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ABSTRACTS FROM THE SCIENTIFIC AND TECHNICAL PRESS.

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(Prepared by R.T.P.3.)

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NOTE.—As far as possible, the country of origin quoted in the items refers to the original source.

Device for Cutting Barrage Balloon Cables. (Inter. Avia., Nos. 891-892, Oct. 30th, 1943, p. 17.) (119/1 Great Britain.)

The device is composed of a steel head projecting from the wing with openings measuring roughly four-fifths of an inch on one or both sides; the balloon cable slides into these " gates " upon coming into contact with the wing leading edge. In the gates are set two triggers of which at least one is actuated by the cable and causes a cartridge to be fired. The explosive charge drives a chisel against the balloon cable which is severed immediately. The British four-engined long-range bombers carry sixteen such devices along their wing leading edge. Each is the " size of a brick " and weighs several pounds.

Caterpillar Track Landing Gear. (Inter. Avia., Nos. 891-892, Oct. 30th, 1943, p. 15.) (119/2 U.S.A.)

This gear was developed by the Dowty Equipment Corp. in collaboration with the Firestone Tyre and Rubber Co., of Akron, O., and the Material Command of the U.S. Army Air Forces *for the Douglas A-20 " Boston " (" Havoc ") twin-engined light bomber*: Each landing gear half has two large bogie rollers to guide the track belt which on the inside is provided with longitudinal grooves and with a wire beading on its edges, as well as a smaller tension roller and two equally small supporting rollers; all these rollers are made from light metal

and have grooved surfaces to engage the longitudinal grooves of the track belt. The two supporting rollers are mounted on a supporting frame which is sprung against the longitudinal members of the caterpillar track and obviously takes a large portion of the weight; they are suspended, like the tension roller ahead of them and the rear bogie roller, from the longitudinal members by means of a lever system; by this means the load that is placed on them assists in tightening the track belt; when the landing gear is unloaded, this task is assumed by a spring acting on the axle of the tension roller. The two longitudinal members are fixed to the lower ends of a lever pair which turns about an axle set in the lower end of the undercarriage strut and whose upper end is guided by a member articulated to the fixed upper extreme of the landing gear strut (inside of the engine cowling); furthermore, a strut mounted more forwards in the engine cowling determines the trajectory of the lower landing gear strut end. The dimensions of the guiding member, the strut and the double lever are selected in a way that the longitudinal track supporting members move both backwards and upwards when the shock strut of the landing gear is shortened, a principle of motion which Dowty strongly recommends also for conventional landing gears, notably for nose-wheel landing gears, and which he achieves by the employment of rocking levers (" levered suspension "). During the taxying and landing trials carried out with the Douglas A-20 fitted with the caterpillar track landing gear, several hundred landings were carried out at speeds of up to 120 m.p.h., and obstacles measuring up to eight inches were negotiated at high taxying speeds; as the load on the surface contact area amounted to only between one-eighth and one-sixth of the load on a conventional landing gear, it did not sink into sandy or marshy ground even when the nose wheel dug itself into the ground. The designer believes that the most promising fields of application of such caterpillar track landing gears are large aircraft weighing 100,000 lb. and over; as landing runways with hard surfaces will be available for such aircraft, their undercarriages will be designed to take considerably higher loads than those that were applied in the experimental types. Retractable designs of this kind are apparently not available for the time being, but do not seem to offer any difficulties of a fundamental nature.

Rate of Climb Calculations. (G. Otten, J. Aeron. Sc., Vol. 10, No. 2, Feb., 1943, pp. 48-50, 57.) (119/3 U.S.A.)

In rate of climb calculations it has been usual to neglect acceleration along the flight path and assume the lift to be equal to the gross weight. The errors due to the two assumptions are of opposite sign and could be safely neglected in the past. This is however no longer the case for present day high performance fighters.

Suppose the aircraft is climbing at an angle θ. Equating the available thrust with the drag and inertia forces, we have

$$\frac{A\eta}{V} = D + W \sin\theta + \frac{W}{g}V$$

where A = h.p. of engine.
η = efficiency of propeller.
W = gross weight.
V = speed along flight path.
D = drag.

Substituting lift and drag coefficients for the complete aircraft under actual climb conditions, this reduces to

$$C_L^2 + C_D^2 - 2C_D\left[\frac{A\eta}{Vqf} - \left(\frac{W}{gqf}\right)V\right] + \left[\frac{A\eta}{Vqf} - \left(\frac{W}{gqf}\right)V\right]^2 - \frac{W^2}{q^2f^2} = 0$$

where f = wing area,
i.e., $C_L qf = L$, etc. . . . . (1)

Plotted in the C_L/C_D plane, the above represents a circle of radius W/qf and centre on the C_D axis at a distance $A\eta/Vqf-(W/gqf)\,V$ from the origin.

If V and V are chosen correctly, this circle will intersect the polar diagram of the complete aircraft at a point for which the corresponding C_L and C_D values satisfy equation (1) above.

In the general case, neither V nor V are known. The procedure is to neglect V in the first approximation and assume V to correspond to the conditions of minimum horse-power, *i.e.*,

$$qC_Lf=W\cos\theta$$

$$\tan\theta=\frac{A\eta}{VqfC_L}-\frac{C_D}{C_L}$$

C_D and C_L being chosen so that $C_D/C_L^{3/2}$ is a minimum. By repeating the calculation at various altitudes, V can be found and thus $A\eta/Vqf-W/gqf\,V$ determined. This gives the corrected position for the centre of the circle corresponding to equation (1).

The intersection of this circle with the aircraft polar diagram gives the corresponding value of C_D. The rate of climb then follows from the expressions

$$\frac{A\eta}{Vqf}\left(\frac{W}{gqf}\right)V-C_D=C_c$$

$$C_cqfV=CW$$

when C = rate of climb in feet/sec.

Space Limitations and Optimum Conditions in Aircraft Spring Design. (R. H. Carter, J. Aero. Sc., Vol. 10, No. 2, Feb., 1943, pp. 51-57.) (119/4 U.S.A.)

The formulæ usually used in spring design are

$$P_{max}=\pi d^3S/8K_1D \quad . \quad . \quad . \quad (1)$$

$$P_f=fGd^4/8nD^3 \quad . \quad . \quad . \quad (2)$$

} Tension or compression springs.

$$M_{max}=\frac{Sd^3}{10.20\,K} \quad . \quad . \quad . \quad (3)$$

$$M_\theta=\frac{\theta}{360}\,\frac{Ed^4}{11.25\,Dn} \quad . \quad . \quad . \quad (4)$$

} Torsion springs.

where P = end load (lb.).
M = applied couple (lb. in.).
f = extension or compression.
d = diameter of wire.
D = mean diameter of coils.
D_o = outside diameter of coils.
D_i = ditto inside diameter.
S = stress in wire.
G = torsion modulus.
θ = deflection in degrees (torsion)
E = Young's modulus.

K_1 = Wahl factor for tension or compression $=1+.015\left(\frac{d}{D}\right)\left(\frac{91\,D-41\,d}{D-d}\right)$

K = Wahl factor for torsion $=[1+(d/5\,D_1)]^3$.

Optimum conditions are ensured by equating (1) and (2) and (3) and (4) respectively and solving for the various parameters, after making simplifying assumptions regarding K, K_1, D_1/d and D_o/d (D_1 and D_o are the inside and outside diameter of the coils respectively). Using these expressions, the relationship between space limitations, maximum load and wire size can be obtained immediately for a given allowable stress. A number of alignment charts are given to facilitate the calculation.

In conclusion, the problem of weight rather than space limitation in spring design is discussed. In many cases the optimum design with respect to weight can be determined. This is illustrated in a specific example of an extension spring carrying a load P_2 at length l_2.

Required: The lowest load P_1 at length l_1 ($l_1 > l_2$) consistent with a d and D combination giving lowest spring weight.

The author obtains the following relationship:—

$$d^2 = (C/A)\,(D/d)\,[1 + .7\,d/D] \quad . \quad . \quad . \quad . \quad (5)$$

where $C = 16\,P_2\,(l_1 - e)$.

$A = (\pi S/K_1)\,(l_2 - e)$.

e = end connection length.

K_1 = Wahl's factor (given above).

Since D_0/d as a function of $(l_1 - l_2)/(l_2 - e)$ is available from the author's previous work on optimum design (maximum permissible S), equation (5) can be solved for d and P_1 determined.

Stress Peaks in Perforated Metal Plates and Strips. (A. Hutter, Z.A.M.M., Vol. 22, No. 6, Dec., 1942, pp. 322-335.) (119/5 Germany.)

The author considers two cases:—

(1) Infinite plate provided with a row of holes.
(2) Infinite strip (finite width) provided with a single central hole.

(1) Infinite plate under uniform two dimensional tensile stress $2c$ at ∞ or monoaxial stress perpendicular to the holes.

Let

$2a$ = diameter of hole.
$2l$ = spacing.
$2b = .2\,(l - a)$ = length of web between holes.
σ_{max} = maximum tangential stress on edge of hole.
σ_d = mean stress in web between holes.

If a/l is small, the Airy stress function can be developed in series and σ_{max} determined.

For either kind of loading, the mean stress in the web between the holes is

$$\sigma_d = 2c\left(\frac{1}{1 - a/l}\right) = 2c\left(\frac{l}{b}\right)$$

Retaining terms up to the fifth power in a/l, the following results are obtained:—

$$\frac{\sigma_{max}}{\sigma_d} = 2\left(1 - \frac{a}{l}\right)\left[1 + \frac{2}{3}\left(\frac{\pi}{2}\cdot\frac{a}{l}\right)^2 - \left(\frac{4}{45}\right)\left(\frac{\pi}{2}\cdot\frac{a}{l}\right)^4 + \ldots\right]$$

(equal tension in all directions, $2c$ at ∞).

$$\frac{\sigma_{max}}{\sigma_d} = 3\left(1 - \frac{a}{l}\right)\left[1 + \left(\frac{2}{9}\right)\left(\frac{\pi}{2}\cdot\frac{a}{l}\right)^4 + \ldots\right]$$

(tension perpendicular to holes, $2c$ at ∞).

For the infinitely small hole, the stress in the rim of the hole is thus either double or treble the uniform stress at infinity, depending on the method of loading. This type of series solution breaks down for large values of a/l.

In this case it is more profitable to expand in terms of b/l. Unfortunately the Airy stress function in its general form does not lend itself to this purpose. Making use, however, of alternative methods of solution already obtained by Neuber (" necked " hyperbolic strip, imperforated) and Poschl (infinite plate with two holes close together), the required stress ratio becomes

$$\frac{\sigma_{max}}{\sigma_d} = 1 + \frac{2}{3}\left(\frac{b}{l}\right) + \ldots$$

correct to first order terms in (b/l).

This solution holds both for monoaxial and two dimensional stress $2c$ at ∞ and the inclination of the tangent of the σ_{max}/σ_d curve at $(b/l)=0$ is thus known, although the curvature at finite values of (b/l) is uncertain. Making use of the Airy solution for (a/l) between 0 and .2 and the tangent inclination at $(a/l)=1$, the probable course of σ_{max}/σ_d can be estimated over the full range.

The following values are obtained :—

	σ_{max}/σ_d.	
a/l	Two dimensional stress.	Monoaxial stress.
0	2.0	3.0
.2	1.7	2.4
.4	1.48	1.95
.6	1.30	1.50
.8	1.15	1.20
1.0	1.0	1.0

Infinite strip with a single hole (tension in direction of strip $=2c$ at ∞). For small values of a/l ($2l$ = width of strip in this case) the Airy stress function can be expanded in series form.

The ratio of maximum tangential stress at hole to mean stress in lateral webs becomes (a/l between 0 and .1)

$$\frac{\sigma_{max}}{\sigma_d}=3-3\left(\frac{a}{l}\right)+4.38\left(\frac{a}{l}\right)^2-\ldots$$

For large values of a/l (very narrow webs) an approximate solution based on the stress distribution existing in a semi-infinite plane with a hole near one edge can be obtained.

The required stress ratio becomes :—

$$\frac{\sigma_{max}}{\sigma_d}=2+\frac{2}{3}\left(\frac{b}{l}\right)+\left(\frac{28}{45}\right)\left(\frac{b}{l}\right)^2+\ldots$$

where $b=l-a$.

This holds over the range $a/b=.9$ to 1.0.

Knowing the shape of the stress ratio curve, both for small and large values of a/l, the curve can be estimated over the whole range.

The following results are obtained :—

a/l	$\sigma_{max}/\sigma d$
0	3.0
.2	2.6
.4	2.4
.6	2.27
.8	2.15
1.0	2.0

It is interesting to note that for small values of a/l, σ_{max}/σ_d for monoaxial stress is the same for the infinite plate with a row of holes or the infinitely long strip with a single hole.

For large values of (a/l), however, the stress ratio differs markedly for the plate (holes close together) and the strip (single central hole reaching almost the edge). In the former case, the mean web stress is equal to the maximum hole stress, whilst in the case of the strip it only reaches two-thirds of this value.

Tool Life Tests. (O. W. Boston, A.S.M.E. Annual Meeting, Nov. 29-Dec. 3, 1943, New York. (Preprint available.) (119/6 U.S.A.)

The proposed standards refer to single point cutting tools other than those of cemented carbide. Carbide tools fail or wear differently from those of steel and cast non-ferrous alloys and a separate procedure for rating them is being developed.

The single point tools considered are either of the solid or tipped type.

Tool life tests naturally depend on the material cut and the cutting fluid employed.

For a given material and fluid, the merit of the tool depends on the following factors :—

(*a*) Tool-life/cutting speed relationship.
(*b*) Surface quality produced.
(*c*) Form of chip.
(*d*) Power required.

These four factors should be determined under actual cutting conditions (light, medium or heavy cuts) and can in their turn be used to evaluate the machinability of a given material. In this connection it should be pointed out that the rating obtained will in general depend on the shape and material of the tool employed. Similarly a change in the nature of the cutting fluid or differences in structure of the material cut may affect the machinability order produced by a given tool. The types of machine tool employed, its condition, and the method of tool and work support are also of importance. Tests on tool life or machinability are thus meaningless unless a relatively large number of factors are clearly specified and controlled.

Of special importance is the shape of the tool point and all the pertinent tool angles should be specified. An example of a convenient code for this purpose is the following 8, 22, 6, 6, 6, 15, 3/64, which signifies :—

8° back rake.
22° side rake.
6° end relief.
6° side relief.
6° end cutting edge angles.
15° side cutting edge angles.
3/64 nose radius (in.).

The formula connecting cutting speed and tool life between grindings for a given tool, material, feed and depth of cut is given by

$$VT^n = C$$

where V = cutting speed in ft./min.
T = tool life in minutes.
C = constant.
= cutting speed for a tool life of one minute.

Plotting $\log T$ against $\log V$ thus gives a straight line and this facilitates the representation of experimental results. The two tool life characteristics n and c are given respectively by the slope of this line and its intercept with the V axis.

For high speed tool steels, n may vary between .08 and .16, C from 40 to 200 ft./minute, depending on material being machined and depth of cut.

It is interesting to note that two steels of the same Brinell hardness may give the same values for C and n for light cuts yet differ appreciably when compared under heavy cut conditions (both dry cuts).

Thus in one particular case (material forged die steels of identical Brinell hardness 363 machined with the same high speed tool steel).

T_{60} (life at a cutting speed of 60 ft./min.) = 11.5 minutes for steel A and 25 minutes for steel B for a depth of cut of .1 in., whilst T_{150} = 10 minutes for both steels for a depth of cut of .0125 in., the feed being .0125 in both cases.

The Theory of Two-Dimensional Gas Waves of Large Amplitude. (H. Pfriem, Z.V.D.I., Vol. 86, Nos. 27-28, July 11, 1942, p. 436.) (Translation of original German Digest.) (119/7 Germany.)

Gas waves of large amplitude differ from acoustic waves principally by the fact that their velocity of propagation is different in different parts of the wave;

for which reason the form of the wave is continually changing. The theory of steady two-dimensional waves in a perfect gas can be considerably simplified by neglecting the damping and introducing the velocity of sound as a factor in the equation of state. This enables the deformation of a travelling wave to be determined by the application of a simple graphical/mechanical method (1). The deformation of a wave always proceeds in the manner that the back is progressively flattened, while the front becomes steeper. This eventually causes abrupt state changes in the wave front, the so-called compression shocks. In particular cases of a simple nature, this transformation of steady wave fronts into compression shocks is easily analysed mathematically (2). The laws governing the development of continuous travelling waves in gases, and of compression shocks, can be used, for example, to calculate the upper limit of technically feasible projectile velocities (3). In combustible gas mixtures, a special type of compression shock can occur, the so-called " detonation wave," in which the steep wave-front is also the point of combustion of the gaseous mixture. In the case of normal detonation waves, the time-variation of the wave-form can be easily followed also behind the steep front, and the whole form of the wave determined (4). For technical applications, the laws of reflection (5) of pressure waves are important. Their derivation is possible also for continuous gas waves, in a clear and elementary form, if the time-variation of the gas states in front of the reflecting wall surface is negligible. Precise analytical determination of the resultant state fields brought about by the superposition of meeting gas waves is only possible with the help of Euler's differential equation and the continuity condition. If the development is confined to mono-, di-, and polyatomic gases ($H = 5/3, 7/5, 9/7, \ldots$), quite general solutions of these simultaneous partial differential equations are easily produced (6). This will enable the analysis of more complex two-dimensional wave phenomena in restricted gas-filled spaces.

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The Formation of Drops at Nozzles and the Disintegration of Fluid Jets. (W. Ohnesorge, Z.V.D.I., Vol. 81, No. 16, 17/4/37, pp. 465-466.) (119/8 Germany.)

A theoretical explanation of the disintegration of fluid jets by the action of surface vibrations with axial symmetry was given over 60 years ago by Lord Rayleigh. This author assumed potential flow and considered gravity and capillary forces only, the solution applying strictly only to the slow dripping of a liquid from the end of a tube without the formation of a jet. In this case the inertia and viscous forces can be neglected.

Viscous forces play also a very small part in the surface vibrations investigated by Rayleigh, although the inertia forces can no longer be neglected and are in fact more important than the effect of gravity.

In the general case of jet instability, however, both inertia and viscous forces play a predominant part and an exact solution of the equations of motion is no longer possible. Recourse can therefore be had only to experiment, but the author shows how such experimental results can be generalised by the introduction of non-dimensional coefficients based on the principle of mechanical similarity. For this purpose he introduces a characteristic Z defined as :—

$$Z = \frac{\eta}{\sqrt{\sigma \rho d}}$$

where η = absolute viscosity, ρ = density, σ = surface tension } of flowing medium.
d = diameter of nozzle.

For a constant value of Z, the stability of the jet is only a function of the Reynolds number $Re = vd\rho/\eta$ where v = velocity of flow.

The experiments show that above a certain well-defined Re number (Re_1), the jet will completely atomise at the nozzle. Below this Reynolds number, the jet will disintegrate by means of helicoidal vibrations which change into Rayleigh vibrations at a second well defined Reynolds number Re_2 (see table below).

Z	Re	
	1	2
10	30	8
1	210	50
10^{-1}	1,500	300
10^{-2}	10,000	2,000
10^{-3}	70,000	11,000

Thus for $Z = 1$, atomisation at nozzle requires $Re > 210$ and between $Re = 210$ and 50, the jet breaks up by helicoidal vibrations. When plotting Z and Re on a log basis, both Re_1 and Re_2 lie on parallel straight lines containing a relatively narrow region over which helicoidal vibrations are possible. To the left of Re_2 the surface only exhibit vibrations with axial symmetry of the Rayleigh type.

It is interesting to note that the onset of atomisation at Re_2 is quite sudden. Just below Re_2, the jet close up to the nozzle has still a smooth surface with axially symmetric swellings which change into helicoidal lateral vibrations of increasing amplitude as the distance from the nozzle increases. Subsidiary drops are formed and the jet finally breaks up completely. As Re increases to the critical value Re_2, the zone of complete disintegration travels upwards towards the nozzle.

The phenomena were recorded on a high speed cine camera (200 to 12,000 frames a second). For specimen picture, see Z.A.M.M., Vol. 16, 1936, p. 357.

Three Dimensional Wing Flutter Analysis. (A. H. Flax, J. Aeron. Sc., Vol. 10, No. 2, Feb., 1943, pp. 41-47.) (119/9 U.S.A.)

It is the aim of the author to develop a three dimensional wing flutter analysis (three degrees of freedom) using methods familiar to the average engineer.

Unfortunately, no complete solution of the problem of the vibrating wing of finite aspect ratio is as yet available.

Hence the aerodynamic force coefficients must be obtained by strip integration of two-dimensional coefficients, it being assumed that the flow at each spanwise element of the wing is independent of the flow at other points on the wing. This necessarily entails neglecting the induced velocities caused by free and trailing vortices all along the span.

The author is of the opinion that this assumption is not likely to produce any serious error in the case of wings of normal aspect ratio. In the case of tail surfaces, however, empirical correction may have to be applied to the local aerodynamic force coefficients to allow for the small aspect ratio.

The author further simplifies the problem by assuming that the fundamental modes of bending and torsion (obtained either from ground tests or calculation) also correspond to the displacement curves in the flutter motion, the number of degrees of freedom thus being limited to three.

In many preliminary investigations, the complete three-dimensional analysis described by the author is not justified, the available data being insufficient. In

the past empirical weighting methods have been applied to two-dimensional analysis to account for three-dimensional effects. The usual procedure is to express the equivalent mass in the form

$$\bar{M} = \frac{\int_0^1 M h dy}{\int_0^1 h dy}$$

and the equivalent radius of gyration as

$$\bar{\rho}^2 = \frac{\int_0^1 \rho^2 \alpha dy}{\int_0^1 \alpha dy}$$

where h = bending displacement of elastic axis.

α = torsional twist about elastic axis.

Comparison with the more accurate results in this paper shows that the above method generally over-emphasises inboard parameter and may lead to appreciable errors. It appears that the main value of the paper lies in the aid it will give for the intelligent choice of such two-dimensional parameter, depending on the nature of the problem. In conclusion, the author gives approximate expressions for the correction of coupled frequencies obtained in still air vibration tests to the " uncoupled " frequencies during flutter. The effect of the apparent inertia of the air is also included. (Eleven references.)

Dynamics of Constant Speed Propellers. (H. K. Weiss, J. Aeron. Sc., Vol. 10, No. 2, Feb., 1943, pp. 58-67, 70.) (119/10 U.S.A.)

Constant propeller speed under varying conditions of flight is usually obtained by varying the blade angle according to some function of the speed error (r.p.m.).

The control consists of some device which measures this error and its integral or derivatives and a servo mechanism which moves the blades in accordance.

If N = set propeller speed (r.p.s.).
n = departure from set speed (r.p.s.).
β = blade angle at N } degrees.
β_0 = change in blade angle }
V = forward speed of aircraft } m.p.h.
v = change in above }
Q_e = torque of engine (lb. ft.).
Q_p = torque of propeller (lb. ft.).
ΔQ = change in torque (positive torque tends to accelerate propeller).

$$\Delta Q_e = (\partial Q_e/\partial N)\, n + \Delta Q_0$$

where ΔQ_0 = increment due to throttle (not speed).

$$Q_p = f(N, V, \beta)$$

$$\Delta Q_p = (\partial Q_p/\partial N)\, n + (\partial Q_p/\partial \beta)\, \beta_1 + (\partial Q_p/\partial V)\, v$$

The acceleration of the propeller is given by

$$I\dot{n} = \Delta Q_e + \Delta Q_p$$

which reduces to

$$\dot{n} - Q_N n - Q_\beta \beta_1 = Q_0 + Q_v v \qquad (1)$$

where

$$Q_N = (1/2\pi I)\,[\partial Q_p/\partial N + \partial Q_e/\partial N]$$
$$Q_\beta = (1/2\pi I)\,\partial Q_p/\partial \beta$$
$$Q_v = (1/2\pi I)\,\partial Q_p/\partial V$$
$$Q_0 = (1/2\pi I)\,\Delta Q_0$$

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Q_N, Q_β and Q_v can be obtained from the slope of the propeller torque curves or calculated from the conventional propeller coefficients.

In this case

$$Q_N = q_N \eta N \sigma$$
$$Q_\beta = q_\beta \eta N^2 \sigma$$

where

$$q_N = (1/2\pi)\,(2c_p - J\partial c_p/\partial J)$$
$$q_\beta = (1/2\pi)\,(\partial c_p/\partial \beta)$$
c_p = propeller power coefficient
$$\eta = (1/2\pi I)\,\rho_{SL} D^5$$
$$J = V/nD$$
σ = density ratio
ρ_{SL} = standard density

Representative values of q_N, q_β and η are given for a number of standard propellers.

The propeller inertia factor η averages about 2.5 for diameter between 8 and 14 feet, but increases to ~ 4 at 18 feet.

Neither q_N nor q_β vary appreciably with J up to $J = 1.5$. The former factor, however, depends markedly on β (increasing, for example, from $-.02$ at $\beta = 20°$ to $-.08$ at $\beta = 40°$ for a certain two-bladed propeller), whilst the variation of q_β with blade angle is small (average value of q_β over the range $J = 0$ to $1.5 = -.002$).

In the practical case, β_1 in equation (1) above is subject to control. It is assumed that the processes involved between measurement of the speed error and movement of the propeller blade can be expressed in the form of linear differential equations with constant coefficients.

In the absence of lag, the response of such a linear control is therefore of the general form,

$$\beta_1 = K_1 \int n\,dt + K_2 n + K_3 \dot{n} + \ldots \qquad (2)$$

where $K_1 = \partial \beta_1/\partial n$
$K_2 = \partial \beta_1/\partial n$
$K_3 = \partial \beta_1/\partial \dot{n}$

Combining this with equation (1), the motion of the controlled propeller is given by

$$\ddot{n}\,(1 - K_3 Q_\beta) - \dot{n}\,(Q_N + K_2 Q_\beta) - K_1 Q_\beta n = \dot{Q}_o + v\dot{Q}_v \qquad (3)$$

Without solving this general equation, several conclusions can be drawn:—

(1) If $K_3 Q_\beta \to 1$, the effective inertia of the propeller is reduced.

(2) An increase of engine torque with engine speed (supercharged engine) reduces the aerodynamic damping of the system.

More detailed information on the aerodynamic damping is readily obtained in the simpler case where K_2 and K_3 are both zero and only K_1 operative (Hamilton type of control, aerodynamic damping only).

Putting

$$\zeta_o = \frac{\text{actual damping}}{\text{minimum required for aperiodic motion after disturbance}}$$

we have

$$\zeta_o^2 = -Q_N^2/4K_1 Q_\beta$$

It appears that

(1) Large K_1 values (sensitive control) tends to oscillate.

(2) This tendency increases with altitude and propeller inertia.

(3) Damping also decreases with decreased forward speed for a given engine power and r.p.m.

(4) Damping increases with increased power at a given air speed and r.p.m. for constant $\partial Q_e/\partial N$.

Making use of the expression for ζ_o, the corresponding damping ratio ζ_s of the system with derivative control (equation (3)) can be shown to follow from

$$\zeta_s^2=\zeta_o^2\ (1+\delta)^2/(1+\gamma)$$

$$\text{when } \delta=\frac{K_2Q_\beta}{Q_N}=\frac{\text{artificially introduced damping}}{\text{original aerodynamic damping}}$$

$$\gamma=-K_3Q_\beta=\frac{\text{change in controlling torque}}{\text{change in inertia torque for unit change in propeller acceleration}}$$

From the above the error in speed following a small sudden change ΔQ_o can be obtained. Typical solutions are shown in graphical form, from which it appears that

(1) For aperiodic control with only an integral component (aerodynamic damping) the error surge following a sudden change in engine torque is about 75 per cent. of the deviation with no control.

Even if the damping ratio is reduced to .6 (oscillatory response) the surge is over 50 per cent. By introducing artificial damping so that $\delta=5$, cuts the surge to 13 per cent. and retains aperiodic response.

The advantage of the δ component is thus obvious. Merely doubling the available Q_N damping by making $\delta=1$ reduces the initial error surge as much as a reduction of ζ_s to .25.

The magnitude of the error surge thus depends only on ζ_s and δ and not on the inertia component γ of the control.

It should be noted that the system covered by the general equation of motion (3) is always stable and when subjected to a transient disturbance will eventually return to a position of zero error provided $\zeta_s > 0$.

In practice, however, conditions frequently arise in which the propeller control system is capable of sustained and self-excited oscillations. This is due to the presence of lag in the control, which is thus always detrimental.

Assuming lag to be proportional to the control velocity and acceleration, equation (2) takes the form

$$\beta_1=K_1\int ndt+\ \ldots\ -T_c\dot{\beta}_1-(1/w_n^2)\,\ddot{\beta}_1 \qquad . \quad . \quad . \quad (4)$$

where T_c = time constant of control.

w_n = natural undamped frequency of control.

Putting

$$\alpha=T_c/T_p$$

$$\psi=1/(w_nT_p)$$

where T_p = time constant of propeller $=-1/Q_N$

The damping ratio of the free control now becomes $\zeta_o=\alpha/2\psi$. Applying the Routh Discriminant, the author shows that stability is ensured, provided

$$4\zeta_o^2>\frac{(\alpha+\psi^2)^2}{\{(\alpha+\psi^2)(1+\alpha+\gamma)(1+\delta)-\psi^2(1+\delta)^2\}} \qquad . \quad . \quad (5)$$

This is the general condition for a control of one degree of freedom with both integral and derivative control components and two orders of lag.

