $1\frac{1}{2}$, 3 inch, flat.
- 1 scale, triangular, engineer; graduation, $\frac{1}{2}$, $\frac{3}{4}$, $1\frac{1}{2}$, 3 inch.
- 1 scissors, 6-inch, pair.
- 2 shields, erasing.
- 1 square, "T" wood, 18-inch.
- 1 square, "T," wood, 36-inch.
- 2 squares, set, 30-degree.
- 2 squares, set, 45-degree.
- 2 squares, set, 60-degree.
- 1 stand, drawing board.
- 6 tacks, thumb, dozen.

METALS AND METALING

FOR PORTABLE MACHINE SHOP.

- 48 aluminum, sheet, 15 gauge, square feet.
- 4 brass, sheet, spring, pieces, of the following sizes:
 - 1 by 15 feet by 0.002 inch.
 - 1 by 15 feet by 0.004 inch.
 - 1 by 15 feet by 0.008 inch.
 - 1 by 15 feet by 0.012 inch.
- 3 brass, soft, 18 gauge, 3 by 4 feet, sheets.
- 7 brass, rod, round, 12 feet long, 1 each of the following sizes: $\frac{1}{4}$, $\frac{3}{8}$, $\frac{1}{2}$, $\frac{5}{8}$, $\frac{3}{4}$, $\frac{7}{8}$, 1 inch.
- 3 brass, rod, round, 4 feet long, 1 each of the following sizes: $1\frac{1}{4}$, $1\frac{1}{2}$, 2 inches.
- 3 brass, rod, round, 3 feet long, 1 each of the following sizes: $2\frac{1}{2}$, 3, $3\frac{1}{2}$ inches.
- 5 brass, rod, hexagonal, 12 feet long, 1 each of the following sizes: $\frac{1}{4}$, $\frac{3}{8}$, $\frac{1}{2}$, $\frac{3}{4}$, 1 inch.
- 3 bronze, bearing, pieces, 1 piece each of the following sizes:
 - 24 by $\frac{9}{16}$ inch.
 - 24 by $1\frac{1}{2}$ inches.
 - 24 by $2\frac{1}{2}$ inches.

- 11 drill rod, Crescent, pieces, 1 each of the following sizes:
- 4 feet by $\frac{5}{8}$ inch.
 - 4 feet by $\frac{3}{4}$ inch.
 - 4 feet by $\frac{1}{2}$ inch.
 - 4 feet by $\frac{7}{8}$ inch.
 - 4 feet by $\frac{3}{8}$ inch.
 - 4 feet by $\frac{1}{2}$ inch.
 - 4 feet by $\frac{9}{16}$ inch.
 - 4 feet by $\frac{5}{8}$ inch.
 - 4 feet by $1\frac{1}{8}$ inch.
 - 4 feet by $\frac{3}{4}$ inch.
 - 4 feet by 1 inch.
- 4 iron, cast, round pieces, 1 each of the following sizes:
- 24 by 2 inches.
 - 24 by $2\frac{1}{2}$ inches.
 - 24 by 3 inches.
 - 24 by $3\frac{1}{2}$ inches.
- 1 iron, galvanized, sheet, 22 gauge, 3 by 6 feet.
- 6 steel, Bessemer, round, rods, 12 feet each of the following: $\frac{3}{4}$, $\frac{7}{8}$, $\frac{1}{2}$, $\frac{9}{16}$, $\frac{1}{4}$, $\frac{5}{8}$, $\frac{3}{4}$, $\frac{1}{2}$ inch.
- 6 steel, cold-rolled, round, rods, 20 feet each, 1 each of the following: $\frac{3}{8}$, $\frac{1}{2}$, $\frac{5}{8}$, $\frac{3}{4}$, $\frac{7}{8}$, $\frac{1}{2}$ inch.
- 9 steel, cold-rolled, round, rods, 12 feet each, 1 each of the following:
- $\frac{9}{16}$, $\frac{5}{8}$, $\frac{3}{4}$, $\frac{7}{8}$, 1 inch.
 - $1\frac{1}{16}$, $1\frac{3}{8}$, $1\frac{1}{2}$, $1\frac{3}{4}$ inches.
- 7 steel, cold-rolled, round, rods, 4 feet each 1 each of the following: 2, $2\frac{1}{4}$, $2\frac{1}{2}$, $2\frac{3}{4}$, 3, $3\frac{1}{2}$, 4 inches.
- 9 steel, cold-rolled, hexagonal, 12 feet each, 1 each of the following: $\frac{3}{8}$, $\frac{1}{2}$, $\frac{5}{8}$, $\frac{3}{4}$, $\frac{1}{2}$, $\frac{5}{8}$, $\frac{3}{4}$, 1 inch, $1\frac{1}{4}$ inches.
- 5 steel, cold-rolled, square, rods, 12 feet each, 1 each of the following: $\frac{5}{8}$, $\frac{7}{8}$, $\frac{1}{2}$, $\frac{5}{8}$, $\frac{7}{8}$, 1 inch.
- 6 steel, cold-rolled, flat, pieces, 1 each of the following sizes:
- 12 feet by $\frac{1}{8}$ by $\frac{3}{4}$ inch.
 - 12 feet by $\frac{1}{8}$ by $\frac{3}{8}$ inch.
 - 12 feet by $\frac{1}{8}$ by $\frac{1}{2}$ inch.
 - 12 feet by $\frac{1}{8}$ by $\frac{3}{4}$ inch.
 - 12 feet by $\frac{1}{8}$ by 1 inch.
 - 12 feet by $\frac{1}{8}$ inch by 2 inches.
- 7 steel, cold-rolled, flat, pieces, 1 each of the following sizes:
- 12 feet by $\frac{1}{8}$ by $\frac{5}{8}$ inch.
 - 12 feet by $\frac{1}{8}$ by $\frac{3}{4}$ inch.
 - 12 feet by $\frac{1}{8}$ by $\frac{7}{8}$ inch.
 - 12 feet by $\frac{1}{8}$ by 1 inch.
 - 12 feet by $\frac{1}{8}$ inch by $1\frac{1}{8}$ inches.
 - 12 feet by $\frac{1}{8}$ inch by $1\frac{1}{4}$ inches.
 - 12 feet by $\frac{1}{8}$ inch by $1\frac{3}{4}$ inches.
- 6 steel, cold-rolled, flat, pieces, 1 each of the following sizes:
- 12 feet by $\frac{3}{8}$ by $\frac{1}{2}$ inch.
 - 12 feet by $\frac{3}{8}$ by $\frac{5}{8}$ inch.
 - 12 feet by $\frac{3}{8}$ by $\frac{3}{4}$ inch.
 - 12 feet by $\frac{3}{8}$ by $\frac{7}{8}$ inch.
 - 12 feet by $\frac{3}{8}$ by 1 inch.
 - 12 feet by $\frac{3}{8}$ inch by $1\frac{1}{8}$ inches.
- 6 steel, cold-rolled, flat, pieces, 1 each of the following sizes:
- 8 feet by $\frac{1}{4}$ by $\frac{1}{2}$ inch.
 - 8 feet by $\frac{1}{4}$ by $\frac{5}{8}$ inch.
 - 8 feet by $\frac{1}{4}$ by $\frac{3}{4}$ inch.
 - 8 feet by $\frac{1}{4}$ by $\frac{7}{8}$ inch.
 - 8 feet by $\frac{1}{4}$ by 1 inch.
 - 8 feet by $\frac{1}{4}$ inch by $1\frac{1}{8}$ inches.

- 3 steel, cold-rolled, flat, pieces, 1 each of the following sizes:
 8 feet by $\frac{1}{8}$ inch by $\frac{1}{4}$ inch.
 8 feet by $\frac{1}{2}$ inch by 2 inches.
 8 feet by $\frac{3}{8}$ inch by 2 inches.
- 6 steel, cold-rolled, flat, fitting stock, pieces, 1 each of the following sizes:
 8 feet by 0.025 inch by 6 inches.
 8 feet by 0.030 inch by 6 inches.
 8 feet by 0.050 inch by 6 inches.
 8 feet by 0.070 inch by 6 inches.
 8 feet by 0.128 inch by 6 inches.
 8 feet by 0.134 inch by 6 inches.
- 3 tubing, copper, 20 gauge, B. & S., pieces, 50 feet each, 1 each of $\frac{1}{4}$, $\frac{5}{16}$, $\frac{3}{8}$ inch.
- 10 tubing, seamless, Shelby, pieces, 15 feet each, 1 each of $\frac{3}{8}$, $\frac{1}{2}$, $\frac{5}{8}$, $\frac{3}{4}$, $1\frac{1}{8}$, $\frac{7}{8}$, $1\frac{1}{8}$, 1 inch, $1\frac{3}{8}$, $1\frac{1}{4}$ inches.
- 8 zinc, sheet, 16 to 20 gauge, pounds.

MISCELLANEOUS EXPENDABLE MATERIALS

FOR MAINTENANCE OF AEROPLANES, MOTOR TRUCKS, AND MOTOR-CYCLES FOR THE FIRST SIX MONTHS.

