

June, 1944



Abstracts from the Scientific and Technical Press

(No. 123. May, 1944)

AND

Titles and References of Articles and Papers Selected from Publications (Reviewed by R.T.P.3)

TOGETHER WITH

List of Selected Translations

(No. 69)

London :

“THE ROYAL AERONAUTICAL SOCIETY”

with which is incorporated “The Institution of Aeronautical Engineers”

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ABSTRACTS FROM THE SCIENTIFIC AND TECHNICAL PRESS.

Issued by the

Directorates of Scientific Research and Technical Development, Air Ministry.

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

No. 123. MAY, 1944.

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

The Upper Limit of Projectile Velocity. (H. Pfriem, Z.f. Techn. Physik, Vol. 22, No. 10, 1941.) (123/1 Germany.)

The author assumes that the charge burns at infinite speed so that at the instant of combustion a pressure discontinuity arises at the end of the combustion chamber separating a region at pressure P_1 (constant volume combustion of powder) from the atmospheric pressure P_0 existing in the barrel. The surface of discontinuity resolves itself immediately into a compression shock (which travels at a velocity W along the air in the barrel towards the muzzle) together with a rarefaction which travels at sonic speed in the opposite direction (*i.e.*, towards the base of the gun). It is assumed that combustion chamber and barrel are cylindrical and of the same diameter and that the combustion chamber is sufficiently long compared with the barrel so that the rarefaction reflected at the base of the gun will not catch up the compression shock.

The maximum possible projectile velocity (absence of friction) is equal to the particle velocity of the compression shock generated under these conditions.

This upper limit can be easily calculated. Taking first the rarefaction, let

P_1 = absolute pressure,
 a_1 = velocity of sound,
 u_1 = particle velocity,
 γ_1 = specific heat ratio,

in the combustion space in the region not yet reached by the rarefaction.

Similarly, let the same quantities with the suffix *e* refer to conditions behind the rarefaction. We have

$$P_o/P_1 = (a_o/a_1)^2 \gamma_1 / (\gamma_1 - 1) \quad \dots \quad (1)$$

$$a_1 - a_o = \frac{1}{2} (\gamma_1 - 1) u_o \quad \dots \quad (2)$$

$$(u_1 = 0)$$

Eliminating *a_o* from (1) and (2)

$$P_o/P_1 = \left\{ 1 - \frac{1}{2} (\gamma_1 - 1) (u_o/a_1) \right\}^2 \gamma_1 / (\gamma_1 - 1) \quad \dots \quad (3)$$

Similarly, if we consider the compressions shock by itself, we have

$$\frac{P_n}{P_o} = \left\{ \frac{2\gamma_o}{(\gamma_o + 1)} \right\} \left(\frac{W}{a_o} \right)^2 - \frac{(\gamma_o - 1)}{(\gamma_o + 1)} \quad \dots \quad (4)$$

$$\frac{u_n}{a_o} = \left\{ \frac{2}{(\gamma_o + 1)} \right\} \left(\frac{W}{a_o} - \frac{a_o}{W} \right) \quad \dots \quad (5)$$

where the suffixes *n* and *o* refer to the respective conditions behind and in front of the shock, *W* being the wave velocity of the latter.

From (4) and (5) we can eliminate *W* and obtain

$$\left(\frac{u_n}{a_o} \right)^2 = \left(\frac{2}{\gamma_o} \right) \left\{ \frac{(P_n/P_o - 1)^2}{[(\gamma_o + 1)(P_n/P_o) + (\gamma_o - 1)]} \right\} \quad \dots \quad (6)$$

Now in the absence of friction, the region behind the compression shock must have identical properties with that behind the rarefaction. We therefore have

$$u_n = u_o = u \quad \text{and} \quad P_n = P_o = P.$$

Substituting for *P_n* in (6) the value *P_o* given by (3) we have finally for the required particle velocity

$$\left(\frac{u}{a_o} \right)^2 = \left(\frac{2}{\gamma_o} \right) \frac{[(P_1/P_o) (1 - \frac{1}{2} (\gamma_1 - 1) (u/a_1)^2 \gamma_1 / (\gamma_1 - 1) - 1)]^2}{[(\gamma_o + 1)(P_1/P_o) (1 - \frac{1}{2} (\gamma_1 - 1) (u/a_1)^2 \gamma_1 / (\gamma_1 - 1) + (\gamma_o - 1)]}$$

This expression is best plotted in the form (*u/a₁*) as a function of (*P₁/P_o*) with (*a₁/a_o*) as parameter, with suitable values for γ_1 and γ_o (e.g., 1.25 and 1.41 respectively).

It is easily seen that (*u/a₁*) tends to an asymptotic maximum value for (*P₁/P_o*) → ∞ given by

$$u/a_1 = 2/(\gamma_1 - 1) = 8 \quad (\gamma_1 = 1.25).$$

The maximum possible particle velocity behind the shock waves is thus reached if there is a vacuum in the gun barrel and amounts then to eight times the sonic velocity of the combustion gases immediately after explosion. With *a₁* = 1,000 m./sec. the upper limit is thus 8,000 m./sec. If, however, the barrel contains air at atmospheric pressure, *P₁/P_o* is finite and particle velocity is reduced considerably.

Thus, for example, with *P₁* = 12,600 kg./cm.² and *P_o* = 1 kg./cm.², *u/a₁* = 3, i.e., *u* = 3,000 m./sec. which is in satisfactory agreement with experimental values (extrapolated to zero projectile weight). This at once raises the possibility of increasing the muzzle velocity of long range guns by either evacuating the barrel or replacing the air by *H₂* at atmospheric pressure.

Reduction of *P_o* at 1/100 ata would raise the limiting speed from 3,000 to 4,600 m./sec., whilst the replacement of the air by *H₂* gives a theoretical speed of 4,000 m./sec. It should, however, be pointed out that these figures refer to limiting cases when the ratio of charge weight the projectile weight is very large and friction is neglected.

In the practical case, the advantages of either lowering *P_o* or raising *a_o* will be less.

An experimental investigation is being contemplated.

Heat Transfer and Pressure Loss in Laminar and Turbulent Flow Through a Slot. (E. Altenkrich, Z.V.D.I., Vol. 88, Nos. 7-8, 19/2/44, p. 105.) (123/2 Germany.)

During laminar flow, the heat transfer coefficient α is independent of the speed of flow w . When the flow becomes turbulent, w increases very suddenly to about twice its former value and with further increases of speed varies as $w^{\frac{3}{2}}$.

The flow resistance increases, however, at a still faster rate with speed so that this method of improving heat transfer soon reaches a practical limit.

The author points out that by restricting the flow to very narrow passages, very high values of α can be obtained, although the flow is still laminar. In this case α varies inversely as the slot width "a" and by having a large number of such slots in parallel, the requisite flow passage can be obtained with a very small pressure loss.

It appears that heat exchangers built on this principle will find special application in closed circuit hot or cold air engines.

The Basis of Compact Heat Exchanger Design. (O. Walger, Z.V.D.I., Vol. 88, Nos. 7-8, 19/2/44, p. 105.) (Digest.) (123/3 Germany.)

The aim of efficient design is to provide the highest possible heat transfer coefficient α accompanied by a permissible pressure drop. Provided the temperature drop is not excessive and the Prandtl number relatively small, the simple exponential formulæ of Nusselt-Krausshold and Haussen give reliable information on the best compromise to be effected. More recent investigations have dealt with the problem of longitudinal and lateral flow through nests of tubes. For large relative temperature changes (corresponding to $l/d > 200$ for longitudinal flow) and the same total pressure drop, it appears that the total tube surface required is about the same for longitudinal as for lateral flow. If, however, the relative temperature difference is small (corresponding to relatively short tubes in longitudinal air flow) the nest exposed to lateral flow becomes more efficient and this type of flow will therefore lead to a saving in material.

A Statistical Theory of the Strength of Materials. (W. Weibull, Ing. Vet. Akad. Proceedings No. 151, 1939.) (123/4 Sweden.)

