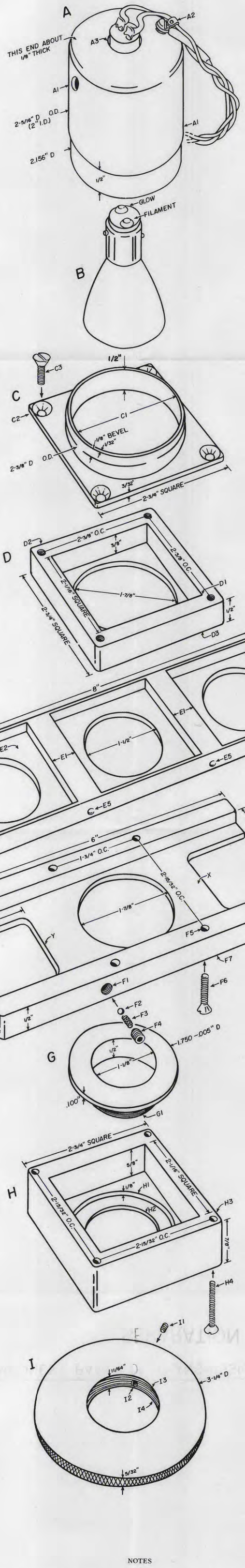


NOTES

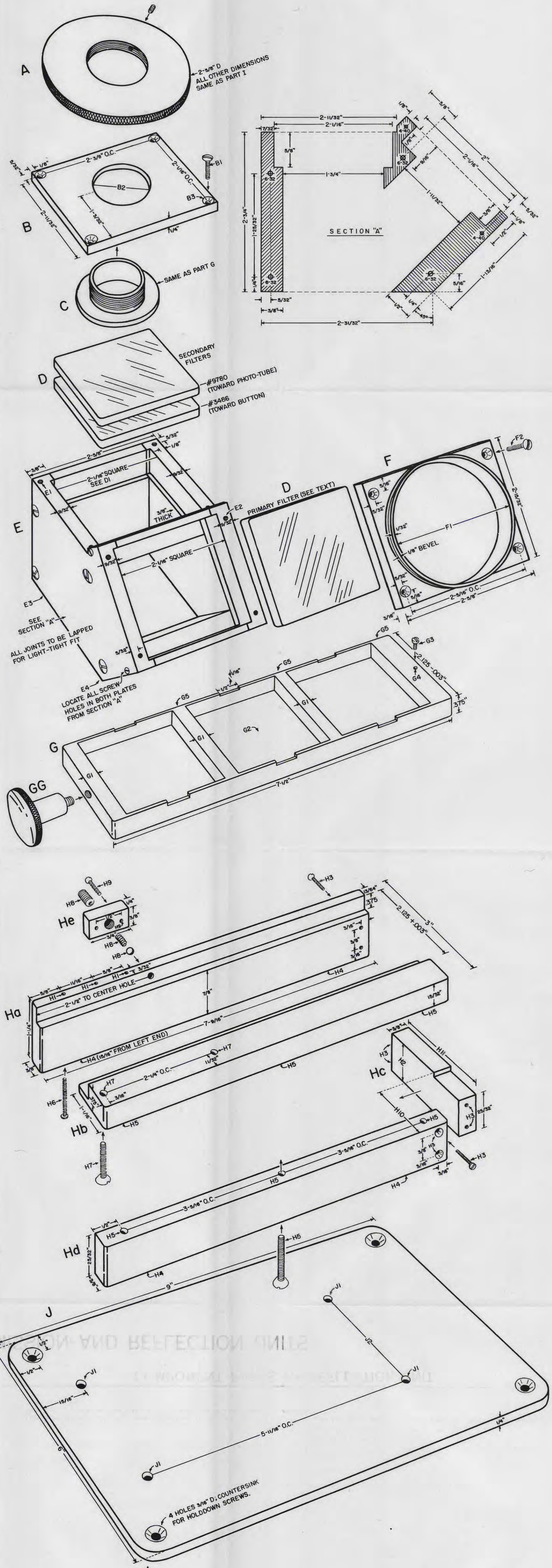
A. Overall height of housing to be such that when lamp is in socket end of lamp will not project more than $^{1}/_{16}$ in. beyond lower end of housing.
A1. ¼ in. ventilation hole.
A2. No. 6-32 roundhead machine screw, ¼ in. long, negative lamp connection, long solder lug under screwhead to hold wires in place.
A3. Drill and tap to match socket thread.
B. RP-12 3-watt fluorescent black-light lamp.
C1. Slip fit for 2.156-in. diameter of lamp housing.
C2. Four holes drilled to clear and countersunk for the no. 8-32 flathead screws.
C3. Four no. 8-32 flathead machine screws, ½ in. long.
D1. Inside corners of all pieces to be square or relieved.
D2. Four holes drilled and tapped for C3.
D3. Four holes drilled and tapped for F6, to match holes in part F.
E1. 0.375 ± 0.010 in.
E2. Three square openings: 2.0312 + 0.005 in.
E3. No. 4-40 fillister-head screw, $^{5}/_{32}$ in. long.
E4. Locate hole at center of 2.125-in. dimension; drill and tap for E3. Hole should be located so that E3 strikes "Y" of part F at the same instant F2 stopball seats in E5.
E5. Three stop holes.
EE. Hole for this part centered on 2.125-in. dimension of part E, but located $^{5}/_{64}$ in. down from top surface of E so that face of $^{7}/_{16}$ in. diameter extends above top surface of E and strikes face of part D, stopping slide at point where stopball (F2) drops in front stop hole. Following above dimensions will locate EE so it will clear surface "X" of part F.
EE1. No. 10-32, $^{3}/_{16}$ in. long (threaded hole to match).