Materials and supplies for maintenance of motor trucks and aeroplanes:

- 3 acid, hydrochloric, gallons.
 1 acid, muriatic, gallon.
 25 ammonia, pints (in bottles).
 100 batteries, tungsten, type A (for flashlights).
 5 beeswax, pounds.
 3 blades, hack saw, fine, gross.
 3 blades, hack saw, medium, gross.
 3 blades, hack saw, coarse, gross.
 48 blades, hack saw, 9-inch, No. 102, Starrett.
 48 blades, hack saw, 9-inch, No. 103, Starrett.
 48 blades, hack saw, 9-inch, No. 103 $\frac{1}{2}$ -B, Starrett.
 25 blue, prussian, tubes.
 5 bolts, stove, flat head, with nuts, $\frac{1}{2}$ by $\frac{3}{8}$ inch, gross.
 5 bolts, stove, flat head, with nuts, 1 by $\frac{3}{8}$ inch, gross.
 5 bolts, stove, flat head, with nuts, $1\frac{1}{2}$ by $\frac{3}{8}$ inch, gross.
 5 bolts, stove, flat head, with nuts, 2 by $\frac{3}{8}$ inch, gross.
 5 bolts, stove, flat head, with nuts, $\frac{1}{2}$ by $\frac{1}{4}$ inch, gross.
 5 bolts, stove, flat head, with nuts, 1 by $\frac{1}{4}$ inch, gross.
 5 bolts, stove, flat head, with nuts, $1\frac{1}{2}$ by $\frac{1}{4}$ inch, gross.
 5 bolts, stove, flat head, with nuts, 2 by $\frac{1}{4}$ inch, gross.
 5 bolts, stove, round head, with nuts, $\frac{1}{2}$ by $\frac{3}{8}$ inch, gross.
 5 bolts, stove, round head, with nuts, 1 by $\frac{3}{8}$ inch, gross.
 5 bolts, stove, round head, with nuts, $1\frac{1}{2}$ by $\frac{3}{8}$ inch, gross.
 5 bolts, stove, round head, with nuts, 2 by $\frac{3}{8}$ inch, gross.
 5 bolts, stove, round head, with nuts, $\frac{1}{2}$ by $\frac{1}{4}$ inch, gross.
 5 bolts, stove, round head, with nuts, 1 by $\frac{1}{4}$ inch, gross.
 5 bolts, stove, round head, with nuts, $1\frac{1}{2}$ by $\frac{1}{4}$ inch, gross.
 5 bolts, stove, round head, with nuts, 2 by $\frac{1}{4}$ inch, gross.
 10 brads, wire, flat head, $\frac{3}{8}$ -inch, No. 18 wire.
 10 brads, wire, flat head, $\frac{1}{2}$ -inch, No. 18 wire.
 10 brads, wire, flat head, $\frac{3}{4}$ -inch, No. 18 wire.
 10 brads, wire, flat head, 1-inch, No. 18 wire.
 4 brass, spring, sheet, 0.002, square feet.
 4 brass, spring, sheet, 0.004, square feet.
 4 brass, spring, sheet, 0.006, square feet.
 4 brass, spring, sheet, 0.008, square feet.
 4 brass, spring, sheet, 0.010, square feet.

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Materials and supplies for maintenance of motor trucks and aeroplanes—Continued.

- 4 brass, spring, sheet, 0.012, square feet.
- 4 bronze, welding, manganese, rods.
- 4 bronze, welding, Tabin, $\frac{1}{4}$ -inch, rods.
- 100 bulbs, flashlight (Mazda, type A).
- 5 burrs, brass, No. 6, pounds.
- 5 burrs, brass, No. 7, pounds.
- 5 burrs, brass, No. 9, pounds.
- 24 burners, gas, acetylene.
- 3,000 cable, aviator, cord, nonflexible, $\frac{1}{8}$ -inch, feet; 1,000-foot spools.
- 3,000 cable, aviator, cord, nonflexible, $\frac{1}{4}$ -inch, feet; 1,000-foot spools.
- 3,000 cable, aviator, cord, nonflexible, $\frac{3}{8}$ -inch, feet; 1,000-foot spools.
- 3,000 cable, aviator, cord, nonflexible, $\frac{1}{2}$ -inch, feet; in 1,000-foot spools.
- 3,000 cable, aviator, cord, nonflexible, $\frac{5}{8}$ -inch, feet; in 1,000-foot spools.
- 3,000 cable, aviator, cord, nonflexible, $\frac{3}{4}$ -inch, feet; in 1,000-foot spools.
- 3,000 cable, aviator, cord, nonflexible, $\frac{7}{8}$ -inch, feet; in 1,000-foot spools.
- 3,000 cable, flexible, contron, wire center, $\frac{1}{2}$ -inch, feet; in 1,000-foot spools.
- 300 canvas, duck, 8-ounce, yards.
- 200 canvas, duck, 10-ounce, yards.
- 75 cells, dry, No. 6 Reserve type.
- 100 cement, Michelin Mastic, cans.
- 156 chamois, large, pieces.
- 600 cloth, aeroplane, linen, yards.
- 500 cloth, crocus, sheets.
- 500 cloth, emery, fine, sheets.
- 500 cloth, emery, medium, sheets.
- 500 cloth, emery, coarse, sheets.
- 100 cloth, cheese, bolts.
- 10 compound, brazing, Appeal, cans.
- 50 compound, valve-grinding, Clover Leaf, cans.
- 100 dope, Curtiss, gallons.
- 1 electrolyte, 1,300 c. p., gallon.
- 25 enamel, black, pint cans.
- 4 flux, aluminum, pounds.
- 4 flux, brass or bronze, pounds.
- 4 flux, cast-iron or steel, pounds.
- 200 gas-lead, Martin, flexible, weaved, feet.
- 10 glue, fish, pounds.
- 200 glue, Lepage's, liquid, gill cans.
- 5 grommets, Crow's, spur, brass, No. 4.
- 200 grease, graphite, Dixon, No. 5, pounds, 5-pound cans.
- 200 grease, graphite, Dixon, No. 676, pounds, 5-pound cans.
- 200 grease, graphite, Dixon, No. 677, pounds, in 5-pound cans.
- 24 handle, maul, assorted.
- 24 handles, ax.
- 10 hose, pure gum, 1-inch, pounds.
- 10 hose, pure gum, $1\frac{1}{2}$ -inch, pounds.
- 15 iron-welding, cast-iron, rods.
- 15 iron-welding, Swedish iron, rods.
- 3 keys, Woodruff, assorted, boxes.
- 500 lacing, rawhide, $\frac{1}{4}$ -inch, feet.

Materials and supplies for maintenance of motor trucks and aeroplanes—Continued.

- 7 linen, intrinsic silk, No. 12, spools.
- 3 lumber, hickory, 1½ by 10 inches by 10 feet net, straight-grain, clear, second-growth, pieces.
- 100 needles, surgeon, bent, assorted.
- 1 needles, sailmaker's dozen.
- 250 nuts, castellated, ⅜-inch, -24.
- 500 nuts, hexagon, head ¼-inch, -24.
- 500 nuts, hexagon, head ⅜-inch, -24.
- 500 nuts, hexagon, head, 10-32.
- 500 nuts, hexagon, head, 8-32.
- 36 oil, 3 in 1, bottles.
- 10 paint, olive-drab, gallons.
- 200 paste, soldering, cans.
- 50 permanite, pounds.
- 5,000 pins, cotter, ⅜ by 1 inch.
- 2,500 pins, cotter, ¼ by 1 inch.
- 2,500 pins, cotter, ⅜ by 1 inch.
- 10,000 pins, cotter, ⅜ by 1 inch.
- 5 pins, escutcheon, brass, ¾-inch, pounds.
- 5 pins, escutcheon, brass, 1-inch, pounds.
- 10 Pyrene, fluid, gallons.
- 5 rivets and burrs, copper, ¾-inch, No. 8.
- 5 rivets and burrs, copper, ⅝-inch, No. 12.
- 5 rivets and burrs, copper, ⅜-inch, No. 14.
- 1,000 rivets, tinned, ¼-inch, 1½, pounds.
- 1,000 rivets, tinned, ¼-inch, 6, pounds.
- 1,000 rivets, tinned, ½-inch, 8, pounds.
- 800 rope, Manila, ⅜-inch, pounds.
- 1,500 rope, Manila, ½-inch, pounds.
- 1,000 sandpaper, fine, sheets.
- 1,000 sandpaper, medium, sheets.
- 1,000 sandpaper, coarse, sheets.
- 250 screws, machine, ¾-inch, 8-32, iron.
- 250 screws, machine, 2½-inch, 10-32, iron.
- 250 screws, machine, 3½-inch, 10-32, iron.
- 250 screws, machine, ½-inch, 8-32, iron.
- 250 screws, machine, ¾-inch, 1-24, iron.
- 250 screws, machine, ¼-inch, 2-24, iron.
- 250 screws, machine, ¼-inch, 3-24, iron.
- 5 screws, wood, flathead, bright, ½-inch, No. 4, gross.
- 5 screws, wood, flathead, bright, ¼-inch, No. 4, gross.
- 5 screws, wood, flathead, bright, ⅜-inch, No. 4, gross.
- 5 screws, wood, flathead, bright, ¾-inch, No. 4, gross.
- 5 screws, wood, flathead, bright, 1-inch, No. 4, gross.
- 5 screws, wood, flathead, bright, ⅜-inch, No. 6, gross.
- 5 screws, wood, flathead, bright, ½-inch, No. 6, gross.
- 5 screws, wood, flathead, bright, ¾-inch, No. 6, gross.
- 5 screws, wood, flat head, bright, 1-inch, No. 6, gross.
- 5 screws, wood, flat head, bright, 1½-inch, No. 6, gross.
- 5 screws, wood, flat head, bright, ½-inch, No. 8, gross.
- 5 screws, wood, flat head, bright, ¾-inch, No. 8, gross.
- 5 screws, wood, flat head, bright, 1-inch, No. 8, gross.
- 5 screws, wood, flat head, bright, 1½-inch, No. 8, gross.
- 5 screws, wood, flat head, bright, 2-inch, No. 8, gross.
- 5 screws, wood, flat head, bright, ½-inch, No. 10, gross.
- 5 screws, wood, flat head, bright, ¾-inch, No. 10, gross.
- 5 screws, wood, flat head, bright, 1-inch, No. 10, gross.

Materials and supplies for maintenance of motor trucks and aeroplanes—Continued.