According to the classical theory of elasticity, the ultimate strength of an isotropic material is reached when the stress at any point in the material exceeds a certain critical value. In practice, however, data on ultimate strength of a so called isotropic material show appreciable scatter, even if extreme care is taken to exclude extraneous influences. Now if the results are distributed along a probability curve $S=f(\sigma)$ so that for very low stresses the probability of rupture $S=0$ and for very heavy stresses $S=1$, the calculus of probability at once leads to the conclusion that

$$\log (1 - S) = - \int_0^{\sigma} n(\sigma) d\sigma$$

where $n(\sigma)$ is a characteristic function of σ depending on the material and may be interpreted as the number of weak places per unit volume of the material which cause rupture at a stress equal to or less than σ .

For brittle substances, it appears that $n(\sigma)$ takes the simple form $n(\sigma) = k\sigma^m$ when k and m are constants.

Under these conditions, an increase in volume of the test specimen causes both the ultimate strength and standard deviation to decrease. The relative dispersion, on the other hand, is independent of V and a function of m only.

It is also easily shown that for the same volume, the ultimate strength in bending or torsion is greater than in pure tension. Similarly, the ultimate tensile strength diminishes rapidly if two or three dimensional tensile stress instead of one dimensional stress is employed.

In conclusion, the author gives some experimental data on rods made of a mixture of stearic acid and plaster of paris which are in good agreement with the above conclusions.

It will be noted that the whole theory depends on the fact that the experimental strength values do indeed fall on a characteristic probability curve.

The Phenomenon of Rupture in Solids. (W. Weibull, Ing. Vet. Akad. Proceedings No. 153, Stockholm, 1939.) (123/5 Sweden.)

The author has given the fundamentals of a statistical theory of the strength of materials in a previous number of this series (151) (Abstract 123/4). According to this theory, an isotropic body is defined as one in which the probability of rupture in a given volume element is a mathematical function of the stress, the constants defining this function (so-called distribution constants) being independent of the direction of stress or the position of the volume element in the solid under consideration. In the previous paper, the author suggested that this distribution function might be of a relatively simple exponential form (so-called elementary form), and the few experimental data supplied seemed to bear out this contention. Further investigation described in the present paper show, however, that in most cases the distribution function is more complex, being the resultant of two or more elementary functions. The author, moreover, finds it now necessary to differentiate between so-called "regular" bodies (in which formations of cracks continues so long as the edge of the crack is subjected to tensile stresses) and "irregular" bodies (in which the crack is arrested when it reaches certain surfaces inside the body).

Sugar is a representative member of the class of "regular" bodies whilst porcelain belongs to the "irregular" group.

The mathematical expression for the probability of rupture of these two classes is very different, although both can be represented by two elementary (exponential) components.

This is shown from statistical tests on both these substances. It is proposed to present further experimental data in subsequent monographs, each dealing with a particular material.

The Consolidation of Large Surface Areas with Cement. (Z.V.D.I., Vol. 88, Nos. 7-8, 19/2/44, p. 111.) (123/6 Germany.)

When large dumps are planned, it is necessary to consolidate the ground surface and for this purpose a separate concrete surface layer about 6 in. thick is generally provided. This entails a considerable amount of work if carried out in the normal manner.

Experience in road making in the East (U.S.S.R.) has, however, shown that in many cases very good results can be obtained much more simply by adding the concrete directly to the roughly dug ground, spraying with water and then rolling down firmly. Apart from excavators for levelling, quite simple machines such as tractors, ploughs, harrows and rollers suffice and it is stated that a team of 11 men (three engineers, two tractor drivers and six labourers) can reinforce about 1,000 m.² of ground to a depth of six inches in eight hours.

The first step is the removal of vegetation with a harrow. The ground is then levelled and ploughed, soft parts being filled in and rolled. Six inches of gravel are next spread uniformly and mixed well with the ground. A uniform layer of concrete follows which is again mixed thoroughly with the soil and finally water is added. Both the quantity of concrete and water required depend on the nature and moisture content of the soil and are determined beforehand. The surface is then rolled, raked and again rolled, and finally covered with damp ash.

The Centrifugal Casting of Gear Wheels. (Z.V.D.I., Vol. 88, Nos. 7-8, 19/2/44.)
(123/7 Germany.)

Centrifugal castings made of steel, cast iron and some other metals are generally stronger than those obtained by the normal process. In addition, there is less wastage of materials and the mould is simplified, thus reducing cost in mass production.

The process was originally applied to tubes. Cylinder liners, valve seats and brake drums soon followed and during the last few years centrifugally cast steel gear wheels have received wide application.

Some of the steel dies employed for this purpose with vertical axis of rotation are illustrated, suitable for either single or stepped gears.

The steel die is generally made of two parts, the lower part being rigidly attached to the rotor, whilst the removable upper portion is held in position by a system of pivoted levers which lock under centrifugal action. Before closing the die, a sand core is inserted in the lower part which produces the necessary recesses in the gear wheel and also protects the die from the impact of the molten steel. It should be noted that the external portions of the wheel must be in direct contact with the steel die. Similar inserts are provided in the more complicated die illustrated. A composite unit of 18 dies of this type will produce nine stepped gears per minute.

Centrifugally cast gears have the same strength and behave in practice just as forged gear wheels.

Flash Butt Welding for Tool Tips. (A.E.G., Z.V.D.I., Vol. 88, Nos. 7-8, 19/2/44, p. 27 (Adv. Section).) (123/8 Germany.)

In order to conserve materials, it has been common practice to use composite tools, in which a plate of high speed steel destined for the cutting edge is attached to a holder made of cheap structural steel. The attachment is usually carried out by brazing or fusion welding with the addition of filings and borax. The employment of flash butt welding for this process presents many advantages and the special tool holder developed by the AEG for this purpose and which can be used in conjunction with a standard flash butt welding machine is illustrated. The tool clamp proper consists of an upper and lower jaw made of steel, whilst the plate clamp for the high speed tool tip is made of copper in order to equalise the electrical resistance. The strength of the flash weld is very great and the weld zone can be even subsequently forged if necessary. The heat zone is very limited and there is no danger of the high speed plate being burnt. It is even possible to use plates already hardened so that the tool only requires grinding before being ready for use. The use of unhardened material is, however, generally recommended, as this facilitates grinding and at the same time enables the weld to be subjected to a proper test. For subsequent hardening, the temperature most favourable for the high speed plate can be chosen without any danger of the weld cracking.

Set Backs in the Wartime Expansion of the Light Metal Industry. (Inter. Avia., Nos. 913-914, 4/4/44, pp. 1-9.) (123/9 U.S.A.)

ALUMINIUM.

The expansion of the American Aluminium Industry was originally mainly financed by the two leading firms concerned—the Aluminium Company of America and Reynolds Metal Co. and by the end of 1941 a total output of about 600 million lb. was achieved. This was stepped up by the Government financed expansion programmes of 1941 and 1942, which set up about a dozen additional plants, and also arranged for manufacturing facilities in Canada. Finally, in 1943, a combined Aluminium Board in which the U.S.A., Canada and Great Britain are represented was set up for the production and allocation of aluminium

among the United Nations. As a result of these activities, the total aluminium supplies reached over 3,000 million lb. in 1943. The phenomenal growth over the last few years is shown in the following table (figures in million lb. units).

	YEAR.				
	1937.	1940.	1941.	1942.	1943.
U.S. Production	327	415	615	1042	1840
Canadian Production	170	218	415	672	1006
U.S. Scrap	50	?	?	370	528
Total Supplies	547	(633)	(1030)	2084	3374
Structural Weight of U.S. Built Aircraft	?	?	87	291	742
Ditto as a percentage of U.S. Al. Production	?	?	14%	28%	40%

Toward the end of 1943, a reserve of over 100 million lb. of aluminium not urgently needed had accumulated and large quantities of Canadian aluminium, originally earmarked for the U.S.A., could be placed at the disposal of Great Britain and the U.S.S.R. The supply is now in excess of demand and a large number of the 60 plants operating in the U.S.A. at the beginning of 1944 are being closed down, thus cutting production to approximately one half.