In the case of first order lag only ($\psi=0$), (5) reduces to

$$4\zeta_o^2>\alpha/(1+\alpha+\gamma)(1+\delta) \qquad . \quad . \quad . \quad . \quad (6)$$

and if the control is of the simple integral type ($\delta=\gamma=0$), the motion is stable for all values of lag provided $\zeta_o > .50$.

It will be noted from (5) that the stability is increased by positive values of δ and γ.

For reasons of quick response, it is desirable, however, to make γ negative. The permissible limits are determined by (5).

The addition of second order lag to a given amount of first order lag will always make the system less stable, but an unstable system with inertia lag in the control cannot always be stabilised by increasing the damping in the control. The remedy here is to increase the aerodynamic damping of the propeller ζ_0 or decreasing ψ. The controls considered so far only introduced one additional degree of freedom. In the case of a centrifugal governor with hydraulic power amplification (each with its own lag), two further degrees of freedom are introduced.

It can be shown that under such conditions the stability for a given total lag is least if the lag is evenly distributed between the two systems.

The author finally illustrates the use of the various equations discussed by a worked out example covering a propeller/control system of the simple integral type with $K_1 = .985°$/sec./r.p.s. and control lag constant $T_c = 1.44$ sec., operating either at altitude (8,700 ft., $V = 250$ m.p.h.) or statically on the ground (take-off).

For disturbance, a sudden change of 500 ft. lb. in the engine torque is assumed. (The torque gradient of the engine is neglected.)

It is interesting to note that under these conditions the control only executes mild and quickly damped oscillations (max. speed error + 35 r.p.m.) when flying at altitude, but violent and continuous hunting on the ground (± 70 r.p.m., period 6.2 seconds). Primary cause of this oscillation is the smaller aerodynamic damping available on the ground at the lower blade angle required for take-off ($\beta = 18°$ on the ground against 29° in flight). This difficulty can be overcome by decreasing the control sensitivity factor K_1 as β becomes smaller (non-linear control). Thus making $K_1 = .066°$/sec./r.p.s. instead of $.985°$/sec./r.p.s., the response becomes aperiodic although the maximum speed error is increased (95 r.p.m.).

According to the author a device for ensuring an automatic reduction of sensitivity with blade angle thus appears well worth while for both integral and rate controls of the type discussed.

On the Design of the Contraction Cone for a Wind Tunnel. (H. S. Tsien, J. Aeron. Sc., Vol. 10, No. 2, Feb., 1943, pp. 68-70.) (119/11 U.S.A.)

When designing a contracting cone for a wind tunnel, the following conditions must be borne in mind:—

(1) Velocity at end of cone uniform.

(2) Curvature of wall must be small enough to ensure that the local velocity at wall does not exceed end velocity at any point (flow separation danger).

(3) Absence of compressibility shock.

Shock waves can be avoided if the velocity is below sonic in the whole field of flow. Since in a contracting cone, the highest velocities occur at the wall, the velocity in the cone will always be less than sonic, provided the wall velocity is made to increase monotonically from beginning to end of cone and that the end velocity is below sonic value.

Since the velocity of flow of a compressible fluid can always be obtained from the corresponding incompressible flow through the same boundary by multiplication with a certain factor, the design of the cone can be based on incompressible theory, provided the condition for monotonical increase in v at the wall is fulfilled. This simplifies the calculation very considerably.

With the x axis along the axis of symmetry of the cone and putting

u = axial velocity.
v = radial velocity.
r = corresponding radius.

we have

$$\frac{\partial v}{\partial x} - \frac{\partial u}{\partial r} = 0 \quad . \quad . \quad . \quad . \quad . \quad (1)$$

$$\frac{\partial}{\partial x}(ru) + \frac{\partial}{\partial r}(rv) = 0 \quad . \quad . \quad . \quad . \quad . \quad (2)$$

Also

$$v = 0 \text{ at } r = 0.$$
$$\partial u/\partial r = 0 \text{ at } r = 0.$$

Thus u and v must be even and odd functions of r respectively.

We may therefore put

$$u = \sum_{n=0}^{n=\infty} r^{2n} f_{2n}(x) \quad . \quad . \quad . \quad . \quad . \quad (3)$$

$$v = \sum_{n=0}^{\infty} r^{2n+1} f_{2n+1}(x) \quad . \quad . \quad . \quad . \quad . \quad (4)$$

Substituting (3) and (4) in (1) and (2) respectively and equating equal powers of r in each case, we obtain

$$u = \sum_{n=0}^{\infty} \frac{(-1)^n r^{2n}}{2^{2n}(n!)^2} f_0^{(2n)}(x)$$

$$v = \sum_{n=0}^{\infty} \frac{(-1)^n 2n r^{2n-1}}{2^{2n}(n!)^2} f_0^{(2n-1)}(x)$$

The resultant velocity $w = \sqrt{u^2 + v^2}$.

Starting off with an assumed monotonic velocity distribution $u = f_0(x)$ at $r = 0$, the resultant velocity w and the streamlines $\psi(x, r)$ can then be determined by a step by step method.

The shape of the contracting cone is then determined by the last streamline along which w still varies monotonically, whilst further out (larger r) this condition is no longer satisfied.

The final shape then depends on the form of $f_0(x)$ assumed. The author has adopted

$$f_0(x) = .55 + .90 \int_0^x \sqrt{2\pi} e^{-x^2/2} dx$$

which he considers plausible.

The final shape obtained is illustrated:—

Entry radius	13·5	units.
Exit radius	10.0	
Length	20.0	

Induced Drag of a Twisted Wing. (H. W. Sibert, J. Aeron. Sc., Vol. 10, No. 2, Feb., 1943, pp. 71-72.) (119/12 U.S.A.)

The formula usually given for the induced drag coefficient of a wing is of the following form:—

$$C_{Di} = (1 + \sigma) C_L^2 / \pi A \quad . \quad . \quad . \quad . \quad . \quad (1)$$

where C_L = lift coefficient.
A = aspect ratio.
σ = induced drag factor.

This evidently does not hold for a twisted wing which has a positive C_{Di} even when $C_L \to 0$.

The difficulty can be overcome by expressing C_L in terms of the section lift coefficient C_e, the variation of which along the span is expressed as a Fourier series.

$$C_e = m_s c_s / c \, (A_1 \sin\theta + A_2 \sin 2\theta + \ldots)$$

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where c = chord of section.
c_s = chord at plane of symmetry.
m_s = shape of section lift coefficient at plane of symmetry.
A_1, etc. = coefficients.
θ = arc cosine of distance of section from plane of symmetry as a fraction of semi-span.

The expression for C_L now becomes

$$C_L = \pi A u_o A_1 \quad . \quad . \quad . \quad . \quad . \quad . \quad (2)$$

when $u_o = m_s c_s / 4b$.
b = span.
A = aspect ratio,

and

$$(1+\sigma) = (A_1^2 + 2A_2^2 + 3A_3^2 + \ldots)/A_1^2 \quad . \quad . \quad . \quad (3)$$

Hence

$$C_{Di} = \pi A u_o^2 (A_1^2 + A_2^2 + \ldots) \quad . \quad . \quad . \quad . \quad (4)$$

The method is illustrated by a worked out example for a wing fitted with flap. For a 60° deflection of flap,

$$C_{Di} = .0425 (C_L - .0123)^2 + .0060.$$

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No. 65.

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THEORY AND PRACTICE OF WARFARE.

TRANSLATION NUMBER AND AUTHOR.	TITLE AND REFERENCE.
2016 ——	*Barrage Balloon Deflector.* (*German Patent No.* 728,852.) (Flugsport, Vol. 35, No. 6, 17/3/43, p. 4.)
2045 Hulten	*The PE-2 Russian Dive Bomber.* (Flyg., Vol. 21, No. 23, Sept.-Dec., 1943, pp. 21-24.)

AERO AND HYDRODYNAMICS.

2007 Ackeret, J.	*The Design of Closely Spaced Blade Grids.* (Schweizer Bauz., Vol. 120, No. 9, 29/8/43, pp. 103-108.)
2019 Borbelyss	*Aerodynamic Forces on a Harmonically Oscillating Wing at Supersonic Velocity (Two-Dimensional Case).* (Z.A.M.M., Vol. 22, No. 4, Aug., 1942, pp. 190-205.)
2021 Sauer, R.	*The Method of Characteristics Applied to the One-Dimensional Unsteady Gas Flow.* (Ing. Archiv., Vol. 8, No. 2, April, 1942, pp. 79-89.)
2035 Kehl, A.	*Investigations on Convergent and Divergent Turbulent Boundary Layers.* (Ing. Archiv., Vol. 13, No. 5, 1943, pp. 293-329.)

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		MATERIALS AND ELASTICITY.
2014	Dehler	*Compressed Powder Magnet with Synthetic Resin Binders.* (Stahl und Eisen, Vol. 47, No. 62, 19/11/42, pp. 983-986.)
2025	Mikhailov, A. I. ...	*A New Approximate Method for Measuring the Percentage Elongation of Metals at Fracture.* (Metal Ind. News, U.S.S.R., Vol. 19, July, 1939, p. 71.)
2029	Albers-Schonberg, E.	*The Standardization of Steatic Insulators.* (Keram. Rundsch., Vol. 51, No. 1, 1/1/43, pp. 1-4.)
2030	Wolff, W. ... ... Pohler, G.	*Investigation on Enamelled Wire for Communication Engineering.* (Communicated by the Central Laboratory for Telegraph and Telephone Service of the A.E.G.)
2031	Benz, W.	*Natural Frequencies of Torsional Systems, in Particular Elastically-Mounted Epicyclic Gears.* (L.F.F., Vol. 20, No. 2, 27/2/43, pp. 46-47.)
		PRODUCTION.
2011	——	*Mobile Unit for the Periodic Cleansing of the Lubricating Systems of Machine Tools.* (Flugsport, Vol. 35, No. 9, 19/5/43, pp. 111-112.)
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2015	Perthen, J.	*Surface Testing as a Guide to Surface Roughness.* (Werkstatt und Werksleiter, Vol. 32, No. 6, 15/3/38, pp. 154-157.)
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2017	Heidebrock, E. ...	*Recent Research on Bearing Technique.* (A.T.Z., Vol. 44, No. 14, 25/4/41, pp. 349-353.)
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2006	Gsell, R.	*Aircraft Operational Requirements for Large Commercial Airports in Switzerland.* (Strasse u. Verkehr, Vol. 27, No. 20, 1941, pp. 354-366.)
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1	15308	U.S.A. ...	*London Survey (Statistical Analysis of the Destructive Effects of Bombing).* (P. G. Masefield, Flying and Industrial Aviation, Vol. 33, No. 3, September, 1943, pp. 57, 84-90.)
2	16001	G.B.	*Air Battle Formulæ (Review of Mediterranean Front).* (J. Yoxall, Flight, Vol. 44, No. 1,817, 21/10/43, pp. 441-446.)
3	16011	G.B.	*Pigeons as Birds of War.* (F. W. Lane, Flight, Vol. 44, No. 1,817, 21/10/43, pp. 455-457.)
4	16020	G.B.	*Big Naval Air Station Built in South Africa.* (Engineer, Vol. 176, No. 4,581, 29/10/43, p. 354.)
5	16082	U.S.A. ...	*Air Transport's Value in Modern War (Map).* (American Aviation, Vol. 7, No. 8, 15/9/43, p. 24.)
6	16094	G.B.	*Mediterranean Air Power.* (A. E. F. Glenny, Aeroplane, Vol. 65, No. 1,692, 29/10/43, pp. 488-489.)

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7	16144	G.B. ...	... *Air Force Targets—No. 33 (Krupps Armament and Engineering Works).* (Engineer, Vol. 176, No. 4,581, 29/10/43, pp. 339-343.)
8	16282	U.S.A.	... *The Lesson of Strategic Bombing (Organisation and Tactics).* (E. E. Miller, Aviation, Vol. 42, No. 8, August, 1943, pp. 114-121, 338-339.)
9	16390	G.B. ...	... *Mediterranean Air Power.* (Aeroplane, Vol. 65, No. 1,693, 5/11/43, pp. 518-519.)
10	16400	G.B. ...	... *Victory Through Air Power.* (F. Murphy, Flight, Vol. 44, No. 1,820, 11/11/43, pp. 526-527.)
11	16408	G.B. ...	... *Blazing the Trail—Use of Pathfinders.* (Flight, Vol. 44, No. 1,820, 11/11/43, p. 533.)
12	15496	G.B. ...	... *Air Targets in Japan.* (Times Trade and Engineering, Vol. 53, No. 955, Sept., 1943, p. 11.)
13	16505	G.B. ...	... *Aircraft Supply to the Middle East.* (J. L. Vachell, Aeroplane, Vol. 65, No. 1,694, 12/11/43, pp. 560-561.)

Training and Organisation.

14	15356	G.B.	... *Technical Training Courses for Servicing the Halifax Bomber.* (Aeroplane, Vol. 65, No. 1,689, 8/10/43, pp. 412-413.)
15	15606	Germany	... *Plexiglass Submarine Models for Training.* (Signal, No. 9, May, 1943, p. 19.)
16	15607	Germany	... *Training Tank for Escape Hatch Training (Submarine).* (Signal, No. 9, May, 1943, pp. 20-21.)
17	15671	U.S.A.	... *Reorganisation of the American Air Staff.* (Inter. Avia., No. 876-877, 19/7/43, pp. 1-6.)
18	15727	U.S.A.	... *New Items of Value to Combat Flying (Trainer for Educating Aerial Photographers on the Ground, Pre-Oiling Device to Prevent Bearing Failure, Piston Seizure, etc.).* (S. R. Winters, Aero Digest, Vol. 43, No. 2, August, 1943, pp. 216, 301.)
19	16137	U.S.A.	... *Four-Engined Boeing Bomber Provides Systematic Instructions for Heavy Bomber Students.* (Scientific American, Vol. 169, No. 4, Oct., 1943, p. 156.)
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21	16193	U.S.A.	... *C.A.A. Airport Model Used by Instructors (Photo).* (American Aviation, Vol. 7, No. 9, 1/10/43, p. 68.)
22	16284	U.S.A.	... *Pre-Flight Training Schools of the Flying Training Command—Part I.* (B. K. Yount, Aviation, Vol. 42, No. 8, August, 1943, pp. 124-125, 321-326.)
23	16452	Germany	... *Hitler Youth—Athletic and Flying Competition at Quedlinburg,* 8-16/8/43. (Flugsport, Vol. 35, No. 13, 15/9/43, pp. 197-199.)

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25	16502	G.B.	*The A.T.C. of the Future.* (C. G. Grey, Aeroplane, Vol. 65, No. 1,694, 12/11/43, p. 554.)

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26	14559	G.B.	*Plastics in German Aircraft.* (British Plastics, Vol. 15, No. 172, September, 1943, p. 215.)
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28	15483	G.B.	*Steerable Nose Wheel on Payne Trainer.* (Der Flieger, Vol. 22, No. 5, May, 1943, p. 144.)
29	15487	U.S.A. ...	*Stainless Steel in Aircraft Construction (from the Iron Age).* (Der Flieger, Vol. 22, No. 5, May, 1943, pp. 149-150.)
30	15488	U.S.A. ...	*List of American Plastics and Their Employment in Aircraft.* (Der Flieger, Vol. 22, No. 5, May, 1943, p. 149.)
31	15507	U.S.A. ...	*New External Bomb Racks on the Boeing Flying Fortress (Photo).* (American Journal, Vol. 7, No. 6, 15/8/43, p. 19.)
32	15553	Germany ...	*Synthetic Resins in Aircraft Construction.* (Der Flieger, Vol. 22, No. 7, July, 1943, p. 202.)
33	15576	U.S.A. ...	*Plastic Aircraft Construction in the U.S.A.* (Der Flieger, Vol. 22, No. 2, Feb., 1943, p. 58.)
34	15665	U.S.A. ...	*Helicopter Developments in the U.S. Army Air Force.* (Inter. Avia., No. 879-880, 9/8/43, p. 17.)
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36	15749	U.S.S.R. ...	*Woods Used in Russian Aeroplanes.* (R.T.P.3 Translation No. 1,820.) (J. Theiner, Aircraft Engineering, Vol. 15, No. 176, Oct., 1943, pp. 288, 292.)
37	15999	U.S.S.R. ...	*Russian Aircraft Designers.* (V. L. Gruberg, Flight, Vol. 44, No. 1,816, 14/10/43, p. 425.)
38	16008	U.S.S.R. ...	*A Russian View: Development Trend of Russian Aircraft.* (H. Polikarpov, Flight, Vol. 44, No. 1,817, 21/10/43, p. 453.)
39	16251	G.B.	*Drop Tanks—Supplementary Fuel Extends Range of Aircraft.* (Flight, Vol. 44, No. 1,819, 4/11/43, pp. 511-513.)

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43	15352	G.B.	*Protection Against Balloon Cables.* (Aeroplane, Vol. 65, No. 1,689, 8/10/43, p. 404.)
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45	15480	Germany ...	*Electrical Equipment of Ju. 88, including Wireless (700 Units, 6,000 m. wire, 500 kg. Weight).* (Der Flieger, Vol. 22, No. 5, May, 1943, p. 144.)
46	15683	U.S.A. ...	*Light Armoured Vest for Protection Against Shell Splinters.* (Inter. Avia., No. 876-877, 19/7/43, p. 24.)
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50	16054	U.S.A. ...	*Midget Searchlight for Life Rafts.* (Scientific American, Vol. 169, No. 4, Oct., 1943, pp. 179-180.)
51	16143	G.B.	*Aircraft Searchlights and U-Boat Warfare.* (Engineer, Vol. 176, No. 4,581, 29/10/43, p. 337.)
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53	16247	G.B.	*The Rotol Auxiliary Generating Plant for Aircraft.* (Flight, Vol. 44, No. 1,819, 4/11/43, pp. 500-501.)
54	16307	U.S.A. ...	*Parachute Servicing Table for Use in Combat Zones.* (Aviation, Vol. 42, No. 8, August, 1943, p. 229.)
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57	14980	U.S.A. ...	*The Sperry Automatic Sight.* (Army Ordnance, Vol. 25, No. 140, September-October, 1943, p. 371.)
58	15400	U.S.A. ...	*Circular Magazine for Airacobra Cannon (Photo).* (Inter. Avia., No. 875, 7/7/43, p. 1.)
59	15458	Germany ...	*Flexible Cover for Gun Turret Slots (Pat. 724,234).* (Borsig, Flugsport, Vol. 35, No. 12, 18/8/43, p. 46.)
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62	15582	Germany ...	*New German Machine Gun, M.G.* 131. (Der Flieger, Vol. 22, No. 1, Jan., 1943, pp. 20-21.)
63	15608	Germany ...	*Aircraft Gun Sighting Adjustment (Firing Targets).* (Signal, No. 7, April, 1943, p. 11.)
64	15633	Switzerland ...	*The Explicit Temperature Effect on Ballistic Trajectories.* (O. Kilhint, R. Sanger, Schweizer Archiv., Vol. 8, No. 6, June, 1942, pp. 167-168.)
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66	16081	U.S.A. ...	*New Frontal Positions for .50 Calibre Machine Guns of Boeing Flying Fortress (Photo).* (American Aviation, Vol. 7, No. 8, 15/9/43, p. 25.)
67	16091	Germany ...	*Reports of the New German Bomb.* (Aeroplane, Vol. 65, No. 1,692, 19/10/43, p. 486.)
68	16145	G.B.	*The .5 in Side Machine Guns in the Noses of U.S. Fortresses (Photo).* (Flight, Vol. 44, No. 1,818, 28/10/43, p. 467.)
69	16290	U.S.A. ...	*The Bell Gun Recoil Damping Device.* (Aviation, Vol. 42, No. 8, August, 1943, pp. 178-181.)
70	16305	U.S.A. ...	*Sperry Automatic Computing Sight.* (Aviation, Vol. 42, No. 8, August, 1943, p. 229.)
71	16434	Germany ...	*Large Calibre Gun Installation on Aircraft (Recoil Balance by Firing in Opposite Directions)* (736,555), *Junkers Patent Series* 8 *(contd.).* (Flugsport, Vol. 35, No. 13, 15/9/43, pp. 52-53.)
72	16477	G.B.	*Plastic Hand Grenade No.* 69, *Mark I/L.* (Plastics, Vol. 7, No. 78, Nov., 1943, pp. 500-506.)
			Military Types of Aircraft (G.B.).
73	16304	G.B.	*British Bomber-Transport Conversions.* (J Bradbrooke, Aviation, Vol. 42, No. 8, August, 1943, pp. 227, 319-321.)
74	15397	G.B.	*Handley Page Halifax II (Photo).* (Inter. Avia., No. 875, 7/7/43, p. 1.)
75	15567	G.B.	*Hawker "Typhoon" (Photograph).* (Der Flieger, Vol. 22, No. 6, June, 1943, p. 179.)
76	15568	G.B.	*De Havilland Mosquito (Photograph).* (Der Flieger, Vol. 22, No. 6, June, 1943, p. 179.)
77	15579	G.B.	*Avro Lancaster (Sectioned Drawing and Design Details).* (Der Flieger, Vol. 22, No. 1, Jan., 1943, pp. 14-15.)
78	15580	G.B.	*Short Stirling (Sectioned Drawing and Design Details).* (Der Flieger, Vol. 22, No. 1, Jan., 1943, pp. 16-17.)
79	15581	G.B.	*Handley Page Halifax (Sectioned Drawing and Design Details).* (Der Flieger, Vol. 22, No. 1, Jan., 1943, pp. 18-19.)
80	15673	G.B.	*Hawker Typhoon (I).* (Inter. Avia., No. 876-877, 19/7/43, p. 11.)

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81	15914	G.B.	*Inside the Stirling.* (E. P. Meyers, Autom. and Aviation Ind., Vol. 89, 1/9/43, pp. 37, 38-41, 60-62.)
82	16396	G.B.	*The Taylorcraft Auster III (Recognition Details).* (Aeroplane, Vol. 65, No. 1,693, 5/11/43, p. 533.)
83	16399	G.B.	*Mosquito Versatility.* (Flight, Vol. 44, No. 1,820, 11/11/43, pp. 524-525.)
84	16402	G.B.	*New Tail for the Handley Page Halifax II (Photo).* (Flight, Vol. 44, No. 1,820, 11/11/43, p. 530.)
85	16446	G.B.	*De Havilland Mosquito (Sect. Drawing).* (Flugsport, Vol. 35, No. 13, 15/9/43, pp. 182-184.)
86	16495	G.B.	*D.H. Mosquitoes for Photographic Reconnaissance and for Civil Transport (Photo).* (Aeroplane, Vol. 65, No. 1,694, 12/11/43, pp. 544, 546-547, 558.)
			Military Types of Aircraft (U.S.A.).
87	15358	U.S.A. ...	*The Lockheed C-69 Constellation (Recognition Details).* (Aeroplane, Vol. 65, No. 1,689, 8/10/43, p. 417.)
88	15359	U.S.A. ...	*The Douglas C-54 Skymaster (Recognition Details).* (Aeroplane, Vol. 65, No. 1,689, 8/10/43, p. 417.)
89	15386	U.S.A. ...	*Lockheed P-38 Lightning.* (Inter. Avia., No. 875, 7/7/43, p. 12.)
90	15387	U.S.A. ...	*Lockheed Auxiliary Fuel Tanks (Steel) (I).* (Inter. Avia., No. 875, 7/7/43, pp. 12-13.)
91	15388	U.S.A. ...	*Vought "Corsair" Naval Fighters (I).* (Inter. Avia., No. 875, 7/7/43, p. 13.)
92	15398	U.S.A. ...	*Grumman Avenger Torpedo Bomber (Photo).* (Inter. Avia., No. 875, 7/7/43, p. 1.)
93	15399	U.S.A. ...	*Curtiss Owl Observation Aircraft (Silhouette).* (Inter. Avia., No. 875, 7/7/43, p. 1.)
94	15512	U.S.A. ...	*Curtiss "Seagull" (Photo).* (American Aviation, Vol. 7, No. 7, 1/9/43, p. 24.)
95	15554	U.S.A. ...	*American Advanced Trainers (Photographs).* (Der Flieger, Vol. 22, No. 7, July, 1943, p. 203.)
96	15578	U.S.A. ...	*Bell Airacobra (Sectioned Drawing).* (Der Flieger, Vol. 22, No. 1, Jan., 1943, p. 13.)
97	15595	U.S.A. ...	*Consolidated 28 "Catalina" (Sectioned Drawing).* (Der Flieger, Vol. 22, No. 4, April, 1943, p. 107.)
98	15663	U.S.A. ..	*Lockheed P-38 Lightning.* (Inter. Avia., No. 879-880, 9/8/43, p. 15.)
99	15664	U.S.A. ...	*American Troop Transport Plane (List of Types).* (Inter. Avia., No. 879-880, 9/8/43, pp. 15-17.)
100	15674	U.S.A. ...	*Kaiser-Hughes 8-Engined Plywood Flying Boat Project (Useful Load 120,000 lb.).* (Inter. Avia., No. 876-877, 19/7/43, p. 13.)
101	15715	U.S.A. ...	*Mustang Acquires Added Fire Power (4-20 mm. Cannon).* (Aero Digest, Vol. 43, No. 2, August, 1943, p. 147.)
102	15726	U.S.A. ...	*Fairchild "Cornell" Primary Trainer (Exploded View).* (Aero Digest, Vol. 43, No. 2, August, 1943, pp. 214-215.)
103	15734	U.S.A. ...	*Flying Fortress (B-17) with Supplementary Exterior Bomb Racks (Photo).* (Aero Digest, Vol. 43, No. 2, August, 1943, p. 294.)

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104	15996	U.S.A. ...	*Lockheed Constellation* (*Recognition Details*). (Flight, Vol. 44, No. 1,816, 14/10/43, p. a.)
105	16005	U.S.A. ...	*Beechcraft AT-11* (*Kansas*) (*Recognition Details*). (Flight, Vol. 44, No. 1,817, 21/10/43, p. 450.)
106	16006	U.S.A. ...	*Curtiss Caravan* (*C-76*) (*Recognition Details*). (Flight, Vol. 44, No. 1,817, 21/10/43, p. 451.)
107	16009	U.S.A. ...	*New American Heavy Bomber B.* 29. (Flight, Vol. 44, No. 1,817, 21/10/43, p. 454.)
108	16025	U.S.A. ...	*Vought-Sikorsky Kingfisher* (*V.S.-310*) (*Photo*). (Flight, Vol. 44, No. 1,818, 28/10/43, p. 488.)
109	16084	U.S.A. ...	*New Super-Bomber Planned in U.S.A.* (American Aviation, Vol. 7, No. 8, 15/9/43, p. 26.)
110	16093	U.S.A. ...	*Lockheed Lightning P.* 38 *as Escort Fighter for Daylight Raids.* (Aeroplane, Vol. 65, No. 1,692, 29/10/43, p. 487.)
111	16095	U.S.A. ...	*Grumman Tarpon and Hellcat* (*Photo*). (Aeroplane, Vol. 65, No. 1,692, 29/10/43, p. 490.)
112	16096	U.S.A. ...	*Vought-Sikorsky Corsair I* (*Photo*). (Aeroplane, Vol. 65, No. 1,692, 29/10/43, p. 491.)
113	16146	U.S.A. ...	*Vought-Sikorsky F4U-1 Corsair Fighter* (*Photo*). (Flight, Vol. 44, No. 1,818, 28/10/43, p. 467.)
114	16150	U.S.A. ...	*Grumman Gosling* (*J4F-1*) (*Recognition Details*). (Flight, Vol. 44, No. 1,818, 28/10/43, p. 478.)
115	16151	U.S.A. ...	*Northrop N-3PB* (*Recognition Details*). (Flight, Vol. 44, No. 1,818, 28/10/43, p. 47.)
116	16184	U.S.A. ...	*New U.S. Torpedo Plane—Seawolf.* (American Aviation, Vol. 7, No. 9, 1/10/43, p. 16.)
117	16188	U.S.A. ...	*Grumman's New "Hellcat" Fighter Plane* (*Photo*). (American Aviation, Vol. 7, No. 9, 1/10/43, p. 35.)
118	16246	U.S.A. ...	*The Lockheed Lightning—America's Twin-Engined Long-Range Fighter.* (Flight, Vol. 44, No. 1,819, 4/11/43, pp. 497-500.)
119	16285	U.S.A. ...	*Design Analysis of the Curtiss Commando.* (J. Foster, Aviation, Vol. 42, No. 8, August, 1943, pp. 130-153.)
120	16295	U.S.A. ...	*Design Detail Sketch of Consolidated Vultee PBY Catalina.* (Aviation, Vol. 42, No. 8, August, 1943, pp. 187-189.)
121	16296	U.S.A. ...	*Bell P-39 Airacobra Wing* (*Design Detail*). (Aviation, Vol. 42, No. 8, August, 1943, p. 189.)
122	16391	U.S.A. ...	*Lockheed Lightning P-38* (*Photo*). (Aeroplane, Vol. 65, No. 1,693, 5/11/43, p. 520.)
123	16395	U.S.A. ...	*The North American Mustang I.* (Aeroplane, Vol. 65, No. 1,693, 5/11/43, pp. 527-531.)
124	16397	U.S.A. ...	*The Stinson L-5B Sentinel* (*Recognition Details*). (Aeroplane, Vol. 65, No. 1,693, 5/11/43, p. 533.)
125	16403	U.S.A. ...	*Invader* (*A-36*) (*Fighter-Dive Bomber Version of the Mustang*) (*Recognition Details*). (Flight, Vol. 44, No. 1,820, 11/11/43, p. a.)
126	16411	U.S.A. ...	*Grumman Avenger* (*Tarpon*) (*Photo*). (Flight, Vol. 44, No. 1,820, 11/11/43, p. 523.)
127	16447	U.S.A. ...	*Martin B-26* (*Photo of Plexiglass Nose and Tail Windows*). (Flugsport, Vol. 35, No. 13, 15/9/43, p. 185.)