- 5 screws, wood, flat head, bright, $1\frac{1}{2}$ -inch, No. 10, gross.
- 5 screws, wood, flat head, bright, 2-inch, No. 10, gross.
- 5 screws, wood, flat head, bright, $2\frac{1}{2}$ -inch, No. 10, gross.
- 5 screws, wood, flat head, bright, 1-inch, No. 12, gross.
- 5 screws, wood, flat head, bright, $1\frac{1}{2}$ -inch, No. 12, gross.
- 5 screws, wood, flat head, bright, 2-inch, No. 12, gross.
- 5 screws, wood, flat head, bright, $2\frac{1}{2}$ -inch, No. 12, gross.
- 5 screws, wood, flat head, bright, 3-inch, No. 12, gross.
- 5 screws, wood, flat head, bright, 1-inch, No. 14, gross.
- 5 screws, wood, flat head, bright, $1\frac{1}{2}$ -inch, No. 14, gross.
- 5 screws, wood, flat head, bright, 2-inch, No. 14, gross.
- 5 screws, wood, flat head, bright, $2\frac{1}{2}$ -inch, No. 14, gross.
- 5 screws, wood, flat head, bright, 3-inch, No. 14, gross.
- 5 screws, wood, flat head, brass, $\frac{1}{4}$ -inch, No. 4, gross.
- 5 screws, wood, flat head, brass, $\frac{3}{8}$ -inch, No. 4, gross.
- 5 screws, wood, flat head, brass, $\frac{1}{2}$ -inch, No. 4, gross.
- 5 screws, wood, flat head, brass, $\frac{3}{4}$ -inch, No. 4, gross.
- 5 screws, wood, flat head, brass, 1-inch, No. 4, gross.
- 5 screws, wood, flat head, brass, $\frac{3}{8}$ -inch, No. 6, gross.
- 5 screws, wood, flat head, brass, $\frac{1}{2}$ -inch, No. 6, gross.
- 5 screws, wood, flat head, brass, $\frac{3}{4}$ -inch, No. 6, gross.
- 5 screws, wood, flat head, brass, 1-inch, No. 6, gross.
- 5 screws, wood, flat head, brass, $1\frac{1}{2}$ -inch, No. 6, gross.
- 5 screws, wood, flat head, brass, $\frac{1}{2}$ -inch, No. 8, gross.
- 5 screws, wood, flat head, brass, $\frac{3}{4}$ -inch, No. 8, gross.
- 5 screws, wood, flat head, brass, 1-inch, No. 8, gross.
- 5 screws, wood, flat head, brass, $1\frac{1}{2}$ -inch, No. 8, gross.
- 5 screws, wood, flat head, brass, 2-inch, No. 8, gross.
- 5 screws, wood, flat head, brass, $\frac{1}{2}$ -inch, No. 10, gross.
- 5 screws, wood, flat head, brass, $\frac{3}{4}$ -inch, No. 10, gross.
- 5 screws, wood, flat head, brass, 1-inch, No. 10, gross.
- 5 screws, wood, flat head, brass, $1\frac{1}{2}$ -inch, No. 10, gross.
- 5 screws, wood, flat head, brass, 2-inch, No. 10, gross.
- 5 screws, wood, round-head, blue, $2\frac{1}{2}$ -inch, No. 10, gross.
- 5 screws, wood, round-head, blue, 1-inch, No. 12, gross.
- 5 screws, wood, round-head, blue, $1\frac{1}{2}$ -inch, No. 12, gross.
- 5 screws, wood, round-head, blue, 2-inch, No. 12, gross.
- 5 screws, wood, round-head, blue, $2\frac{1}{2}$ -inch, No. 12, gross.
- 5 screws, wood, round-head, blue, 3-inch, No. 12, gross.
- 5 screws, wood, round-head, blue, 1-inch, No. 14, gross.
- 5 screws, wood, round-head, blue, $1\frac{1}{2}$ -inch, No. 14, gross.
- 5 screws, wood, round-head, blue, 2-inch, No. 14, gross.
- 5 screws, wood, round-head, blue, $2\frac{1}{2}$ -inch, No. 14, gross.
- 5 screws, wood, round-head, blue, 3-inch, No. 14, gross.
- 5 screws, wood, round-head, brass, $\frac{1}{4}$ -inch, No. 4, gross.
- 5 screws, wood, round-head, brass, $\frac{3}{8}$ -inch, No. 4, gross.
- 5 screws, wood, round-head, brass, $\frac{1}{2}$ -inch, No. 4, gross.
- 5 screws, wood, round-head, brass, $\frac{3}{4}$ -inch, No. 4, gross.
- 5 screws, wood, round-head, brass, 1-inch, No. 4, gross.
- 5 screws, wood, round-head, brass, $\frac{3}{8}$ -inch, No. 6, gross.
- 5 screws, wood, round-head, brass, $\frac{1}{2}$ -inch, No. 6, gross.
- 5 screws, wood, round-head, brass, $\frac{3}{4}$ -inch, No. 6, gross.
- 5 screws, wood, round-head, brass, 1-inch, No. 6, gross.
- 5 screws, wood, round-head, brass, $1\frac{1}{2}$ -inch, No. 6, gross.
- 5 screws, wood, round-head, brass, $\frac{1}{2}$ -inch, No. 8, gross.
- 5 screws, wood, round-head, brass, $\frac{3}{4}$ -inch, No. 8, gross.
- 5 screws, wood, round-head, brass, 1-inch, No. 8, gross.
- 5 screws, wood, round-head, brass, $1\frac{1}{2}$ -inch, No. 8, gross.
- 5 screws, wood, round-head, brass, 2-inch, No. 8, gross.

Materials and supplies for maintenance of motor trucks and aeroplanes—Continued.

- 5 screws, wood, round-head, brass, $\frac{1}{2}$ -inch, No. 10, gross.
- 5 screws, wood, round-head, brass, $\frac{3}{4}$ -inch, No. 10, gross.
- 5 screws, wood, round-head, brass, 1-inch, No. 10, gross.
- 5 screws, wood, round-head, brass, $1\frac{1}{2}$ -inch, No. 10, gross.
- 5 screws, wood, round-head, brass, 2-inch, No. 10, gross.
- 5 screws, wood, round-head, brass, $2\frac{1}{2}$ -inch, No. 10, gross.
- 5 screws, wood, round-head, brass, 1-inch, No. 12, gross.
- 5 screws, wood, round-head, brass, $1\frac{1}{2}$ -inch, No. 12, gross.
- 5 screws, wood, round-head, brass, 2-inch, No. 12, gross.
- 5 screws, wood, round-head, brass, $2\frac{1}{2}$ -inch, No. 12, gross.
- 5 screws, wood, round-head, brass, $2\frac{3}{4}$ -inch, No. 12, gross.
- 5 screws, wood, round-head, brass, 3-inch, No. 12, gross.
- 5 screws, wood, round-head, brass, 1-inch, No. 14, gross.
- 5 screws, wood, round-head, brass, $1\frac{1}{2}$ -inch, No. 14, gross.
- 5 screws, wood, round-head, brass, 2-inch, No. 14, gross.
- 5 screws, wood, round-head, brass, 3-inch, No. 14, gross.
- 60 shellac, orange, gallons (in quart cans).
- 25 soap, castile, pounds.
- 200 solder, string, pounds.
- 200 solder, half and half, bars.
- 36 sponges, large.
- 4 steel welding, vanadium steel, rods.
- 36 switches, electric, single-pole, double-throw.
- 10 tacks, brass, flat head, $\frac{1}{2}$ -inch, pounds.
- 10 tacks, copper, flat head, $\frac{1}{2}$ -inch, pounds.
- 10 tacks, copper, flat head, $\frac{3}{8}$ -inch, pounds.
- 10 tacks, copper, flat head, $\frac{3}{4}$ -inch, pounds.
- 10 tacks, double pointed, boxes.
- 5 tacks, shoe, $\frac{1}{2}$ -ounce, boxes.
- 1,500 tape, friction, rolls, "Autocrat" or equal.
- 100 tape, Okonite, rolls.
- 4 thread, silk linen, Intrinsic, No. 12, spools.
- 100 tin, IX, sheets.
- 50 tubing, copper, outside dimensions, $\frac{1}{4}$ -inch, feet.
- 50 tubing, copper, outside dimensions, $\frac{1}{8}$ -inch, feet.
- 20 turpentine, gallons, in 5-gallon cans.
- 50 twine, fishing, balls.
- 10 varnish, Valspar, gallons.
- 10,000 washers, lock, $\frac{3}{16}$ by $\frac{3}{32}$ by $\frac{1}{16}$ inch.
- 5,000 washers, lock, $\frac{1}{4}$ by $\frac{5}{64}$ by $\frac{1}{16}$ inch.
- 5,000 washers, lock, $\frac{1}{8}$ by $\frac{1}{8}$ by $\frac{1}{16}$ inch.
- 5,000 washers, lock, $\frac{3}{8}$ by $\frac{1}{4}$ by $\frac{3}{16}$ inch.
- 5,000 washers, lock, $\frac{1}{8}$ by $\frac{11}{32}$ by $\frac{5}{32}$ inch.
- 2,000 washers, lock, $\frac{5}{8}$ by $\frac{13}{32}$ by $\frac{3}{32}$ inch.
- 2,000 washers, lock, $\frac{3}{8}$ by $\frac{1}{8}$ by $\frac{3}{32}$ inch.
- 2,000 washers, lock, $\frac{1}{16}$ by $\frac{11}{64}$ by $\frac{1}{8}$ inch.
- 2,000 washers, lock, $\frac{1}{2}$ by $\frac{11}{32}$ by $\frac{1}{8}$ inch.
- 2,000 washers, wrought, for $\frac{3}{8}$ -inch bolt.
- 2,000 washers, wrought, for $\frac{1}{16}$ -inch bolt.
- 2,000 washers, wrought, for $\frac{1}{2}$ -inch bolt.
- 2,000 washers, wrought, for $\frac{5}{8}$ -inch bolt.
- 1 water, distilled, gallon.
- 50 wax, paraffin, pounds.
- 35 white-lead, pounds (in 1-pound cans).
- 1,000 wire, aviator, plated, No. .100, feet.
- 1,000 wire, aviator, plated, No. .065, feet.
- 1,000 wire, aviator, plated, No. .080, feet.
- 1,000 wire, aviator, plated, No. .130, feet.
- 100 wire, brass, soft, No. 18, pounds.
- 100 wire, copper, soft, No. 22, pounds (in spools).