MAGNESIUM.

In 1938 the total magnesium production in the U.S.A. amounted to less than 5 million lb. and was thus quite insufficient to cover any wartime requirements. The American War Production authorities have so far spent about 500 million dollars (mainly in the form of financial assistance to the leading producer, Dow Chemical Co.) so as to build up plants with an annual capacity of 700 million lb. by 1943 (150 times pre-war capacity). Actual production lagged, however, considerably behind estimate, with the result that the estimated requirements of about 450 million lb. for that year were not met. This is shown in the following table.

1939	6 million lb.
1940	12½ "
1941	33 "
1942	100 "
1943	391 "

As a result, the managements of several of the plants were severely criticised by the Truman Committee. Meanwhile the lack of magnesium has been made good by drawing on aluminium supplies and replacing magnesium incendiaries to a large extent by phosphorous bombs. The position, in spite of the waste disclosed, is thus not considered dangerous, especially as Canada, after covering its own needs in 1943, is now reported to be ready for export. The magnesium production in Great Britain during the war period is not known. In 1939 about 11 million lb. were produced. From the Report of the House of Commons Select Committee on National Expenditure it appears that till recently there were four firms producing magnesium in Great Britain, each of which used a different process at a cost ranging from 1s. 6d. to over four shillings a lb. (The average price of magnesium in the U.S.A. was of the order of 20½ cent. or 1s. a lb. in 1943.)

Two of the processes had never been tried before on a large scale and are now to be closed down entirely. Production at the other two plants is being curtailed, imports from America meeting the difference. This is rendered easier by the reduction in the magnesium content of modern incendiary bombs.

Very rapid expansion of the light metal industry, both in the U.S.A. and in Great Britain, was purely a wartime measure and it will be difficult to find a peace time market for the enormous plants now in operation.

Training Accidents in the U.S.A. (Inter. Avia., No. 906, 12/2/44, p. 18.)
(123/10 U.S.A.)

Before the war, 1.3 per cent. of all Army student pilots were killed in training. This rate has risen to 2.0 per cent. since the war. In primary, basic and advanced flying training the rate of fatal accidents (each of which may cause more than one fatality) has remained approximately at pre-war level, but in operational training the rate has risen from 82 fatal accidents for 1,000,000 flying hours to 182 fatal accidents. As regards individual fatalities, the operational training rate has risen from 145 fatalities for 1,000,000 hours to 521 fatalities. A brief analysis given the following principal accident causes: Pilot and ground crew errors are responsible for 48 per cent. of the accidents, failure of equipment for 12.4 per cent.; the causes of one-third of all accidents are undetermined. The most frequent type of fatal accident is collision in full flight with mountains, trees, telephone poles, etc. (not a take-off or landing?), while collision with other aircraft accounts for only 8.5 per cent. of all accidents.

The Effect of Propeller Thrust on the Take-off Distance. (F. Roth, Flugwehr und Technik, Vol. 6, No. 1, Jan., 1944, pp. 23-28, and No. 2, Feb., 1944, pp. 52-54.) (123/11 Switzerland.)

The take-off distance of an aircraft includes the ground projection of the initial flight path to clear a 20 m. obstruction under steady climb conditions. It thus consists of the following portions:—

- (1) Ground run proper till aircraft unsticks.
- (2) Transition arc, during which excess lift is utilised to balance the associated centrifugal force, the aircraft gaining about 10 m. in altitude.
- (3) The climb proper to 20 m.

Of the above (2) is difficult to calculate since the exact shape of path depends markedly on the way the aircraft is handled and the corresponding horizontal projection of the flight path is thus uncertain. Compared with (1) and (3), the distance involved is relatively small and is neglected by the author. This simplification is rendered even more permissible if, as is done by the author, the projection of the final climb to 20 m. is reckoned from ground level and will thus automatically include a portion of the arc. Under these conditions, the author shows that the total take-off distance D is given by

$$D = \frac{(G/F)}{\gamma C_a [S_m/G - \frac{1}{2}(\mu + \epsilon_a)]} + \frac{h}{(S_a/G - \epsilon_a)}$$

where G = weight of aircraft.

F = wing area.

C_a = lift coefficient at unsticking.

S_m = mean propeller thrust during ground roll.

S_a = propeller thrust during climb to 20 ft.

μ = coefficient of ground friction.

ϵ_a = drag/lift ratio at unstick.

γ = air density.

A short take-off distance thus mainly implies small (G/F) , large C_a and large thrust values S_m and S_a .

Since modern high speed aircraft only function efficiently at a high wing loading and since the maximum value of C_a is also limited (leaving out of account possible further improvement by boundary layer suction), an increase in the thrust value offers the most immediate prospect of reducing the take-off run.

The author is of the opinion that this line of development has been rather neglected and points out that by simply increasing the solidity (=total blade area/disc area) from the normal value of about .10 to about .15 or .2, the static thrust can be increased by at least 30 per cent. This can be increased to about

50 per cent., if an increase in propeller diameter of the order of 10 per cent. is permissible. It is true that this increase in solidity and diameter must be accompanied by a corresponding increase in propeller weight and a 50 per cent. increase in thrust may have to be paid for by a 10 per cent. increase in the weight of the propeller. Since under normal conditions, the propeller accounts for only about 2.5 per cent. of the total weight of the aircraft, even doubling this proportion will not raise the wing loading unduly. In any case, the increase is well worth while if at the same time a 50 per cent. increase in thrust can be obtained. The author has calculated the changes in take-off run for a number of standard aircraft, the wing and power loading of which ranged from 160 to 306 kg./m.² and from 2.3 to 4.5 kg./h.p. respectively. By doubling the solidity of the standard propeller, the total take-off run could be reduced by amounts ranging from 100 to 200 m. Even in the most unfavourable case (combined high wing and power loading) a total distance of 700 m. sufficed to clear the 20 m. obstacle.

These conclusions are specially important at the present time for the planning of aerodromes for post-war civil aviation.

The Effect of Oxygen Deficiency on the Human Organism During Short Time Exposure to High Altitude Conditions. (F. V. Tavel, *Helvetica Physiologica and Pharmacologica Acta Suppl. I*, 1943.) (123/12 Switzerland.)

After a historical survey of the problem, the author discusses about 300 tests carried out in the Low Pressure Chamber of the Physiological Institute of Zurich.

All the test subjects were Swiss Army Pilots, the age groups (21—25) and (25—35) being represented about equally. For the majority of the tests (about 200 cases) the following standard procedure was adopted:—

- (1) Ascent to 5,000 m. in 10 minutes and stay at this altitude for 10 minutes.
- (2) Ascent from 5,000 to 6,000 m. in 2 minutes and stay at 6,000 m. for 10 minutes.
- (3) Ascent from 6,000 to 7,000 m. in 2 minutes and stay at 7,000 m. for 15 minutes.
- (4) Drop to 6,000 m. in 2 minutes and stay at 6,000 m. for 10 minutes.
- (5) Drop from 6,000 m. to 5,000 m. in 2 minutes and stay at 5,000 m. for 10 minutes.
- (6) Drop from 5,000 m. to the ground in 5 minutes.

During the tests (which altogether lasts 1 hr. 23 min.) blood pressure and pulse rates were recorded and the candidates were required to write down columns of figures (1,000 downwards), since the handwriting (muscular control) and effort involved throw valuable light on the physical and mental state of the candidate. At 7,000 m. the test subjects were also required to write down general impressions of their state or anything else which might strike them of special interest, great care being taken not to suggest the type of answer expected. Every endeavour was made to put the candidates at their ease and encourage free conversation, the greatest attention being paid to spontaneous behaviour. The tests were generally carried out simultaneously on two to three candidates, together with the doctor in charge, who, of course, is provided with a mask. It is generally admitted that for rates of ascent of the order utilised and altitude up to 7,000 m. the physiological effects observed are almost entirely due to the reduction in the partial pressure of the oxygen and similar results can be obtained by breathing N₂ diluted air mixtures at normal pressure through a mask. Although this method of test is much cheaper than the low pressure chamber, and would not subject the doctor in charge to any strain, it is not recommended by the author, mainly because the wearing of a tight fitting mask during the relatively long test period creates artificial conditions (discomfort) which reduce the altitude resistance of the candidate. Observation of facial expression

is also rendered difficult if a mask is worn by the candidate and there is always the danger that a coughing fit will cause leakage and thus falsify the results. On the other hand, the altitude chamber tests, although free from these defects, subject the doctor in charge to severe strain and if repeated at too close intervals impair his critical faculty and render him restless and irritable. Long periods of sleep are required for full recovery. For this reason, the same doctor should not supervise more than a dozen low pressure tests spread over a period of about three weeks.