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			Military Types of Aircraft (U.S.S.R.).
128	15515	U.S.S.R. ...	*New Russian Aircraft.* (American Aviation, Vol. 7, No. 7, 1/9/43, p. 32.)
129	15666	U.S.S.R. ...	*Petlyakoff PE-2 Russian Light Bomber.* (Inter. Avia., No. 879-880, 9/8/43, p. 20.)
130	15750	U.S.S.R. ...	*The Lagg-3 Russian Fighter.* (*R.T.P.3 Translation No.* 1,822.) (Nils Hulten, Aircraft Engineering, Vol. 15, No. 176, Oct., 1943, pp. 289-292.)
131	16259	U.S.S.R. ...	*Lagg-3* (*Sectional Drawing and Parts List*). (Flying, No. 16, 26/8/43, pp. 20-21.)
132	16500	U.S.S.R. ...	*Aeroplanes of the Red Air Forces—I* (*The Ant-g, Ant-20 bis, Ar-2, Ark-3*) (*Recognition Details*). (Aeroplane, Vol. 65, No. 1,694, 12/11/43, p. 552.)
			Military Types of Aircraft (Germany).
133	15150	Germany ...	*The History of the Luftwaffe Heavies.* (H. J. A. Wilson, Aeronautics, Vol. 9, No. 2, September, 1943, pp. 33-38.)
134	15354	Germany ...	*Heinkel III Designations.* (Aeroplane, Vol. 65, No. 1,689, 8/10/43, p. 404.)
135	15435	Germany ...	*Focke-Wulf F.W.* 190. (Flugsport, Vol. 35, No. 12, 18/8/43, pp. 163-165.)
136	15474	Germany ...	*Focke-Wulf F.W.* 190 (*Sectional Drawing*). (Der Flieger, Vol. 22, No. 5, May, 1943, p. 131.)
137	15475	Germany ...	*Heinkel He.* 111 (*Photograph*). (Der Flieger, Vol. 22, No. 5, May, 1943, p. 132.)
138	15489	Germany ...	*The Development of the Heinkel He.* 111 (*Well Illustrated*). (Der Flieger, Vol. 22, No. 8, August, 1943, pp. 220-225.)
139	15490	Germany ...	*The Ju.* 52 *Universal Transport Plane* (*Examples of Utilisation*). (Der Flieger, Vol. 22, No. 8, August, 1943, pp. 230-231.)
140	15562	Germany ...	*He.* 111 (*Photographs*). (Der Flieger, Vol. 22, No. 6, June, 1943, pp. 158-161.)
141	15563	Germany ...	*The Development of the Dornier Wal. Type of Flying Boat.* (W. Zuerl, Der Flieger, Vol. 22, No. 6, June, 1943, pp. 164-167.)
142	15572	Germany ...	*Me.* 109 (*Sectional Drawing*). (Der Flieger, Vol. 22, No. 2, Feb., 1943, pp. 48-49.)
143	15577	Germany ...	*Dornier Do.* 217 (*Photograph*). (Der Flieger, Vol. 22, No. 1, Jan., 1943, p. 5.)
144	15584	Germany ...	*Bucker Trainers.* (Der Flieger, Vol. 21, No. 3, March, 1942, pp. 66-68.)
145	15591	Germany ...	*Dornier Do.* 217 (*Photograph*). (Der Flieger, Vol. 22, No. 4, April, 1943, p. 93.)
146	15594	Germany ...	*Me.* 110 (*Sectioned Drawing*). (Der Flieger, Vol. 22, No. 4, April, 1943, pp. 104-105.)
147	15654	Germany ...	*Junkers Ju. 86P High Altitude Bomber* (*British Notes*). (I., Inter. Avia., No. 879-880, 9/8/43, p. 9.)
148	15655	Germany ...	*Heinkel He.* 177 (*British Notes*). (Inter. Avia., No. 879-880, 9/8/43, pp. 9-10.)
149	15656	Germany ...	*Blohm and Voss B.V.* 222 (*British Notes*). (Inter. Avia., No. 879-880, 9/8/43, p. 10.)

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150	15657	Germany	...	*Messerschmitt Me.* 323 *Transport* (*British Notes*). (Inter. Avia., No. 879-880, 9/8/43, p. 10.)
151	15679	Germany	...	*New Version of Me.* 110 *Intercepter Fighter* (*Six Cannon*). (Inter. Avia., No. 876-877, 19/7/43, p. 17.)
152	15706	Germany	...	*Heinkel Development* (*Different Versions of the Heinkel* 111). (Aeroplane, Vol. 65, No. 1,690, 15/10/43, p. 439.)
153	15997	Germany	...	*Junkers Ju.* 290 (*Recognition Details*). (Flight, Vol. 44, No. 1,816, 14/10/43, p. b.)
154	16003	Germany	...	*Ju.* 87 *D2 with* 13 *mm. MG* 131 (*Photo*). (Flight, Vol. 44, No. 1,817, 21/10/43, p. 449.)
155	16004	Germany	...	*The Me.* 410. (Flight, Vol. 44, No. 1,817, 21/10/43, p. 449.)
156	16016	Germany	...	*German Fighter Aircraft.* (Engineer, Vol. 176, No. 4,581, 29/10/43, p. 346.)
157	16148	Germany	...	*New Version of Me.* 110 (*Photo*) (*Showing Cannon Installation*). (Flight, Vol. 44, No. 1,818, 28/10/43, p. 472.)
158	16248	Germany	...	*Blohm and Voss B.V.* 222 (*Recognition Details*). (Flight, Vol. 44, No. 1,819, 4/11/43, p. 502.)
159	16297	Germany	...	*Wing of Junkers Ju.* 88 (*Design Detail*). (Aviation, Vol. 42, No. 8, August, 1943, p. 191.)
160	16404	Germany	...	*Messerschmitt Me.* 109*G* (*Recognition Details*). (Flight, Vol. 44, No. 1,820, 11/11/43, p. b.)
161	16405	Germany	...	*Ju.* 86*P High Altitude Aircraft* (*Photo*). (Flight, Vol. 44, No. 1,820, 11/11/43, p. 531.)
				Military Types of Aircraft (Japan).
162	15436	Japan	...	*Mitsubishi S-OO Fighter.* (Flugsport, Vol. 35, No. 12, 18/8/43, p. 166.)
163	15680	Japan	...	*New Japanese Twin-Engined Medium Bomber I.* (Inter. Avia., No. 876-877, 19/7/43, p. 18.)
164	15710	Japan	...	*Aeroplanes of the Japanese Army and Navy Air Forces* (*Silhouettes*). (Aeroplane, Vol. 65, No. 1,690, 15/10/43, p. 443.)
				Military Types of Aircraft (Italy).
165	15478	Italy ...	...	*Macchi. M.C.* 202 *Fighter* (*Photograph*). (Der Flieger, Vol. 22, No. 5, May, 1943, p. 142.)
166	15481	Italy ...	...	*Re.* 2003 *Two-Seater Trainer* (*Photo*). (Der Flieger, Vol. 22, No. 5, May, 1943, p. 144.)
167	15482	Italy ...	...	*Caproni Ca.* 331 *Night Fighter* (*Photo*). (Der Flieger, Vol. 22, No. 5, May, 1943, p. 144.)
168	15669	Italy ...	...	*Cant.* 1018 *Medium Bomber* (*Photograph*). (I., Inter. Avia., No. 879-880, 9/8/43.)
169	15670	Italy ...	...	*Cant.* 515 *Float Reconnaissance Plane* (*Photo*). (I., Inter Avia., No. 879-880, 9/8/43.)
170	16012	Italy ...	...	*The Piaggio* 108. (Flight, Vol. 44, No. 1,817, 21/10/43, p. 458.)
171	16445	Italy ...	...	*Caproni Ca.* 313 *Light Bomber.* (Flugsport, Vol. 35, No. 13, 15/9/43, pp. 181-182.)
				Military Types of Aircraft (France).
172	15551	France	...	*Bugatti High Speed Aircraft* (*Review of Patents*). (Der Flieger, Vol. 22, No. 7, July, 1943, p. 195.)

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173	15659	France ...	*Gauthier Trainer (Incorporating Feature of Morane* 460). (Inter. Avia., No. 879-880, 9/8/43, p. 12.)
174	15660	France ...	*French Giant Flying Boats S.E. 200 and Laté* 631. (Inter. Avia., No. 879-880, 9/8/43, p. 12.)
			Military Types of Aircraft (Sweden and Spain).
175	15565	Sweden ...	*Swedish Military Aircraft.* (Der Flieger, Vol. 22, No. 6, June, 1943, pp. 172-175.)
176	15681	Sweden ...	*Swedish Twin-Engined Light Bomber B-18.* (I., Inter. Avia., No. 876-877, 19/7/43, p. 18.)
177	15682	Sweden ...	*J. 22 Fighter.* (Inter. Avia., No. 876-877, 19/7/43, p. 18.)
178	16007	Sweden ...	*An Unorthodox Swedish Project: Asymmetrical Fighter and Bomber (Isacson Design).* (Flight, Vol. 44, No. 1,817, 21/10/43, p. 452.)
179	16013	Spain ...	*Spanish and Mexican Trainers.* (Flight, Vol. 44, No. 1,817, 21/10/43, p. 458.)
			Gliders and Sailplanes.
180	15392	U.S.A. ...	*Atlantic Glider Train.* (Inter. Avia., No. 875, 7/7/43, pp. 16-17.)
181	15434	Germany ...	*Sailplane Rheinland* 108-74. (Flugsport, Vol. 35, No. 12, 18/8/43, pp. 162-163.)
182	15477	U.S.A. ...	*American Type of Sail Planes (V).* (Der Flieger, Vol. 22, No. 5, May, 1943, pp. 136-141.)
183	15494	Hungary ...	*Types of Hungarian Sail Planes.* (Der Flieger, Vol. 22, No. 8, August, 1943, pp. 239-242.)
184	15555	Switzerland ...	*Swiss Types of Sail Planes.* (Der Flieger, Vol. 22, No. 7, July, 1943, pp. 204-208.)
185	15569	Switzerland ...	*Swiss Types of Sail Planes (VI).* (Der Flieger, Vol. 22, No. 6, June, 1943, pp. 180-182.)
186	15583	Germany ...	*New 45 Hours' Sailing Record for Germany.* (E. Vergens, Der Flieger, Vol. 22, No. 1, Jan., 1943, pp. 22-23.)
187	15597	France ...	*French Type of Sail Planes.* (Der Flieger, Vol. 22, No. 4, April, 1943, p. 110.)
188	15598	France ...	*Fauvel Tailless Glider AV. 17 (Silhouette).* (Der Flieger, Vol. 22, No. 4, April, 1943, p. 110.)
189	15662	G.B.	*Horsa Troop Transport Glider.* (I., Inter. Avia., No. 879-880, 9/8/43, p. 13.)
190	15675	U.S.A. ...	*Atlantic Glider Train (Nylon Towing Cable* 340 *ft.).* (Inter. Avia., No. 876-877, 19/7/43, pp. 13-14.)
191	15676	U.S.A. ...	*Auxiliary Engine for Waco CG-4 Fifteen-Seater Transport Glider.* (I., Inter. Avia., No. 876-877, 19/7/43, p. 14.)
192	16309	U.S.A. ...	*New U.S. Amphibious Glider (Photo).* (Aviation, Vol. 42, No. 8, August, 1943, p. 277.)
193	16362	G.B.	*Airspeed Horsa Transport Glider.* (Automotive Industries, Vol. 89, No. 6, 15/9/43, pp. 32-33.)
194	16451	Germany ...	*Standard Specification Sheets (No. 9-16 for Certain Glider Components).* (Flugsport, Vol. 35, No. 13, 15/9/43, pp. 187-188.)
			Fleet Air Arm.
195	15357	G.B.	*The Fairey Albacore of the Fleet Air Arm.* (Aeroplane, Vol. 65, No. 1,689, 8/10/43, pp. 414-415.)

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196	15705	G.B.	*Navy Observer Trainer—Stinson Reliant I (Photo).* (Aeroplane, Vol. 65, No. 1,690, 15/10/43, p. 433.)
197	15708	G.B.	*Work of Wrens in Fleet Air Arm.* (Aeroplane, Vol. 65, No. 1,690, 15/10/43, pp. 442-443.)
198	15954	G.B.	*The Rôle of the Aircraft Carrier (U.S.A. Developments).* (B. J. Hurren, Flight, Vol. 44, No. 1,816, 14/10/43, pp. 415-419.)
199	16015	G.B.	*New U.S. Aircraft Carriers.* (Engineer, Vol. 176, No. 4,581, 29/10/43, p. 345.)
200	15099	G.B.	*The Fleet Air Arm.* (A. Bryant, Aeroplane, Vol. 65, No. 1,692, 29/10/43, pp. 498-499.)
201	16185	U.S.A. ...	*The U.S. Fleet Air Arm (Aircraft Figures).* (American Aviation, Vol. 7, No. 9, 1/10/43, p. 30.)
202	16245	G.B.	*The Fleet Air Arm.* (Flight, Vol. 44, No. 1,819, 4/11/43, p. 495.)
203	16389	G.B.	*Fleet Air Arm.* (Aeroplane, Vol. 65, No. 1,693, 5/11/43, p. 517.)
			A.A. and A.R.P.
204	15744	Switzerland ...	*A.A. Searchlights (Description, Functioning and Method of Employment).* (H. Born, Flugwehr und Technik., Vol. 5, No. 2, February, 1943, pp. 39-41.)
205	15745	Switzerland ...	*The Effect of Angular Acceleration on the Sighting of A.A.Guns.* (A. Roth, Flugwehr und Technik., Vol. 5, No. 2, February, 1943, pp. 42-46.)
206	15750	Switzerland ...	*Some Elementary Considerations on the Employment of Light A.A. Guns.* (H. Born, Flugwehr und Technik., Vol. 5, No. 8, August, 1943, pp. 206-209.)
207	16198	U.S.A. ...	*Instruction in Fire-Fighting at the Norfolk Navy Base.* (National Petroleum News, Vol. 35, No. 34, 25/8/43, pp. 17-20.)
208	16392	U.S.S.R. ...	*Soviet Barrage Balloons (Photo).* (Aeroplane, Vol. 65, No. 1,693, 5/11/43, p. 522.)
			GENERAL AERODYNAMICS.
209	12717	Germany ...	*Some Notes on the Theory of Free Turbulence.* (L. Prandtl, Z.A.M.M., Vol. 22, No. 5, Oct., 1942, pp. 241-243.)
210	12718	Germany ...	*A New Approximeter Method for the Numerical Evolution of Free Turbulence Problems.* (H. Gortler, Z.A.M.M., Vol. 22, No. 5, Oct., 1942, pp. 244-254.)
211	12720	Germany ...	*The Flow of Compressible Fluids about Solid Bodies (Subsonic Speeds).* (F. Eser, L.F.F., Vol. 20, No. 7, 20/7/43, pp. 220-230.)
212	12721	Germany ...	*The Theory of the Unsteady Compression Shock (Two Dimensional Problem).* (R. Sauer, Ing. Archiv., Vol. 14, No. 1, 1943.)
213	12722	Germany ...	*Unsteady Gas Flow in Nozzles and Diffusors with Some Notes on Flow having Spherical Symmetry.* (F. Schultz Grunow, Ing. Archiv., Vol. 14, No. 1, 1943.)

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214	15590	Germany ...	*Boundary Layer Control by Emission of Air (N.A.C.A. Experiments).* (Der Flieger, Vol. 21, No. 3, March, 1942, p. 86.)
215	15652	Germany ...	*Investigation on Convergent and Divergent Turbulent Boundary Layers.* (A. Kehl, Ing. Archiv., Vol. 13, No. 5, pp. 293-329.)
216	15816	G.B.	*Wind Pressure on Buildings, including Effects of Adjacent Buildings.* (A. Bailey and N. D. G. Vincent, Journal of the Institution of Civil Engineers, Vol. 20, No. 8, Oct., 1943, pp. 243-275.)
217	15841	U.S.A. ...	*Relationship Between Reynolds Number and Velocity Distribution (Discussion).* (Journal of Applied Mechanics, Vol. 10, No. 3, Sept., 1943, pp. A179-A180.)
218	15971	Italy	*The Influence of Reynolds Number at High Mach Numbers.* (A. Ferri, Luftwissen, Vol. 10, No. 3, March, 1943, pp. 90-91.)

AIRCRAFT AND ACCESSORIES.

Air Cargo and Civil Aviation.

219	15065	G.B.	*The U.S. Office of Air Transport Information.* (Aeroplane, Vol. 65, No. 1,688, 1/10/43, p. 397.)
220	15072	G.B.	*The Work of the B.O.A. (Two Years' Survey).* (Flight, Vol. 44, No. 1,814, 30/9/43, p. 367.)
221	15395	U.S.A. ...	*Air Lines in Latin America.* (Inter. Avia., No. 875, 7/7/43, pp. 23-27.)
222	15396	U.S.A. ...	*Developments in Aerial Mail Pick-up Services.* (Inter. Avia., No. 875, 7/7/43, pp. 29-30.)
223	15506	G.B.	*Air Transport Policy (Conservative M.P.'s Views).* (Times Trade and Engineering, Vol. 53, No. 955, Sept., 1943, p. 32.)
224	15522	U.S.A. ...	*Five Types of Post-War Air Service.* (T. Wolfe, American Aviation, Vol. 7, No. 7, 1/9/43, pp. 21, 41.)
225	15667	U.S.A. ...	*Civil Aviation Projects in the U.S.A.* (Inter. Avia., No. 879-880, 9/8/43, pp. 27-28.)
226	15668	G.B.	*British Overseas Airway Corporation Project.* (Inter. Avia., No. 879-880, 9/8/43, pp. 29-30.)
227	15684	U.S.A. ...	*American Civil Aviation—Result and Prospect.* (Inter. Avia., No. 876-877, 19/7/43, pp. 25-29.)
228	15712	U.S.A. ...	*Lockheed's Overseas Service Organisation.* (Aero Digest, Vol. 43, No. 2, August, 1943, pp. 121-125.)
229	15782	G.B.	*Canada and Civil Aviation.* (Engineer, Vol. 176, No. 4,580, 22/10/43, p. 334.)
230	16024	G.B.	*Air Transport (Debate in House of Lords).* (Flight, Vol. 44, No. 1,818, 28/10/43, pp. 484-485.)
231	16097	G.B.	*Air Transport in the House of Lords.* (Aeroplane, Vol. 65, No. 1,692, 29/10/43, p. 494.)
232	16100	U.S.A. ...	*U.S. Post-War Air Transport.* (Aeroplane, Vol. 65, No. 1,692, 29/10/43, p. 500.)
233	16186	U.S.A. ...	*Forecasting the Future of Aviation (Estimating Number of Aircraft Required for Transport Operation).* (M. Taitel, American Aviation, Vol. 7, No. 9, 1/10/43, p. 32.)

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234	16191	U.S.A. ...	*C.A.B. Study of U.S. Overseas Mail.* (American Aviation, Vol. 7, No. 9, 1/10/43, p. 43.)
235	16250	G.B.	*International Air Travel in Wartime (the Mediterranean Battle Fronts).* (J. Yoxall, Flight, Vol. 44, No. 1,819, 4/11/43, pp. 505-510.)
236	16279	U.S.A. ...	*Flying Freight.* (R. S. Ball, Service Engineering, Vol. 1, No. 2, Spring, 1943, pp. 6-7.)
237	16283	U.S.A. ...	*Our Planes and Our Peace (Future of Aviation Industry).* (H. Woodhead, Aviation, Vol. 42, No. 8, August, 1943, pp. 122-123, 333-338.)
238	16347	U.S.A. ...	*Basic Fundamentals for Packaging Air Cargo Shipments.* (J. H. Macleod, S.A.E. Preprint, 8-9/11/43, pp. 1-8.)
239	16348	U.S.A. ...	*Co-ordinating Air and Surface Cargo Transportation.* (J. H. Frederick, S.A.E. Preprint, 8-9/11/43, pp. 1-8.)
240	16349	U.S.A. ...	*The Use of Air Freighters in Areas not Served by Other Adequate Means of Transportation in Northern Canada.* (W. L. Brintnell, S.A.E. Preprint, 8-9/11/43, pp. 1-7.)
241	16398	G.B.	*Shipowners' Plan to Operate Air Lines.* (Aeroplane, Vol. 65, No. 1,693, 5/11/43, p. 534.)
242	16498	G.B.	*Pioneers of Flying in the U.S.A.* (G. Brewer, Aeroplane, Vol. 65, No. 1,694, 12/11/43, p. 550.)
243	16504	G.B.	*The Case for the Established Air Lines in Post-War Air Transport.* (Aeroplane, Vol. 65, No. 1,694, 12/11/43, p. 559.)
			Civil and Experimental Aircraft.
244	15437	Germany ...	*Pioneering Work of Weiss Kopf in the U.S.A. (Gliders and Power-Driven Aircraft, 1895-1911).* (Flugsport, Vol. 35, No. 12, 18/8/43, pp. 167-170.)
245	15502	G.B.	*Future Aircraft — Landplane or Flying-Boat?* (Times Trade and Engineering, Vol. 53, No. 955, Sept., 1943, p. 31.)
246	15524	G.B.	*Post-War Transport Aircraft (Contd.).* (E. P. Warner, Engineering, Vol. 156, No. 4,056, 8/10/43, pp. 285-286.)
247	15547	Germany ...	*Tailless Aircraft (German Type).* (Der Flieger, Vol. 22, No. 3, March, 1943, pp. 80-81.)
248	15550	France ...	*New Types of French Civil Aircraft.* (Der Flieger, Vol. 22, No. 7, July, 1943, pp. 190-194.)
249	15566	France ...	*Tailless Aircraft (French and American Types).* (W. Zuerl, Der Flieger, Vol. 22, No. 6, June, 1943, pp. 176-178.)
250	15573	Germany ...	*Tailless Aircraft (German Types — Delta and Storch).* (Der Flieger, Vol. 22, No. 2, Feb., 1943, pp. 50-51.)
251	15596	Germany ...	*German Tailless Aircraft (Horten and Gotha).* (W. Zuerl, Der Flieger, Vol. 22, No. 4, April, 1943, pp. 108-109.)
252	15661	Switzerland ...	*French Commercial Transport Trials (SO 30N and SO 161).* (Inter. Avia., No. 879-880, 9/8/43, pp. 12-13.)

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253	15714	U.S.A.	...	*Sky Cars for Civilian Use.* (W. B. Stout, Aero Digest, Vol. 43, No. 2, August, 1943, pp. 128-130.)
254	15885	G.B. ...	...	*Post-War Transport Aircraft (Contd.).* (E. P. Warner, Engineering, Vol. 156, No. 4,058, 22/10/43, pp. 337-338.)
255	15908	U.S.A.	...	*Noorduyn U.C.-64 Cargo Transport Plane (Photo).* (Autom. and Aviation Ind., Vol. 89, No. 5, 1/9/43, p. 25.)
256	16101	G.B. ...	...	*Lockheed Lodestar Transport (Photo).* (Aeroplane, Vol. 65, No. 1,692, 29/10/43, p. 500.)
257	16102	G.B. ...	...	*Consolidated CO 87 Liberator Express Transport (Photo).* (Aeroplane, Vol. 65, No. 1,692, 29/10/43, p. 501.)
258	16136	U.S.A.	...	*To-morrow's Air Transport Planes.* (A. Klemin, Scientific American, Vol. 169, No. 4, Oct., 1943, pp. 154-156.)
259	16187	U.S.A.	...	*Fairchild's New All-Metal Cargo Plane.* (American Aviation, Vol. 7, No. 9, 1/10/43, p. 34.)
260	16244	G.B. ...	...	*Avro York Transport Aircraft (Photo).* (Flight, Vol. 44, No. 1,819, 4/11/43, p. 492.)
261	16249	G.B. ...	...	*Civil Lancaster (Recognition Details).* (Flight, Vol. 44, No. 1,819, 4/11/43, p. 503.)
262	16353	G.B. ...	...	*The Avro York Transport Aircraft.* (Engineer, Vol. 176, No. 4,582, 5/11/43, p. 357.)
263	16393	G.B. ...	...	*The Avro York Transport (Photo).* (Aeroplane, Vol. 65, No. 1,693, 5/11/43, p. 523.)
264	16407	G.B. ...	...	*Comments on Our Newest Air Liner-Freighter (Avro-York).* (Flight, Vol. 44, No. 1,820, 11/11/43, pp. 532-533.)
265	16503	G.B. ...	...	*The Avro York (Photographs).* (Aeroplane, Vol. 65, No. 1,694, 12/11/43, pp. 556-557.)
				Design and Construction.
266	15360	G.B. ...	...	*An Outline of Wooden Construction (Historical Survey of Wooden Aircraft).* (J. A. Sizer, Aeroplane, Vol. 65, No. 1,689, 8/10/43, pp. 418-421.)
267	15391	U.S.A.	...	*South American Mahogany Used for Wooden Cargo Planes.* (Inter. Avia., No. 875, 7/7/43, p. 16.)
268	15446	Germany	...	*Tailless Aircraft (Pat. 735,149).* (Messerschmitt, Flugsport, Vol. 35, No. 12, 18/8/43, pp. 41-42.)
269	15476	G.B. ...	...	*Tailless Aircraft (Dunne, Pterodactyl, Handley Page, Roxbee Cox) (with Special Reference to the Handley Page Automatic Trimming Device).* (W. Zuerl, Der Flieger, Vol. 22, No. 5, May, 1943, pp. 135-137.)
270	15514	U.S.A.	...	*Martin Engineer Designs New Cargo Plane (Special Provisions for Loading and Unloading Incorporated in the Design).* (American Aviation, Vol. 7, No. 7, 1/9/43, p. 30.)
271	15672	G.B. ...	...	*New Civil Aircraft Projects in G.B.* (Inter. Avia., No. 876-877, 19/7/43, pp. 10-11.)
272	15707	G.B. ...	...	*An Outline of Wooden Construction—II.* (J. A. Sizer, Aeroplane, Vol. 65, No. 1,690, 15/10/43, pp. 440-441.)

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273	15722	U.S.A. ...	*Large Landplanes for Large Payloads.* (B. Smith, Aero Digest, Vol. 43, No. 2, August, 1943, pp. 192-195.)
274	15781	G.B.	*Jet Propelled Aircraft.* (Engineer, Vol. 176, No. 4,560, 22/10/43, p. 326.)
275	15995	G.B.	*A Vision of 25 Years Ahead (the Lonsdale-Hands Project for Jet Propelled Aircraft, etc.).* (Flight, Vol. 44, No. 1,816, 14/10/43, pp. 420-421.)
276	16002	G.B.	*Aircraft Weight Reduction.* (Flight, Vol. 44, No. 1,817, 21/10/43, p. 447.)
277	16340	Germany ...	*Calculation of Stiffened Shells in Metal Aeroplane Construction.* (Z.V.D.I., Vol. 86, No. 33-34, 22/8/42, pp. 497-507.) (E. Schapitz, Engineers' Digest, Vol. 4, No. 10, October, 1943, pp. 277-281.)
			Performance, Stability and Control.
278	15725	U.S.A. ...	*Streamlining Dynamic Stability Computations (Part IV).* (M. M. Munk, Aero Digest, Vol. 43, No. 2, August, 1943, pp. 207-208, 301.)
279	15746	Switzerland ...	*The Take-off of Heavily Loaded Aircraft.* (H. L. Studer and F. Widmer, Flugwehr und Technik., Vol. 5, No. 2, February, 1943, pp. 48-51.)
280	15747	G.B.	*Calculation of Wing Profile Drag—A New Simplified Method of Practical Value to Engineers.* (M. Holt, Aircraft Engineering, Vol. 15, No. 176, Oct., 1943, pp. 278-282.)
281	15748	G.B.	*The Lateral Stability of Aeroplanes—A New Geometrical System of Analysis (Part IV) (including Corrections to Part III).* (H. L. Price, Aircraft Engineering, Vol. 15, No. 176, Oct., 1943, pp. 281-287.)
282	16317	G.B.	*Diving Speed Calculations.* (Luftwissen, Vol. 10, No. 2, Feb., 1943, pp. 51-52.) (E. Kennel, Engineers' Digest, Vol. 4, No. 9, Sept., 1943, pp. 271-273.)
			Propellers and Helicopters.
283	15389	U.S.A. ...	*Unimatic Hydraulically Operated Variable Pitch Airscrew (Steel Blades).* (I., Inter. Avia., No. 875, 7/7/43, p. 14.)
284	15432	G.B.	*Propeller Developments.* (Mechanical World, Vol. 114, No. 2,961, 1/10/43, pp. 395-400.)
285	15463	Germany ...	*Twin Screw Helicopter with Intersecting Blade Discs (Pat. 733,590).* (Flettner, Flugsport, Vol. 35, No. 12, 18/8/43, p. 48.)
286	15492	Germany ...	*Junkers Variable Pitch Propeller VS (Sectional Diagram).* (Der Flieger, Vol. 22, No. 8, August, 1943, p. 235.)
287	15493	Germany ...	*Fundamentals of the Autogyro.* (Der Flieger, Vol. 22, No. 8, August, 1943, pp. 236-238.)
288	15503	G.B.	*V.P. Airscrews—Adaptation to Marine Use.* (Times Trade and Engineering, Vol. 53, No. 955, Sept., 1943, p. 34.)