Parts D, E, and F to be lapped together to form light-tight and freesliding fit.

F1. To be drilled through at slightly smaller diameter than ball. Then drilled with $^{9}/_{64}$-in. drill almost through. Care should be taken not to drill completely through. Then drill and tap for F4. Center of hole should be located $1^{13}/_{16}$ in. from end. Stop holes in part E should then be drilled to center each opening with openings in parts D and F.
F2. $^{3}/_{16}$-in. steel ball.
F3. Spring.
F4. No. 10-32 Allen setscrew, $^{5}/_{16}$ in. long.
F5. Four holes drilled to clear screws (F6); countersink to clear heads.
F6. Four no. 6-32 flathead machine screws, ¾ in. long.
F7. Drill and tap four holes to match screws H4 and holes in part H.
G. To be freefitting in part H so piece will rotate when threaded portion of G is screwed into phototube housing.
G1. Turn outside diameter of G1 the full length to 1.312-0.001 in. and thread with 36 threads per inch to within $^{1}/_{8}$ in. of underside of 1.750-in. diameter flange.
H1. 1.750 + 0.003 in. diameter.
H2. 1.313 + 0.001 in. diameter.
H3. Four holes drilled to clear no. 6 screws (H4); countersink for heads on bottom side.
H4. Four no. 6-32 flathead machine screws, 1 in. long, to match holes F7 in part F.
I1. No. 4-40 Allen setscrew, $^{1}/_{8}$ in. long.
I2. Drill and tap for I1; counterdrill to clear outside diameter of screw ¾ in. deep.
I3. $1\ ^{5}/_{16}$ in. diameter, 36 threads per inch to match threaded part G1.
I4. $^{1}/_{64}$ in. shoulder, $^{1}/_{34}$ in. diameter.

Parts A, E, and G of brass; all other parts of aluminum. Screws of any suitable material.

COMPONENT PARTS OF TRANSMISSION UNIT



NOTES

B1. Four no. 4-40 oval-head machine screws, ½ in. long.
B2. Same diameter as H1 and H2 of transmission unit (H1 $^{1}/_{8}$ in. deep).
B3. Drill and countersink four holes to clear B1.
E1. Drill and tap four holes to match part B.
E2. Drill and tap four holes to match part F (F2).
E3. Drill and tap three holes to match holes H1 and screws H6, part Ha.
E4. Drill and tap two holes to match holes and screws H7, part Hb.
F1. Same as C1, of transmission unit (outside diameter $2^{3}/_{8}$ in.).
F2. Same as B1.
G1. 0.297 ± 0.005 in.
G2. See E2 of transmission unit.
G3. See E3 of transmission unit.
G4. Same as E4 of transmission unit, except head of screw strikes outside of back plate, part E.
G5. See E5 of transmission unit.
GG. See EE and E1 of transmission unit, except hole in part G is centered.

Contact between parts E and G to be lapped to form light-tight and freesliding fit.

H1. Three holes drilled to clear H6; counterbore to clear heads ¾ in. deep.
H2. This dimension to be flush to within 0.010 in. below top of $^{7}/_{8}$-in. dimension of part Ha.
H3. Four no. 4-40 flathead screws, $^{5}/_{8}$ in. long; drill to clear and countersink heads in parts Ha and Hd; drill and tap matching holes in ends of part Hc.
H4. Drill center of $^{3}/_{8}$-in. dimension (spaced as shown at J1); tap to match J3.
H5. Three no. 6-32 flathead screws, 1 in. long; drill to clear and countersink part Hd for H5 screws; drill and tap part Hb to match holes H5, part Hd.
H6. Three no. 3-56 fillister-head screws, ¾ in. long.
H7. Two no. 6-32 flathead screws, ¾ in. long; clear and countersink two holes on part Hb.
H8. See F1, 2, 3, and 4 of transmission unit.
H9. Two no. 3-56 flathead screws, $^{3}/_{8}$ in. long; drill to clear and countersink part He; drill and tap for same in part Ha.
H10. To clear $1^{1}/_{16}$-in. dimension of part Hb.
H11. Length adjusted to keep 2.125-in. dimension parallel.
Ha, Hb, Hd } $7\ ^{9}/_{16}$ in. long.
J1. Four holes; drill and countersink to clear J3.
J2. Approximately $2\ ^{19}/_{32}$ in. on center. Center on 6-in. dimension and from parts Ha, b, c, and d when assembled.
J3. Four no. 10-32 flathead screws, ½ in. long.

Parts C and G of brass; all other parts of aluminum. Screws of any suitable material.

COMPONENT PARTS OF REFLECTION UNIT

SEPARATION DRAWINGS OF TRANSMISSION AND REFLECTION UNITS

427374 O - 57 (In pocket)