RESULTS OF TESTS.

Of the 200 odd cases examined, 28 exhibited altitude collapse in various degrees, 13 candidates at 6,000 m. and 15 at 7,000 m. Of these cases, eight were accompanied by grave symptoms (4 at 6,000 m. and 4 at 7,000 m.). Five of these cases required oxygen administration. The remaining cases of collapse were all of the passing phase type, the candidates fully recovering by their own efforts. Whilst, in the majority of cases, liability to collapse was indicated by abnormalities in pulse and blood pressure, three cases of heavy collapse at 7,000 m. occurred very suddenly without any apparent warning.

The tests seem to indicate that the liability to collapse is more pronounced in the lower age group. This is brought out in the following table:—

Age Group.	No. of Candidates.	Cases of Collapse.	
		Heavy.	Passing Phase.
21-25	103	5 (5%)	11 (11%)
26-30	71	3 (4%)	6 (8%)
31-46	39	1 (2½%)	2 (5%)

It should, however, be pointed out that the older pilots had been actively engaged in flying over a number of years and therefore represented a more or less selected group, abnormal individuals having been already weeded out automatically. Ruling out the 28 cases of collapse detailed above, the remaining candidates exhibited the following average variation in circulatory constants during the tests.

	Altitude (m.).				
	0	Ascent.		Descent.	
		5000	7000	5000	0
Pulse frequency	78	93	105	90	74
Blood pressure (diastolic) mm. Hg. ...	75	70	62	68	76
Blood pressure (systolic) mm. Hg. ...	125	132	132	122	115
Rel. minute volume (red. amplitude × pulse frequency)	55	68	82	62	48

Whilst the above table shows general tendencies, there are considerable individual variations. There is evidence that the youngest age group exhibits a more pronounced diastolic pressure drop at altitude, combined with high values for the rel. Minute Volume, and this may account for the greater tendency to collapse for this group as already noted above.

Speaking generally, a symmetrical variation of the circulatory functions during ascent and descent as exhibited in this table denotes normal altitude resistance of the individual. Tendency to collapse is indicated by an abnormal drop of diastolic pressure followed by a diminution of systolic pressure and a marked decrease in pulse frequency. This pre-collapse condition is often accompanied by a feeling of warmth (perspiration), pallor and pupil contraction. Loss of consciousness invariably follows a drop of systolic pressure below 80 mm. of Hg, but pressure of the order of 100 mm. produce in general only sleepiness and general apathy. It should, however, be emphasised that these abnormalities in the circulatory functions indicate tendencies only and it does not by any means follow that a serious collapse will actually take place.

Individual cases vary widely and it is evident that the relatively simple data regarding blood pressure and pulse rate are not by themselves sufficient to indicate a pending crisis. Attempts to use electrocardio diagrams for this purpose also led to similar uncertainties (30 separate experiments at varying altitudes up to 8,000 m.). The author is, however, of the opinion that an accurate determination of the pulse wave velocity may furnish the required criterion. For this purpose he has designed a piezo electric pressure recorder, which is actuated by the pulse and modulates the grid potential of the first stage amplifier of the electrocardiograph. The combined record thus gives the relative pulse wave velocity (time between R beat and rise of pulse pressure) and by making the measurement at two points of an artery, the absolute pulse wave velocity can be determined.

The author states that under more or less stable circulatory conditions, the pulse wave velocity is remarkably constant, but undergoes changes when the organism experience difficulties in adapting itself to the new conditions. It is too early yet to state whether this method of experimentation will prove of use in low pressure tests.

It is obvious that the human organism undergoes very complicate readjustment when exposed to oxygen want. A displacement in the timing or actual failure in any one of the steps of this process may lead to collapse, which may be regarded as the last self protective measure at the disposal of the individual. When in a mild form, the collapse resembles sleep and the individual will recover after a period of his own accord, feeling refreshed and probably capable of standing a further increase in height without trouble.

It is evident that during the "sleep" period, when oxygen requirements were cut automatically to a minimum, the organism was capable of completing its readjustment and even build up reserves. In the heavy form of collapse, however, this adjustment may fail in spite of minimum oxygen consumption. There is complete loss of consciousness and recovery is problematical unless oxygen is administered or a lower altitude reached quickly. A simple instrumental test thus having failed to indicate danger of collapse (which, in view of the complexity of the causes, is not surprising), the doctor in charge has to pay increased attention to other symptoms, such as: deterioration of muscular control, tremor, inarticulate speech, bad or restricted vision, loss of critical faculties, so-called attention "peaks" (during which the test subject can regain control by a great effort), etc.

It is only the experienced medical observer who can evaluate these symptoms and only repeated tests on the same individual will enable him to express an opinion. Quite apart from this, however, the altitude chamber has proved of enormous value in familiarising the pilot with some of the symptoms and demonstrate that his vaunted altitude resistance may vary considerably on different days. The loss of critical faculty constitutes a special danger and the extreme suddenness of some types of collapse will emphasise the need of being thoroughly familiar with the manipulation of emergency controls, including oxygen supply.

Although the normal pilot will generally stand short time exposures to 7,000 m. without breathing oxygen provided he is in a comfortable sitting position and not doing heavy manual work, discomfort (especially cold), combined with the excitement of aerial combat, may rapidly drain his reserves. Under such conditions, warning symptoms, coupled with the well-known loss of critical faculty, may pass unnoticed and the collapse occurs very suddenly.

The low pressure chamber test is not to be regarded as a criterion of the ultimate height resistance. It will, however, definitely weed out cases which have subnormal oxygen reserves and will keep them from high altitude flying till the cause of the abnormality has been ascertained. A mobile unit should therefore be attached to every high altitude squadron and the pilots examined at frequent intervals.

Electric Fuel Flow Meter of the Sampling Type. (Z.V.D.I., Vol. 87, Nos 35-36, 4/9/43, p. 556.) (123/13 Germany.)

Flow meters of the sampling type (in which the time for the consumption of a given volume is measured with a stop watch) are not very suitable for use on aircraft since the observer has generally to take simultaneous readings on a number of other instruments and can ill spare the time for operating the stop watch accurately. Devices in which the passage of the fuel past the measuring marks automatically controls the stop watch are not novel. Their use on aircraft has, however, not been general, either due to complications or lack of reliability.

The instrument described by the author is stated to operate reliably and with ample accuracy under all normal flying conditions. Its essential feature consists in the type of magnetic relay employed which is operated by a thin steel float placed in a gauge tube of non-magnetic material communicating with the measuring vessel. The iron core of this relay is housed in a recess of the gauge tube, the wall thickness of which is cut down in this region to a few tenths of a millimeter. This is essential in order to reduce the airgap between float and core to a minimum and can be carried out without impairing the strength of the tube by very careful fitting. The relay operates directly by the increased magnetic flux due to the passage of the float, and since the latter is very thin, the need of working with the smallest possible airgap is obvious.

The relay response was investigated experimentally by recording the actual position of the float by an inductive method at the instant of operation. The maximum position error was found to be no more than ± 1 mm. over the full range of flow corresponding to a volume error of less than .2 per cent. (total metered volume 1,600 cc.).

This was confirmed by flight tests under various atmospheric conditions, in which the fuel was passed to a calibrated tank.

VOLUME ERRORS (FLIGHT TESTS).

Rate of Flow. (litres/hour).	% Error.		Weather.
	Meter I.	Meter II.	
260	.25	.25	Calm.
360	.25	.15	Calm.
480	.37	.25	Slight gusts.
600	.21	.30	Very gusty.
900	—	.25	Calm.