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289	15588	Germany ...	*Variable Pitch Propellers (II)—Junkers VS Propeller.* (Der Flieger, Vol. 21, No. 3, March, 1942, pp. 82-83.)
290	15589	Germany ...	*Curtiss Hollow Steel Blade for Propellers.* (Der Flieger, Vol. 21, No. 3, March, 1942, p. 85.)
291	15686	U.S.A. ...	*Helicopter Service Projects.* (Inter. Avia., No. 876-877, 19/7/43, p. 30.)
292	15739	U.S.A. ...	*A New Device for Rapid Testing of Gyro Rotors (Few Mins.).* (Aero Digest, Vol. 43, No. 2, August, 1943, p. 397.)
293	16277	U.S.A. ...	*What About the Helicopter?* (Service Engineering, Vol. 1, No. 2, Spring, 1943, pp. 2-3.)
294	16437	Germany ...	*Directional Control for Rotary Wing Aircraft Fitted with Side by Side Rotors (Pat. 689,552).* (Focke, Flugsport, Vol. 35, No. 13, 15/9/43, p. 54.)
295	16438	Germany ...	*Drive for Rotary Systems Producing Axial Thrust and Kept in Rotation by Vibration of the Thrust Producing Members (Pat. 736,822).* (A.V.A. (Goethingen), Flugsport, Vol. 35, No. 13, 15/9/43, p. 54.)
296	16439	Germany ...	*Device for the Automatic Thrust Control of an Airscrew (with Special Application to the Compensation and Control Screws Fitted to Helicopters (Pat. 733,730).* (Flettner, Flugsport, Vol. 35, No. 13, 15/9/43, pp. 54-55.)
297	16440	Germany ...	*Single Rotor Helicopter Control by Auxiliary Airscrew at Tail (Pat. 734,201).* (Focke, Flugsport, Vol. 35, No. 13, 15/9/43, pp. 55-56.)

General Accessories and Patents.

298	15452	Germany ...	*Damping Device for Aircraft Structural Parts (Pat. 734,709).* (Junkers, Flugsport, Vol. 35, No. 12, 18/8/43, p. 43.)
299	15454	Germany ...	*Control of Artificial Horizon to Give True Banking Angle During a Turn (Pat. 736,170).* (Siemens, Flugsport, Vol. 35, No. 12, 18/8/43, p. 45.)
300	15455	Germany ...	*Distant Control of Two or More Navigational Instruments (Pat. 736,171).* (Siemens, Flugsport, Vol. 35, No. 12, 18/8/43, p. 45.)
301	15461	Germany ...	*Universal Spherical Joint for Aircraft Structural Parts (Pat. 734,939).* (Arado, Flugsport, Vol. 35, No. 12, 18/8/43, p. 47.)
302	15920	U.S.A. ...	*A Combination Air Scoop and Filter for Light Planes.* (Autom. and Aviation Ind., Vol. 89, No. 5, 1/9/43, pp. 44, 74.)
303	16098	G.B.	*Aircraft Accessory Systems—I (Abstract of S.A.E. Paper).* (T. B. Holliday, Aeroplane, Vol. 65, No. 1,692, 29/10/43, pp. 495-497.)
304	16181	G.B.	*Electrical Installations (Standardisation in Accessories and Fittings).* (Electrician, Vol. 131, No. 3,412, 22/10/43, pp. 405-406.)
305	16394	G.B.	*Aircraft Accessory Systems—II.* (T. B. Holliday, Aeroplane, Vol. 65, No. 1,693, 5/11/43, pp. 525-526.)

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306	16462	Germany ...	*Corner Guide for Control Cables (Interposed Endless Belt) (Pat.* 735,939). (Heinkel, Flugsport, Vol. 35, No. 13, 15/9/43, p. 52.)

Cabins and Windscreens.

307	15443	Germany ...	*Flexible Outer Wall of Pressure Cabin Assuming Correct Shape at Altitude (Pat.* 734,935), (Junkers, Flugsport, Vol. 35, No. 12, 18/8/43, p. 41.)
308	15444	Germany ...	*Stopping Pressure Cabin Leaks by Means of Metal Spraying (Pat.* 736,109). (Arado, Flugsport, Vol. 35, No. 12, 18/8/43, p. 41.)
309	15445	Germany ...	*Aircraft Window Frames (Pat.* 734,808). (Junkers, Flugsport, Vol. 35, No. 12, 18/8/43, p. 41.)
310	15754	G.B.	*Pressure Control System for Aircraft Cabins (Boeing Patent).* (Aircraft Engineering, Vol. 15, No. 176, Oct., 1943, p. 308.)
311	16453	Germany ...	*Universal Windscreen Cleaner (Endless Belt Conveying Cleansing Fluid and Effective Against Rain, Snow, Sand, Mist and Ice (Pat.* 736,908). (Focke-Wulf, Flugsport, Vol. 35, No. 13, 15/9/43, p. 49.)
312	16454	Germany ...	*Adjustable Cabin Enclosure (Pat.* 737,293). (Heinkel, Flugsport, Vol. 35, No. 13, 15/9/43, p. 49.)
313	16455	Germany ...	*Pressure Cabin Double Window with Air Purifier Sealed into Central Space (Pat.* 737,294). (Junkers, Flugsport, Vol. 35, No. 13, 15/9/43, p. 49.)
314	15462	Germany ...	*Silica Gel Air Drier for the Interior of Aircraft Structures (Corrosion Protection) (Pat.* 734,951). (Junkers, Flugsport, Vol. 35, No. 12, 18/8/43, p. 48.)

Landing Gear, Brakes.

315	15456	Germany ...	*Interconnection of Rudder and Tab (Pat.* 736,331). (Heinkel, Flugsport, Vol. 35, No. 12, 18/8/43, p. 45.)
316	15457	Germany ...	*Foot Pedals for Brake Operation (Pat.* 734,938). (Focke-Wulf, Flugsport, Vol. 35, No. 12, 18/8/43, pp. 45-46.)
317	15508	U.S.A. ...	*New Tank-Type Landing Gear.* (American Aviation, Vol. 7, No. 6, 15/8/43, p. 36.)
318	15747	Switzerland ...	*The Realisation of the Aircraft Propeller Landing Brake.* (A. V. de Muhll, Flugwehr und Technik., Vol. 5, No. 2, February, 1943, pp. 51-54.)
319	15791	Switzerland ...	*The Effectiveness of the Propeller as a Landing Brake.* (A. von der Muhll, Flugwehr und Technik., Vol. 5, No. 8, August, 1943, pp. 211-217.)
320	16206	Switzerland ...	*The Airscrew as a Landing Brake.* (From Flugwehr und Technik., Vol. 5, No. 2, Feb., 1943, pp. 51-54.) (A. von der Muhll, Engineers Digest, Vol. 4, No. 8, August, 1943, pp. 231-232.)

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			Fuselage, Wings, Flaps.
321	15447	Germany ...	*Adjustable Nose Slot for Suction or Emission of Air* (*Pat.* 734,936). (Heinkel, Flugsport, Vol. 35, No. 12, 18/8/43, p. 42.)
322	15448	Germany ...	*Operating Mechanism for Split Flaps* (*Pat.* 734,869). (Breda, Flugsport, Vol. 35, No. 12, 18/8/43, p. 42.)
323	15449	Germany ...	*Maintaining Laminar Flow on a Profile* (*Pat.* 734,937). (Junkers, Flugsport, Vol. 35, No. 12, 18/8/43, pp. 42-43.)
324	15450	Germany ...	*Wings of Very High Camber* (*Pat.* 736,169). (Reiter, Flugsport, Vol. 35, No. 12, 18/8/43, p. 43.)
325	15451	Germany ...	*Device for Increasing the Friction Lift of Fuselages* (*Pat.* 736,216). (Heinkel, Flugsport, Vol. 35, No. 12, 18/8/43, p. 43.)
326	15453	Germany ...	*Protection of Landing Flaps Against Overload* (*Pat* 737,729). (Dornier, Flugsport, Vol. 35, No. 12, 18/8/43, p. 44.)
327	15459	Germany ...	*Fuselage Flaps for Rearward Fire* (*Pat.* 733,168). (Dornier, Flugsport, Vol. 35, No. 12, 18/8/43, p. 46.)
328	16435	Germany ...	*Stringer Profiles* (*Pat.* 736,493). (Junkers, Flugsport, Vol. 35, No. 13, 15/9/43, p. 53.)
329	16436	Germany ...	*Adjustable Wing Stops for Rotating Wing Aircraft* (*Pat.* 737,528). (Flettner, Flugsport, Vol. 35, No. 13, 15/9/43, pp. 53-54.)
330	16456	Germany ...	*Hydraulically Operated Landing Flap* (*Pat.* 736,716). (Junkers, Flugsport, Vol. 35, No. 13, 15/9/43, pp. 49-50.)
331	16457	Germany ...	*Adjustable Fowler Flap* (*Pat.* 737,614). (Heinkel, Flugsport, Vol. 35, No. 13, 15/9/43, p. 50.)
332	16458	Germany ...	*Landing Flap by Dynamic Pressure and Provided with Clockwork Controlled Delay Mechanism* (*Pat.* 737,176). (Frexler, Flugsport, Vol. 35, No. 13, 15/9/43, p. 50.)
333	16459	Germany ...	*Automatic Lateral Stabiliser During Climb Controlled by Difference Between Thrust and Dynamic Head* (*Pat.* 737,177). (Junkers, Flugsport, Vol. 35, No. 13, 15/9/43, pp. 50-51.)
334	16461	Germany ...	*Lateral Control by Means of Spoilers* (*Pat.* 735,881). (Messerschmitt, Flugsport, Vol. 35, No. 13, 15/9/43, pp. 51-52.)
			De-icing.
335	15510	U.S.A. ...	*New Anti-Ice Device* (*Rubber Strip as Conductor of Electricity*). (American Aviation, Vol. 7, No. 7, 1/9/43, p. 19.)
336	16090	U.S.A. ...	*Wing De-Icing* (*Use of Exhaust Gases*). (American Aviation, Vol. 7, No. 8, 15/9/43, p. 78.)
337	16363	U.S.A. ...	*A Thermal Anti-Icing System Developed by the Consolidated Vultee Aircraft Corp.* (Automotive Industries, Vol. 89, No. 6, 15/9/43, p. 34.)
338	16367	U.S.A. ...	*New Device Keeps Ice from Propellers* (*Use of Conductive Rubber*). (Automotive Industries, Vol. 89, No. 6, 15/9/43, p. 42.)

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			Airfields, Seadromes.
339	15140	U.S.A. ...	*Floating Airports in Mid-Ocean.* (Scientific American, Vol. 169, No. 3, September, 1943, pp. 118-120.)
340	15331	G.B.	*Floating Airports.* (Engineer, Vol. 176, No. 4,578, 8/10/43, pp. 293-294.)
341	15509	U.S.A. ...	*Tangent Runway Pattern Suggested for Idlewild Airport.* (American Aviation, Vol. 7, No. 6, 15/8/43, pp. 46-47.)
342	15513	U.S.A. ...	*C.A.A. Revises Airport Plans.* (American Aviation, Vol. 7, No. 7, 1/9/43, p. 28.)
343	15518	U.S.A. ...	*Fairchild Builds an All-Wood Hangar (Photo).* (American Aviation, Vol. 7, No. 7, 1/9/43, p. 75.)
344	15521	U.S.A. ...	*Federal State Airport Plan Proposed.* (American Aviation, Vol. 7, No. 7, 1/9/43, pp. 16, 28.)
345	15685	U.S.A. ...	*Floating Air Bases in Mid-Atlantic (Project).* (Inter. Avia., No. 876-877, 19/7/43, p. 29.)
346	15817	G.B.	*Soil Mechanics and Foundation Problems (Abstract).* (H. Q. Golder, Journal of the Institution of Civil Engineers, Vol. 20, No. 8, Oct., 1943, pp. 276-277.)
347	15818	G.B.	*Aerodrome Abstracts (Vol. II, No. 4, Abstracts Nos. 59-77).* (Journal of the Institution of Civil Engineers, Vol. 20, No. 8, Oct., 1943.)
348	16010	G.B.	*Tangent Runways (Suggested Pattern for New Idlewild Airport).* (Flight, Vol. 44, No. 1,817, 21/10/43, p. 454.)
349	16022	G.B.	*Post-War Airport Needs.* (Flight, Vol. 44, No. 1,818, 28/10/43, p. 482.)
350	16086	U.S.A. ...	*C.A.A. Studies an Ideal Airport Design.* (American Aviation, Vol. 7, No. 8, 15/9/43, pp. 38-40, 64.)
351	16087	U.S.A. ...	*New Method for "Painting" White Stripes on Black-Top Runways.* (American Aviation, Vol. 7, No. 8, 15/9/43, p. 48.)
352	16122	G.B.	*Timber Hangars for the United States Navy.* (Engineering, Vol. 156, No. 4,059, 29/10/43, pp. 341-343, 350.)
353	16138	U.S.A. ...	*Latin American Airways (Book Review).* (W. A. M. Burden, Scientific American, Vol. 169, No. 4, Oct., 1943, p. 156.)
354	16189	U.S.A. ...	*Los Angeles Airport Plan.* (American Aviation, Vol. 7, No. 9, 1/10/43, p. 35.)
355	16276	U.S.A. ...	*Airport of the Future.* (Service Engineering, Vol. 1, No. 2, Spring, 1943, p. 1.)
356	16410	G.B.	*Airport Design—Points Against Tangent Runways.* (G. Dawbarn, Flight, Vol. 44, No. 1,820, 11/11/43, p. 540.)
			Maintenance, Servicing.
357	15731	U.S.A. ...	*Factory-Designed Repairs (for Damaged Aircraft).* (M. Duke and L. C. Cowgill, Aero Digest, Vol. 43, No. 2, August, 1943, pp. 238-253, 301.)
358	15926	U.S.A. ...	*Special Propeller Handling Equipment (Photo).* (Autom. and Aviation Ind., Vol. 89, No. 5, 1/9/43, p. 76.)

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359	15970	Germany ...	*The Utilisation of Aircraft for Combating Insect Pests.* (Flughafen, Vol. 11, No. 1, January, 1943, pp. 7-10.)
360	16280	U.S.A. ...	*Maintenance and Service (Complete Tool Kit, Turnbuckle Holding and Adjusting Fixture, etc.).* (Service Engineering, Vol. 1, No. 2, Spring, 1943, p. 8.)
361	16301	U.S.A. ...	*Tyre Installation Dolly.* (Aviation, Vol. 42, No. 8, August, 1943, p. 216.)
362	16302	U.S.A. ...	*Towing Device for Removing Plane with Flat Tyre from Runway.* (Aviation, Vol. 42, No. 8, August, 1943, pp. 216, 223.)

ENGINES AND ACCESSORIES.

Named Engine Types.

363	14949	U.S.A. ...	*Some Aspects of Diesel Engines for Navy Main Propulsion.* (E. W. Hills, Mechanical Engineering, Vol. 65, No. 9, Sept., 1943, pp. 625-627.)
364	14950	U.S.A. ...	*Diesel Engine Maintenance in the Navy.* (T. G. Reemy, Mechanical Engineering, Vol. 65, No. 9, Sept., 1943, pp. 628-632, 663.)
365	15326	G.B.	*John Henry Hamilton and the Positive Scavenging Engine—No. 1.* (A. K. Bruce, Engineer, Vol. 176, No. 4,578, 8/10/43, pp. 281-282.)
366	15473	Germany ...	*The History of the Daimler-Benz Aircraft Engine.* (Der Flieger, Vol. 22, No. 5, May, 1943, pp. 124-129.)
367	15545	Germany ...	*Development of B.M.W. Aero Engines.* (Der Flieger, Vol. 22, No. 3, March, 1943, pp. 75-79.)
368	15546	Germany ...	*Sectional Drawing of B.M.W. 801A.* (Der Flieger, Vol. 22, No. 3, March, 1943, p. 79.)
369	15552	Germany ...	*Jumo 211.* (Der Flieger, Vol. 22, No. 7, July, 1943, pp. 196-201.)
370	15564	Germany ...	*Development of the Junkers Aero Engines.* (Der Flieger, Vol. 22, No. 6, June, 1943, pp. 168-171.)
371	15571	Germany ...	*Development of the Argus Aero Engine.* (Der Flieger, Vol. 22, No. 2, Feb., 1943, pp. 43-47.)
372	15585	Germany ...	*Brumo Fafnir 323P Aero Engine.* (Der Flieger, Vol. 21, No. 3, March, 1942, pp. 76-78.)
373	15592	Germany ...	*Development of B.M.W. Aero Engine.* (Der Flieger, Vol. 22, No. 4, April, 1943, pp. 94-97.)
374	15687	G.B.	*John Henry Hamilton and the Positive Scavenging Engine.* (A. K. Bruce, Engineer, Vol. 176, No. 4,579, 15/10/43, pp. 301-303.)
375	15709	G.B.	*The Cirrus Minor Aero Motor.* (Aeroplane, Vol. 65, No. 1,690, 15/10/43, p. 444.)
376	15779	G.B.	*John Henry Hamilton and the Positive Scavenging Engine—III.* (A. K. Bruce, Engineer, Vol. 176, No. 4,580, 22/10/43, pp. 320-322.)
377	16089	U.S.A. ...	*New Packard-Rolls Royce Engine (Incorporating Two-Speed Two-Stage Supercharger).* (American Aviation, Vol. 7, No. 8, 15/9/43, p. 72.)
378	16147	Sweden ...	*The Mannerstedt Engine—An Unorthodox Swedish Multi-Row 42-Cylinder Radial.* (Flight, Vol. 44, No. 1,818, 28/10/43, p. 469.)

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379	16323	U.S.A. ...	*New Power Plant for Landing Barges (General Motors Two-Cycle Diesel Engines).* (Autom. and Aviation Ind., Vol. 89, No. 5, 1/9/43, p. 48.)
380	16401	G.B.	*Bristol Hercules Progress.* (Flight, Vol. 44, No. 1,820, 11/11/43, pp. 528-530.)
381	16416	Germany ...	*The Supercharging of Small High Speed Diesels (Translated from I.A.E. Lecture).* (J. H. Pitchford, M.T.Z., Vol. 1, No. 5, Nov., 1939, pp. 156-160.)
382	16488	G.B.	*The Bristol "Hercules" Aero Engine.* (Engineer, Vol. 176, No. 4,583, 12/11/43, pp. 383-385.)
			Design and Installation.
383	14604	Germany ...	*Geometrical Characteristics of Spiral Level Gears of the Palloid Type (Design Sheet 62/63).* (W. Krumme, A.T.Z., Vol. 45, No. 17, 10/9/42, p. 470a.)
384	15485	Germany ...	*Four-Bank Six-Cylinder Four-Stroke Radial Engine with Cranks in One Plane.* (Der Flieger, Vol. 22, No. 5, May, 1943, p. 145.)
385	15632	Switzerland ...	*The Fundamentals of Light Weight Design.* (F. Streiff, Schweizer Archiv., Vol. 8, No. 7, July, 1942, pp. 212-230.)
386	15751	Germany ...	*Three German Engine Fuel Systems.* (Aircraft Engineering, Vol. 15, No. 176, Oct., 1943, pp. 293-302.)
387	15905	U.S.A. ...	*Power for Tanks (Engine Requirements for Tanks)* (J. R. Custer, Autom. and Aviation Ind., Vol. 89, No. 5, 1/9/43, pp. 17-19, 80.)
388	16033	Switzerland ...	*"Light Design" Commercial Motor.* (Koenig, Light Metals, Vol. 6, No. 69, Oct., 1943, pp. 514-518.)
389	16116	U.S.S.R. ...	*Some Problems of Engine Dynamics in Application to Design.* (J. J. Artobolevsky, Metal Industries Review, Vol. 19, No. 7, July, 1939, pp. 15-21.)
390	16419	Germany ...	*List of Recent Russian Patents on Internal Combustion Engines.* (M.T.Z., Vol. 1, No. 5, Nov., 1939, p. 179.)
			Wear and Efficiency.
391	15327	G.B.	*Change Gear Calculations.* (H. N. Merritt, Engineer, Vol. 176, No. 4,578, 8/10/43, pp. 282-284.)
392	15631	Switzerland ...	*Wear and Lubrication (Abstract).* (R. Poppinger, Schweizer Archiv., Vol. 8, No. 8, August, 1942, p. 262.)
393	15644	Switzerland ...	*Wear Phenomena in Dry Solid Friction (Abstract).* (E. Siebel, Schweizer Archiv., Vol. 8, No. 3, March, 1942, p. 98.)
394	15721	U.S.A. ...	*Engine Failures as Causes of Aircraft Accidents.* (Aero Digest, Vol. 43, No. 2, August, 1943, p. 191.)
395	15985	G.B.	*Oil Engine Intake and Exhaust Losses.* (R. L. Boyer, Mechanical World, Vol. 114, No. 2,964, 22/10/43, p. 480.)

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396	16387	G.B. ...	... *The Coefficient of Propulsive Efficiency.* (K. C. Barnaby, Engineering, Vol. 156, No. 4,060, 5/11/43, pp. 378-380.)
397	16413	Germany	... *The Air Consumption of Aircraft Engines at Altitude.* (J. Zeyns, M.T.Z., Vol. 1, No. 5, Nov., 1939, pp. 145-151.)

Accessories (Pistons, Cylinders, etc.).

398	14607	Germany	... *Standard Terms for the Description of Motor Car Components—III (Carburettors, Fuel Pumps, Tanks, etc.).* (H. Hartel, A.T.Z., Vol. 45, No. 17, 10/11/42, pp. 475-479.)
399	14896	G.B. ...	... *A New Bearing Design for High Speed and Minimum Friction.* (Machinery, Vol. 63, No. 1,614, 16/9/43, p. 321.)
400	14897	G.B. ...	... *Laminated Fabric-Resin Plastics for Bearings.* (W. A. Cook, Machinery, Vol. 63, No. 1,614, 16/9/43, pp. 322-326.)
401	14960	U.S.A.	... *Recommended Specification for Prime Mover Speed Governing.* (Mechanical Engineering, Vol. 65, No. 9, Sept., 1943, pp. 664-668.)
402	15313	U.S.A.	... *Power Actuator Cylinders (Use of Carbon Dioxide Gas in Case of Failure of Hydraulic System).* (Flying and Industrial Aviation, Vol. 33, No. 3, September, 1943, p. 112.)
403	15315	U.S.A.	... *Curtiss Automatic Engine Speed Synchronizer.* (Flying and Industrial Aviation, Vol. 33, No. 3, September, 1943, p. 114.)
404	15484	Germany	... *German Piston Alloy Mahle* 124. (Der Flieger, Vol. 22, No. 5, May, 1943, p. 145.)
405	15912	U.S.A.	... *High Capacity Ball Reciprocating Bearings.* (S. R. Thomas, Autom. and Aviation Ind., Vol. 89, No. 5, 1/9/43, pp. 35, 85-86.)
406	15916	U.S.A.	... *Calculation of Proportional Cams.* (C. H. Bouvy, Autom. and Aviation Ind., Vol. 89, No. 5, 1/9/43, pp. 45, 48, 78-79.)
407	15983	G.B. ...	... *Air Excludes Grit from Bearings (Swedish Development).* (Mechanical World, Vol. 114, No. 2,964, 22/10/43, p. 473.)
408.	16066	G.B. ...	... *Cylinder Head Packings (Patent).* (Automobile Engineer, Vol. 33, No. 441, Oct., 1943, p. 422.)
409	16288	U.S.A.	... *Piston Ring Design Makes or Breaks the Engine.* (D. M. Smith and H. Wainwright, Aviation, Vol. 42, No. 8, August, 1943, pp. 171-174, 326-333.)
410	16330	G.B. ...	... *German Light Alloy Pistons.* (Metal Industry, Vol. 63, No. 19, 5/11/43, pp. 298-300.)
411	16354	G.B. ...	... *German Aero Engine Pistons.* (Engineer, Vol. 176, No. 4,582, 5/11/43, pp. 363-364.)
412	16380.	G.B. ...	... *Metallurgical Investigation of German Aero Engine Pistons.* (Engineering, Vol. 156, No. 4,060, 5/11/43, pp. 367-368, 370.)
413	16501	Germany	... *German Aero Motor Pistons.* (Aeroplane, Vol. 65, No. 1,694, 12/11/43, p. 553.)

ITEM NO.	R.T.P. REF.		TITLE AND JOURNAL.
			Turbines, Pumps, Boilers.
414	15194	G.B. ...	... *Water Circulation in Steam Boilers—V. The Principle of Forced Circulation.* (J. Webster, Mechanical World, Vol. 114, No. 2,960, 24/9/43, pp. 365-368.)
415	15427	G.B. ...	... *The Operation and Maintenance of Steam Boilers.* (F. J. Redman and H. A. H. McDonic, Mechanical World, Vol. 114, No. 2,961, 1/10/43, pp. 382-385.)
416	15690	G.B. ...	... *The pH Value of Boiler Feed Water.* (J. B. Jackson, Engineer, Vol. 176, No. 4,579, 15/10/43, pp. 308-309.)
417	15823	U.S.A.	... *Quick Starting of Steam Turbines.* (K. Frey, Journal of the American Society of Naval Engineers, Vol. 55, No. 3, Aug., 1943, pp. 518-530.)
418	15826	U.S.A.	... *Operation and Care of Boiler Control Systems.* (Journal of the American Society of Naval Engineers, Vol. 55, No. 3, Aug., 1943, pp. 549-560.)
419	15978	G.B. ...	... *The Operation and Maintenance of Steam Boilers—II. Modern Furnace Design and Operation.* (F. J. Redman and H. A. J. McDonic, Mechanical World, Vol. 114, No. 2,962, 8/10/43, pp. 422-425.)
420	16167	Germany	... 100 *Years Turbine Development.* (E. Foerster, Schiff und Werft, Vol. 44-24, No. 17-18, September, 1943, pp. 262-266.)
			Fuel Injection.
421	15910	U.S.A.	... *Stroboscope Unmasks Fuel Injection.* (P. H. Schweitzer, Autom. and Aviation Ind., Vol. 89, No. 5, 1/9/43, pp. 32-34.)
422	16414	Germany	... *The Archaouloff Method of Fuel Injection for Diesel Engines.* (K. Mohr, M.T.Z., Vol. 1, No. 5, Nov., 1939, pp. 151-153.)
423	16418	Germany	... *A New Injection Method for Gas Engines.* (Translated from I.M.E. Journal, June, 1939.) (R. A. Erren, M.T.Z., Vol. 1, No. 5, Nov., 1939, pp. 163-164.)
			Testing and Maintenance.
424	15556	Germany	... *Engine Testing on the Ground and in the Air.* (Der Flieger, Vol. 22, No. 7, July, 1943, pp. 209-210.)
425	15617	Switzerland	... *Determination of the Change of State of the Working Substances in Turbo Machinery (Entropy Increase).* (O. Zweifel, Schweizer Archiv., Vol. 8, No. 1, January, 1942, pp. 28-33.)
426	15840	U.S.A.	... *Investigation of Self-Excited Torsional Oscillations and Vibration Damper for Induction Motor Drives (Discussion).* (Journal of Applied Mechanics, Vol. 10, No. 3, Sept., 1943, pp. A176-A177.)