BASE EQUIPMENT FOR TRAINING STATIONS.

EQUIPMENT FOR MACHINE SHOPS AT TRAINING STATIONS.

MACHINERY AND TOOLS.

- 2 anvil, Hay-Buddon, 300-pounds, with 2-toe hardies, 2 regular hardies, and 2 straight hardies.
- 2 arbors, No. 125 $\frac{1}{2}$, each Nos. 4, 5, and 6.
- 1 arbor, cutting, screw-slotting, $\frac{7}{8}$ -inch, No. 5, taper, adapted for use between centers.
- 2 axes, medium weight, Jack Frost.
- 2 bar, boring, No. 10.
- 8 bevels, Universal, No. 498, each 1 $\frac{1}{2}$ and 3 inch.
- 2 bits, expansive, Clark, each of No. 1 and No. 2.
- 4 bits, screwdriver, No. 4, each 4 and 6 inch.
- 2 bits, wood, set of, in case.
- 72 blades, hack-saw, AAA, for tubing, 18-inch blades, each of No. 425 and No. 530.
- 72 blades, hack-saw, AAA, for iron and soft steel, 18-inch blades, each of No. 440 and No. 445.
- 18 blades, hack-saw, 9-inch, No. 102.
- 18 blades, hack-saw, 9-inch, No. 103.
- 18 blades, hack-saw, 9-inch, No. 103 $\frac{1}{2}$.
- 4 blocks and clamps, steel drill, No. 271-C.
- 4 blocks and clamps, V, No. 750.
- 4 bores, counter, taper shank, each as follows:
 - $\frac{1}{8}$ -inch pilot, $\frac{1}{4}$ -inch, $\frac{7}{8}$ -inch.
 - $\frac{1}{4}$ -inch pilot, $\frac{1}{8}$ -inch, $\frac{3}{8}$ -inch, $\frac{7}{8}$ -inch, $\frac{1}{2}$ -inch.
 - $\frac{1}{2}$ -inch pilot, $\frac{3}{8}$ -inch, $\frac{7}{8}$ -inch, $\frac{1}{2}$ -inch.
 - $\frac{3}{8}$ -inch pilot, $\frac{1}{8}$ -inch, $\frac{1}{2}$ -inch, $\frac{9}{16}$ inch, $\frac{5}{8}$ -inch, $\frac{3}{4}$ -inch, $\frac{7}{8}$ -inch, 1-inch.
- 1 box, miter, No. 460.
- 2 braces, bit, 10-inch, No. 811.
- 1 brazer, gasoline, complete, Giant, No. 48.
- 8 brushes, bench, No. 9.
- 8 brushes, file, with card and scorer.
- 4 brushes, glue, No. 2.
- 8 brushes, paint, flat; each of the following: $\frac{1}{2}$, $\frac{3}{4}$, 1, 1 $\frac{1}{2}$, 2 inch.
- 8 brushes, paint, flat; each of the following: $\frac{1}{2}$, $\frac{3}{4}$, 1, 1 $\frac{1}{2}$, 2 inch.
- 4 brushes, scratch, circular, wheel, No. 602.
- 8 brushes, scratch, curved handle, No. 448.
- 2 cabinet, lathe tool, steel, Nos. 2-3.
- 8 calipers, hermaphrodite, 6-inch, No. 42.
- 8 calipers, inside, 3-inch, No. 802.
- 4 calipers, inside, 6-inch, No. 802.
- 2 calipers, inside, transfer, firm joint, 10-inch, No. 827.
- 2 calipers, outside, transfer, firm joint, 10-inch, No. 827.
- 2 calipers, micrometer, with ratchet stop and case, No. 221.

- 8 calipers, micrometer, with ratchet stop and case, English, No. 8.
- 1 caliper, micrometer, with ratchet stop and case, Metric, No. 8.
- 1 caliper, micrometer, in case, direct reading, English, No. 25.
- 8 calipers, pocket slide, 3-inch, No. 425.
- 1,000 checks, wire, brass.
- 2 chisels, cold, $1\frac{1}{2}$ -inch, No. 1290.
- 2 chisels, hot, $1\frac{1}{2}$ -inch, No. 1300.
- 4 chisels, cold, each of the following: $\frac{1}{4}$, $\frac{3}{8}$, $\frac{1}{2}$, $\frac{3}{4}$ inch.
- 2 chisels, wood, set of, $\frac{1}{4}$ to $1\frac{1}{4}$ inch, in case.
- 2 chuck, drill, 0 to $\frac{1}{2}$ inch, Jacobs's, fitted to drill by manufacturer.
- 4 clamps, C, heavy design, each of 10, 12, 14.
- 8 clamps, C, light design, No. 4.
- 8 clamps, toolmaker's, $1\frac{1}{2}$ -inch, No. 754.
- 4 clamps, C, malleable iron, each of 3, 4, 5, 6, 8 inch.
- 2 clippers, bolt, Porter's New Easy, No. 3.
- 8 combination sets, 12-inch blade, No. 7 graduation, with hardened head, No. 438.
- 1 compressor, air, motor driven, motor to be 110 volts, direct current, size 3-X, class R, with air receivers. 16 by 60 inches, and necessary fittings for same.
- 4 coppers, soldering, $\frac{1}{2}$ -pound, with handles.
- 1 countersink, blacksmith's, No. 1180-A.
- 4 counters, speed, No. 21, with set of extra tips.
- 12 crucibles, bottom pour, with covers, No. 50.
- 12 crucibles, file, with covers, No. 60.
- 2 cutter, angular, J-10, 45° , high-speed steel, right hand.
- 2 cutter, angular, J-10, 45° , high-speed steel, left hand.
- 2 cutter, angular, J-10, 50° , high-speed steel, right hand.
- 2 cutter, angular, J-10, 50° , high-speed steel, left hand.
- 2 cutter, angular, J-10, 60° , high-speed steel, right hand.
- 2 cutter, angular, J-10, 60° , high-speed steel, left hand.
- 2 cutter, angular, J-10, 70° , high-speed steel, right hand.
- 2 cutter, angular, J-10, 70° , high-speed steel, left hand.
- 2 cutter, angular, J-10, 80° , high-speed steel, right hand.
- 2 cutter, angular, J-10, 80° , high-speed steel, left hand.
- 2 cutter, double angles, J-102, high-speed steel, each of 45, 60, and 90.
- 1 cutter, keyway, Woodruff, each of No. 5, No. 11, No. 15.
- 2 cutter, pipe, with 6 extra cutters and 12 extra wheel pins, Barnes, No. 2.
- 4 cutters, side milling, each of the following:
 - $\frac{1}{4}$ by $2\frac{1}{4}$ inches, S-21, high-speed steel, $\frac{7}{8}$ -inch hole.
 - $\frac{1}{2}$ by $2\frac{1}{4}$ inches, S-23, high-speed steel, $\frac{7}{8}$ -inch hole.
 - $\frac{1}{2}$ by $2\frac{1}{4}$ inches, S-25, high-speed steel, $\frac{7}{8}$ -inch hole.
- 1 cutter, T slot, high-speed steel, No. 7, with No. 5 taper, right hand.
- 8 dividers, 3-inch, No. 805.
- 4 dogs, lathe, drop forged, No. 11.
- 2 dressers, Huntington, with 4 extra cutters.
- 12 drill and countersink, combined, No. 109-B, each sizes 1 to 5, inclusive.
- 2 drill case, sectional, No. 4, with sections A, B, C.
- 4 drill drifts, automatic, No. 2-A.
- 1 drilling machine, 4-foot, motor driven, full universal radial, with universal table extra; motor to be 110 volts, direct current, compound wound, with starting switch and rheostat, same to be fitted to drill by manufacturer.
- 8 drills, automatic, No. 42.
- 1 drill, breast, hand, type E, 110 volts, direct-current.
- 2 drills, floor, electric, equipped with taper socket, type XP, for 110 volts, direct-current.

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- 2 drill sets, and revolving stand, taper shank, style 102, from $\frac{3}{8}$ to 1 inch, by sixty-fourths.
- 2 drill sets, and revolving stand, straight shank, style 106, 15-B, folding holder, A to Z.
- 2 drill sets, and revolving stand, straight shank on folding holder, style 107, 8-B, 1 to 60.
- 2 drill sets, same as above, in index cases.
- 2 drill sets, and revolving stand, straight-shank, without holder, No. 106, 15-B, A to Z.
- 4 drills, style, 107-8-B, sets of, 1 to 25, inclusive.
- 6 drills, style 107-8-B, sets of 26 to 60, inclusive.
- 1 drill, style 102, sets of, from $1\frac{1}{8}$ to $2\frac{1}{2}$ inches, inclusive, by sixteenths.
- 8 drills, hand, ratchet, with chain attachment, No. 555.
- 8 drills, hand, ratchet, No. 1530.
- 1 driver, bolt, No. 4-D.
- 8 extractors, cotter-pin, nickel-finish.
- 2 figures, set, $\frac{3}{8}$ -inch, Standwell.
- 24 files, hand, 8-inch, XF, No. 0.
- 24 files, pillar, 8-inch, XF, No. 2.
- 24 files, pillar, 8-inch, safe edges, XF, No. 2.
- 24 files, pillar, 8-inch, narrow, XF, No. 4.
- 24 files, pillar, 8-inch, narrow safe edges, XF, No. 4.
- 24 files, pillar, 8-inch, half-round, XF, No. 0.
- 24 files, 6-inch, XF, No. 00.
- 24 files, 6-inch, XF, No. 0.
- 24 files, 6-inch, XF, No. 1.
- 24 files, 6-inch, XF, No. 3.
- 2 files, escapement, $5\frac{1}{2}$ -inch, set of 12, XF.
- 2 files, die sinkers, $3\frac{1}{2}$ -inch, sets of 12, XF.
- 2 files and holder, stub, set of, with extra set of files.
- 12 files, cut, increment, 10-inch; each of the following: Hand coarse, hand bastard, hand second-cut, hand smooth, hand head smooth, mill double blunt bastard, mill blunt double cut second-cut, mill blunt double cut smooth, mill blunt double cut safe edges, three square bastard, three square double cut, three square smooth, pillar smooth, pillar smooth safe edges, half-round coarse, half-round bastard, half-round second-cut, half-round smooth, half-round dead smooth, half-round lead float, square bastard, square second-cut, square smooth, square blunt bastard, round bastard, round second-cut, round smooth, round blunt bastard.
- 6 flashlights, Penllite, No. 3500.
- 12 batteries, extra, for the above, Radio No. 1008.
- 1 flatter, blacksmith's, square, No. 1230, each of 1 to 4 inches by fourths.
- 1 forge, portable, with motor, for 110-volt, direct-current, Buffalo, No. 650-E.
- 8 frames, hack-saw, No. 145.
- 1 furnace, combination, for use with oil, Frankfort, No. 5-A.
- 8 gauges, center, tempered, No. 650.
- 8 gauges, depth, English, No. 615.
- 2 gauges, screw, English, No. 630.
- 2 gauges, screw, metric, No. 636.
- 4 gauges, screw-thread, Standard, No. 724.
- 2 gauges, surface, 9-inch, Universal, No. 3622.
- 1 gauge, taper, complete with attachments, Hartford.
- 2 gauges, thickness, No. 72-M.
- 2 gauges, thickness, English, No. 640.
- 2 gauges, thickness, Metric, No. 641.
- 1 gauge, music-wire, No. 195.