In practice two metering units are mounted side by side so that as one unit is gradually emptied during a test, the second one is refilling and readings can be taken in succession. This switching over can be done automatically by the float by providing a third relay below the second measuring mark.

Vapour Pressures of Petrols and Kerosenes. (Technical Data on Fuel, World Power Conference, London, 1928, pp. 151 and 156-157.) (123/14 Great Britain.)

PETROLEUM MOTOR SPIRITS.

	Aviation Petrol.	From Mixed Base Crude.		
		Petrol No. 1.	Petrol No. 3.	Tractor Vaporising Oil.
Specific gravity D 15.5 °C./15.5 °C. ...	0.720	0.740	0.745	0.780
Correction to specific gravity per °C.	0.000855	0.000830	0.000820	0.000745
Boiling Range.:				
I.B.P. °C. ...	35	33	35	115
50 per cent. over at °C. ...	84	104	112	166
F.B.P. °C. ...	146	184	198	196
Per cent. to 100 °C. ...	70	42	32	Nil

PETROLEUM MOTOR SPIRITS (continued).

	From Mixed Base Crude.				
	Aviation Petrol.	Petrol. No. 2.	Petrol. No. 2.	Tractor. Vaporising Oil.	
Vapour pressure : Mm. of Hg. at °C.	-30	20.4	15	11	—
	-20	34	25	19	—
	-10	52	40	29	—
	0	80	62	47	—
	+10	115	90	70	—
	20	170	133	100	—
	30	240	185	145	—
	40	330	265	200	12
	50	450	360	280	19
	60	590	480	365	29
70	780	630	490	44	

Equation for vapour pressure :

$$\text{Log } p = A - B/T \text{ where } p = \text{mm. Hg., } T = \text{abs. temp. } ^\circ\text{C.}$$

A =	6.76	6.72	6.65	7.48
B =	1,325	1,345	1,360	2,000

FUELS OTHER THAN MOTOR SPIRITS.

Composition :	Power Vaporising Oil.	Kerosene.	From Mixed Base Crude.				
			Long-time Burning Oil.	Diesel Oil Distilled (Gas Oil).	Light Fuel Oil.	Heavy Fuel Oil.	
Ultimate C. % ...	86.2	86.4	86.0	86.3	86.2	86.1	
" H. % ...	13.8	13.6	14.0	12.8	12.4	11.8	
" S. % ...	0.01	0.08	0.01	0.9	1.4	2.1	
Specific gravity :							
D. 15.5 °C./15.5 °C.	0.780	0.793	0.793	0.870	0.895	0.949	
Correction to specific gravity per °C. ...	0.000745	0.00072	0.00072	0.000665	0.00066	0.00065	
Boiling Range :							
I.B.P. °C. ...	115	140	178	177	200	250	
50 per cent. over at °C. ...	166	196	225	300	348	—	
F.B.P. °C. ...	196	285	293	—	—	—	
Per cent. residue at 350 °C. ...	—	—	—	16.5	49	62	
Vapour Pressure :							
Mm. of Hg. at °C.	50	19	25	7.8	2.6	2.2	0.4
100	130	130	47	21	16	3.6	
150	550	460	195	100	72	20	
200	1,750	1,300	605	345	235	81	
250	4,500	2,950	1,500	910	610	240	
300	9,600	5,500	3,200	2,050	1,330	590	
350	18,500	9,900	6,000	4,100	2,500	1,290	
400	32,000	16,000	10,300	7,500	4,500	2,450	
450	50,500	24,500	16,500	12,500	7,300	4,200	
Equation for vapour press. A =	7.48	6.81	6.92	7.05	6.70	6.90	
Log $p = A - B/T$ where $p = \text{mm. Hg., } T = \text{abs. temp. } ^\circ\text{C.}$	B =	2,000	1,750	1,960	2,135	2,050	2,370

Determination of the Loss of Definition Due to Steady, or Irregular Motion of an Aerial Camera by the Pictorial Point Method. (M. Nagel, Allg. Verm. Nachr., Vol. 51, No. 26, 15/9/39, pp. 582-590.) (123/15 Germany.)

Loss of definition due to regular displacement of the camera depends mainly of flight speed, scale and exposure time and can thus be calculated in a relatively simple manner. The effects of irregular motion (camera vibration) can, however, be only assessed experimentally. For this purpose the author has devised a so-called "pictorial point" method in which the apparent path of a small light source stationed on the ground is photographed, the exposure time being several times that normally employed.

A suitable light source is provided by a concave mirror which reflects the sun towards the aircraft. This mirror is best placed on an artificial background of black cloth, but in many cases the ordinary ground will suffice, provided it is of uniform colouration over a distance at least equal to the flight path during the exposure ($\sim 1/5$ sec.). If necessary the contrast can be increased by a suitable combination of photographic emulsion and light filter.

In principle, the loss of definition due to camera vibration is independent of altitude. The experiments are, however, best carried out at fairly low altitudes, of the order of 400-800 m. so that the shutter calibration obtained on the ground can be employed without necessitating corrections due to temperature effects. (The relatively long exposure times ($\sim 1/5$ sec.) required may necessitate fitting a special shutter.) If the camera is free from vibrations, the point source will trace a straight line on the plate, corresponding to the regular displacement in the direction of flight. Any camera vibration will cause high frequency ripples to appear on the light track. It should be noted, however, that only vibrations at right angles to the flight path are fully recorded. If it be assumed that the camera can vibrate equally in all directions, the length of the recorded light track may thus differ from the theoretical length by an amount up to $2a'$, where a' is the amplitude of the recorded ripples. This is of importance when calculating the amount of camera tilt required to compensate automatically for the regular motion.

Again, if a' =amplitude of recorded ripple, and f =frequency, the displacement velocity of the point image due to camera vibration can be calculated. From this the maximum exposure time for a given permissible displacement follows immediately. Thus, in a given example, $a'=.3$ mm. and frequency 19 vibrations/sec. This gives an image velocity of 11.4 mm./sec. and an exposure time of $1/114$ sec. for a permissible displacement of .1 mm.

Now automatic compensation for regular displacement is only of value if by this means longer exposures ($\sim 1/10$ at least) can be obtained. It is therefore essential that the camera vibrations be reduced so that a permissible irregular displacement of .1 mm. will not be exceeded during these longer exposures. It was found that this could be achieved by fitting the standard D.V.L. camera suspension with special hard rubber blocks supplied by Zeiss-Aerotopograph. (The details of this suspension are not given.)

As a result of these tests, the author suggests a figure of merit $G=T \times F$ for judging an aerial camera installation, where

T =exposure time for .1 mm. irregular displacement (sec.).

F =focal length in in. cm.

This figure applies to visual examination of the photograph. If the latter is to be examined with a magnification V , a correspondingly greater factor will be required.

Tests show that G depends markedly on the type of aircraft carrying the installation, but for similar installations in aircraft of the same type, the factor repeats in a satisfactory manner, provided the flight conditions are the same. (In this connection special attention should be paid to the propeller.)

The tests were carried out on W. 34, Ju. 52 and He. 70 aircraft, the latter proving the worst from the point of view of camera vibration.

In conclusion, it is pointed out that the method can also be employed for studying aircraft vibrations, by attaching the camera rigidly to the structure and examining the record of the light source situated on the ground.

LIST OF SELECTED TRANSLATIONS.

No. 69.

NOTE.—Applications for the loan of copies of translations mentioned below should be addressed to the Secretary (R.T.P.3), Ministry of Aircraft Production, and not to the Royal Aeronautical Society. Copies will be loaned as far as availability of stocks permits. Suggestions concerning new translations will be considered in relation to general interest and facilities available.

Lists of selected translations have appeared in this publication since September, 1938.

AIRCRAFT AND ACCESSORIES.