ITEM NO.	R.T.P. REF.			TITLE AND JOURNAL.
427	15913	Germany	...	*A Method to Overcome Piston Ring Seizure.* (F. Gossland, Autom. and Aviation Ind., Vol. 89, No. 5, 1/9/43, p. 36.)
428	16021	G.B.	...	*Pre-Selected Engine Speed (Lockheed's System of Speed Control of Airscrews).* (Flight, Vol. 44, No. 1,818, 28/10/43, pp. 480-481.)
429	16109	G.B.	...	*Variable Speed Control (Use of Magnetic Coupling for Power Regeneration on Engine Test Beds).* (Electrical Review, Vol. 133, No. 3,433, 10/9/43, pp. 337-338.)
430	16115	U.S.S.R.	...	*On the Methods of Determining Permissible Stresses in Machinery Parts.* (J. A. Dending, Metal Industries Review, Vol. 19, No. 7, July, 1939, pp. 3-14.)
431	16159	G.B.	...	*Regenerative Dynamometers (a Means of Utilising Power Developed on Aircraft Engine Test Beds).* (Aircraft Production, Vol. 5, No. 61, Nov., 1943, p. 511.)
432	16271	U.S.A.	...	*The Diesel Engine at War (Maintenance Servicing, Special Servicing Tools, Diesel Types, etc.).* (Service Engineering, Vol. 1, No. 3, Summer, 1943, pp. 1-15.)
				Thermodynamics.
433	15829	U.S.A.	...	*Periodic Heat Transfer at Small Pressure Fluctuations.* (H. Pfriem, N.A.C.A. Tech. Memo. No. 1,048, Sept., 1943.)
434	15833	U.S.A.	...	*Temperature Relations in Journal Bearing Systems.* (R. Musket and F. Morgan, Journal of Applied Mechanics, Vol. 10, No. 3, September, 1943, pp. A131-A138.)
435	16140	U.S.A.	...	*Control of Oil Temperature for Maximum Efficiency in Machinery.* (Scientific American, Vol. 169, No. 4, Oct., 1943, p. 159.)
436	16341	Germany	...	*Transmission of Heat Between Vertical Walls and Turbulent Water Films.* (Z.V.D.I., Vol. 86, No. 27-28, July, 1942, pp. 444-445.) (V. Grigull, Engineers' Digest, Vol. 4, No. 10, October, 1943, pp. 286-287.)
437	16346	U.S.A.	...	*Heat Transfer Over the Circumference of a Heated Cylinder in Transverse Flow.* (E. Schmidt and K. Wenner, N.A.C.A. Tech. Memo. No. 1,050, October, 1943, pp. 1-15.)
438	16491	G.B.	...	*Causes of High Dewpoint Temperatures in Boiler Flue Gases.* (W. F. Harlow, Engineer, Vol. 176, No. 4,583, 12/11/43, pp. 393-394, 390.)
				De-icing.
439	15586	Germany	...	*British Opinion on De-Icing of Carburettor and Propeller by Means of De-Icing Pumps Handling Alcohol-Glycerine Mixture.* (Der Flieger, Vol. 21, No. 3, March, 1942, p. 79.)

ITEM NO.	R.T.P. REF.		TITLE AND JOURNAL.
440	15441	Germany ...	*Hot Air De-Icing with Special Reference to Engine Cowlings* (*Pat.* 730,008). (B.M.W., Flugsport, Vol. 35, No. 13, 15/9/43, p. 56.)

FUELS AND LUBRICANTS.

Liquid Fuels.

441	15368	G.B.	*Standard Temperature for Specific Gravity Determination and Volume Correction (for Petroleum Products).* (Petroleum Times, Vol. 47, No. 1,203, 4/9/43, p. 470.)
442	15724	U.S.A. ...	*Behaviour of Gasoline at High Temperatures.* (F. E. Mock, Aero Digest, Vol. 43, No. 2, August, 1943, pp. 204, 298.)
443	15881	G.B.	*Production of Liquid Fuels from Minerals in the United States.* (Engineering, Vol. 156, No. 4,058, 22/10/43, p. 325.)
444	16104	U.S.A. ...	*Determination of Tetraethyl Lead in Gasoline.* (L. Schwartz, Industrial and Engineering Chemistry, Vol. 15, No. 8, 17/8/43, pp. 499-501.)
445	16108	U.S.A. ...	*Viscosity of Solutions in Branched-Chain Paraffins.* (E. H. McArdle and E. A. Robertson, Industrial and Engineering Chemistry, Vol. 15, No. 8, 17/8/43, pp. 484-487.)
446	16169	G.B.	*Reclamation of Waste Petroleum—The Vokes-Petco Solvent Re-Refiner.* (Petroleum Times, Vol. 47, No. 1,206, 16/10/43, p. 560.)
447	16494	G.B.	*Air Force Petrol Consumption.* (Engineer, Vol. 176, No. 4,583, 12/11/43, p. 377.)

High Octane Fuels.

448	16128	U.S.A. ...	*Fluid Catalysis—New Process for Boosting Supply of High Octane Aviation.* (Scientific American, Vol. 169, No. 4, Oct., 1943, p. 162.)
449	16199	U.S.A. ...	*Triptane on Commercial Scale.* (National Petroleum News, Vol. 35, No. 36, 1/9/43, p. 18.)
450	16467	U.S.A. ...	*Triptane Process (for Aviation Fuel).* (Ind. and Eng. Chem. (News Edition), Vol. 21, No. 18, 25/9/43, pp. 1560-1562.)

Gaseous Fuels.

451	15369	G.B.	*The Producer Gas Plant Industry in France.* (E. A. Bell, Petroleum Times, Vol. 47, No. 1,203, 4/9/43, p. 472.)
452	15534	Germany ...	*Operation of Motor Vehicles on Coal Gas (Gas Bag Trailer).* (Gas, Vol. 15, No. 2, Feb., 1943, pp. 26-27.)
453	15979	G.B.	*Fuel in Germany—Transport Changing Over to Producer Gas.* (Mechanical World, Vol. 114, No. 2,964, 22/10/43, p. 466.)

ITEM NO.	R.T.P. REF.		TITLE AND JOURNAL.
			Solid, Powdered Fuels.
454	15199	G.B. ...	... *Discussion on "Coal for Steam Raising."* (Institution of Electrical Engineers, Vol. 90, No. 35, P. 1, Sept., 1943, pp. 397-416.)
455	16195	G.B. ...	... *Identification of Powdered Wood Charcoals.* (L. G. G. Warne, Journal of the Society of Chemical Industry, Vol. 62, No. 9, Sept., 1943, pp. 141-144.)
456	16196	G.B. ...	... *Creosote Pitch Fuel: its Wartime Development in Britain.* (A. J. Gibbs Smith, Petroleum Times, Vol. 47, No. 1,205, 2/10/43, pp. 520-522, 540.)
			Oils and Lubricants.
457	14887	G.B. ...	... *The Beginnings of Lubrication Technique.* (Engineering, Vol. 156, No. 4,054, 24/9/43, pp. 251-252.)
458	14941	G.B. ...	... *Gear Lubrication with Lead.* (Metal Industry, Vol. 63, No. 14, 1/10/43, p. 212.)
459	15334	G.B. ...	... *Anomalous Viscosity Shown in Oil Flow Through Engine Bearings.* (S. M. Heale, Philosophical Magazine, Vol. 34, No. 236, Sept., 1943, p. 577.)
460	15367	G.B. ...	... *Front Line U.S. Pipelines in N. Africa and Sicily.* (Petroleum Times, Vol. 47, No. 1,203, 4/9/43, p. 466.)
461	15628	Switzerland	... *Lubricants and Fuel for Diesel Engines.* (H. Stager and H. Kunzler, Schweizer Archiv., Vol. 8, No. 8, August, 1942, pp. 231-252.)
462	15643	Switzerland	... *Association Processes in Mineral Oils.* (R. Linke, Schweizer Archiv., Vol. 8, No. 3, March, 1942, p. 97.)
463	15844	U.S.A.	... *An Evaluation of Quenching Oils (No. 3).* (E. K. Spring and others, A.S.M. Preprints (25th Annual Convention), 18-22/10/43, pp. 1-15.)
464	15911	U.S.A.	... *Plastic Petroleum Used to Lubricate the Magazines of Marine Anti-Aircraft Guns.* (Autom. and Aviation Ind., Vol. 89, No. 5, 1/9/43, p. 34.)
465	16067	G.B. ...	... *Diesel Lubricating Problems.* (Automobile Engineer, Vol. 33, No. 441, Oct., 1943, p. 424.)
466	16170	G.B. ...	... *Oil Cleaning—Section 2 (Oil Contamination by Deterioration).* (L. Rosenfeld, I.A.E. Report, No. 1,943-11, Section 2, September, 1943, pp. 3-18.)
467	16197	G.B. ...	... *What of the German Oil Position?* (Petroleum Times, Vol. 47, No. 1,205, 2/10/43, pp. 525-531, 540.)
468	16417	Germany	... *The Lubrication of Static and Ship's Diesel Engines.* (M. Gratzl, M.T.Z., Vol. 1, No. 5, Nov., 1939, pp. 161-163.)

ITEM NO.	R.T.P. REF.		TITLE AND JOURNAL.

THEORY OF ELASTICITY

(STRESSES IN BEAMS, PLATES, Etc.).

469	15603	Germany ...	*Dynamic Extensometer Measurements on the Rear Axle of a Lorry.* (F. Lehr and R. Schulz, A.T.Z., Vol. 45, No. 17, 10/9/42, pp. 461-470.)
470	15442	Germany ...	*Nomograms for the Buckling Stress of Dural Plates (Technical Notes Nos. 9-12).* (Flugsport, Vol. 35, No. 12, 18/8/43, p. 168a.)
471	15467	Germany ...	*The Rôle of Internal Stresses in the Process of Strain Hardening.* (G. Masing, Z.J. Metallk., Vol. 35, No. 2, February, 1943, p. 56.)
472	15622	Switzerland ...	*Stress Calculations for Autoclave Flanges (VII).* (R. V. Band, Schweizer Archiv., Vol. 8, No. 10, October, 1942, pp. 315-322.)
473	15625	Switzerland ...	*Stress Calculations for Autoclave Flanges (VI) (with Special Reference to Plasticity and Fatigue).* (R. V. Band, Schweizer Archiv., Vol. 8, No. 9, September, 1942, pp. 274-288.)
474	15649	Germany ...	*Transverse Vibrations of a Cantilever with a Load.* (A. Schallenkamp, Ing. Archiv., Vol. 13, No. 5, pp. 267-272.)
475	15650	Germany ...	*Stresses Due to Single Loads Applied to a Semi-Infinite Plate.* (K. Girkmann, Ing. Archiv., Vol. 13, No. 5, pp. 273-284.)
476	15651	Germany ...	*Movement Compensation in Plastic Girder Structures and the Compatibility of Changes in Shape.* (H. Craemer, Ing. Archiv., Vol. 13, No. 5, pp. 285-292.)
477	15802	U.S.A. ...	*Chart for Computing Tensile Stresses.* (J. C. Gould, Metal Progress, Vol. 44, No. 3, Sept., 1943, pp. 431-432.)
478	15806	U.S.A. ...	*Endurance of Machine Parts Under a Few Heavy Loads.* (J. O. Almen, Metal Progress, Vol. 44, No. 3, Sept., 1943, pp. 435-440.)
479	15808	U.S.A. ...	*Residual Stresses in Wire Loops at Anchorage Shoes or Grommets.* (G. Brewer, Metal Progress, Vol. 44, No. 3, Sept., 1943, pp. 441-447.)
480	15831	U.S.A. ...	*Stress Distributions in Cylindrically Aeolotropic Plates.* (G. F. Carrier, Journal of Applied Mechanics, Vol. 10, No. 3, September, 1943, pp. A117-A122.)
481	15836	U.S.A. ...	*Photo-Elastic Separation of Principal Stresses by Oblique Incidence.* (D. C. Drucker, Journal of Applied Mechanics, Vol. 10, No. 3, September, 1943, pp. A156-A160.)
482	15837	U.S.A. ...	*A Numerical Procedure for the Calculation of the Moments in Edge Reinforcements of Cut-Outs in Monocoques.* (N. J. Hoff, Journal of Applied Mechanics, Vol. 10, No. 3, September, 1943, pp. A161-A167.)

ITEM NO.	R.T.P. REF.		TITLE AND JOURNAL.
483	15838	U.S.A. ...	*The Free Lateral Vibrations of a Cantilever Beam with a Terminal Dashpot.* (E. J. McBride, Journal of Applied Mechanics, Vol. 10, P. 3, September, 1943, pp. A168-A172.)
484	15839	U.S.A. ...	*Design Data for Flat Circular Plates with Central Holes.* (W. E. Trumpler, Journal of Applied Mechanics, Vol. 10, No. 3, Sept., 1943, pp. A173-A175.)
485	15866	U.S.A. ...	*The Stress Distribution at the Neck of a Tension Specimen (No. 25).* (P. W. Bridgman, A.S.M. Preprints (25th Annual Convention), 18-22/10/43, pp. 1-20.)
486	15956	G.B.	*Loads and Deflections of Stainless Steel Round Wire Helical Springs (Chart).* (Machinery, Vol. 63, No. 1,617, 7/10/43, p. 399.)
487	15964	Germany ...	*The Problem of the Floating Beam.* (F. Schiel, Z.A.M.M., Vol. 22, No. 5, Oct., 1942, pp. 205-262.)
488	15965	Germany ...	*On the Stresses in Semi-Infinite Space Subjected to a Hemispherical Stress Distribution.* (H. Vounoff, Z.A.M.M., Vol. 22, No. 5, Oct., 1942, pp. 262-269.)
489	16068	Germany ...	*The Eccentrically Loaded Rigid Plate on an Elastic Isotropic Foundation.* (H. Borowicks, Ing. Archiv., Vol. 14, No. 1, 1943, pp. 1-8.)
490	16069	Germany ...	*Stress Distribution in a Semi-Infinite Space Due to Surface and Internal Loads (Soil Mechanics).* (K. Honban, Ing. Archiv., Vol. 14, No. 1, 1943, pp. 9-13.)
491	16210	Germany ...	*Elastic Deformation of Yokes.* (From Werkstett und Betrieb, Vol. 75, No. 7, July, 1942, pp. 156-157.) (H. Birkle, Engineers' Digest, Vol. 4, No. 8, August, 1943, pp. 237-239.)
492	16211	G.B.	*Design of Highly Stressed Studs to Improve Their Fatigue Strength.* (Engineers' Digest, Vol. 4, No. 8, August, 1943, pp. 239-241.)
493	16318	G.B.	*Stress Increase in Hollow Section Under Torsion.* (Luftwissen, Vol. 10, No. 2, Feb., 1943, pp. 40-50.) (A. Weigand, Engineers' Digest, Vol. 4, No. 9, Sept., 1943, pp. 273-274.)
499	16460	G.B.	*Some Notes on the Shear Centre of Thin-Walled Open Sections.* (T. Haas, Journal of the Royal Aeron. Society, Vol. 47, No. 395, Nov., 1943, pp. 383-389.)

MATERIALS (PROPERTIES, FABRICATION, INSPECTION).

A. Properties.

Al. and Mg. Alloys.

500	14948	G.B.	*Protection of Magnesium.* (Metal Industry, Vol. 63, No. 14, 1/10/43, p. 220.)

ITEM NO.	R.T.P. REF.		TITLE AND JOURNAL.
501	15529	G.B.	*Structure of Aluminium as Revealed by X-Rays.* (E. E. Spillett, Engineering, Vol. 156, No. 4,056, 8/10/43, p. 294.)
502	15759	G.B.	*A New Magnesium Base Alloy.* (Metal Industry, Vol. 63, No. 16, 15/10/43, p. 248.)
503	15796	G.B.	*Alumina from Low Grade Materials.* (Metal Industry, Vol. 63, No. 17, 22/10/43, p. 266.)
504	16027	G.B.	*Alloying Practice for Magnesium Alloys.* (Light Metals, Vol. 6, No. 69, Oct., 1943, p. 479.)
505	16029	G.B.	*Light Alloys in Machine Tools.* (Light Metals, Vol. 6, No. 69, Oct., 1943, pp. 486-493.)
506	16160	G.B.	*British Magnesium—History of its Development in This Country.* (Aircraft Production, Vol. 5, No. 61, Nov., 1943, pp. 557-558.)
507	16329	G.B.	*Design of Aluminium Hammer Forgings.* (Metal Industry, Vol. 63, No. 19, 5/11/43, pp. 295-297.)
508	16343	Sweden ...	*Rivet Wire and Rivets of Al.-Cu.-Mg. Alloy.* (Tekinsk Tidskrift, Vol. 73, 10/7/43, pp. 53-58.) (S. Tobert, Engineers' Digest, Vol. 4, No. 10, October, 1943, pp. 291-293.)
509	16485	G.B.	*Mechanical Ingotting of Aluminium and Magnesium Turnings.* (M. Stern, Metal Industry, Vol. 63, No. 20, 12/11/43, p. 313.)
			Iron and Steel.
510	14936	G.B.	*American Steel Research.* (Engineer, Vol. 176, No. 4,577, 1/10/43, p. 274.)
511	15113	G.B.	*The Strain Ageing of Killed Low Carbon Steel, with Particular Reference to the Effect of Titanium.* (G. F. Comstock, Sheet Metal Industries, Vol. 18, No. 198, October, 1943, pp. 1723-1730.)
512	15382	Germany ...	*Weldable Vanadium Bearing Steels of High Strength.* (Stahl und Eisen, Vol. 60, 1940, Aug., pp. 684-687.) (H. Cornelius, The Institute of Welding, Quarterly Trans., Vol. 5, No. 4, October, 1942, pp. 177-180.)
513	15780	G.B.	*Iron and Steel Institute—Summary of Papers Presented at the Autumn Meeting.* (Engineer, Vol. 176, No. 4,580, 22/10/43, pp. 325-326.)
514	15847	U.S.A. ...	*A Metallographic Study of the Decomposition of Austecite in Manganese Steels (No. 6).* (J. V. Russell and F. T. McGuire, A.S.M. Preprints (25th Annual Convention), 18-22/10/43, pp. 1-19.)
515	15851	U.S.A. ...	*The Effect of Varying Amounts of Martensite upon the Isothermal Transformation of Austenite Remaining After Controlled Quenching (No. 10).* (H. J. Elmendorf, A.S.M. Preprints (25th Annual Convention), 18-22/10/43, pp. 1-20.)
516	15853	U.S.A. ...	*Martensite Reactions in Alloy Steels (No. 11).* (F. Payson and C. H. Savage, A.S.M. Preprints (25th Annual Convention), 18-22/10/43, pp. 1-16.)

ITEM NO.	R.T.P. REF.		TITLE AND JOURNAL.
517	15854	U.S.A. ...	*Influence of Nickel, Molybdenum, Cobalt and Silicon on the Kinetics and Ar" Temperatures of the Austenite to Martensite Transformations in Steels* (*No.* 12). (H. H. Chiswik and A. B. Greninger, A.S.M. Preprints (25th Annual Convention), 18-22/10/43, pp. 1-35.)
518	15857	U.S.A. ...	*The Tensile Properties of Alloyed Ferrities* (*No.* 15). (C. E. Lacy and H. Gensamer, A.S.M. Preprints (25th Annual Convention), 18-22/10/43, pp. 1-19.)
519	15859	U.S.A. ...	*The Action of Carbonate Catalysts in the Carburisation of Steel* (*No.* 17). (T. C. Fong and R. A. Ragatz, A.S.M. Preprints (25th Annual Convention), 18-22/10/43, pp. 1-27.)
520	15868	U.S.A. ...	*The Strength of Heat Treated Alloy Steel Bolts* (*No.* 27). (G. Sachs and others, A.S.M. Preprints (25th Annual Convention), 18-22/10/43, pp. 1-11.)
521	15869	U.S.A. ...	*The Emissivity of Molten Stainless Steels* (*No.* 28). (G. H. Goller, A.S.M. Preprints (25th Annual Convention), 18-22/10/43, pp. 1-13.)
522	15877	U.S.A. ...	*An Optimum Silicon Range in Plain and 2.0 per cent. Chromium Cast Irons Exposed to Elevated Temperatures* (*No.* 36). (C. O. Burgess and R. W. Bishop, A.S.M. Preprints (25th Annual Convention), 18-22/10/43, pp. 1-22.)
523	15878	U.S.A. ...	*Creep Strength, Stability of Microstructure and Oxidation Resistance of Cr.-Mo. and Cr.-8 Ni. Steels* (*No.* 37). (R. F. Miller and others, A.S.M. Preprints (25th Annual Convention), 18-22/10/43, pp. 1-22.)
524	15886	G.B.	*The Solidification and Cooling of Steel Ingots.* (E. F. Law and V. Harbord, Engineering, Vol. 156, No. 4,058, 22/10/43, pp. 338-340.)
525	15917	U.S.A. ...	1943 *Output of Steel May Exceed* 90,000,000 *Tons* (W. C. Hirsch, Autom. and Aviation Ind., Vol. 89, No. 5, 1/9/43, pp. 50, 82-83.)
526	16064	G.B.	*Stainless Steels. Machining Steels of High Resistance to Rust, Acid and Heat.* (Automobile Engineer, Vol. 33, No. 441, Oct., 1943, pp. 419-420.)
527	16072	G.B.	*Precipitation Effects in Mild Steel and Wrought Iron Pipe.* (T. H. Schofield, Engineering, Vol. 156, No. 4,059, 29/10/43, p. 358.)
528	16079	G.B.	*Weld Decay in Nickel-Chrome Ferrous Alloys.* (E. J. Raybould, Mechanical World, Vol. 114, No. 2,963, 15/10/43, p. 449.)
529	16163	G.B.	*Defective Steel—Decarburisation Traced to the Use of Damp Fuel.* (Aircraft Production, Vol. 5, No. 61, Nov., 1943, p. 515.)
530	16202	G.B.	*Steels Containing Lead (Iron and Steel Institute Papers).* (Engineering, Vol. 156, No. 4,059, 29/10/43, p. 354.)

ITEM NO.	R.T.P. REF.		TITLE AND JOURNAL.
531	16220	Germany ...	*The Influence of Carbide Formers on the Yield Point of Steel at Room Temperature.* (R.T.P. Translation No. 1,972.) (K. Dies, Sheet Metal Industries, Vol. 18, No. 199, November, 1943, pp. 1907-1909.)
532	16240	G.B.	*A Survey of Electrical Sheet Steels for Power Plant and the Factors Affecting Their Magnetic Properties. (Abstract.)* (F. Brailsford, Journal of Inst. of Electrical Engineers, Vol. 90, No. 34, Pt. 1, Oct., 1943, pp. 450-452.)
533	16242	G.B.	*A Survey of Electrical Sheet Steels for Power Plant and the Factors Affecting Their Magnetic Properties.* (F. Brailsford, Journal of Inst. of Electrical Engineers, Vol. 90, No. 17, Part 2, Oct., 1943, pp. 307-326.)
534	16429	Germany ...	*The Notch and Weld Sensitivity of Structural Steels.* (Metallwirtschaft, Vol. 19, No. 46, 20/11/40, pp. 1091-1093.)
535	16474	G.B.	*Steel-Faced Plastic-Laminate Piercing Die.* (Plastics, Vol. 7, No. 78, Nov., 1943, p. 497.)
			Non-Ferrous Alloys.
536	15318	G.B.	*Copper-Lead Bearings (Lead Acts as Lubricant).* (Metal Industry, Vol. 63, No. 15, 8/10/43, p. 228.)
537	15321	G.B.	*Structural Changes in 70: 30 Brass Strip as Effected by Cold Rolling and Annealing.* (M. Cook and T. L. Richards, Metal Industry, Vol. 63, No. 15, 8/10/43, pp. 231-234.)
538	15322	G.B.	*Trace Elements on High Purity Copper.* (Metal Industry, Vol. 63, No. 15, 8/10/43, p. 234.)
539	15324	G.B.	*Bronze Welding Rods.* (Metal Industry, Vol. 63, No. 15, 8/10/43, p. 236.)
540	15530	G.B.	*Directional Characteristics of Copper Strip.* (Engineering, Vol. 156, No. 4,056, 8/10/43, p. 294.)
541	15758	G.B.	*Structural Changes in 70: 30 Brass Strip as Effected by Cold-Rolling and Annealing.* (M. Cook and T. Ll. Richards, Metal Industry, Vol. 63, No. 16, 15/10/43, pp. 247-248.)
542	15794	G.B.	*Density of Chill and Sand-Cast Bronzes.* (V. Kondic, Metal Industry, Vol. 63, No. 17, 22/10/43, pp. 261-263.)
543	15845	U.S.A. ...	*Dimensional Changes Encountered in Tube Sinking (for Copper and a Number of Copper Alloys) (No. 5).* (W. M. Baldwin and T. S. Howald, A.S.M. Preprints (25th Annual Convention), 18-22/10/43, pp. 1-14.)
544	15977	G.B.	*Tin in White Metal Bearings.* (Mechanical World, Vol. 114, No. 2,962, 8/10/43, p. 421.)
545	15981	G.B.	*The Working of Yellow Brass.* (E. J. Raybould, Mechanical World, Vol. 114, No. 2,964, 22/10/43, pp. 470-471.)
546	16044	G.B.	*Manganese Bronze Melting.* (N. K. B. Patch, Metal Industry, Vol. 63, No. 18, 29/10/43, p. 278.)

ITEM NO.	R.T.P. REF.			TITLE AND JOURNAL.
547	16077	G.B.	...	*Tin in White Metal Bearings.* (Mechanical World, Vol. 114, No. 2,963, 15/10/43, p. 447.)
548	16223	G.B.	...	*Conservation of Tin in Soft Solders.* (D. L. Colwell and W. C. Lang, Sheet Metal Industries, Vol. 18, No. 199, November, 1943, pp. 1921-1922.)
549	16420	Germany	...	*A New Zinc Casting Alloy.* (A. Burkhardt and others, Metallwirtschaft, Vol. 19, No. 45, 8/11/40, pp. 995-1001.)
550	16421	Germany	...	*The Ductility of Certain Zinc Alloys (Cold Working).* (A. Burkhardt, Metallwirtschaft, Vol. 19, No. 45, 8/11/40, pp. 1001-1004.)
551	16427	Germany	...	*A Simple Method for the Preparation of Metallographic Specimens of Copper and Brass.* (H. C. Muller, Metallwirtschaft, Vol. 19, No. 48, 20/11/40, pp. 1085-1089.)
552	16482	G.B.	...	*Sand-Cast Copper-Silicon Alloys.* (Metal Industry, Vol. 63, No. 20, 12/11/43, pp. 310-311.)
				Plastics.
553	15540	G.B.	...	*Plasticizers and Their Applications.* (H. Barron, Plastics, Vol. 7, No. 77, Oct., 1943, pp. 449-459.)
554	15544	G.B.	...	*New Standard Definitions and Designations for Plastics Produced in Germany.* (Plastics, Vol. 7, No. 77, Oct., 1943, p. 462.)
555	15764	G.B.	...	*Polyvinyl Acetate as an Adhesive.* (British Plastics, Vol. 15, No. 173, Oct., 1943, p. 257.)
556	15765	G.B.	...	*Plastics in the Building Trade.* (T. W. Kennedy, British Plastics, Vol. 15, No. 173, Oct., 1943, pp. 261-265.)
557	15768	G.B.	...	*A New Plastics—Marvinol.* (British Plastics, Vol. 15, No. 173, Oct., 1943, p. 272.)
558	15769	G.B.	...	*Aircraft Plastics—Part II.* (W. Nichols, British Plastics, Vol. 15, No. 173, Oct., 1943, p. 273.)
559	15771	G.B.	...	*Tyre Casings of Plastics Cord.* (British Plastics, Vol. 15, No. 173, Oct., 1943, p. 291.)
560	15772	G.B.	...	*Education in Plastics.* (J. M. Edwards, British Plastics, Vol. 15, No. 173, Oct., 1943, pp. 292-294.)
561	15763	G.B.	...	*A More Heat-Resistant Acrylate Material.* (H. W. Perry, British Plastics, Vol. 15, No. 173, Oct., 1943, pp. 254-257.)
562	15776	G.B.	...	*Methods for Reducing Water Sensitivity of Polyvynl Alcohol Coatings.* (British Plastics, Vol. 15, No. 173, Oct., 1943, p. 308.)
563	15923	U.S.A.	...	*A New Thermo-Plastic and Thermo-Setting Adhesive.* (Autom. and Aviation Ind., Vol. 89, No. 5, 1/9/43, p. 74.)
564	16130	U.S.A.	...	*Plastics Parade—A Systematic Survey of Synthetic Products.* (A. F. Caprio, Scientific American, Vol. 169, No. 4, Oct., 1943, pp. 163-165.)
565	16142	U.S.A.	...	*Progress in Proteins (Survey of Derivative Plastic Products).* (J. M. Crowe, Scientific American, Vol. 169, No. 4, Oct., 1943, p. 160.)
566	16154	G.B.	...	*Sewing Plastic Fabrics.* (Aircraft Production, Vol. 5, No. 61, Nov., 1943, p. 533.)