- 1 grinding machine, tool, Universal, B. & S. No. 13, motor drive; motor to be 110 volts, direct current, compound wound, with starting switch and rheostat, same to be fitted to grinder by the manufacturer. Grinder to have the following attachments fitted by the manufacturer:
 - 1 internal grinding attachment.
 - 1 surface grinding attachment.
 - 1 radial grinding attachment.
 - 1 tool cupboard complete with tools.
- 1 grinder and cutter, chisel, Stanley, No. 200.
- 2 grinder, pedestal, 1-horsepower, 110 volts, direct-current, type M.
- 2 grinder, tool post, $\frac{1}{2}$ -horsepower, 110 volts, direct-current, type 3-ASD (with 6 extra fuses).
- 1 hack-saw machine, power, with motor for 110 volts, direct-current, compound wound, with starting switch and rheostat, same to be fitted to machine by manufacturer, Kwik-kut, No. 7.
- 4 hammers, brass, solid, 2-pound, with handles.
- 2 hammers, carpenter, $1\frac{1}{2}$ -pound, Maydole.
- 4 hammers, copper, solid, 2-pound, with handles.
- 4 hammers, farrier's, turning, No. 480.
- 1 hammers, blacksmith's, hand, No. 403.
- 4 hammers, machinist's ball-pien, $1\frac{1}{4}$ -pound, Maydole.
- 4 hammers, machinist's, ball-pien, 1-pound, Maydole.
- 4 hammers, machinist's, ball-pien, $\frac{3}{4}$ -pound, Maydole.
- 4 hammers, machinist's, ball-pien, $\frac{1}{2}$ -pound, Maydole.
- 4 hammers, machinist's, ball-pien, $\frac{1}{4}$ -pound, Maydole.
- 4 hammers, machinist's, cross-pien, 1-pound, Maydole.
- 4 hammers, machinist's, cross-pien, $\frac{1}{2}$ -pound, Maydole.
- 4 hammers, machinist's, straight-pien, 1-pound, Maydole.
- 4 hammers, machinist's, plain riveting, 1-pound, Maydole.
- 1 hammer, power, 50-pound, Little Giant, with motor drive; motor to be for 110 volts, direct current, compound wound, with starting switch and rheostats, same to be fitted to machine by the manufacturer.
- 1 hammer, striking, short pattern, 8-pound, No. 760.
- 48 handles, file, with spun farrel handle, assorted.
- 48 handles, hammer, to fit above enumerated sizes of Maydole hammers, in the amounts stated for each size.
- 4 hatchets, claw, bell face, $1\frac{1}{2}$ -pound, Maydole.
- 2 holders, file, surface, No. 4.
- 2 holders, file, surface, No. 5.
- 2 hydrometers, battery, syringe, No. 2.
- 6 hydrometers, gasoline, No. 2.
- 1 indicator, dial test, English, No. 730.
- 1 jig, dowling, No. 60.
- 2 knives, drawing, with folding handle, 9-inch, No. 10.
- 1 ladle, hand, and shank, "A."
- 1 ladle, wrought, No. 1494-A.
- 1 lathe, bench, rivet, motor-driven, $8\frac{1}{2}$ -inch swing, 22 inches between centers, with cabinet and full set of attachments, including set of forge-turning tools. Motor to be 110 volts, direct current, compound wound, with starting switch and rheostat; same to be fitted to the lathe by the manufacturer (to be used in tool room).
- 3 lathe, engine, quick-change geared, 12 inches by 6 feet, equipped for motor drive. Motor to be for 110 volts direct current, compound wound, with starting switch and rheostat. Each lathe to have the following attachments fitted to the lathe by the manufacturer:
 - 1 center, crotch.
 - 1 center, cup.
 - 1 center, female.

- 3 lathe, engine, etc.—Continued.
- 1 center, half.
 - 4 centers, point.
 - 1 center, spur.
 - 1 center, square.
 - 1 chuck, combination scroll, spur gear, $10\frac{1}{2}$ inch, 4-jaw, Westcott.
 - 1 chuck, same as above, except to be 3-jaw.
 - 1 chuck, drill, 0 to $\frac{3}{4}$ inch, Jacobs.
 - 1 chuck, screw.
 - 1 pad, drill.
 - 1 plate, face, large.
 - 1 plate, face, small.
 - 1 rest, follow.
 - 1 rest, steady.
 - 1 taper attachment.
 - 1 tools, turning, complete set of, hand forged (at least 20 in set).
 - 1 tool post, European.
- 1 lathe, engine, quick-change geared, 20 inches by 14 feet, equipped for motor drive. Motor to be 110 volts, direct current, compound wound, starting switch and rheostat; same to be fitted to lathe by the manufacturer of the lathe. Lathe to have the following attachments fitted to same by the manufacturer:
- 1 center, crotch.
 - 1 center, cup.
 - 1 center, female.
 - 1 center, half.
 - 4 centers, point.
 - 1 center, spur.
 - 1 center, square point.
 - 1 chuck, combination scroll, spur gear. $18\frac{1}{2}$ -inch, 4-jaw, Westcott.
- 2 letters, set of, $\frac{5}{8}$ -inch, Standwell.
- 8 levels, cross test, No. 134.
- 1 level, machinist, Eclipse, No. 34-V4.
- 8 levels, iron, No. 130.
- 4 mallets, rawhide, No. 4.
- 1 mandrels, expanding, each from 1 to 8, inclusive, Champion.
- 1 mandrels, hardened and ground steel, No. 123, from $\frac{1}{4}$ to 3 inch, by sixteenths.
- 1 micrometer, set, in case with standards and ratchet stops, English, No. 135.
- 2 micrometer, inside, with case and handle, No. 124-B.
- 1 milling machine, Universal, No. 3, motor driven, with regular equipment and fitted with motor for 110 volts, direct current, compound wound, with starting switch and rheostat fitted to machine by the manufacturer, and with the following extra attachments:
- 1 arbor, cutter, No. 08, style A, p. 159, Brown & Sharpe, 10-A.
 - 1 arbor, cutter, No. 15, B. & S.
 - 1 arbor, cutter, No. 18, B. & S.
 - 1 chuck spring, No. 156, with one each of the following collets—
 - Round, $\frac{3}{8}$ to $\frac{1}{2}$ inch, by thirty-seconds.
 - $\frac{1}{8}$ to 1 inch, by sixteenths.
 - Square, $\frac{1}{4}$, $\frac{3}{8}$, $\frac{1}{2}$, $\frac{3}{4}$, 1 (p. 156, Brown & Sharpe, No. 10-A).
 - 1 collet, G, style 1 (Brown & Sharpe catalogue, p. 157, No. 10-A).
 - 1 cupboard, with lock and key.
 - 1 cutters, T slot, high-speed steel, each of the following—
 - No. 9, B. & S. taper, 1 inch diameter, $\frac{1}{4}$ inch thick.
 - No. 5, B. & S. taper, $\frac{3}{4}$ inch diameter, $\frac{3}{4}$ inch thick.