TRANSLATION NUMBER AND AUTHOR.	TITLE AND REFERENCE.
2114 —	<i>Device for the Automatic Limitation of Aircraft Acceleration in the Vertical Direction.</i> (German Patent 733,589.) (Flugsport, Vol. 35, No. 9, 19/5/43, p. 26.)
2117 Richon, M. J.	<i>The Future of Stratospheric Aviation.</i> (L'Aéroplane, November, 1938, pp. 77-84.)
2128 Focke, H.	<i>Autogiro and Helicopter Problems.</i> (Schriften der deutschen Akad. Luftfahrtforschung, No. 22.)
2131 Wolff, K.	<i>Calculation of Power for Operating Variable Camber Wing Flaps.</i> (Luftwissen, Vol. 10, No. 2, Feb., 1943, pp. 53-57.)
2132 De Azcarraga, L.	<i>Ideal Requirements for Civil Aviation.</i> (Rev. Aeronautica, Vol. 4 (2nd Series), No. 26, Jan., 1943, pp. 42-49.)

ENGINES AND ACCESSORIES.

2116 Graff, H.	<i>Measurement of the Gas Temperature in Internal Combustion Engines.</i> (Z.V.D.I., Vol. 86, Nos. 29-30, 25/7/42, pp. 461-466.)
2123 Schroder, W.	<i>Photothermotic Investigation of Diesel Combustion.</i> (M.T.Z., Vol. 1, No. 6, 1939, pp. 180-190, and Vol. 2, No. 1, 1940, pp. 7-15.)
2129 Huttemann, E.	<i>Auxiliary Engines for High Performance Gliders.</i> (Der deutsche Sportflieger, Vol. 9, No. 8, Aug., 1942, p. 175.)

MATERIALS AND ELASTICITY.

2113 Kummer, B.	<i>The Stressing of Rings.</i> (Schweizer Archiv., Vol. 3, No. 2, Feb., 1937, pp. 48-50.)
2133 Weigand, A.	<i>Stress Increases in Hollow Thin-Walled Sections Under Torsion.</i> (Luftwissen, Vol. 10, No. 2, Feb., 1943, pp. 49-50.)

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| 2115 Goldowski ... | ... <i>Application of pH Indicators in the Colorimeter Investigation of Corrosion.</i> (Kerr u. Metallschutz, Vol. 13, Nos. 4-5, April-May, 1937, pp. 128-131.) |
| 2118 Vosskuhler, H. ... | ... <i>The Behaviour of Certain Aluminium Alloys Towards Acid and Alkaline Solutions.</i> (Aluminium, Vol. 20, No. 7, July, 1938, pp. 460-464.) |
| 2136 Zurbrugg ... | ... <i>Rapid Method of Determining Grain-Boundary Corrosion in Alloys of the Al.-Cu.-Mg. Type.</i> (Aluminium, Vol. 20, No. 11, Nov., 1938, pp. 826-827.) |
| 2137 Bosshard, M.
Hug, H. ... | ... <i>The Causes of Grain-Boundary Corrosion in Age-Hardened Al.-Cu.-Mg. Alloy.</i> (Aluminium, Vol. 20, No. 6, June, 1938, pp. 389-394.) |
| 2142 Kuhnel, R. ... | ... <i>Evaluation of Metallic Bearing Materials in the Light of Recent Literature.</i> (Z.V.D.I., Vol. 85, No. 9, 1/3/41, pp. 201-206.) (Translated by Rolls Royce, Ltd.) |
| 2143 Bertrand, G.
Benist, S. ... | ... <i>Preparation and Properties of Procellose. A New Sugar Obtained from Cellulose.</i> (Mem. Soc. Chim. France. Series IV, Vol. 33, 1923, pp. 1451-1459.) |

WIRELESS AND ELECTRICITY.

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| 2124 — ... | ... <i>Photo-Electric Ice Warning Device.</i> (German Patent No. 731,905.) (Flugsport, Vol. 35, No. 10, 16/6/43, p. 36.) |
| 2134 Argus Motors ... | ... <i>Device for the Automatic Control of Pilotless Aircraft, with Special Application to Models.</i> (German Patent No 728,025.) (Flugsport, Vol. 35, No. 6, 17/3/44, p. 3.) |
| 2138 Gross Kopf, J.
Vogt, K. ... | ... <i>Measurement of Ground Conductivity.</i> (T.F.T., Vol. 31, No. 1, 1942, pp. 22-23.) |
| 2140 Kolloth, R. ... | ... <i>Secondary Electronic Emission of Solids.</i> (Phys. Zeit., Vol. 38, No. 7, April, 1937, pp. 202-224.) |

MISCELLANEOUS.

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| 2126 Domagk, G. ... | ... <i>The New Therapy of Bacterial Infection.</i> (Forschungen u. Fortschritte, Vol. 19, Nos. 17-18, June, 1943, pp. 180-181.) |
| 2141 Heinhold, J. ... | ... <i>Interpolation in Tables having Unequal Steps.</i> (Z.A.M.M., Vol. 22, No. 4, Aug., 1942, pp. 235-238.) |

TITLES AND REFERENCES OF ARTICLES AND PAPERS SELECTED
FROM PUBLICATIONS REVIEWED IN R.T.P.3.

Requests for further information or translations should be addressed to R.T.P.3, Ministry of Aircraft Production, giving item and reference numbers.

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THEORY AND PRACTICE OF WARFARE.

General Strategy and Tactics.

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1	20118 U.S.A.	<i>Curtiss C-76 Transport "Caravan" Abandoned.</i> (Inter. Avia., No. 893, 8/11/43, p. 14.)
2	20125 G.B.	<i>Lessons from Airborne Operations.</i> (Inter. Avia., No. 893, 8/11/43, p. 22.)
3	20168 Switzerland	<i>Bomber Command Losses During 1943.</i> (Inter. Avia., No. 898-899, 11/12/43, p. 26.)
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5	20316 Spain	<i>Aviation Co-operation with the Land Forces (Capital Ships or Aircraft Carriers?).</i> (Transcript from article in Flight, 25/6/42.) (M. Mezino, Revista de Aeronautica, Vol. 75, No. 23, Oct., 1942, pp. 243-248.)
6	20318 Spain	<i>Roumanian Aviation in the Anti-Communist War.</i> (Anon., Revista de Aeronautica, Vol. 75, No. 23, Oct., 1942, pp. 261-264.)

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7	20327 Spain	... <i>Torpedo Aircraft Attack (Conclusion)</i> . (G. C. Carre, <i>Revista de Aeronautica</i> , Vol. 77, No. 25, Dec., 1942, pp. 405-409.)
8	20330 Spain	... <i>Torpedo Aircraft Attack</i> . (G. C. Carre, <i>Revista de Aeronautica</i> , Vol. 76, No. 24, Nov., 1942, pp. 325-332.)
9	20331 Spain	... <i>Air Bombing</i> . (A. S. Dargent, <i>Revista de Aeronautica</i> , Vol. 76, No. 24, Nov., 1942, pp. 367-369.)
10	20335 Spain	... <i>Questions of Air Law in War Time</i> . (L. T. Salinas, <i>Revista de Aeronautica</i> , Vol. 71, No. 19, June, 1942, pp. 407-409.)
11	20452 G.B.	... <i>The Pattern of Aerial Combat</i> . (<i>Aeronautics</i> , Vol. 10, No. 1, Feb., 1944, pp. 46-49.)
12	20485 U.S.A.	... <i>Winning Battles by Bombing</i> . (N. F. Silsbee, <i>Mechanical Engineering</i> , Vol. 66, No. 2, Feb., 1944, pp. 101-104.)
13	20538 G.B.	... <i>Air Force Targets—No. 35, Steyr Werke, Austria</i> . (<i>Engineer</i> , Vol. 177, No. 4,599, 3/3/44, pp. 167-168.)
14	20879 G.B.	... <i>White Plumage of Sea-Birds (Principles of Camouflage)</i> . (K. J. W. Clark, <i>Nature</i> , Vol. 153, No. 3,879, 4/3/44, p. 288.)
15	20980 U.S.A.	... <i>Can Air Power Alone Bring About Decisive Victory</i> . (U.S. Air Services, Vol. 28, No. 10, October, 1943, pp. 13-14, 43.)