ITEM NO.	R.T.P. REF.		TITLE AND JOURNAL.
			Rubber (Nat. and Syn.).
567	15536	Italy	*Processing of Polyvinyl Chloride.* (P. Paselli, Plastics, Vol. 7, No. 77, Oct., 1943, pp. 433-435.)
568	15542	G.B.	*New Rubberlike Material for Inner Tubes in Cars ("Marvinol").* (Plastics, Vol. 7, No. 77, Oct., 1943, p. 461.)
569	15767	G.B.	*A Vulcanisable Elastic Plastic—Plioflex.* (British Plastics, Vol. 15, No. 173, Oct., 1943, pp. 270-271.)
570	15770	G.B.	*Flexible Plastics (Advantages of Plasticised Vinyl Chloride).* (J. R. Price, British Plastics, Vol. 15, No. 173, Oct., 1943, pp. 284-291.)
571	16049	U.S.A. ...	*Rubber: Natural or Synthetic?* (E. N. Bressman, Scientific American, Vol. 169, No. 4, Oct., 1943, pp. 166-168.)
572	16114	G.B.	*Polyvinyl Chloride Cables.* (Electrician, Vol. 131, No. 3,411, 15/10/43, p. 384.)
573	16182	G.B.	*Polykol Insulated Conductors (Plasticised Polyvinyl Chloride).* (Electrician, Vol. 131, No. 3,412, 22/10/43, p. 407.)
574	16342	Germany ...	*Sheathing of Electrical Conductors with Polyvinyl Chlorides.* (Z.V.D.I., Vol. 86, No. 41-42, 17/10/42, pp. 629-632.) (H. Beck and A. Rehbock, Engineers' Digest, Vol. 4, No. 10, October, 1943, pp. 288-290.)
575	16473	Germany ...	*Rubber, Guttapercha and Lead may be Replaced by Suitable Plastics.* (Kunststoffe, 1943, No. 33, p. 144.) (Plastics, Vol. 7, No. 78, Nov., 1943, p. 497.)
			Wood and Paper.
576	15421	U.S.A. ...	*Resin Impregnation of Wood.* (R. Casselman, Mechanical Engineering, Vol. 65, No. 10, Oct., 1943, pp. 737-738, 744.)
577	15689	G.B.	*A New Stop-Nut of Plywood.* (Engineer, Vol. 176, No. 4,579, 15/10/43, p. 305.)
578	15692	G.B.	*Conservation of Wood (Modern Timber Construction Techniques, etc.).* (A. G. K. Dietz, Engineer, Vol. 176, No. 4,579, 15/10/43, pp. 312-314.)
579	16129	U.S.A. ...	*New Wet Resistant Paper.* (Scientific American, Vol. 169, No. 4, Oct., 1943, p. 162.)
580	16158	G.B.	*Scarfed Joints in Plywood.* (Aircraft Production, Vol. 5, No. 61, Nov., 1943, pp. 552-554.)
			Glass, Silver.
581	14946	G.B.	*Electrolytic Polishing of Silver.* (L. I. Gilbertson and O. M. Fortner, Metal Industry, Vol. 63, No. 14, 1/10/43, pp. 218-219.)
582	15431	G.B.	*Silver as a Bonding Material—Properties and Capabilities for a Wide Range of Work.* (Mechanical World, Vol. 114, No. 2,961, 1/10/43, pp. 393-394.)
583	16050	U.S.A. ...	*Foamglas as Insulating Material.* (Scientific American, Vol. 169, No. 4, Oct., 1943, p. 172.)

ITEM NO.	R.T.P. REF.		TITLE AND JOURNAL.
584	16076	G.B.	*Silver in Electrical Applications.* (Mechanical World, Vol. 114, No. 2,963, 15/10/43, pp. 440-441.)
585	16135	U.S.A. ...	*Silver in Peace and War.* (F. D. Peters, Scientific American, Vol. 169, No. 4, Oct., 1943, pp. 151-153, 182.)
			Concrete, Cements.
586	16055	U.S.A. ...	*Concrete Curing—Special Laboratory for Testing Durability and Strength of Concrete.* (Scientific American, Vol. 169, No. 4, Oct., 1943, p. 181.)
587	16468	G.B.	*Plastic Glues and Cements.* (D. L. Brown, Plastics, Vol. 7, No. 78, Nov., 1943, pp. 480-485.)
			General Properties, including Corrosion.
588	15082	G.B.	*New Methods for Examination of Corroded Metal (Abridged).* (F. H. Champion, Engineering, Vol. 156, No. 4,055, 1/10/43, pp. 273-274.)
589	15084	G.B.	*Mechanical Properties of Metals.* (H. O'Neill, Engineering, Vol. 156, No. 4,055, 1/10/43, p. 276.)
590	14510	G.B.	*Mancoloy Alloys—Low Resistance with Low Temperature Coefficient Materials.* (Electronic Engineering, Vol. 16, No. 188, October, 1943, p. 214.)
591	15541	G.B.	*Incidental Corrosion of Metals by Plastics.* (Chem. Technik, 1942, Vol. 15, p. 226.) (Wiederholt and Groebe, Plastics, Vol. 7, No. 77, Oct., 1943, p. 460.)
592	15775	G.B.	*Factors Influencing Chemical Corrosion of Plastics.* (British Plastics, Vol. 15, No. 173, Oct., 1943, pp. 306-308.)
593	15849	U.S.A. ...	*Intercrystalline Cohesion of Metals (Study of High Temperature Intercrystalline Failures) (No. 8).* (E. R. Parker, A.S.M. Preprints (25th Annual Convention), 18-22/10/43, pp. 1-11.)
594	15850	U.S.A. ...	*Plastic Flow and Rupture of Metals (No. 9).* (C. Zener and J. H. Hollomon, A.S.M. Preprints (25th Annual Convention), 18-22/10/43, pp. 1/53.)
595	16028	G.B.	*Comparing Structures in Metals and Plastics.* (L. P. Dudley, Light Metals, Vol. 6, No. 69, Oct., 1943, pp. 480-485.)
596	16350	G.B.	*The Atmospheric Corrosion of Copper. Some Factors which Influence the Formation of Protective Coatings.* (J. H. Wilkinson and W. S. Patterson, Journal of Society of Chemistry and Industry, Vol. 62, No. 10, October, 1943, pp. 167-170.)
597	16428	Germany ...	*Stress Corrosion of Structural Steels (Various Methods).* (Metallwirtschaft, Vol. 19, No. 48, 20/11/40, pp. 1089-1090.)
598	16431	Germany ...	*Metal Production in the U.S.S.R.* (1927-1938). (K. G. Makuke, Metallwirtschaft, Vol. 19, No. 48, 20/11/40, pp. 1096-1099.)
599	16481	G.B.	*Production of Metals in Wartime.* (Metal Industry, Vol. 63, No. 20, 12/11/43, p. 309.)

ITEM NO.	R.T.P. REF.		TITLE AND JOURNAL.
			B. Fabrication.
			Welding.
600	15125	G.B.	*Fusion Welding of Wrought Aluminium Alloys.* (Sheet Metal Industries, Vol. 18, No. 198, October, 1943, p. 1792.)
601	15127	G.B.	*Rightward or Leftward Welding Technique? (Contd.).* (W. Heiz, Sheet Metal Industries, Vol. 18, No. 198, October, 1943, pp. 1801-1804.)
602	15355	G.B.	*The Welding of Wrought Aluminium Alloys.* (Aeroplane, Vol. 65, No. 1,689, 8/10/43, p. 405.)
603	15379	G.B.	*The Welding of Cast Iron: A Review.* (J. G. Pearce, The Institute of Welding, Quarterly Trans., Vol. 5, No. 4, October, 1942, pp. 156-163.)
604	15380	G.B.	*Report on a Preliminary Investigation of the Welding of Cast Iron.* (W. J. Driscoll, The Institute of Welding, Quarterly Trans., Vol. 5, No. 4, October, 1942, pp. 164-173.)
605	15381	G.B.	*Under Water Arc Welding.* (A. J. Hipperson, The Institute of Welding, Quarterly Trans., Vol. 5, No. 4, October, 1942, pp. 174-177.)
606	15383	U.S.A. ...	*American Tentative Standards and Recommended practices and Procedures for Spot Welding of Aluminium Alloys.* (The Institute of Welding, Quarterly Trans., Vol. 5, No. 4, October, 1942, pp. 181-198.)
607	15428	G.B.	*Control System for Spot Welding.* (Mechanical World, Vol. 114, No. 2,961, 1/10/43, p. 390.)
608	15757	G.B.	*Helium Arc Welding of Magnesium.* (Metal Industry, Vol. 63, No. 16, 15/10/43, p. 246.)
609	15882	G.B.	*Spot Welding of Heavy-Gauge Light-Alloy Sheets.* (Engineering, Vol. 156, No. 4,058, 22/10/43, pp. 327-328, 330.)
610	16124	G.B.	*Influence of Silicon on Welds in Cast Iron.* (Engineering, Vol. 156, No. 4,059, 29/10/43, p. 348.)
611	16141	U.S.A. ...	*Spot Welding Demands Clean Surfaces for Uniform Results.* (Scientific American, Vol. 169, No. 4, Oct., 1943, pp. 159-160.)
612	16175	G.B.	*Combiner Forming and Cutting Operations in Welding.* (J. V. Thomas, Machinery, Vol. 63, No. 1,619, 21/10/43, p. 460.)
613	16232	G.B.	*Cable for Electric Arc Welding.* (Sheet Metal Industries, Vol. 18, No. 199, November, 1943, p. 1980.)
614	16233	Switzerland ...	*A Welding Table with an Attached Exhauster.* (Sheet Metal Industries, Vol. 18, No. 199, November, 1943, p. 1981.)
615	16480	G.B.	*Fabricating Welding Quality Elektron. III—Welding.* (W. K. B. Marshall, Metal Industry, Vol. 63, No. 20, 12/11/43, pp. 306-309.)
			Soldering and Brazing.
616	14944	G.B.	*Solder for Aluminium Bronze.* (Metal Industry, Vol. 63, No. 14, 1/10/43, p. 216.)

ITEM NO.	R.T.P. REF.		TITLE AND JOURNAL.
617	15124	G.B. ...	... *The Design of Parts for Copper Brazing.* (P. F. Tylecote, Sheet Metal Industries, Vol. 18, No. 198, October, 1943, pp. 1789-1791.)
618	15433	G.B. ...	... *Soldering Methods—the Limitations of Soft Solders* (Mechanical World, Vol. 114, No. 2,941, 1/10/43, p. 400.)
			Joining and Bonding.
619	16058	U.S.A.	... *Reanite Bonding Process (for Wood Plastics and Metals).* (Scientific American, Vol. 169, No. 4, Oct., 1943, p. 185.)
620	16162	G.B. ...	... *A New Fusion Metal Bonding Process.* (Aircraft Production, Vol. 5, No. 61, Nov., 1943, p. 358.)
			Drilling and Impact Extrusion.
621	15120	G.B. ...	... *Drilling Thin Sheet Metal.* (Sheet Metal Industries, Vol. 18, No. 198, October, 1943, p. 1769.)
622	15122	G.B. ...	... *A Test for Measuring Drawability of Deep Drawing Steels—I.* (F. W. Boulger and F. B. Dahle, Sheet Metal Industries, Vol. 18, No. 198, October, 1943, pp. 1777-1780.)
623	16032	G.B. ...	... *Review of Impact Extrusion as Applied to Aluminium and Aluminium Alloys.* (Light Metals, Vol. 6, No. 69, Oct., 1943, pp. 509-513.)
624	16270	G.B. ...	... *Drilling Machines (Radial Drills, Cutting Fluids, Feeds and Speeds, Tap Drill Sizes, etc.).* (Machinist, Vol. 87, No. 16, Oct., pp. 97-112.)
			Plating, Spraying, etc.
625	15083	G.B. ...	... *Surface Protection of Magnesium Alloys (Abridged).* (N. Parkinson and J. W. Cuthbertson, Engineering, Vol. 156, No. 4,055, 1/10/43, p. 274.)
626	15115	G.B. ...	... *Thickness and Finishing of Chromium Plate on Tools and Gauges.* (Sheet Metal Industries, Vol. 18, No. 198, October, 1943, pp. 1739-1740.)
627	15535	G.B. ...	... *Metallizing Plastics (Contd.).* (E. E. Halls, Plastics, Vol. 7, No. 77, Oct., 1943, pp. 429-432.)
628	15761	G.B. ...	... *Electro-Deposition of Lead.* (M. B. Diggin, Metal Industry, Vol. 63, No. 16, 15/10/43, pp. 250-252.)
629	15858	U.S.A.	... *A Study of the Nitriding Process. 1. Effect of Ammonia Dissociation on Case Depth and Structure (No. 16).* (C. F. Floe, A.S.M. Preprints (25th Annual Convention), 18-22/10/43, pp. 1-24.)
630	15955	G.B. ...	... *Restoring Worn Ways on Lathes by Metallic Spraying.* (Machinery, Vol. 63, No. 1,617, 7/10/43, p. 396.)
631	16225	G.B. ...	... *Black Nickel Plating.* (Sheet Metal Industries, Vol. 18, No. 199, November, 1943, pp. 1940-1944.)
632	16228	G.B. ...	... *Developments in Thermal Technique as Applied to Vitreous Enamelling Processes.* (J. Fallon, Sheet Metal Industries, Vol. 18, No. 199, November, 1943, pp. 1950-1952, 1966.)
633	16487	G.B. ...	... *White Bronze Plating.* (Metal Industry, Vol. 63, No. 20, 12/11/43, p. 316.)

ITEM NO.	R.T.P. REF.		TITLE AND JOURNAL.
			Milling, Grinding, Machining.
634	15121	G.B. ...	... *Trueing and Dressing Grinding Wheels.* (Sheet Metal Industries, Vol. 18, No. 198, October, 1943, p. 1768.)
635	16046	G.B. ...	... *Machining of Light Metals.* (Metal Industry, Vol. 63, No. 18, 29/10/43, p. 281.)
636	16075	G.B. ...	... *Improving Fatigue Strength of Machine Parts (Effects Produced by Working Hardening Processes, Machining and Heat Treatment).* (J. O. Almen, Mechanical World, Vol. 114, No. 2,963, 15/10/43, pp. 435-439.)
637	16176	G.B. ...	... *The Multiple-Cutter Thread Milling Process.* (J. G. Smith, Machinery, Vol. 63, No. 1,619, 21/10/43, pp. 461-464.)
638	16227	G.B. ...	... *Some Aspects of Metal Finishing.* (Sheet Metal Industries, Vol. 18, No. 199, November, 1943, pp. 1945-1947.)
			Drawing, Rolling and Pressing.
639	15112	G.B. ...	... *Rolling, Processing and Testing of Tinplate (Contd.).* (W. E. Hoare and E. S. Hedges, Sheet Metal Industries, Vol. 18, No. 198, October, 1943, pp. 1713-1722.)
640	15114	G.B. ...	... *The Principles of Lubrication in Modern Deep Drawing Practice (Contd.).* (H. A. H. Crowther and others, Sheet Metal Industries, Vol. 18, No. 198, October, 1943, pp. 1733-1738.)
641	15317	Germany	... *Light Metal Rolling Mills—I.* (From Aluminium, Vol. 24, pp. 20-25, 1942.) (W. Krämer, Metal Industry, Vol. 63, No. 15, 8/10/43, pp. 226-228.)
642	15756	G.B. ...	... *Light Metal Rolling Mills—II.* (W. Krämer, Metal Industry, Vol. 63, No. 16, 15/10/43, pp. 245-246.)
643	16080	G.B. ...	... *Pressing Magnesium Alloy Sheet (Plastic Working in Heated Dies).* (Mechanical World, Vol. 114, No. 2,963, 15/10/43, pp. 450-451.)
644	16218	G.B. ...	... *Rolling, Processing and Testing of Tinplate.* (W. E. Hoare and E. S. Hedges, Sheet Metal Industries, Vol. 18, No. 199, November, 1943, pp. 1895-1899.)
645	16222	G.B. ...	... *The Principles of Lubrication in Modern Deep Drawing Practice.* (H. A. H. Crowther and others, Sheet Metal Industries, Vol. 18, No. 199, November, 1943, pp. 1915-1920.)
646	16229	G.B. ...	... *A Test for Measuring Drawability of Deep Drawing Steels.* (F. W. Boulger and F. B. Dahle, Sheet Metal Industries, Vol. 18, No. 199, November, 1943, pp. 1959-1966.)
647	16430	Germany	... *Deep Drawing Test Method (Review).* (Metallwirtschaft, Vol. 19, No. 48, 20/11/40, pp. 1093-1094.)
			Moulding and Casting.
648	14942	G.B. ...	... *Centrifugal Casting.* (Metal Industry, Vol. 63, No. 14, 1/10/43, p. 214.)

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649	15320	G.B. ...	*Magnesium Moulding Sands.* (C. Sanders, Metal Industry, Vol. 63, No. 15, 8/10/43, p. 230.)
650	15323	G.B.	*Centrifugal Casting of Aluminium.* (Metal Industry, Vol. 63, No. 15, 8/10/43, p. 234.)
651	15543	G.B.	*The Detection and Elimination of Some Common Faults in Plastic Mouldings.* (W. M. Halliday, Plastics, Vol. 7, No. 77, Oct., 1943, pp. 467-476.)
652	15426	G.B.	*Hot Tear Formation in Steel Castings.* (C. W. Briggs, Mechanical World, Vol. 114, No. 2,961, 1/10/43, pp. 379-381.)
653	15755	G.B.	*Sand Casting of Aluminium Alloys—I.* (Metal Industry, Vol. 63, No. 16, 15/10/43, pp. 242-244.)
654	15766	G.B.	*Salvage of Porous Castings.* (British Plastics, Vol. 15, No. 174, Oct., 1943, p. 268.)
655	15773	Germany ...	*Working Methods for P.V.C. Material (Impact Compression Moulding and Injection Moulding).* (From Kunstoffe, Vol. 32, No. 137, 1942, pp. 137-141.) (G. Wick and A. Iloff, British Plastics, Vol. 15, No. 173, Oct., 1943, pp. 299-305.)
656	15774	G.B.	*Heatronic Moulding.* (British Plastics, Vol. 15, No. 173, Oct., 1943, p. 305.)
657	15795	G.B.	*Sand Casting of Aluminium Alloys—II.* (Metal Industry, Vol. 63, No. 17, 22/10/43, pp. 264-266.)
658	15980	G.B.	*Casting High Duty Iron—Practical Methods for the Small Foundry.* (T. Roberts, Mechanical World, Vol. 114, No. 2,964, 22/10/43, pp. 467-468.)
659	16030	G.B.	*Gravity Dies of Light Alloys.* (Light Metals, Vol. 6, No. 69, Oct., 1943, pp. 474-476.)
660	16161	G.B.	*Gravity Die Casting: Part III, Ageing and Solution Treatment.* (Aircraft Production, Vol. 5, No. 61, Nov., 1943, pp. 512-515.)
			Heat Treatment.
661	14943	G.B.	*Technical Assistance in the Foundry.* (Metal Industry, Vol. 63, No. 14, 1/10/43, pp. 215-216.)
662	15077	G.B.	*The Maintenance of Basic Open-Hearth Furnace Linings.* (A. Jackson, Engineering, Vol. 156, No. 4,055, 1/10/43, p. 265.)
663	15623	Switzerland ...	*Heat Treatment of Replacement Steels in Electrically Heated Salt Bath.* (C. Albrecht, Schweizer Archiv., Vol. 8, No. 10, October, 1942, pp. 322-328.)
664	15856	U.S.A. ...	*The Effect of Heat Treatment and Carbon Content on the Work Hardening Characteristics of Several Steels (No. 14).* (J. H. Holloman, A.S.M. Preprints (25th Annual Convention), 18-22/10/43, pp. 1-9.)
665	15864	U.S.A. ...	*Some Effects of Heat Treatment on Low Alloy Titanium Steels (No. 23).* (G. F. Coustock, A.S.M. Preprints (25th Annual Convention), 18-22/10/43, pp. 1-14.)

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666	15865	U.S.A. ...	*Effect of Time, Temperature and Prior Structure on the Hardenability of Several Alloy Steels* (*No.* 24). (J. Welchner and ôthers, A.S.M. Preprints (25th Annual Convention), 18-22/10/43, pp. 1-29.)
667	15876	U.S.A. ...	*An Emergency Heat Resistant Alloy* (760°*C.*) (*No.* 35). (O. E. Harder and J. T. Gow, A.S.M. Preprints (25th Annual Convention), 18-22/10/43, pp. 1-67.)
668	16048	G.B.	*Heat-Treating Aluminium Pressure Die Castings.* (Metal Industries, Vol. 62. No. 18, 29/10/43, p. 284.)
669	16219	G.B.	*The Uses of Controlled Atmospheres in the Metal Industries—Part II.* (Sheet Metal Industries, Vol. 18, No. 199, November, 1943, pp. 1900-1905.)

Quenching and Tempering.

670	14945	G.B.	*Tempering Hard-Rolled Aluminium.* (Metal Industry, Vol. 63, No. 14, 1/10/43, p. 217.)
671	15702	G.B.	*The Solidification and Cooling of Steel Ingots.* (E. F. Law and V. Harbord, Engineering, Vol. 156, No. 4,057, 15/10/43, pp. 318-320.)
672	15842	U.S.A. ...	*Quenching and Hardenability of Hollow Cylinders* (*No.* 1). (J. H. Holloman and C. Zener, A.S.M. Preprints (25th Annual Convention), 18-22/10/43, pp. 1-17.)
673	15843	U.S.A. ...	*Rates of Cooling in Blocks and Cylinders* (*No.* 2). (C. B. Post and W. H. Fenstermacher, A.S.M. Preprints (25th Annual Convention), 18-22/10/43, pp. 1-20.)
674	15860	U.S.A. ...	*The Isothermal Transformation of Case-Carburized S.A.E.* 4,815 (*No.* 18). (J. R. Cruciger and J. R. Vilella, A.S.M. Preprints (25th Annual Convention), 18-22/10/43, pp. 1-13.)
675	15861	U.S.A. ...	*Order Hardening: its Mechanism and Recognition* (*No.* 19). (D. Harker, A.S.M. Preprints (25th Annual Convention), 18-22/10/43, pp. 1-26.)
676	15862	U.S.A. ...	*Interrupted Quench and Isothermal Treatments of Precipitation Hardening Alloys: Introductory Notes* (*No.* 20). (R. H. Harrington, A.S.M. Preprints (25th Annual Convention), 18-22/10/43, pp. 1-14.)
677	15863	U.S.A. ...	*Bright Gas Quenching of S.A.E. X-4,130 and N.E.-8,630 Welded Aircraft Tubes* (*No.* 22). (W. Lehrer, A.S.M. Preprints (25th Annual Convention), 18-22/10/43, pp. 1-31.)
678	15870	U.S.A. ...	*Quenching Rate Versus Graphite Formation in Prequenched White Cast Iron* (*No.* 29). (O. W. Simmons, A.S.M. Preprints (25th Annual Convention), 18-22/10/43, pp. 1-11.)
679	15871	U.S.A. ...	*Pseudomorphs of Pearlite in Quenched Steel* (*No.* 30). (O. W. Ellis, A.S.M. Preprints (25th Annual Convention), 18-22/10/43, pp. 1-12.)

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680	15872	U.S.A. ...	*Structural Changes During the Tempering of High Carbon Steel* (*No.* 31). (D. P. Antie and others, A.S.M. Preprints (25th Annual Convention), 18-22/10/43, pp. 1-37.)
681	15873	U.S.A. ...	*The Effect of Carbon on the Tempering of Steel* (*No.* 32). (S. C. Fletcher and M. Cohen, A.S.M. Preprints (25th Annual Convention), 18-22/10/43, pp. 1-26.)
682	15874	U.S.A. ...	*The Tempering of Nickel and Nickel-Molybdenum Steels* (*No.* 33). (D. P. Antis and M. Cohen, A.S.M. Preprints (25th Annual Convention), 18-22/10/43, pp. 1-17.)
683	15875	U.S.A. ...	*Effect of Quenching Bath Temperature on the Tempering of High Speed Steel* (*No.* 34). (P. Gordon and others, A.S.M. Preprints (25th Annual Convention), 18-22/10/43, pp. 1-30.)
			Powder Metallurgy.
684	14940	G.B.	*Is Powder Metallurgy Costly?* (H. W. Greenwood, Metal Industry, Vol. 63, No. 14, 1/10/43, pp. 213-214.)
685	15425	G.B.	*The Processing and Application of Metal Powders.* (C. S. Darling, Mechanical World, Vol. 114, No. 2,961, 1/10/43, pp. 375-378.)
686	15697	G.B.	*Iron Powder Metallurgy.* (Engineering, Vol. 156, No. 4,057, 15/10/43, p. 305.)
687	15753	G.B.	*The Powdered Metal Process for Moulding Parts.* (H. W. Perry, Aircraft Engineering, Vol. 15, No. 176, Oct., 1943, pp. 305-306.)
688	15778	G.B.	*The Measurement of the Fineness of Powdered Materials.* (P. J. Rigden, Chemistry and Industry, Vol. 62, No. 42, 16/10/43, pp. 393-396.)
689	15797	G.B.	*Manufacture of Metal Powders* (*Patent*). (Metal Industry, Vol. 63, No. 17, 22/10/43, p. 268.)
690	16034	G.B.	*Metal Powder Technology.* (Light Metals, Vol. 6, No. 69, Oct., 1943, pp. 484-485.)
691	16056	U.S.A. ...	*New Micro-Hardness Tester for Powder Particles* (*Special Application to Powder Metallurgy*). (Scientific American, Vol. 169, No. 4, Oct., 1943, p. 182.)
692	16063	G.B.	*Powder Metallurgy. The Physical Properties of Parts Made from Iron.* (F. V. Lenel, Automobile Engineer, Vol. 33, No. 441, Oct., 1943, pp. 415-418.)
			Machines and Tools.
693	15848	U.S.A. ...	*The Micro-Hardness Tester as a Metallurgical Tool* (*No.* 7). (C. B. Brodie, A.S.M. Preprints (25th Annual Convention), 18-22/10/43, pp. 1-14.)
694	15883	G.B.	*Internal Grinding and Facing Machine.* (Engineering, Vol. 156, No. 4,058, 22/10/43, p. 326.)
695	16078	G.B.	*The Push-Through Blanking Tool.* (A. Keye, Mechanical World, Vol. 114, No. 2,963, 15/10/43, pp. 448-449.)

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696	16231	G.B. ...	... *The "Wimet" Tungsten Carbide-Tipped Riveting Punch.* (Sheet Metal Industries, Vol. 18, No. 199, November, 1943, p. 1979.)
697	16275	U.S.A.	... *Precision Tubing—New Double-Lap Flaring Tool for Tube Connections.* (Service Engineering, Vol. 1, No. 1, Winter, 1943, pp. 12-13.)
698	16497	U.S.A.	... *The Use of Plastics for Drill Jigs and Stretch Moulds by the Brewster Aeronautical Corporation.* (Aeroplane, Vol. 65, No. 1,694, 12/11/43, p. 249.)

C. Inspection.

Mechanical and Chemical Testing.

699	15855	U.S.A.	... *High Speed Testing of Mild Steel (No. 13).* (J. H. Holloman and C. Zener, A.S.M. Preprints (25th Annual Convention), 18-22/10/43, pp. 1-9.)
700	15867	U.S.A.	... *Notched Bar Tensile Test Characteristics of Heat Treated Low Alloy Steels (No. 26).* (G. Sachs and others, A.S.M. Preprints (25th Annual Convention), 18-22/10/43, pp. 1-53.)
701	15982	G.B. ...	... *The Salt Spray Test: Its Use in Specifications Criticised.* (Mechanical World, Vol. 114, No. 2,964, 22/10/43, p. 471.)
702	16200	G.B. ...	... *Rapid Test for Molybdenum in Steel.* (Engineering, Vol. 156, No. 4,059, 29/10/43, p. 350.)

X-Ray Analysis.

703	14939	G.B. ...	... *Structural Changes in 70:30 Brass Strip as Effected by Cold-Rolling and Annealing (a Study by X-Ray and Microscopic Methods).* (M. Cook and T. L. L. Richards, Metal Industry, Vol. 63, No. 14, 1/10/43, pp. 210-212.)
704	15538	G.B. ...	... *Non-Destructive Testing by X-Rays.* (R. H. Cooke, Plastics, Vol. 7, No. 77, Oct., 1943, pp. 438-443.)
705	16026	G.B. ...	... *X-Rays in the Light Alloy Foundry.* (F. R. Mansfield, Light Metals, Vol. 6, No. 69, Oct., 1943, pp. 469-478.)
706	16179	G.B. ...	... *X-Ray Crystallography.* (Electrician, Vol. 131, No. 3,412, 22/10/43, pp. 398-399.)

Optical Analysis.

707	15088	G.B. ...	... *The Use of the Microscope in Particle Size Analysis.* (G. L. Fairs, Chemistry and Industry, Vol. 62, No. 40, 2/10/43, pp. 374-378.)
708	15792	G.B. ...	... *The Electron Microscope: Its Application in Metallurgy.* (V. K. Zworykin, Metal Industry, Vol. 63, No. 17, 22/10/43, pp. 258-260.)
709	16045	G.B. ...	... *The Electron Microscope: Its Application in Metallurgy (Concluded).* (V. K. Zworykin, Metal Industry, Vol. 63, No. 18, 29/10/43, pp. 279-281.)
710	16432	Germany	... *Spectroscopic Determination of the Thickness of Metallic Coatings.* (Metallwirtschaft, Vol. 19, No. 48, 20/10/40, p. 1101.)