- 1 milling machine, Universal, No. 3, etc.—Continued.
- 1 cutters, milling, high-speed steel; each of the following: B. & S. M55, M88, M92, M96, M95, M94, M97.
 - 1 milling attachment, Universal No. 2 (p. 126, B. & S. catalogue 10-A).
 - 1 milling and dividing attachment, circular (p. 142, B. & S. catalogue 10-A).
 - 1 pump, oil, and tank.
 - 1 scale and verneir (p. 140, B. & S. catalogue 10-A).
 - 1 slotting attachment, No. 2 (p. 130, B. & S. catalogue 10-A).
 - 1 tools, set of, as shown on page 163, B. & S., catalogue 10-A, except that cutter, etc., to be for high-speed steel.
- NOTE.—Should purchase be made from any firm or jobber other than Brown & Sharpe, state that attachments, etc., required are to be similar or equal to B. & S. specifications.
- 1 mills, end, both right and left hand, high-speed steel, each of E-105, E-101, E-108, E-112, E-117, E-125.
 - 4 nail, sets (5 in set), No. 762.
 - 12 oilers, bent spout, No. 309.
 - 12 oilers, straight spout, No. 309.
 - 2 oilstones, hard, Arkansas, 2 by 1 by 6 inch.
 - 2 parallels, planer, set of, figure 6066, grade A.
 - 1 plane, block, No. 15.
 - 1 plane, fore, No. 29.
 - 1 plane, jack, No. 27½.
 - 1 plane, rabbet, No. 190.
 - 1 plane, side rabbet, No. 98-99.
 - 1 plane, circular, Stanley, No. 113.
 - 1 plane, complete, with cutters, Stanley, No. 55.
 - 1 plane, core box, No. 56.
 - 1 plane, smooth, Bailey, No. 35.
 - 4 pliers, duck-bill, 5-inch, No. 318-N.
 - 4 pliers, long-nose, oval, plain, 5-inch, No. 319-N.
 - 4 pliers, long-nose, curved, 6-inch, No. 1319-C.
 - 4 pliers, needle, 5½-inch, No. 319-B.
 - 4 pliers, oblique cutting, Swedish, 4½-inch, No. 3167-C.
 - 4 pliers, oblique cutting, Swedish, 5½-inch, No. 3167-A.
 - 4 pliers, round, 5-inch, No. 1810-A.
 - 4 pliers, side cutting, 6-inch, No. 312-A.
 - 4 pliers, side-cutting, 8-inch, No. 312-A.
 - 4 pliers, side-cutting, 5½ and 8 inch, Bernards.
 - 4 pliers, combination, 6 and 8 inch, Billings & Spencer.
 - 2 pots, fire, canner's, C. & L., No. 17.
 - 4 pots, glue, No. 2.
 - 1 press, arbor, Greenard, No. 7.
 - 1 press, arbor, Greenard, No. 3 (on stand).
 - 2 press, bench, straightening, No. 2.
 - 1 protractors, Improved Universal, with acute angle attachment, 6 and 12 inch blades, in Morocco case, No. 496.
 - 8 punches, center, No. 118.
 - 8 punches, center, sets of (6 in set), No. 765.
 - 2 punches, center, automatic, No. 771.
 - 2 punches, centering, double.
 - 1 punch, machine, Badger's No. 8, with 3 punches; each of the following sizes: $\frac{5}{16}$, $\frac{1}{4}$, $\frac{3}{8}$, $\frac{1}{2}$ inch; 2 each of the following: $\frac{1}{8}$, $\frac{1}{4}$, $\frac{3}{8}$, $\frac{1}{2}$ inch.
 - 1 punches, round, blacksmith's No. 1270; each of the following: $\frac{1}{4}$, $\frac{5}{16}$, $\frac{3}{8}$, $\frac{7}{16}$, $\frac{1}{2}$, $\frac{5}{8}$, $\frac{3}{4}$, $\frac{7}{8}$, and 1 inch.
 - 1 punches, square, blacksmith's, No. 1260; each of the following: $\frac{1}{4}$, $\frac{5}{16}$, $\frac{3}{8}$, $\frac{7}{16}$, $\frac{1}{2}$, $\frac{5}{8}$, $\frac{3}{4}$, $\frac{7}{8}$, and 1 inch.

- 2 punch, revolving, spring, 6 tubes for leather.
- 2 reamers, pipe, $\frac{3}{8}$, $\frac{1}{2}$, $\frac{3}{4}$, $\frac{1}{2}$, $\frac{3}{4}$, 1 inch.
- 1 reamers, expansion, No. 120-G, from $\frac{1}{4}$ to 1 inch, by thirty-seconds.
- 1 reamers, expansion, No. 120-G, from $1\frac{1}{4}$ to $2\frac{1}{2}$ inch, by fourths.
- 2 reamers, taper pin, 0 to 10, in case.
- 1 reamers, taper shank, No. 115-D, spiral flute, $\frac{1}{4}$ to 1 inch, by thirty-seconds.
- 1 reamers, spiral shell, No. 117 $\frac{1}{2}$, 1-1/16 to $2\frac{1}{2}$ inch, by sixteenths.
- 1 reamers, jobbers, 115-, from $\frac{1}{4}$ to $2\frac{1}{2}$ inch, by thirty-seconds.
- 8 rules, steel, 6-inch, No. 300.
- 2 rules, boxwood, full bound, 1 inch by 2 foot, 64-C, square joint.
- 2 rules, boxwood, half bound, 2-foot, No. 84.
- 4 rules, flexible steel, 30 centimeters, $\frac{1}{2}$ millimeters and sixty-fourths, No. 308.
- 4 rules, narrow, steel, 6-inch, No. 11, graduation, No. 303.
- 4 rules, steel, 6-inch, No. 300.
- 2 rules, steel, set of, with holders, English, No. 335.
- 8 rules, key seat, English, No. 374.
- 2 saw, compass, 10-inch, No. 9.
- 4 saws, metal slitting, each of the following sizes:
- $\frac{3}{8}$ by $2\frac{1}{2}$ inch, G-50, high-speed steel, $\frac{1}{4}$ -inch hole.
 - $\frac{3}{4}$ by $2\frac{1}{2}$ inch, G-51, high-speed steel, $\frac{1}{4}$ -inch hole.
 - $\frac{1}{8}$ by $2\frac{1}{2}$ inch, G-52, high-speed steel, $\frac{1}{4}$ -inch hole.
 - $\frac{3}{2}$ by $2\frac{1}{2}$ inch, G-53, high-speed steel, $\frac{1}{4}$ -inch hole.
 - $\frac{3}{2}$ by $2\frac{1}{2}$ inch, G-55, high-speed steel, $\frac{1}{4}$ -inch hole.
- 2 saw, panel, 26-inch, 9-point, Disston.
- 2 saw, rip, 26-inch, Disston.
- 4 screw, jack, complete, Little Giant, No. 190.
- 4 screw drivers, bent end, each Nos. 2100, 2101, 2104, 2105.
- 4 screw drivers, Champion, each 32, 4, 6, 8, 10, 12 inch.
- 2 screw drivers, jeweler's, set of, No. 555.
- 8 screw drivers, spiral ratchet, with three bits each, No. 30.
- 8 scribers, style 3, No. 778.
- 1 shaper, 24-inch, back-gearred, crank, motor drive. Motor to be for 110 volts, direct current, compound wound, with starting switch and rheostat fitted to machine by manufacturer. Shaper to be equipped with power feed to head, with automatic stops. To be furnished with Universal table and set of hand-forged shaper tools as extra.
- 1 shave, spoke, iron, Bailey, No. 53.
- 1 shears, Badger, No. 3.
- 4 shears (or snips), Samson, No. 50.
- 1 sledge, blacksmith's, 8-round, No. 820.
- 1 sleeve, steel, Morse, No. 100-B, each of the following: No. 1 to 2; No. 3 to 4; No. 2 to 4; No. 1 to 3; No. 2 to 3.
- 2 socket, steel, Morse, No. 100-A, each of the following: No. 3 to 4; No. 1 to 4; No. 2 to 4.
- 8 square, combination, attachments for, No. 829.
- 4 square, double steel, No. 14-C.
- 2 square, steel, blued, 2-foot, No. 14-B.
- 2 square, try, 3-inch, cast steel, hardened, No. 540.
- 2 square, try, 6-inch, cast steel, hardened, No. 540.
- 2 square, steel, beveled edges, hardened, No. 542.
- 2 steel, special hardening (self-hardening) 3-foot bars of each of the following:
- Square, $\frac{1}{4}$, $\frac{1}{8}$, $\frac{3}{8}$, $\frac{1}{8}$, $\frac{1}{2}$ inch.
 - Flat, $\frac{1}{4}$ by $\frac{3}{8}$ inch, $\frac{1}{8}$ by $\frac{1}{8}$ inch, $\frac{3}{8}$ by $\frac{1}{2}$ inch, $\frac{1}{8}$ by $\frac{1}{8}$ inch, $\frac{1}{2}$ by $1\frac{1}{8}$ inch.
- All sizes of special bevel.