Training and Organisation.

16	20010 U.S.A.	... <i>The Organisation of the U.S. Army Air Forces (IV)</i> . (<i>Inter. Avia.</i> , Nos. 896-897, 30/11/43, pp. 1-9.)
17	20076 U.S.A.	... <i>Notes on Classification, Selection and Training of Pilots</i> . (B. Kaufman, <i>Journal of Aviation Medicine</i> , Vol. 14, No. 6, Dec., 1943, pp. 383-385.)
18	20110 U.S.A.	... <i>G.B.-U.S.A. Naval Air Co-operation</i> . (<i>Inter. Avia.</i> , Nos. 894-895, 18/11/43, pp. 21-22.)
19	20152 U.S.A.	... <i>Organisation of the U.S. Army Air Forces (IV-2)</i> . (<i>Inter. Avia.</i> , Nos. 898-899, 11/12/43, pp. 1-12.)
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22	20236 G.B.	... <i>The Air Training Corps</i> . (Duke of Hamilton, <i>Aeroplane</i> , Vol. 66, No. 1,709, 25/2/44, p. 210.)
23	20393 G.B.	... <i>Map Reading and Navigation (Book Review)</i> . (R. M. Field and H. T. Stetson, <i>Nature</i> , Vol. 153, No. 3,876, 12/2/44, p. 180.)
24	20397 U.S.A.	... <i>Communications Lifeline of the Air Transport Command</i> . (R. L. Sigerson, <i>Aero Digest</i> , Vol. 43, No. 6, December, 1943, pp. 128, 264.)
25	20455 G.B.	... <i>Aerobatic Ground Trainer (Patent)</i> . (<i>Aeronautics</i> , Vol. 10, No. 1, Feb., 1944, p. 58.)

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26	20489 U.S.A.	... <i>Conservation in the Ordnance Dept. of the Army Service Forces.</i> (T. Lewis, Mechanical Engineering, Vol. 56, No. 2, February, 1944, pp. 119-120.)
27	20666 G.B.	... <i>Synthetic Black-Out (Novel and Simple Aid for Instrument-Flying Training).</i> (Flight, Vol. 45, No. 1,836, 2/3/44, p. 226.)
28	20674 U.S.A.	... <i>Organisation of the U.S. Army Air Force (IV-3).</i> (Inter. Avia., No. 900, 24/12/143, pp. 1-8.)
29	20795 U.S.A.	... <i>The Command and Employment of Air Power.</i> (H. A. De Weerd, U.S. Air Services, Vol. 29, No. 1, January, 1944, pp. 11-13.)
30	20958 G.B.	... <i>Coastal Command Station.</i> (Flight, Vol. 45, No. 1,838, 16/3/44, pp. 278-283.)
31	20962 U.S.A.	... <i>Growth of U.S. Air Power (Review).</i> (Flight, Vol. 45, No. 1,838, 16/3/44, pp. 289-291.)
32	21004 G.B.	... <i>Atlantic Conquest (Atlantic Ferry Service).</i> (Aeroplane, Vol. 66, No. 1,712, 17/3/44, pp. 299-302.)
33	21069 Canada	... <i>Organisation and Planning an R.A.F. Raid.</i> (A. C. H. Purthrey, Canadian Aviation, Vol. 17, No. 1, January, 1944, pp. 44-47, 68-70.)
34	21079 U.S.A.	... <i>Three Years of the North Atlantic Ferry.</i> (Aero Digest, Vol. 43, No. 4, October, 1943, pp. 120-121, 240.)

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37	20218 G.B.	... <i>The World's Best Aircraft (Comments on Peter Masefield's Article).</i> (R. L. Lickley and F. H. M. Lloyd, Flight, Vol. 45, No. 1,835, 24/2/44, pp. 202-203.)
38	20405 U.S.A.	... <i>New Fuses Protect Aircraft Hydraulic Systems (Seals Off any Portion of Hydraulic System Affected by Bullet Penetration, etc.).</i> (Aero Digest, Vol. 43, No. 6, December, 1943, pp. 185-188, 282.)
39	20406 U.S.A.	... <i>Reduction of the Progressive Thinning of Hydraulic Tube Flares (Weight Reduction by Designing for Higher Pressure Systems).</i> (R. J. McCabe, Aero Digest, Vol. 43, No. 6, December, 1943, pp. 190-192, 282-284.)
40	20449 Germany	... <i>A Survey of Nazi Fighter Development.</i> (H. J. A. Wilson, Aeronautics, Vol. 10, No. 1, Feb., 1944, pp. 28-35.)
41	20667 G.B.	... <i>The New Exactor Hydraulic Remote Control.</i> (Flight, Vol. 45, No. 1,836, 2/3/44, p. 226.)
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44	20673 G.B. ...	<i>Control Simplification and Standardisation.</i> (Flight, Vol. 45, No. 1,836, 2/3/44, pp. 237-238.)
45	20748 U.S.A. ...	<i>Sound Proofing of Military Aircraft.</i> (A. A. Arnhyrn, Preprints of the Institute of the Aeronautical Sciences, 12th Annual Meeting, 25/1/44, pp. 1-14.)
46	20768 U.S.A. ...	<i>Truman Report on American Aircraft.</i> (Inter. Avia., Nos. 886-887, 27/9/43, pp. 15-18.)
47	21005 G.B. ...	<i>Messier Undercarriage for Handley Page Halifax III.</i> (Aeroplane, Vol. 66, No. 1,712, 17/3/44, p. 303.)
48	21095 U.S.A. ...	<i>New Laminated Phenolic Plastic Flooring Designed for Martin "Mars."</i> (Aero Digest, Vol. 43, No. 4, October, 1943, p. 210.)

Testing and Navigation.

49	20210 U.S.A. ...	<i>Biggest A.A.F. Motorless Aircraft Tested (Photos).</i> (Aviation News, Dec., 1943, p. 11.)
50	20319 Spain ...	<i>Astro Navigation and the War.</i> (Gen. Aymat, Revista de Aeronautica, Vol. 75, No. 23, Oct., 1943, pp. 267-269.)
51	21081 U.S.A. ...	<i>Mathematics of Direction Finding Navigation.</i> (T. Collins, Aero Digest, Vol. 43, No. 4, October, 1943, pp. 125, 235.)

Equipment of Military Aircraft.

52	18623 U.S.A. ...	<i>Improvised Depression Position Finder.</i> (D. J. Caldwell, Coast Artillery Journal, Vol. 86, No. 4, July-August, 1943, pp. 52-53.)
53	20137 Canada ...	<i>Radium Luminous Compounds for Aircraft Instruments.</i> (Commercial Aviation, Vol. 5, No. 11, Nov., 1943, pp. 114-116.)
54	20170 G.B. ...	<i>Rotol A.G.P. Auxiliary Generating Plant (Photograph).</i> (Inter. Avia., Nos. 898-899, 11/12/43, p. 1.)
55	20194 U.S.A. ...	<i>Flexible Cable Control Eliminates Backlash (Teleflex Cable).</i> (Aviation, Vol. 42, No. 12, Dec., 1943, pp. 189-191, 303.)
56	20195 U.S.A. ...	<i>Autopilot Gives Instant Control (Minneapolis-Honeywell Autopilot Control).</i> (E. E. Thorp, Aviation, Vol. 42, No. 12, Dec., 1943, pp. 192-193.)
57	20490 U.S.A. ...	<i>Inflatable Life-Saving Rafts in the War Effort.</i> (J. C. Kreyer, Mechanical Engineering, Vol. 66, No. 2, February, 1944, pp. 121-129.)
58	20586 Germany ...	<i>Parachute Opening Shock Dampers.</i> (736,638.) (Schroeder, Flugsport, Vol. 35, No. 14, 20/10/43,

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59	20664 G.B. ...	<i>Electricity in Aircraft.</i> (C. G. A. Woodford, <i>Flight</i> , Vol. 45, No. 1, 836, 2/3/44, p. 223.)
60	20678 Switzerland ...	<i>Equipment of First Line Aircraft.</i> (Inter. Avia., No. 900, 24/12/43, pp. 14-15.)
61	20680 U.S.A. ...	<i>Separate Air-Driven Booster Fuel Pump for Jet-sonable Fuel Tanks.</i> (Inter. Avia., No. 900, 24/12/43, p. 16 (I).)
62	20705 U.S.A. ...	<i>Head Armour for Airmen (1½ lb.).</i> (Inter. Avia., Nos. 901-902, 10/1/44, pp. 26-27.)
63	20801 U.S.A. ...	<i>New Flak Helmets for Air Crews.</i> (U.S. Air Services, Vol. 29, No. 1, January, 1944, p. 48.)
64	21009 G.B. ...	<i>Automatic Weight and Balance Indicator Installed in Martin "Mars" (Hydrobal).</i> (Aeroplane, Vol. 66, No. 1, 712, 17/3/44, p. 296.)