ITEM NO.	R.T.P. REF.		TITLE AND JOURNAL.
			Quality Control.
711	15960	G.B.	*Statistical Quality Control in Practice.* (O. H. Rachwalsky, Machinery, Vol. 63, No. 1,617, 7/10/43, pp. 407-410.)
712	16073	G.B.	*Quality Control—An Examination of the Basic Principles of the New Inspection Technique.* (J. W. Parker, Mechanical World, Vol. 114, No. 2,963, 15/10/43, pp. 431-434.)
			INSTRUMENTS.
			Flight, Navigational.
713	15074	G.B.	*The Kodak Astrograph.* (Flight, Vol. 44, No. 1,814, 30/9/43, pp. 370-372.)
714	15385	Germany ...	*Requirements of an Acoustic Altimeter.* (Inter. Avia., No. 875, 7/7/43, p. 10.)
715	15486	U.S.A. ...	*Periscope Sextant.* (Der Flieger, Vol. 22, No. 5, May, 1943, p. 147.)
716	15517	U.S.A. ...	*New Computer Developed for Pilots and Navigators.* (American Aviation, Vol. 7, No. 7, 1/9/43, p. 69.)
717	15716	U.S.A. ...	*Testing and Installing Liberator Instruments.* (C. W. Greaves, Aero Digest, Vol. 43, No. 2, August, 1943, pp. 156-160.)
718	15925	U.S.A. ...	*Alternating Current Motors for Aircraft.* (Autom. and Aviation Ind., Vol. 89, No. 5, 1/9/43, p. 76.)
719	16406	Germany ...	*German Development of Acoustic Landing Altimeters.* (Flight, Vol. 44, No. 1,820, 11/11/43, p. 531.)
720	16409	G.B.	*Aircraft Instruments.* (Flight, Vol. 44, No. 1,820, 11/11/43, pp. 534-539.)
			Photo-Electric, Electric.
721	15338	G.B.	*Viscosity at the Boiling Point—The Rheochet.* (J. H. Friend and W. D. Hargreaves, Philosophical Magazine, Vol. 34, No. 236, Sept., 1943, pp. 643-650.)
722	15345	G.B.	*The Dielecometer (Instrument for Dielectric Constant Determination).* (J. H. Jupe, Electrical Review, Vol. 133, No. 3,431, 27/8/43, pp. 271-273.)
723	15616	Switzerland ...	*Highly Accurate Electrical Calculating Machines, with Special Reference to a New Range Finder for A.A. Artillery (Verograph).* (F. Fischer, Schweizer Archiv., Vol. 8, No. 1, January, 1942, pp. 1-15.)
724	15629	Switzerland ...	*Photo-Electric Torsiograph.* (W. Spillmann, Schweizer Archiv., Vol. 8, No. 8, August, 1942, pp. 252-255.)
725	15743	G.B.	*Photo-Electric Photometers: Their Properties, Use and Maintenance (Discussion).* (J. S. Preston, Transactions of the Illuminating Engg. Soc., Vol. 8, No. 7, July, 1943, pp. 121-152.)

ITEM NO.	R.T.P. REF.		TITLE AND JOURNAL.
			Electronic, Magnetic.
726	14902	Switzerland ...	*The Fortin Magnetometer and its Employment for Water Divining.* (Schweizer Archiv., Vol. 3, No. 2, February, 1937, pp. 47-48.)
727	16118	U.S.S.R. ...	*An Electronic Defectoscope.* (Gorelik and others, Metal Industries Review, Vol. 19, No. 7, July, 1939, pp. 67-70.)
			PRODUCTION.
			Organisation and Control.
728	14898	G.B.	*Capacity Planning.* (F. Whiteley, Machinery, Vol. 63, No. 1,614, 16/9/43, pp. 327-328.)
729	14958	U.S.A. ...	*Women who Work for Victory.* (W. G. Tuttle, Mechanical Engineering, Vol. 65, No. 9, Sept., 1943, pp. 657-660.)
730	14986	U.S.A. ...	*Scheduling of Changes in Aircraft Production.* (H. S. Martin, Preprint of the Society of Automotive Engineers, September 30-October 2, 1943, pp. 1-5.)
731	15081	G.B.	*An International Resources Organisation.* (Engineering, Vol. 156, No. 4,055, 1/10/43, pp. 272-273.)
732	15329	G.B.	*Outworking and Production.* (Engineer, Vol. 176, No. 4,578, 8/10/43, pp. 258-259.)
733	15384	Switzerland ...	*Organisation of the German Munitions and War Economy.* (Inter. Avia., No. 875, 7/7/43, pp. 1-7.)
734	15393	U.S.A. ...	*U.S.A. Aircraft Production Figure.* (Inter. Avia., No. 875, 7/7/43, p. 17.)
735	15525	G.B.	*The Co-ordination of Abstracting.* (Engineering, Vol. 156, No. 4,056, 8/10/43, p. 292.)
736	15527	G.B.	*Out-Working in Practice.* (Engineering, Vol. 156, No. 4,056, 8/10/43, p. 296.)
737	15732	U.S.A. ...	*Production Planning Through Time Study Analysis.* (B. F. Smith, Aero Digest, Vol. 43, No. 2, August, 1943, pp. 255-261.)
738	15998	G.B.	*Out-Working Aids Production.* (Flight, Vol. 44, No. 1,816, 14/10/43, p. 424.)
739	16037	G.B.	*Success of Out-Working.* (Aircraft Production, Vol. 5, No. 61, Nov., 1943, p. 540.)
740	16062	G.B.	*Wartime Production—The Special Requirements of Wartime Control Systems.* (Automobile Engineer, Vol. 33, No. 441, Oct., 1943, p. 414.)
741	16092	G.B.	*Out-Working Adds to Production.* (Aeroplane, Vol. 65, No. 1,692, 29/10/43, p. 487.)
742	16235	G.B.	*Out-Working for Various Types of Assembly Work.* (Sheet Metal Industries, Vol. 18, No. 199, November, 1943, p. 1,982.)
			Research and Training.
743	14888	G.B.	*Scientific Information.* (Engineering, Vol. 156, No. 4,054, 24/9/43, p. 252.)
744	14932	G.B.	*Our Debt to the Metallurgist.* (L. W. Low, Engineer, Vol. 176, No. 4,577, 1/10/43, pp. 264-265.)

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745	14934	Switzerland ...	*Laboratory for H.T. Research.* (Engineer, Vol. 176, No. 4,577, 1/10/43, pp. 269-272.)
746	14935	G.B.	*Scientific Information.* (J. G. Crowther, Engineer, Vol. 176, No. 4,577, 1/10/43, pp. 266, 272-273.)
747	14959	U.S.A. ...	*Training Employees for the War and After.* (R. O. Johnson, Mechanical Engineering, Vol. 65, No. 9, Sept., 1943, pp. 661-663.)
748	15076	G.B.	*Research: A General Survey—I.* (O. W. Roskill, Engineering, Vol. 156, No. 4,055, 1/10/43, pp. 263-264.)
749	15189	G.B.	*Towards Better Engineering Education (Report by the Institution of Mechanical Engineers).* (Mechanical World, Vol. 114, No. 2,960, 24/9/43, pp. 350-353, 368-372.)
750	15198	G.B.	*Engineering Economics (with Discussion).* (Sir Frank Gill, Institution of Electrical Engineers, Vol. 90, No. 33, Pt. 1, Sept., 1943, pp. 373-396.)
751	15200	G.B.	*Discussion on "A Critical Review of Education and Training for Engineers."* (Institution of Electrical Engineers, Vol. 90, No. 33, Pt. 1, Sept., 1943, pp. 417-424.)
752	15325	G.B.	*Australian Aeronautical Research.* (Engineer, Vol. 176, No. 4,578, 8/10/43, p. 277.)
753	15441	Germany ...	*Reports of the Aerodynamic Department of the Brunswick Technical High School (List of Titles).* (Flugsport, Vol. 35, No. 12, 18/8/43, p. 180.)
754	15500	G.B.	*Education for Industry (Review of Training Schemes at Bristol's, De Havilland's, etc.).* (Times Trade and Engineering, Vol. 53, No. 955, Sept., 1943, p. 22.)
755	15523	G.B.	*Research: A General Survey—II.* (O. W. Roskill, Engineering, Vol. 156, No. 4,056, 8/10/43, pp. 282-283.)
756	15570	Germany ...	*Examples of Research Equipment of the Dornier Firm.* (W. Zuerl, Der Flieger, Vol. 22, No. 2, Feb., 1943, pp. 38-42.)
757	15593	Germany ...	*The Flight Research Department of Junkers (Review of Work During Last 20 Years).* (Der Flieger, Vol. 22, No. 4, April, 1943, pp. 102-105.)
758	15658	Switzerland ...	*Training of Aeronautical Engineers in Germany.* (Inter. Avia., No. 879-880, 9/8/43, pp. 10-11.)
759	15713	U.S.A. ...	*Langley Field Aerodynamic Laboratory (Photos).* (Aero Digest, Vol. 43, No. 2, August, 1943, pp. 126-127.)
760	15931	G.B.	*Co-operative Research in the Wire Industry.* (A. T. Adam, Metal Treatment, Vol. 10, No. 34, Summer, 1943, pp. 105-110, 126.)
761	15936	G.B.	*Applications of Physics in Chemical Industry (Use of Physical Instruments for Analysing and Testing Products).* (A. J. Mee, Journal of Scientific Instruments, Vol. 20, No. 9, Sept., 1943, pp. 137-141.)

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762	15937	G.B. ...	...	*The Physicist in the Chemical Industry.* (R. C. L. Bosworth, Journal of Scientific Instruments, Vol. 20, No. 9, Sept., 1943, pp. 142-145.)
763	15972	G.B. ...	...	*Laboratory Control in the Aero Engine Industry.* (S. A. J. Sage, Z.A.M.M., Vol. 114, No. 2,962, 8/10/43, pp. 403-405.)
764	15974	G.B. ...	...	*Engineering, Investigation (Evolution of Scientific Evidence, etc.).* (W. O. Andrews, Mechanical World, Vol. 114, No. 2,962, 8/10/43, pp. 408-411, 413.)
765	16014	G.B. ...	...	"*Remember the Past and Look to the Future*" (*Institution of Mechanical Engineers, Presidential Address*) (*Review of Engineering Progress*). (F. C. Lea, Engineer, Vol. 176, No. 4,581, 29/10/43, pp. 343-345.)
766	16019	G.B. ...	...	*Industry and Research—F.B.I. Report.* (Engineer, Vol. 176, No. 4,581, 29/10/43, pp. 352-353.)
767	16043	G.B. ...	...	*Industry and Research—F.B.I. Proposals for Future Organisation.* (Metal Industry, Vol. 63, No. 18, 29/10/43, pp. 277-278.)
768	16074	G.B. ...	...	*The New Goodyear Research Laboratory.* (Mechanical World, Vol. 114, No. 2,963, 15/10/43, p. 434.)
769	16110	G.B. ...	...	*H.T. Testing—Details of New Research Laboratory at Zurich.* (Electrician, Vol. 131, No. 3,407, 17/9/43, pp. 273-275.)
770	16156	G.B. ...	...	*The Training of Unskilled Labour—Part I.* (Aircraft Production, Vol. 5, No. 61, Nov., 1943, pp. 536-539.)
771	16203	G.B. ...	...	*Engineering, Past and Future.* (F. C. Lea, Engineering, Vol. 156, No. 4,059, 29/10/43, pp. 355-356.)
772	16221	G.B. ...	...	*Industrial Research.* (Sheet Metal Industries, Vol. 18, No. 199, November, 1943, pp. 1910-1912.)
773	16338	G.B. ...	...	*Educational Reconstruction (III).* (Nature, Vol. 152, No. 3,860, 23/10/43, pp. 455-458.)
774	16352	G.B. ...	...	*Industrial Achievement and Training.* (T. J. Drakeley, Chemistry and Industry, Vol. 62, No. 45, 6/11/43, pp. 423-424.)
775	16355	G.B. ...	...	*Invention and its Relation to Industry.* (E. W. Moss, Engineer, Vol. 176, No. 4,582, 5/11/43, p. 365.)
776	16357	G.B. ...	...	*Engineers and National Planning—No. 1.* (D. Anderson, Engineer, Vol. 176, No. 4,582, 5/11/43, pp. 367-368.)
777	16377	G.B. ...	...	*Research: A General Survey.* (O. W. Roskill, Engineering, Vol. 156, No. 4,060, 5/11/43, p. 364.)
778	16378	G.B. ...	...	*Engineering, Past and Future.* (F. C. Lea, Engineering, Vol. 156, No. 4,060, 5/11/43, pp. 365-366.)
779	16385	G.B. ...	...	*Inventors and Employers.* (Engineering, Vol. 156, No. 4,060, 5/11/43, pp. 375-376.)

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			Aircraft Production Methods.
780	15067	France ...	*The French Aircraft Industry (Review of French Aircraft Types).* (V. L. Gruberg, Flight, Vol. 44, No. 1,814, 30/9/43, pp. 359-362.)
781	15118	G.B. ...	*The Development of Aircraft Detail Fittings—Part II: Sheet Metal Work.* (W. Cookson, Sheet Metal Industries, Vol. 18, No. 198, Oct., 1943, pp. 1765-1767, 1770.)
782	15126	G.B. ...	*Welding and Other Assembly and Fabrication Methods Used on Eight German Aircraft Types.* (Sheet Metal Industries, Vol. 18, No. 198, Oct., 1943, pp. 1793-1800.)
783	15220	Germany ...	*Direct Pneumatic Hammer Riveting in Aircraft Production.* (From Maschinenbau, Der Betrieb, Vol. 21, No. 8, Aug., 1942, pp. 337-340.) (F. Wilde, Engineers' Digest, Vol. 4, No. 7, July, 1943, pp. 196-197.)
784	15505	G.B. ...	*Production of Aircraft (Select Committee's Proposals).* (Times Trade and Engineering, Vol. 53, No. 955, Sept., 1943, p. 33.)
785	15519	U.S.A. ...	*New Plywood Adhesive Developed by Du Pont.* (American Aviation, Vol. 7, No. 7, 1/9/43, p. 75.)
786	15520	U.S.A. ...	*New Lightweight Plastic Aircraft Flooring (Panelyte).* (American Aviation, Vol. 7, No. 7, 1/9/43, p. 80.)
787	15602	Germany ...	*Hand Milling of Cut-outs in Fuel Tanks (Templete Prevents Cut-out Section from Dropping Inside).* (Der Flieger, Vol. 22, No. 4, April, 1943, p. 112.)
788	15605	Germany ...	*Mass Production of He. 111 (Photographs).* (Signal, No. 13, July, 1943, pp. 34-37.)
789	15615	Germany ...	*American Methods of Propeller Blade Manufacture.* (Der Flieger, Vol. 22, No. 3, March, 1943, p. 83.)
790	15677	U.S.A. ...	*Aircraft and Engine Production by Ford Plants.* (Inter. Avia., No. 876-877, 19/7/43, pp. 14-15.)
791	15719	U.S.A. ...	*Widespread Use of Conveyorized Assembly Systems.* (Aero Digest, Vol. 43, No. 2, August, 1943, pp. 182-183.)
792	15723	U.S.A. ...	*Lofting Problems of Streamline Bodies (Part 16).* (C. M. Hartley and R. A. Liming, Aero Digest, Vol. 43, No. 2, August, 1943, pp. 197-202, 298.)
793	15726	U.S.A. ...	*Scale Installations for Weighing Aircraft.* (L. R. Hackney, Aero Digest, Vol. 43, No. 2, August, 1943, pp. 219-227.)
794	15733	U.S.A. ...	*Directory of Equipment for Handling Parts and Materials Used in Aircraft (Including Addresses of Manufacturers).* (Aero Digest, Vol. 43, No. 2, August, 1943, pp. 281-293.)
795	15741	U.S.A. ...	*New Curtiss Wright Scribing Tool Speeds Fuselage Production.* (Aero Digest, Vol. 43, No. 2, August, 1943, p. 403.)
796	15907	U.S.A. ...	*Canada's Aircraft Industry.* (Autom. and Aviation Ind., Vol 89, No. 5, 1/9/43, pp. 25, 86.)

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797	15909	U.S.A.	...	*Magnetic Particle Inspection at Lockheeds.* (R. Mitchell and C. Geist, Autom. and Aviation Ind., Vol 89, No. 5, 1/9/43, pp. 26-29, 56.)
798	15915	U.S.A.	...	*Modern Production Methods for the Manufacture of Filters for the Automotive and Aircraft Industries.* (Autom. and Aviation Ind., Vol. 89, No. 5, 1/9/43, pp. 43, 86.)
799	15947	G.B. ...	...	*Forming Extruded Components for Aircraft.* (Machinery, Vol. 63, No. 1,618, 14/10/43, pp. 438-439.)
800	15957	G.B. ...	...	*The Manufacture of Bomber Engines.* (Machinery, Vol. 63, No. 1,617, 7/10/43, pp. 400-403.)
801	15959	G.B. ...	...	*Centrifugal Casting Speeds Up Aero Engine Production.* (Machinery, Vol. 63, No. 1,617, 7/10/43, p. 406.)
802	16038	G.B. ...	...	*Consolidated Vultee Apply Moving-Line Assembly System.* (Aircraft Production, Vol. 5, No. 61, Nov., 1943, pp. 541-543.)
803	16103	G.B. ...	...	*Production of the Halifax Bomber at Handley Page.* (Sir F. Handley Page, Aeroplane, Vol. 65, No. 1,692, 29/10/43, p. 505.)
804	16152	G.B. ...	...	*The Horsa Glider: Part II—Building the Outer Wing Panels, etc.* (W. E. Goff, Aircraft Production, Vol. 5, No. 61, Nov., 1943, pp. 518-529.)
805	16153	G.B. ...	...	*Packard Built Merlins (Adoption of the Conveyor System).* (Aircraft Production, Vol. 5, No. 61, Nov., 1943, pp. 530-533.)
806	16157	G.B. ...	...	*Inspection of Aircraft Parts (Avoidance of Bottlenecks).* (Aircraft Production, Vol. 5, No. 61, Nov., 1943, p. 510.)
807	16225	G.B. ...	...	*The Development of Aircraft Detail Fittings—Part III.* (W. Cookson, Sheet Metal Industries, Vol. 18, No. 199, November, 1943, pp. 1941-1944.)
808	16286	U.S.A.	...	*Super Aluminium Alloys for Aircraft Structures—Part I.* (K. R. Jackman, Aviation, Vol. 42, No. 8, August, 1943, pp. 154-163, 297-305.)
809	16291	U.S.A.	...	*Wing Chord Divider Beam (for Laying Out Wing Contours for Specified Chord Lengths).* (Aviation, Vol. 42, No. 8, August, 1943, p. 181.)
810	16293	U.S.A.	...	*Sheet-Spring Fasteners Speed Aircraft Assembly.* (H. White, Aviation, Vol. 42, No. 8, August, 1943, pp. 183-185, 294-295.)
811	16294	U.S.A.	...	*Exploded View Showing Sub-Assemblies of the Cessna AT-17 Bobcat.* (Aviation, Vol. 42, No. 8, August, 1943, p. 187.)
812	16300	U.S.A.	...	*Noorduyn's Airframe Repair Plant for "Harvard" Trainers and "Norseman" Transports (Line-Assembly Methods).* (Aviation, Vol. 42, No. 8, August, 1943, pp. 215, 309-311.)
813	16303	U.S.A.	...	*Propeller Blade Buffing Fixture.* (Aviation, Vol. 42, No. 8, August, 1943, p. 221.)
814	16322	U.S.A.	...	*Production Problems of the Coronado Flying Boat.* (E. P. Meyers, Autom. and Aviation Ind., Vol. 89, No. 5, 1/9/43, pp. 38-41, 60-62.)

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815	16360	U.S.A. ...	*Mass Production Methods Used at Bell Plant to Build Airacobras.* (J. Geschelin, Automotive Industries, Vol. 89, No. 6, 15/9/43, pp. 22-26, 87-90.)
816	16361	U.S.A. ...	*Possibilities of Furnace Brazing in Aircraft Production.* (H. D. Samuel, Automotive Industries, Vol. 89, No. 6, 15/9/43, pp. 28-29, 64.)
817	16345	U.S.A. ...	*Arc Welding of Magnesium Aircraft Structures.* (Metal and Alloys, Vol. 18, No. 2, August, 1943, pp. 302-307.) (V. H. Pavlecka and J. K. Northrop, Engineers' Digest, Vol. 4, No. 10, October, 1943, pp. 294-295.)
818	16365	U.S.A. ...	*All Half-Tac Assembly Operations at White Plant on Mass Production Basis.* (J. Geschelin, Automotive Industries, Vol. 89, No. 6, 15/9/43, pp. 36-38, 90.)

Engine and Other Production Methods.

819	15144	U.S.A. ...	*New Electrical Equipment for Hardening Engine Parts (Induction Heating).* (Scientific American, Vol. 169, No. 3, September, 1943, pp. 130-131.)
820	15159	G.B.	*Fairey Bomb-Loading Device.* (Aeronautics, Vol. 9, No. 2, September, 1943, pp. 58-59.)
821	15468	G.B.	*Radial Aero Engine Production in Australia.* (J. Piggott, Journal of the Institution of Production Engineers, Vol. 22, No. 9, September, 1943, pp. 281-311.)
822	15811	U.S.A. ...	*Gun Tube Manufacture.* (Metal Progress, Vol. 44, No. 3, Sept., 1943, p. 412.)
823	15921	U.S.A. ...	*No-Sip Screw has Two Different Threads.* (Autom. and Aviation Ind., Vol. 89, No. 5, 1/9/43, pp. 46, 58.)
824	15922	U.S.A. ...	*New Dardelet Thread Tests.* (Autom. and Aviation Ind., Vol. 89, No. 5, 1/9/43, p. 54.)
825	15942	G.B.	*Production Line Drilling and Tapping Fuse Bodies.* (Machinery, Vol. 63, No. 1,618, 14/10/43, pp. 428-434.)
826	15948	G.B.	*Operations in Building Marine Diesel Engines (Extensive Use of Jigs and Special Fixtures).* (Machinery, Vol. 63, No. 1,616, 30/9/43, pp. 365-371.)
827	15949	G.B.	*Should the Whitworth Thread be Modified?* (Machinery, Vol. 63, No. 1,616, 30/9/43, p. 373.)
828	15954	G.B.	*The Quantity Production of Dies for Machine Gun Cartridge Cases.* (Machinery, Vol. 63, No. 1,617, 7/10/43, pp. 393-396.)
829	16060	U.S.A. ...	*Pressed Pistons—Control Methods Employed by Specialloid, Ltd.* (Automobile Engineer, Vol. 33, No. 441, Oct., 1943, pp. 397-404.)
830	16126	U.S.A. ...	*Production of Fibre Cans.* (R. P. Bigger, Industrial Engineering and Chemistry, Vol. 21, No. 17, 10/9/43, pp. 1436-1439.)
831	16171	G.B.	*The Production of Parts for the Jerrican.* (Machinery, Vol. 63, No. 1,619, 21/10/43, pp. 449-454.)

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832	16281	U.S.A.	...	*The Manufacture of Service Tools.* (Service Engineering, Vol. 1, No. 2, Spring, 1943, pp. 13-14.)
833	16483	G.B. ...	...	*Cartridge Case Defects.* (Metal Industry, Vol. 63, No. 20, 12/11/43, p. 311.)
834	16499	G.B. ...	...	*Production of the Bristol Hercules Engine.* (Aeroplane, Vol. 65, No. 1,694, 12/11/43, p. 551.)
				General Production Methods.
835	15086	G.B. ...	...	*Marking Methods and War Production (Contd.).* (A. Throp, Engineering, Vol. 156, No. 4,055, 1/10/43, pp. 278-279.)
836	15117	G.B. ...	...	*Industrial Metal Finishing. Part III—Polishing Processes.* (H. Silman, Sheet Metal Industries, Vol. 18, No. 198, October, 1943, pp. 1759-1763.)
837	15132	U.S.A.	...	*Munitions Storage.* (Scientific American, Vol. 169, No. 3, September, 1943, p. 108.)
838	15470	G.B. ...	...	*A Quick Method of Cleaning Settling Tanks of Grinding Machines (Technical Bulletin, Sept.,* 1943). (Journal of the Institution of Production Engineers, Vol. 22, No. 9, September, 1943, pp. 67-69.)
839	15471	G.B. ...	...	*Investigating Unsatisfactory Die Casting Production (Technical Bulletin, Sept.,* 1943). (B. H. Dyson, Journal of the Institution of Production Engineers, Vol. 22, No. 9, September, 1943, pp. 69-71.)
840	15548	Germany	...	*Method of Taking Out Buckles in Thin Metal Tubing (Spherical Piston Under Hydraulic Pressure).* (Der Flieger, Vol. 22, No. 3, March, 1943, p. 82.)
841	15558	Germany	...	*Removing Insulation from Wires (Automatic Stripping).* (Der Flieger, Vol. 22, No. 7, July, 1943, pp. 211-212.)
842	15604	Germany	...	*Lead Hand Flap for Beating Electron Sheet to Shape (Used in Conjunction with Gas Flame).* (Der Flieger, Vol. 22, No. 4, April, 1943, p. 112.)
843	16035	G.B. ...	...	*Defective Castings and Forgings Detected by Sound.* (Aircraft Production, Vol. 5, No. 61, Nov., 1943, p. 539.)
844	16036	G.B. ...	...	*Rivets Tested by Light.* (Aircraft Production, Vol. 5, No. 61, Nov., 1943, p. 539.)
845	16039	G.B. ...	...	*Diamond Lock Riveting—Increasing Production without Increase of Floor Space.* (G. G. Williams, Aircraft Production, Vol. 5, No. 61, Nov., 1943, pp. 544-546.)
846	16051	U.S.A.	...	*Mass Spectrometer Speeds Production Testing in Synthetic Rubber Plants (Testing Butadiene Molecules).* (Scientific American, Vol. 169, No. 4, Oct., 1943, p. 172.)
847	16088	U.S.A.	...	*Use of Pliofilm Cover for Shipping Aircraft to War Front.* (American Aviation, Vol. 7, No. 8, 15/9/43, p. 71.)

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848	16215	Germany ...	*Improved Electrical Connection Diagram Speeds Up Manufacturing Process.* (From E.T.Z., Vol. 63, No. 41-42, 22/10/42, pp. 481-486.) (A. Windmueller, Engineers' Digest, Vol. 4, No. 8, August, 1943, pp. 223-225.)
849	16224	G.B.	*Overcoming the Problems of Degreasing and Cleaning.* (H. Silman, Sheet Metal Industries, Vol. 18, No. 199, November, 1943, pp. 1935-1940.)
850	16230	G.B.	*Assembling Metal Components—Factors Governing the Choice of Methods and Processes.* (J. L. Miller, Sheet Metal Industries, Vol. 18, No. 199, November, 1943, pp. 1971-1979.)
851	16287	U.S.A. ...	*Cutting Costs on Perforating Dies (Use of Cerromatrix).* (E. H. Ruder, Aviation, Vol. 42, No. 8, August, 1943, pp. 165-167, 314-315.)
852	16366	U.S.A. ...	*Kolene Metal Cleaning and "Tinning" Process for Bearings.* (Automotive Industries, Vol. 89, No. 6, 15/9/43, pp. 40, 72.)
			Machines, Tools, etc.
853	15438	Germany ...	*Spring Ejectors for Removing Pressed Parts from Dies (Arado).* (Flugsport, Vol. 35, No. 12, 18/8/43, pp. 170-171.)
854	15439	Germany ...	*Magnetic Clamp for Holding Drill Against Sheet Metal.* (Junkers, Flugsport, Vol. 35, No. 12, 18/8/43, p. 171.)
855	15469	G.B.	*From the Pneumatic Tool Repair Bench (Technical Bulletin, September, 1943).* (H. S. Broom, Journal of the Institution of Production Engineers, Vol. 22, No. 9, September, 1943, pp. 58-67.)
856	15472	G.B.	*Four-Way Loading of the Hydraulic Press (Technical Bulletin, September, 1943).* (Journal of the Institution of Production Engineers, Vol. 22, No. 9, September, 1943, p. 72.)
857	15479	Germany ...	*Etching Tool for Marking Contours of Templates (Notifies Accidental Damage and Wear).* (Junkers, Der Flieger, Vol. 22, No. 5, May, 1943, p. 142.)
858	15549	Germany ...	*Automatic Thread Testing and Sorting Machine for Studs.* (Der Flieger, Vol. 22, No. 3, March, 1943, pp. 82-83.)
859	15560	Germany ...	*Suction Pad Indicators for Checking Profile Contours Against Loft Diagrams (Junkers).* (Der Flieger, Vol. 22, No. 7, July, 1943, pp. 212-213.)
860	15561	Germany ...	*Instrument for the Rapid Determination of Shaft Length for Various Types of Rivet Heads.* (Junkers, Der Flieger, Vol. 22, No. 7, July, 1943, p. 213.)
861	15574	Germany ...	*Junkers Metal Working Tools (Beading and Off-Setting).* (Der Flieger, Vol. 22, No. 2, Feb., 1943, pp. 56-57.)