- 2 stocks and dies, adjustable pipe, with guides, each of the following sizes: $\frac{1}{8}$, $\frac{1}{4}$, $\frac{3}{8}$, $\frac{1}{2}$, $\frac{3}{4}$, 1 inch.
- 2 stones, carborundum, sharpening, medium, 2 by 1 by 8 inch.
- 2 straightedge, hardened steel, 39-inch, No. 527.
- 1 swedges, No. 1190, each of the following: $\frac{1}{4}$, $\frac{1}{8}$, $\frac{3}{8}$, $\frac{1}{2}$, $\frac{7}{8}$, $\frac{1}{2}$, $\frac{1}{8}$, $\frac{3}{8}$, $\frac{1}{2}$, $\frac{7}{8}$, 1, $1\frac{1}{8}$, $1\frac{1}{4}$, $1\frac{3}{8}$, $1\frac{1}{2}$ inch.
- 1 swedges, bottom, No. 1200, each of the above sizes.
- 2 tape, measuring, steel, 50-foot, No. 507.
- 1 taps and dies, in case, with adjustable tap wrench No. 0, each of the following:
- No. 2-56.
 - No. 3-48.
 - No. 4-36, 40, 48.
 - No. 5-36, 40.
 - No. 6-32, 36, 40.
 - No. 7-32.
 - No. 8-32.
 - No. 9-32.
 - No. 10-24, 30, 32.
 - No. 12-24, 32.
 - No. 14-20, 24.
 - No. 15-20, 24.
 - No. 16-18, 20.
 - No. 18-18, 20.
 - No. $\frac{1}{4}$ -inch, 56.
 - No. $\frac{1}{8}$ -inch, 40.
 - No. $\frac{3}{8}$ -inch, 40.
 - No. $\frac{1}{4}$ -inch, 32.
 - No. $\frac{1}{8}$ -inch, 24, 32.
 - No. $\frac{3}{8}$ -inch, 24, 32.
 - No. $\frac{1}{2}$ -inch, 28.
 - No. $\frac{1}{4}$ -inch, 20, 24, 32.
 - No. $\frac{3}{8}$ -inch, 20, 24, 32.
- Bottoming taps extra for $\frac{3}{8}$ -inch, 40; $\frac{1}{2}$ -inch, 38; $\frac{3}{4}$ -inch, 32; $\frac{1}{2}$ -inch, 28; $\frac{1}{4}$ -inch, 24.
- 1 taps and dies, in case, each of the following assortment No. 7 $\frac{1}{2}$:
- $\frac{1}{8}$ -inch, 20, 24; $\frac{3}{8}$ -inch, 20, 24; $\frac{1}{2}$ -inch, 18, 20, 24; $\frac{3}{4}$ -inch, 20, 24; $\frac{1}{2}$ -inch, 20.
- One each of the above bottoming taps extra; also die, tap, and bottoming tap for left-hand thread $\frac{1}{8}$ -inch, 20, 24.
- 1 taps and dies, screw-plate set No. 5 $\frac{1}{2}$, with bottoming taps extra, 8 time savers, No. 185.
- 1 tongs, blacksmith's, 18-inch; each of the following: No. 10, 11-A, 11-D, 12-A, 12-D, 12-F, 12-H, 13, 14, 15, 16, 17, 18.
- 1 tool, boring, No. 3-B.
- 2 tool, grinding, diamond (about No. 10 size).
- 1 tools, heading, No. 1280, each of the following: $\frac{1}{4}$ -inch, $\frac{1}{8}$ -inch, $\frac{3}{8}$ -inch, $\frac{1}{2}$ -inch, $\frac{3}{8}$ -inch, $\frac{1}{2}$ -inch, $\frac{3}{8}$ -inch, $\frac{1}{2}$ -inch, $\frac{3}{8}$ -inch, 1-inch.
- 2 tools, knurling, with extra set of knurls, revolving head, $\frac{1}{2}$ inch by $1\frac{1}{8}$ inches.
- 2 tool set, for Armstrong lathe (10 tools), with high-speed cutters, with extra cutter for U. S. standard thread, No. 50 holder (set to include the V-thread cutter and tool holder, $\frac{1}{2}$ inch by $1\frac{1}{8}$ inches).
- 1 tool, thread-cutting, rivet dock, figure 6387. Tool to be equipped with V thread-cutting tool, 8 pitch and 1 each extra cutters for 18, 20, 24, 32, U. S. standard thread.
- 4 torches, gasoline, Clayton & Lambert, No. 32.
- 4 tweezers, 5-inch.

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Vise equipment:

- 8 vise, ironworkers, No. 194.
 - 2 vise, ironworkers, No. 23 .
 - 2 vise, ironworkers, No. 26.
 - 4 vise, table clamp, No. 802.
 - 2 vise, cabinetmaker's, No. 613.
 - 2 vises, with column and tool table, No. 100.
 - 2 vise, pipe, No. 288.
 - 8 caps, brass finished, for vise jaws of vise No. 194.
 - 2 caps, brass finished, for vise jaws of vise No. 23.
 - 4 vise, quick action, No. 2-V.
 - 4 vise, toolmaker's, No. 752.
 - 2 vise, toolmaker's, Universal, No. 3-T.
- 2 welding equipment No. 1, consisting of the following:
- 1 blowpipe, welding, style H, with interchangeable tips Nos. 1 to 7, inclusive.
 - 1 regulator, acetylene, automatic, constant pressure, fitted with inlet and outlet pressure gauges.
 - 1 regulator, oxygen, automatic, constant pressure, fitted with inlet and outlet pressure gauges.
 - 2 hose, each 12½ feet long, rubber.
 - 1 clamps, hose, set of.
 - 1 wrench, box end, for needle on Prestolite dissolved acetylene cylinder valve.
 - 1 wrench, stuffing nut, for valve on Prestolite dissolved acetylene cylinder and attaching acetylene regulator.
 - 1 wrench, for attaching oxygen regulator.
 - 1 wrench, box end, for blowpipe.
 - 1 wrench, box, for welding tips.
 - 1 goggles, special colored.
 - 1 manual, welding.

Welding equipment, accessories for:

- 4 cylinders, WK Prestolite dissolved acetylene.
 - 4 tanks, oxygen, large size.
 - 2 truck, steel, style WK, for mounting cylinders of acetylene and oxygen.
- 2 cutting equipment, consisting of the following:
- 1 type K blowpipe.
 - 3 tips and guide wheel.
 - 1 high-pressure oxygen regulator.
 - 1 high-pressure acetylene regulator.
 - 2 hose, rubber, lengths of 25 feet each.
 - 4 hose clamps.
 - 1 pair of goggles.

Wrenches, assortment of.

Welding equipment, miscellaneous:

- 50 welding rod for cast iron, ¼-inch, pounds.
- 50 Norway iron-welding wire, ½-inch, pounds.
- 50 special nickel-steel rod, ¼-inch, pounds.
- 50 vanadium-steel rods, ¼-inch, pounds.
- 50 mild-steel wire, ¼-inch, pounds.
- 50 Tobin bronze welding rod, ¼-inch, pounds.
- 50 aluminum drawn-wire rod, ¼-inch, pounds.
- 50 aluminum cast alloy rod, ¼-inch.
- 4 flux, cast iron, 2-pound tins.
- 4 flux, Tobin bronze, 2-pound tins.
- 8 flux, aluminum, ¼-pound tins.
- 2 pipes, blow, carbon-burning.

- 2 wheels, grinding, each of the following:
- 8 by $\frac{1}{2}$ by $\frac{5}{8}$ inch hole, style A, grade 40-M and 40-K, 60-M and 60-K.
 - 8 by $\frac{1}{2}$ by $\frac{5}{8}$ inch hole, style B, grade 40-M and 40-K, 60-M and 60-K.
 - 8 by $\frac{1}{2}$ by $\frac{5}{8}$ inch hole, style C, grade 40-M and 40-K, 60-M and 60-K.
 - 8 by $\frac{1}{2}$ by $\frac{5}{8}$ inch hole, style D, grade 40-M and 40-K, 60-M and 60-K.
 - 8 by $\frac{1}{2}$ by $\frac{5}{8}$ inch hole, style H, grade 40-M and 40-K, 60-M and 60-K.
 - 2 by $\frac{1}{2}$ by $\frac{1}{2}$ inch hole, style A, grade 40-M and 40-K, 60-M and 60-K.
 - 2 by $\frac{1}{2}$ by $\frac{1}{2}$ inch hole, style C, grade 40-M and 60-K, 60-M and 60-K.
 - 2 by $\frac{1}{2}$ by $\frac{1}{2}$ inch hole, style D, grade 40-M and 40-K, 60-M and 60-K.
 - 2 by $\frac{1}{2}$ by $\frac{1}{2}$ inch hole, style H, grade 40-M and 40-K, 60-M and 60-K.
 - 8 by $\frac{3}{4}$ by $\frac{5}{8}$ inch hole, style A, grade 20-O, 30-P, 36-Q, 40-M, and 60-M.
- 4 wheels, polishing, loose canvas, 8-inch, No. 434-A, 1-inch.
- 2 winder, spring, with 12 assorted pitch hooks, Champion.
- 1 woodworker, No. 51, Universal, motor drive. Motor to be 110 volts, direct current, compound wound, with starting switch and rheostat; same to be fitted to machine by manufacturer, and the following extra equipment and accessories:
- 1 each saw blades, $\frac{3}{8}$ to 1 inch.
 - 1 ripping fence.
 - 1 band-saw guard.
 - 1 resaw gauge.
 - 1 set of extra knives for joiner.
 - 1 round safety head.
 - 1 steel lips.
 - 1 set extra knives for shaper.
 - 1 tenoner.
 - 1 panel razer, one side.
 - 1 panel razer, two sides.
 - 1 extra saw for saw table.
 - 1 saw guard.
 - 1 dado head, No. 4.
 - 1 groover head, complete, No. 33.
 - 1 knife grinder, for borer.
 - 1 disk grinder, for borer.
 - 1 plain emery wheel, for borer.
 - 1 hollow chisel mortiser, complete with chisels and bits.
- 4 wrenches, adjustable, tap, T, style No. 329.
- 4 wrenches, Stillson, solid handle, 10-inch.
- 2 wrenches, monkey, Coe's, each of the following sizes: 6, 8, 10, 12, 18 inch.
- 6 wrenches, adjustable, Crescent, 6-inch.
- 6 wrenches, adjustable, Crescent, 8-inch.
- 6 wrenches, angle, $22\frac{1}{2}$ degree, offset, finished; each of the following sizes: 671-D, 671-E, 672-D, 672-E, 673-D, 673-E, 674-D, 674-E, 675-D, 675-E, 676-D.
- 6 wrenches, socket, single head, with pin handle, finished; each of the following sizes: 962-D, 964-A, 967-A, 867-D, 969-A, 962-H.
- 4 wrenches, ratchet, 443-A.

METALS AND METALLINGS.

- Aluminum, sheet, 18 gauge, 48 square feet.
- Bronze, bearing, 24 inches each, $\frac{1}{8}$, $1\frac{1}{2}$, $2\frac{1}{2}$ inches.
- Brass, sheet, spring, 1 piece each, 1 foot by 15 feet, 0.002, 0.004, 0.008, 0.012.
- Brass, soft sheets, 18 gauge, 3 sheets, 3 feet by 4 feet.
- Brass, rod, round, 12 feet each size, $\frac{1}{4}$, $\frac{3}{8}$, $\frac{1}{2}$, $\frac{5}{8}$, $\frac{3}{4}$, $\frac{7}{8}$, 1 inch.
- Brass, rod, round, 4 feet each size, $1\frac{1}{4}$, $1\frac{1}{2}$, 2 inches.
- Brass, rod, round, 3 feet each size, $2\frac{1}{2}$, 3, $3\frac{1}{2}$ inches.
- Brass, Hex, 12 feet each size, $\frac{1}{4}$, $\frac{3}{8}$, $\frac{1}{2}$, $\frac{3}{4}$, 1 inch.
- Cast iron, round, 24 inches, each size, 2, $2\frac{1}{2}$, 3, $3\frac{1}{2}$ inches.
- Drill rod crescent, 4 feet each size, $\frac{3}{16}$, $\frac{1}{4}$, $\frac{5}{16}$, $\frac{3}{8}$, $\frac{1}{2}$, $\frac{5}{8}$, $\frac{3}{4}$, $1\frac{1}{8}$, $\frac{1}{2}$, 1 inch.
- Galvanized iron, sheet, 22 gauge, 1 piece, 3 feet by 6 feet.
- Steel, Bessemer, round, 12 feet each, $\frac{3}{16}$, $\frac{1}{4}$, $\frac{5}{16}$, $\frac{3}{8}$, $\frac{1}{2}$, $\frac{5}{8}$, $\frac{3}{4}$, 1, $1\frac{1}{4}$ inch.
- Steel, cold rolled, round, 20 feet, each, $\frac{1}{8}$, $\frac{1}{4}$, $\frac{3}{8}$, $\frac{1}{2}$, $\frac{5}{8}$, $\frac{3}{4}$, 1 inch.
- Steel, cold rolled, round, 12 feet each, $\frac{1}{8}$, $\frac{3}{8}$, $\frac{1}{2}$, $\frac{3}{4}$, 1, $1\frac{1}{8}$, $1\frac{1}{2}$, $1\frac{3}{4}$ inches.
- Steel, cold rolled, round, 4 feet each, 2, $2\frac{1}{4}$, $2\frac{1}{2}$, 3, $3\frac{1}{2}$, 4 inches.
- Steel, Hex, cold rolled, 12 feet each, $\frac{1}{8}$, $\frac{1}{4}$, $\frac{3}{8}$, $\frac{1}{2}$, $\frac{5}{8}$, $\frac{3}{4}$, 1, $1\frac{1}{4}$ inches.
- Steel, square, cold rolled, 12 feet each, $\frac{1}{8}$, $\frac{1}{4}$, $\frac{3}{8}$, $\frac{1}{2}$, $\frac{5}{8}$, $\frac{3}{4}$, 1 inch.
- Steel, cold rolled, flat, 12 feet each, $\frac{1}{16}$ by $\frac{1}{2}$, $\frac{3}{8}$, $\frac{1}{2}$, $\frac{3}{4}$, 1, 2 inches.
- Steel, cold rolled, flat, 12 feet each, $\frac{1}{8}$ by $\frac{1}{8}$, $\frac{1}{4}$, $\frac{1}{2}$, 1, $1\frac{1}{8}$, $1\frac{1}{4}$, $1\frac{1}{2}$ inches.
- Steel, cold rolled, flat, 12 feet each, $\frac{1}{8}$ by $\frac{1}{4}$, $\frac{3}{8}$, $\frac{1}{2}$, $\frac{5}{8}$, 1, $1\frac{1}{8}$ inches.
- Steel, cold rolled, flat, 8 feet each, $\frac{1}{4}$ by $\frac{1}{4}$, $\frac{5}{8}$, $\frac{3}{4}$, $\frac{7}{8}$, 1, $1\frac{1}{8}$ inches.
- Steel, cold rolled, flat, 8 feet each, $\frac{1}{8}$ by $\frac{1}{4}$, $\frac{1}{2}$ by 2, $\frac{3}{8}$ by 2 inches.
- Steel, cold rolled, flat, fitting stock, 8 feet each, 0.025 by 6, 0.030 by 6, 0.050 by 6, 0.070 by 6, 0.128 by 6, 0.134 by 6 inches.
- Steel, self-hardening high speed square, 4 feet each, $\frac{1}{8}$, $\frac{1}{4}$, $\frac{3}{8}$, $\frac{1}{2}$ inch.
- Steel, self-hardening high speed, square, 4 feet each, $\frac{3}{8}$ by $\frac{1}{2}$ inch.
- Steel, self-hardening high speed, cutting off stock, 4 feet, $\frac{1}{8}$ by $\frac{3}{8}$ inch.
- Tubing, copper, B. & S. 20 gauge, 50 feet each, $\frac{1}{4}$, $\frac{1}{2}$, $\frac{3}{4}$ inch.
- Tubing, seamless, Shelby, 15 feet each, $\frac{3}{8}$, $\frac{1}{2}$, $\frac{5}{8}$, $\frac{3}{4}$, $1\frac{1}{8}$, $\frac{1}{2}$, $1\frac{1}{2}$, 1, $1\frac{3}{8}$, $1\frac{1}{4}$ inches.
- Zinc, sheet, 16 to 20 gauge, 8 pounds.

MISCELLANEOUS.

- 6 acid, muriatic, quarts.
- 5 aluminum, filling rod, $\frac{1}{8}$ -inch, pounds.
- 5 blades, hack-saw, 10-inch, dozen.
- 100 bolts, carriage, 3 by $\frac{1}{8}$ inch.
- 100 bolts, carriage, 3 by $\frac{1}{4}$ inch.
- 100 bolts, carriage, 3 by $\frac{3}{8}$ inch.
- 100 bolts, carriage, 6 by $\frac{1}{2}$ inch.
- 200 bolts, stove, flat head, full thread, $\frac{3}{8}$ by 2 inches.
- 200 bolts, stove, flat head, full thread, $\frac{1}{2}$ by 2 inches.
- 100 bolts, machine, hexagon head, 24-thread, 2 by 14 inches.
- 100 bolts, machine, hexagon head, 28-thread, 2 by 14 inches.
- 100 bolts, machine, hexagon head, 24-thread, 4 by $\frac{1}{8}$ inch.
- 100 bolts, machine, round head, 1-inch, 6-32.
- 100 bolts, machine, round head, 1-inch, 10-32.
- 100 bolts, machine, round head, 3-inch, $\frac{1}{4}$ -24 thread.
- 1 chalk, white, pounds.
- 1,000 cloth, cheese, yards.
- 100 cloth, emery, sheets, assorted.
- 2 cyanide, pounds.

- 3 flux, brazing, Imperial, cans.
- 3 flux, welding, cast-iron, cans.
- 500 gaskets, copper, water manifold (for type of engines used).
- 200 gaskets, paper.
- 4 graphite, cans (5 pounds each), assorted.
- 5 grease, hard, cans (25 pounds each).
- 5 iron, cast, filling rod, $\frac{1}{8}$ -inch, pounds.
- 5 iron, Norway, filling rod, $\frac{5}{8}$ -inch, pounds.
- 100 lacing, belt, $\frac{5}{8}$ -inch, feet.
- 3 oil, M. M., barrels.
- 150 paper, sand, No. 00, sheets.
- 150 paper, sand No. 0, sheets.
- 150 paper, sand, No. 1, sheets.
- 150 paper, sand, No. 2, sheets.
- 30 paste, soldering, cans.
- 2,000 pins, cotter, 1 by $\frac{1}{8}$ inch.
- 1,000 pins, cotter, 1 by $\frac{3}{8}$ inch.
- 1,000 pins, cotter, 1 by $\frac{1}{2}$ inch.
- $1\frac{1}{2}$ rivets, pounds, $\frac{1}{2}$ pound each, $\frac{1}{4}$ by $\frac{1}{8}$ inch, $\frac{1}{2}$ by $\frac{1}{2}$ inch, $\frac{1}{2}$ by $\frac{1}{8}$ inch.
- 1 screws, wood, flat head, bright, $\frac{1}{4}$ -inch, No. 4, gross.
- 1 screws, wood, flat head, bright, $\frac{1}{2}$ -inch, No. 4, gross.
- 1 screws, wood, flat head, bright, 1-inch, No. 4, gross.
- 1 screws, wood, round head, brass, $\frac{1}{4}$ -inch, No. 4, gross.
- 1 screws, wood, round head, brass, $\frac{1}{2}$ -inch, No. 4, gross.
- 1 screws, wood, round head, brass, 1-inch, No. 4 gross.
- 1 screws wood, flat head, bright, $\frac{3}{8}$ -inch, No. 6, gross.
- 1 screws, wood, flat head, bright, $\frac{3}{4}$ -inch, No. 6, gross.
- 1 screws, wood, flat head, bright, $1\frac{1}{2}$ -inch, No. 6, gross.
- 1 screws, wood, round head, blued, $\frac{3}{8}$ -inch, No. 6, gross.
- 1 screws, wood, round head, blued, $\frac{3}{4}$ -inch, No. 6 gross.
- 1 screws, wood, round head, blued, $1\frac{1}{2}$ -inch, No. 6, gross.
- 1 screws wood, flat head, bright, $\frac{3}{4}$ -inch, No. 8, gross.
- 1 screws, wood, flat head, bright, 1-inch, No. 8, gross.
- 1 screws wood, round head, brass, $\frac{3}{4}$ -inch, No. 8, gross.
- 1 screws, wood, round head, brass, 1-inch, No. 8, gross.
- 1 screws, wood, flat head, bright, 2-inch, No. 10, gross.
- 1 screws, wood, flat head, bright, 2-inch, No. 12, gross.
- 1 screws, wood, flat head, bright, $2\frac{1}{2}$ -inch, No. 12, gross.
- 1 screws, wood, round head, blued, 3-inch, No. 12, gross.
- 1 screws, wood, flat head, 1-inch, No. 14, gross.
- 1 screws, wood, flat head, bright, 2-inch, No. 14, gross.
- 6 shellac, quarts.
- 30 solder, half and half, pounds.
- 10 solder, string, pounds.
- 20 tape, cotton, for water manifold, rolls.
- 125 tape, friction, rolls.
- 3 washers, plain, flat, 1 pound each, $\frac{1}{4}$, $\frac{3}{8}$, $\frac{1}{2}$ inch.
- 6,000 washers, special, lock, 3,000 each, $\frac{1}{8}$, $\frac{1}{4}$ inch.
- 5 wire, brazing, brass, pounds.
- 10 wire, copper, spools, No. 24, pounds.



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