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862	15575	Germany ...	*Junkers Tool Support for Cutting and Radiusing Operations on the Lathe.* (Der Flieger, Vol. 22, No. 2, Feb., 1943, p. 56.)
863	15599	Germany ...	*Slide Rule for the Rapid Determination of Sheet Metal Weights.* (Der Flieger, Vol. 22, No. 4, April, 1943, p. 111.)
864	15600	Germany ...	*Roller Clamps for Applying Tension to Sheet Metal.* (Junkers, Der Flieger, Vol. 22, No. 4, April, 1943, p. 112.)
865	15603	Germany ...	*Hand Tool for Recessing Plate Edges (Pat.* 675,973). (Der Flieger, Vol. 22, No. 4, April, 1943, p. 112.)
866	15614	Germany ...	*Device for the Flame Hardening of Long Shafts (Pat.* 729,476). (Gas und Electro Warme, Vol. 1,943, No. 3, June, 1943, p. 63.)
867	15736	U.S.A. ...	*Fixture Developed at General Electric for Quick and Accurate Wire-Bending.* (Aero Digest, Vol. 43, No. 2, August, 1943, p. 391.)
868	15740	U.S.A. ...	*Modified Indicating Gauge for Checking Finished Dimensions More Quickly and Accurately.* (Aero Digest, Vol. 43, No. 2, August, 1943, pp. 397-398.)
869	15887	U.S.A. ...	*Autoclaves for Pressure-Temperature Reactions.* (D. B. Gooch, Industrial and Engineering Chemistry, Vol. 35, No. 9, Sept., 1943, pp. 927-946.)
870	15906	U.S.A. ...	*Big Plant Expansion at Ohio Crankshaft Co. (Survey of Equipment and Processes Employed).* (J. Geschelin, Autom. and Aviation Ind., Vol. 89, No. 5, 1/9/43, pp. 20-24.)
871	15919	U.S.A. ...	*Riehle Testing Machine for Parachute Web.* (Autom. and Aviation Ind., Vol. 89, No. 5, 1/9/43, p. 44.)
872	15950	G.B.	*Automatic Screw Machine Work on Munition Parts.* (Machinery, Vol. 63, No. 1,616, 30/9/43, pp. 374-379.)
873	16208	Germany ...	*Sheet Metal Stitching Machine.* (From Workstatt und Betrieb, Vol. 75, No. 8, 1942, pp. 186, 188.) (Engineers' Digest, Vol. 4, No. 8, August, 1943, p. 235.)
874	16262	G.B.	*Hob Inspection Machine for High Speed Reduction Gears.* (Machinist, Vol. 87, No. 16, 7/8/43, pp. 83-85.)
875	16265	G.B.	*Device for Holding Overlapping Sheets of Metal in an Upright Position.* (Machinist, Vol. 87, No. 16, 7/8/43, p. 87.)
876	16379	G.B.	*Electric Vulcaniser and Press for the Repair of Damaged Rubber Conveyor Belts.* (Engineering, Vol. 156, No. 4,060, 5/11/43, p. 366.)
877	16448	Germany ...	*Appliance for Testing Plug in Cardan Joints (Junkers).* (Flugsport, Vol. 35, No. 13, 15/9/43, p. 185.)
878	16449	Germany ...	*Flanging Tool for Sheet Metal Stringers (Junkers).* (Flugsport, Vol. 35, No. 13, 15/9/43, pp. 185-196.)

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879	16450	Germany ...	*Draughtsman's Template for Perspective Drawings.* (Flugsport, Vol. 35, No. 13, 15/9/43, p. 186.)

Salvage, Swarf.

880	15742	U.S.A. ...	*Vega Develops Machine for Salvaging Welding Electrode Stubs.* (Aero Digest, Vol. 43, No. 2, August, 1943, p. 407.)
881	15961	G.B.	*Salvage of Broken Drills.* (Machinery, Vol. 63, No. 1,617, 7/10/43, p. 410.)
882	16155	G.B.	*Swarf Removal (Pneumatic Swarf Removal Unit).* (Aircraft Production, Vol. 5, No. 61, Nov., 1943, pp. 534-535.)
883	16324	U.S.A. ...	*German Process Compacts Steel "Swarf" by Auto Combustion.* (R.T.P.3 Translation.) (Autom. and Aviation Ind., Vol. 89, No. 5, 1/9/43, pp. 82-83.)

Workers' Welfare.

884	15079	G.B.	*Glass Filters for Air Conditioning.* (Engineering, Vol. 156, No. 4,055, 1/10/43, pp. 266-267.)
885	15539	G.B.	*Fire Hazards in the Plastics Industry—II (Preventive Methods).* (H. R. Fleck, Plastics, Vol. 7, No. 77, Oct., 1943, pp. 446-448, 459.)
886	15762	G.B.	*Industrial Health.* (Metal Industry, Vol. 63, No. 16, 15/10/43, p. 241.)
887	15975	G.B.	*Fire Protection in the New Factory.* (J. V. Brittain, Mechanical World, Vol. 114, No. 2,962, 8/10/43, pp. 412-413.)
888	15986	G.B.	*Accident Prevention, Working Conditions and Welfare Work in Factories.* (Mechanical World, Vol. 114, No. 2,964, 22/10/43, pp. 482-486.)
889	15993	G.B.	*Memorandum on the Prevention of Industrial Dermatitis. Dermatitis from Glues Used in Aircraft Construction.* (Form 331, Feb., 1943, H.M.S.O.) (Bulletin of War Medicine, Vol. 4, No. 2, Oct., 1943, p. 114.)
890	16132	U.S.A. ...	*New Method for Removing Oil Smoke and Mist in Machine Shops.* (Scientific American, Vol. 169, No. 4, Oct., 1943, p. 168.)
891	16139	U.S.A. ...	*Taking Dust Out of Industry.* (E. L. Cady, Scientific American, Vol. 169, No. 4, Oct., 1943, pp. 157-159.)
892	16183	G.B.	*Electrical Accidents—Precautions Necessary in Magnesium and Aluminium Production.* (Electrician, Vol. 131, No. 3,412, 22/10/43, pp. 411-412.)

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Army Vehicles, Tanks.

893	16059	G.B.	*The Karrier K6.* (Automobile Engineer, Vol. 33, No. 441, Oct., 1943, pp. 387-396.)
894	16273	U.S.A. ...	*Simplicity that Saves Critical Time, Material and Machines in Tank Maintenance.* (Service Engineering, Vol. 1, No. 1, Winter, 1943, pp. 4-5.)

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895	16359	Germany	...	*German Military Tractor with Motor Cycle Steering (Kettenkrad).* (Automotive Industries, Vol. 89, No. 6, 15/9/43, p. 21.)
896	16372	U.S.A.	...	*Morris Mark I Light Reconnaissance Car (Photo).* (Automotive Industries, Vol. 89, No. 6, 15/9/43, p. 48.)

Locomotives, Tractors.

897	14962	U.S.A.	...	*Future Diesel Road Locomotives (Discussion).* (Mechanical Engineering, Vol. 65, No. 9, Sept., 1943, pp. 673-675.)
898	15613	Germany	...	*Electrically Heated Steam Locomotive in Switzerland.* (Gas und Electro Warme, Vol. 1,943, No. 3, June, 1943, p. 61.)
899	15785	U.S.A.	...	*Pneumatic Tyres for Farm Tractors and Implements.* (E. F. Brunner, S.A.E. Preprint, 23/9/43, pp. 1-9.)
900	15786	U.S.A.	...	*A Method of Predicting Tractor Bearing Life.* (John Borland, S.A.E. Preprint, 23-24/9/43, pp. 1-10.)
901	16085	U.S.A.	...	*New Power Industrial Truck for Loading Aircraft.* (American Aviation, Vol. 7, No. 8, 15/9/43, p. 36.)
902	16373	U.S.A.	...	*Hydraulic Valve Lifter on the M.-M. Tractor Engine.* (Automotive Industries, Vol. 89, No. 6, 15/9/43, pp. 60-61.)

Trolley Buses, Cars.

903	15528	G.B. ...	...	*Automobile Research (Annual Report of I.A.E.).* (Engineering, Vol. 156, No. 4,056, 8/10/43, p. 296.)
904	15688	G.B. ...	...	*Threshold of a New Era in Transport.* (Sir William V. Wood, Engineer, Vol. 176, No. 4,579, 15/10/43, p. 305.)
905	15699	G.B. ...	...	*Automobile Research (I.A.E. Annual Report).* (Engineering, Vol. 156, No. 4,057, 15/10/43, pp. 307-308.)
906	16031	G.B. ...	...	*Aluminium in Automobiles.* (Light Metals, Vol. 6, No. 69, Oct., 1943, pp. 500-508.)
907	16236	G.B. ...	...	*Electric Transport (Trolley Bus, Battery Vehicles, etc.).* (Automobile Engineer, Vol. 33, No. 442, Nov., 1943, pp. 425-468.)

WIRELESS AND ELECTRICITY.

Aircraft Radio.

908	15057	G.B. ...	...	*Rockets and Radio.* (Aeroplane, Vol. 65, No. 1,688, 1/10/43, pp. 372-373.)
909	16306	U.S.A.	...	*Radio Static Neutraliser (New Device).* (Aviation, Vol. 42, No. 8, August, 1943, p. 229.)
910	15390	U.S.A.	...	*American Radio Location Equipment (Radar).* (Inter. Avia., No. 875, 7/7/43, pp. 14-15.)
911	15414	U.S.A.	...	*The Radio Engineer in Psychological Warfare (Expansion of Short-Wave Facilities).* (R. C. Corderman, Procs. of the I.R.E., Vol. 31, No. 9, September, 1943, pp. 510-514.)

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912	15415	U.S.A. ...	*The Radio Engineer in the Navy.* (C. F. Holden, Procs. of the I.R.E., Vol. 31, No. 9, September, 1943, pp. 517-519.)
913	15789	Switzerland ...	*The Wireless Transmission of Reconnaissance Results.* (W. Guldimann, Flugwehr und Technik, Vol. 5, No. 8, August, 1943, pp. 205-206.)
914	16254	G.B.	*Radio Insignia in the Forces.* (Wireless World, Vol. 49, No. 10, Oct., 1943, pp. 293-295.)
			General Radio and Television.
915	15095	Germany ...	*Wired Television.* (F. Ring, T.F.T., Vol. 29, No. 6, June, 1940, pp. 172-178.)
916	15096	Germany ...	*High Frequency Distortions in Wired Broadcastings.* (W. Klein, T.F.T., Vol. 29, No. 11, November, 1940, pp. 331-334.)
917	15097	Germany ...	*A Recording Phase Meter for Reception Observations in Short, Medium and Long Wave Ranges.* (J. Grosskopf, T.F.T., Vol. 29, No. 11, November, 1940, pp. 334-339.)
918	15210	G.B.	*Wide-Range R.-C. Oscillator.* (T. A. Ledward, Wireless World, Vol. 49, No. 9, Sept., 1943, pp. 263-265.)
919	15412	U.S.A. ...	*The Radio Sonde.* (W. H. Pickering, Procs. of the I.R.E., Vol. 31, No. 9, September, 1943, pp. 479-485.)
920	15413	U S.A. ...	*Some Aspects of Radio Reception at Ultra-High Frequency. Part II—Admittances and Fluctuation Noise of Tubes and Circuits. Part III—The Signal-to-Noise Ratio of Radio Receivers.* (E. W. Herold and L. Malter, Procs. of the I.R.E., Vol. 31, No. 9, September, 1943, pp. 491-510.)
921	15901	G.B.	*Factory Testing of Radio Equipment (Discussion).* (Journal of the Inst. of Electrical Eng., Part 3, Vol. 90, No. 11, Sept., 1943, pp. 145-146.)
922	15903	G.B.	*Discussion on "Factors Determining the Choice of Carrier Frequency for an Improved Television System."* (Journal of the Inst. of Electrical Eng., Part 3, Vol. 90, No. 11, Sept., 1943, pp. 147-148.)
923	16071	G.B	*International Telecommunications.* (Sir A. S. Angwin, Engineering, Vol. 156, No. 4,059, 29/10/43, p. 357.)
924	16255	G.B.	*Long Distance Short-Wave Transmission.* (T. W. Bennington, Wireless World, Vol. 49, No. 10, Oct., 1943, pp. 297-300.)
925	16257	G.B.	*Radio Data Charts—II (Frequency and Wave Length).* (J. McG. Sowerby, Wireless World, Vol. 49, No. 10, Oct., 1943, pp. 304-305.)
			Valves, Rectifiers, etc.
926	15131	U S.A ...	*Rapid Sorting of Filament Wires for High Power Radio Tubes.* (Scientific American, Vol. 169, No. 3, September, 1943, p. 105.)

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927	15209	G.B.	*Use of Valves and Valve Ratings.* (J. R. Hughes, Wireless World, Vol. 49, No. 9, Sept., 1943, pp. 256-259.)
928	15211	G.B.	*American Valve Designations.* (Wireless World, Vol. 49, No. 9, Sept., 1943, p. 271.)
929	15902	G.B.	*Discussion on "Metal Rectifiers and Their Application to Radio and to Measurements."* (Journal of the Inst. of Electrical Eng., Part 3, Vol. 90, No. 11, Sept., 1943, pp. 146-147.)
930	16258	G.B.	*Use of Valves (Safety Precautions to Prevent Overrunning).* (J. R. Hughes, Wireless World, Vol. 49, No. 10, Oct., 1943, pp. 306-309.)
			General Electricity.
931	12723	Germany ...	*The Experimental Solution of Two Dimensional Potential Problems by Electrical Dipole Fields.* (R. Sonntag, Ing. Archiv., Vol. 14, No. 1, 1943.)
932	14739	G.B.	*Non-Corrosive Flux for Electrical Work.* (Machinery, Vol. 63, No. 1,613, 9/9/43, p. 292.)
933	14830	G.B.	*Factors Affecting the Accuracy of Electrical Methods of Measuring Temperature.* (Mechanical World, Vol. 114, No. 2,958, 10/9/43, pp. 285-286.)
934	14866	U.S.A. ...	*Improved Salt Bridge for Polarographic and Potentiometric Measurements.* (D. N. Hume and W. E. Harris, Industrial and Engineering Chemistry (Analyt. Edition), Vol. 15, No. 7, 19/7/43, p. 465.)
935	15093	Germany ...	*Measurement of Ground Conductivity.* (J. Grosskopf and K. Vogt, T.F.T., Vol. 31, No. 1, January, 1942, pp. 22-23.)
936	15094	Germany ...	*On the Measurement of Ground Conductivity.* (J. Grosskopf and K. Vogt, T.F.T., Vol. 29, No. 6, June, 1940, pp. 164-172.)
937	15212	G.B.	*Calculating Coupling Coefficients. Useful Formulæ for Finding the Optimum Spacing of I.F. Transformers Windings.* (S. W. Amos, Wireless World, Vol. 49, No. 9, Sept., 1943, pp. 272-273.)
938	15332	U.S.S.R. ...	*On the Thermal Conductivity of Dielectrics at Temperatures Lower Than That of Debye.* (I. Pomeranchuk, Journal of Physics, Vol. 6, No. 6, 1942, pp. 237-250.)
939	15333	U.S.S.R. ...	*On the Theory of Phase Transitions of the Second Order. II. Phase Transitions of the Second Order in Alloys.* (E. N. Lifshitz, Journal of Physics, Vol. 6, No. 6, 1942, pp. 251-263.)
940	15636	Switzerland ...	*Negative Resistances* (3). (W. Arnrein, Schweizer Archiv., Vol. 8, No. 5, May, 1942, pp. 152-157.)
941	15639	Switzerland ...	*Negative Resistances (Semi-Conductors with Falling Characteristics up to Frequency of 3,000/sec).* (W. Arnrein, Schweizer Archiv., Vol. 8, No. 3, March, 1942, pp. 85-89.)
942	15645	Switzerland ...	*Negative Resistances (II).* (W. Arnrein, Schweizer Archiv., Vol. 8, No. 9, April, 1942, pp. 109-122.)

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943	15898	G.B.	*Wave Guides in Electrical Communication.* (J. Kemp, Journal of the Inst. of Electrical Eng., Vol. 90, No. 11, Part 3, Sept., 1943, pp. 90-114.)
944	15899	G.B.	*Graphical-Vector Solution and Study of the Coil-Loaded Line.* (A. K. Robinson, Journal of the Inst. of Electrical Eng., Part 3, Vol. 90, No. 11, Sept., 1943, pp. 115-128.)
945	16112	G.B.	*Difference Between Amplitude and Frequency Modulation.* (Electrician, Vol. 131, No. 3,407, 17/9/43, p. 283.)
946	16217	Switzerland ...	*Temperature Measurements on Buried High Tension Cables.* (From Bulletin Schweis Elecktrotechn. Veroin, Vol. 34, No. 5, 10/3/43, pp. pp. 105-107.) (R. Iselin and O. Wanner, Engineers' Digest, Vol. 4, No. 8, August, 1943, pp. 226-228.)
947	16237	G.B.	*Mechanical Integration in Electrical Problems (34th Kelvin Lecture).* (D. R. Hartree, Journal of the Inst. of Electrical Engineers, Vol. 90, No. 34, Pt. 1, Oct., 1943, pp. 422-435.)

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948	15092	Germany ...	*A New Conductivity Metre.* (J. Grosskopf, W. Putzer and K. Vogt, T.F.T., Vol. 31, No. 4, April, 1942, pp. 112-114.)
949	16111	G.B.	*Reversing Electrical Motors.* (Electrician, Vol. 131, No. 3,407, 17/9/43, pp. 280-282.)
950	16264	G.B.	*Temporary Sleeves to Identify Electrical Harnesses.* (Machinist, Vol. 87, No. 16, 7/8/43, p. 86.)
951	16381	G.B.	*The Development of the Coiled-Coil Lamp.* (Engineering, Vol. 156, No. 4,060, 5/11/43, p. 368.)

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952	15126	U.S.A. ...	*Electronic Methods of Heating Metallic and Non-Metallic Materials.* (K. Henney, Scientific American, Vol. 169, No. 3, September, 1943, pp. 103-105.)
953	15824	U.S.A. ...	*Electronic Motor Control (for Direct Current Motors).* (Journal of the American Society of Naval Engineers, Vol. 55, No. 3, Aug., 1943, pp. 530-538.)
954	16133	U.S.A. ...	*Air Cleaner Utilises Ultra-Sonic Waves Electronically Generated.* (Scientific American, Vol. 169, No. 4, Oct., 1943, p. 168.)
955	16278	U.S.A. ...	*The Electronic Tube (Review of Applications).* (E. R. Grace, Service Engineering, Vol. 1, No. 2, Spring, 1943, pp. 4-5.)

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Acoustics, Resonance.

956	14933	G.B.	*A Universal Resonance Chart.* (H. G. Yates, Engineer, Vol. 176, No. 4,577, 1/10/43, pp. 268-269.)

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957	15091	Germany ...	*Reduction of Noise in Rooms. Reduction of Noise Interference when Telephoning and the Improvement of Audibility of Rooms.* (K. Braun and P. Just, T.F.T., Vol. 31, No. 4, April, 1942, pp. 91-103.)
958	15635	Switzerland ...	*Acoustics of Radio Studios (IV).* (W. Furrer, Schweizer Archiv., Vol. 8, No. 5, May, 1942, pp. 143-152.)
959	15640	Switzerland ...	*The Acoustics of Radio Studios.* (W. Furrer, Schweizer Archiv., Vol. 8, No. 3, March, 1942, pp. 77-85.)
960	15645	Switzerland ...	*Acoustics of Radio Studios.* (W. Furrer, Schweizer Archiv., Vol. 8, No. 4, April, 1942, pp. 99-109.)
			Light Propagation, Colour Television.
961	15231	G.B.	*Colour Microscopy in Ultra-Violet Rays.* (E. M. Bramberg, Nature, Vol. 152, No. 3,856, 25/9/43, p. 357.)
962	15411	U.S.A. ...	*Colour Television—Part II.* (P. C. Goldmark and others, Procs. of the I.R.E., Vol. 31, No. 9, September, 1943, p. 465.)
963	15626	Switzerland ...	*The Propagation of Light in Hollow Conductors.* (A. Mathieu, Schweizer Archiv., Vol. 8, No. 9, September, 1942, pp. 288-291.)
964	15991	U.S.A. ...	*Colour and Composition of Light in Relation to the Black-Out.* (J. Aviation Med., Sept., 1942, Vol. 13, No. 3, pp. 193-200.) (C. E. Ferree and G. Rand, Bulletin of War Medicine, Vol. 4, No. 2, Oct., 1943, p. 113.)
965	16180	G.B.	*Fluorescent Lighting.* (Electrician, Vol. 131, No. 3,412, 22/10/43, pp. 403-404.)
			Radiant Heating, Heat Transfer.
966	14886	G.B.	*Radiant Heating for Industrial Processes.* (L. W. Andrew and E. A. C. Chamberlain, Engineering, Vol. 156, No. 4,054, 24/9/43, pp. 245-246.)
967	14937	G.B.	*Emergency Valves for High-Pressure Heating Systems.* (Engineer, Vol. 176, No. 4,577, 1/10/43, pp. 273-274.)
968	15223	Germany ...	*Freezing of Acids in Accumulators.* (From A.T.Z., Vol. 45, No. 23, Dec., 1942, pp. 641-645.) (E. Blaich, Engineers' Digest, Vol. 4, No. 7, July, 1943, pp. 200-202.)
969	15531	G.B.	*Radiant Heating for Industrial Processes.* (L. W. Andrew and E. A. C. Chamberlain, Engineering, Vol. 156, No. 4,056, 8/10/43, pp. 298-300.)
970	15532	G.B.	*The Growth of District Heating in Russia and Germany.* (A. E. Margolis, Engineering, Vol. 156, No. 4,056, 8/10/43, pp. 283-284.)
971	15830	U.S.A. ...	*Heat Transfer Through Turbulent Friction Layers.* (H. Reichardt, N.A.C.A. Tech. Memo., No. 1,047, Sept., 1943.)
972	15832	U.S.A. ...	*A Table of Thermodynamic Properties of Air.* (J. H. Keenan and J. Kaye, Journal of Applied Mechanics, Vol. 10, No. 3, September, 1943, pp. A123-A130.)

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973	16207	Switzerland ...	*Radiant Heat Transmission.* (From Bulletin Schweizerischer Elektrotechnischer Veren, Vol. 34, No. 5, 10/3/43, pp. 107-111.) (O. Sauter, Engineers' Digest, Vol. 4, No. 8, August, 1943, pp. 233-235.)

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974	15187	G.B.	*Photography as an Aid to Management. The "Bacro" System.* (P. H. Billington, Mechanical World, Vol. 114, No. 2,960, 24/9/43, pp. 345-348.)
975	15700	G.B.	*Reproduction of Diagrams on Metal Surfaces by Photography.* (Engineering, Vol. 156, No. 4,057, 15/10/43, p. 310.)
976	16017	G.B.	*Microfilming Technical Literature.* (Engineer, Vol. 176, No. 4,581, 29/10/43, p. 347.)
977	16127	U.S.A. ...	*Preparation of Lantern Slides.* (F. J. Van Antroerpen, Industrial Engineering and Chemistry, Vol. 21, No. 17, 10/9/43, pp. 144-148.)
978	16253	G.B.	*Miniature Film (Mass) Radiography.* (A. J. Minns, G.E.C. Journal, Vol. 12, No. 3, Feb., 1943, pp. 146-155.)

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979	15062	G.B.	*Cloud Reading for Pilots.* (Aeroplane, Vol. 65, No. 1,688, 1/10/43, pp. 384-385.)
980	15078	G.B.	*Guard-Wire Lightning Protection.* (Engineering, Vol. 156, No. 4,055, 1/10/43, p. 266.)
981	15621	Switzerland ...	*Stresses and Plasticity Phenomena of Ground Snow (with Special Reference to Pressure on Base).* (R. Haefili, Schweizer Archiv., Vol. 8, No. 10, October, 1942, pp. 308-315.)
982	15624	Switzerland ...	*Stresses and Plasticity Phenomena of Ground Snow (with Special Reference to Pressure on Base).* (R. Haefili, Schweizer Archiv., Vol. 8, No. 9, September, 1943, pp. 263-274.)
983	16256	G.B.	*Sunspots.* (Wireless World, Vol. 49, No. 10, Oct., 1943, p. 303.)

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984	15297	U.S.A. ...	*Prevention of Ear Disability in Industry. Report on the Use of a Plastic Mould.* (J. Amer. Med. Ass., Vol. 121, No. 17, 24/4/43, pp. 1330-1331.) (D. H. McCoy, Bulletin of War Medicine, Vol. 4, No. 1, Sept., 1943, pp. 54-55.)
985	15494	U.S.A. ...	*The Oximeter for Testing Oxygen Content of Blood During Altitude Chamber Investigations.* (Der Flieger, Vol. 22, No. 8, August, 1943, p. 246.)
986	15900	G.B.	*Amplifying and Recording Technique in Electro-Biology, with Special Reference to the Electrical Activity of the Human Brain (with Discussion).* (V. Parr and W. G. Walter, Journal of the Inst. of Electrical Eng., Part 3, Vol. 90, No. 11, Sept., 1943, pp. 129-144.)

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987	15904	G.B. ...	...	*Discussion on "The Electrical Amplifying Stethoscope and Phono-Electrocardioscope."* (Journal of the Inst. of Electrical Eng., Part 3, Vol. 90, No. 11, Sept., 1943, pp. 149-150.)
988	15938	G.B. ...	...	*A Simple Inexpensive Photo-Electric Hæmoglobinometer.* (G. H. Bell and E. Guthmann, Journal of Scientific Instruments, Vol. 20, No. 9, Sept., 1943, pp. 145-146.)
989	15987	G.B. ...	...	*Effects of Increased Flying Time on Aviation Instructors.* (From War Medicine, Chicago, Vol. 3, No. 3, March, 1943, pp. 297-302.) (J. E. Dougherty, Bulletin of War Medicine, Vol. 4, No. 2, Oct., 1943, p. 111.)
990	15988	Germany	...	*Possible Improvement of Human Altitude Tolerance by Therapeutic Means.* (Deut. Med. Woch., Vol. 69, No. 2, 15/1/43, pp. 25-28.) (A. Rühl, Bulletin of War Medicine, Vol. 4, No. 2, Oct., 1943, p. 112.)
991	15989	U.S.A.	..	*The Effect of Pre Oxygenation on New Born Rats Exposed to a Simulated Altitude of 55,000 Feet (Barometric Pressure of 67.8 mm. Hg.), Preliminary Report.* (J. Aviation Med., Vol. 13, No. 3, Sept., 1942, pp. 190-192.) (A. L. Barach and others, Bulletin of War Medicine, Vol. 4, No. 2, Oct., 1943, p. 112.)
992	15990	G.B. ...	...	*The Physiology of Free Fall Through the Air. Delayed Parachute Jumps.* (Quarterly Bull., North Western Univ. Med. School, No. 4, 1942, pp. 254-266.) (A. Carlson and others, Bulletin of War Medicine, Vol. 4, No. 2, Oct., 1943, p. 113.)
993	16125	U.S.A.	...	*Penicillin.* (Industrial Engineering and Chemistry, Vol. 21, No. 17, 10/9/43, pp. 1430-1434, 1468.)
994	16238	G.B. ...	...	*Amplifying and Recording Technique in Electro-Biology, with Special Reference to the Electrical Activity of the Human Brain (Abstract).* (G. Parr and W. Gray Walter, Journal of Inst. of Electrical Engineers, Vol. 90, No. 34, Pt. 1, Oct., 1943, pp. 446-447.)

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995	15346	G.B. ...	...	*Precision Hygrometry with a Wet Bulb.* (W. L. Balls, Nature, Vol. 152, No. 3,857, 2/10/43, pp. 389-390.)
996	15409	G.B. ...	...	*Matrix Algebra. Part II—Solution of Electrical Network Problems.* (J. C. Simmonds, Electronic Engineering, Vol. 16, No. 188, October, 1943, p. 314.)
997	15526	G.B. ...	...	*The Probability-Integral of the t-Function.* (U. R. Evans, Engineering, Vol. 156, No. 4,056, 8/10/43, p. 295.)

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998	15777	G.B.	*The Electron Mass in Relation to the Energy of Formation of the Atoms: Calculation of Isotopic and Atomic Weights.* (H. D. K. Drew, Chemistry and Industry, Vol. 62, No. 42, 16/10/43, pp. 390-393.)
999	15825	U.S.A. ...	*The Extreme Properties of Matter.* (Sir Charles Darwin, Journal of the American Society of Naval Engineers, Vol. 55, No. 3, Aug., 1943, pp. 539-549.)
1000	15884	G.B.	*The Accuracy of Numerical Harmonic Analysis.* (P. G. Manley, Engineering, Vol. 156, No. 4,058, 22/10/43, p. 335.)
1001	15953	G.B.	*Length of Chord for Laying Out Equal Spacings Around a Circle—Four (Table).* (Machinery, Vol. 63, No. 1,616, 30/9/43, p. 380.)
1002	15966	Germany ...	*The Harmonic Analysis of Discrete Numerical Series.* (E. R. Berger, Z.A.M.M., Vol. 22, No 5, Oct., 1942, pp. 269-272.)
1003	15967	Germany ...	*The Practical Integration of Plane Vectors.* (S. Borbely, Z.A.M.M., Vol. 22, No. 5, Oct., 1942, pp. 273-277.)
1004	15968	Germany ...	*A Simple Series Transformation for a Very General Fourier Series.* (H. Buckholz, Z.A.M.M., Vol. 22, No. 5, Oct., 1942, pp. 277-286.)
1005	15969	Germany ...	*Method for Estimating Very Small Correlation Factors Between Two Stateshead Series.* (H. Gabdun, Z.A.M.M., Vol. 22, No. 5, Oct., 1942, pp. 286-298.)
1006	16384	G.B.	*The Accuracy of Numerical Harmonic Analysis.* (G. S. Bower, Engineering, Vol. 156, No. 4,060, 5/11/43, p. 375.)