Armament and Explosives.

65	20022 U.S.A. ...	<i>Boeing B-17 Chin Turret (Photograph).</i> (Inter. Avia., Nos. 896-897, 30/11/43, p. 11.)
66	20098 U.S.A. ...	<i>O.W.I. Report on American Aerial Rearmament (Bomb Load of Fortress 20,000 lb.).</i> (Inter. Avia., Nos. 894-895, 18/11/43, pp. 17-18.)
67	20108 U.S.A. ...	<i>"Consolidated" Nose Armament.</i> (Inter. Avia., Nos. 894-895, 18/11/43, pp. 1, 16.)
68	20119 U.S.A. ...	<i>Boeing B.17F Nose Guns.</i> (Inter. Avia., No. 893, 8/11/43, pp. 14-15 (I).)
69	20124 U.S.A. ...	<i>Sperry Automatic Gun Sight for Power-Driven Gun Turrets.</i> (Inter. Avia., No. 892, 8/11/43, p. 20.)
70	20171 Switzerland ...	<i>American Bomb Type.</i> (Inter. Avia., Nos. 898-899, 11/12/43, pp. 21-22.)
71	20174 Switzerland ...	<i>Douglas Havoc Fuselage Gun (Photo).</i> (Inter. Avia., Nos. 898-899, 11/12/43, p. 1.)
72	20332 Spain ...	<i>Auto-Propulsive Bombs.</i> (Anon., <i>Revista de Aeronautica</i> , Vol. 76, No. 24, Nov., 1942, pp. 370-371.)
73	20414 U.S.A. ...	<i>B-25 Mounts 75 mm. Cannon.</i> (Aero Digest, Vol. 43, No. 6, December, 1943, p. 238.)
74	20463 G.B. ...	<i>Gunnery Notes.</i> (J. Russell, <i>Aeronautics</i> , Vol. 10, No. 1, Feb., 1944, p. 41.)
75	20583 Germany ...	<i>Bomb Release Gears.</i> (734,009, 736,269.) (Ritscher, <i>Flugsport</i> , Vol. 35, No. 14, 20/10/43, pp. 63-69.)
76	20665 G.B. ...	<i>Mosquito Development (500 lb. Bomb Under Each Wing in Addition to 1,000 lb. Bomb Load within Fuselage).</i> (<i>Flight</i> , Vol. 45, No. 1, 836, 2/3/44, p. 223.)
77	20676 U.S.A. ...	<i>Consolidated B-24H "Liberator" (Armament).</i> (Inter. Avia., No. 900, 24/12/43, pp. 13-14.)
78	20776 Germany ...	<i>Focke Wulf F.W. 189 Rear Gun Installation (Photo).</i> (Inter. Avia., Nos. 886-887, 27/9/43, p. 1.)
79	20777 G.B. ...	<i>Magnetic Mines Exploding Device on Wellington (Photo).</i> (Inter. Avia., Nos. 886-887, 27/9/43, p. 1.)

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80	20848 U.S.S.R.	... <i>The Facing of Detonation in Elongated Charges of Explosives with Intensified Initiation.</i> (A. F. Belyaev, Reports of the Academy of Sciences, Vol. 38 (New Series), Nos. 5-6, 1943, pp. 198-199.)
81	20857 U.S.S.R.	... <i>Effect of Admixtures on the Detonation of a Mixture of Methane and Air.</i> (M. A. Rivin, Reports of the Academy of Sciences, Vol. 30 (New Series), No. 6, 1941, pp. 500-501.)
82	20872 G.B.	... <i>Rocket - Wing - Bomb and Rocket - Torpedo.</i> (Z. Leliwa-Kraywoblocki, Journal of the Royal Aeronautical Society, Vol. 48, No. 399, March, 1944, pp. 58-67.)
83	21001 G.B.	... <i>12,000 lb. Bomb (Photos).</i> (Aeroplane, Vol. 66, No. 1,712, 17/3/44, p. 294.)
84	21077 U.S.A.	... <i>Precision Bombing and the Electronically Controlled Autopilot.</i> (Aero Digest, Vol. 43, No. 4, Oct., 1943, pp. 116-117, 232.)
85	21080 U.S.A.	... <i>Our Aircraft the Most Formidable in the Skies (Improvements in Armament, etc.).</i> (Aero Digest, Vol. 43, No. 4, October, 1943, pp. 122-124.)

Military Types of Aircraft (G.B.).

86	20017 G.B.	... <i>Handley Page Halifax II.</i> (Inter. Avia., Nos. 896-897, 30/11/43, pp. 11, 15.)
87	20018 G.B.	... <i>D.H. 98 Mosquito in 15 Versions.</i> (Inter. Avia., Nos. 896-897, 30/11/43, p. 16.)
88	20019 G.B.	... <i>Fairey "Barracuda" Torpedo and Dive-Bomber.</i> (Inter. Avia., Nos. 896-897, 30/11/43, p. 16.)
89	20107 Australia	... <i>Australian Built "Boomerang" Fighter.</i> (Inter. Avia., Nos. 894-895, 18/11/43, pp. 1, 16.)
90	20154 Canada	... <i>Canadian Fairey Battle (Photo).</i> (Inter. Avia., Nos. 898-899, 11/12/43, p. 1.)
91	20221 G.B.	... <i>Percival Proctor IV.</i> (Flight, Vol. 45, No. 1,835, 24/2/44, p. 210.)
92	20402 G.B.	... <i>Detail Sketches of the Bristol Beaufighter.</i> (Aero Digest, Vol. 43, No. 6, December, 1943, pp. 172-173.)
93	20446 G.B.	... <i>The Hawker Hurricane IID (Recognition Details).</i> (Aeroplane, Vol. 66, No. 1,710, 3/3/44, pp. 248-249.)
94	20684 G.B.	... <i>Saunders-Roe Flying Boat Projects (20,000 to 200,000 lb. Gross Weight).</i> (Inter. Avia., Nos. 901-902, 10/1/44, pp. 1, 13-19.)
95	20686 Canada	... <i>Lancaster II (Canadian Built).</i> (Inter. Avia., Nos. 901-902, 10/1/44, p. 14.)
96	20918 G.B.	... <i>The Armstrong Whitworth Albemarle (Recognition Details).</i> (Aeroplane, Vol. 66, No. 1,711, 10/3/44, p. 275.)
97	21010 G.B.	... <i>Avro Lancaster III (Photo).</i> (Aeroplane, Vol. 66, No. 1,712, 17/3/44, p. 294.)

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98	20085 U.S.A.	... <i>The Cyclone-Engined Brewster Bermuda Dive-Bomber (Photo)</i> . (Aircraft Engineering, Vol. 16, No. 180, Feb., 1944, pp. 46-47.)
99	20116 U.S.A.	... <i>Douglas P-70 (Night Fighter Version of the Havoc)</i> . (Inter. Avia., No. 893, 8/11/43, pp. 1, 12.)
100	20117 U.S.A.	... <i>Curtiss-Wright C-46 Transport "Commando."</i> (Inter. Avia., No. 893, 8/11/43, pp. 13-14.)
101	20122 U.S.A.	... <i>Sikorsky V.S.-44-A Flying Boat for the Naval Air Transport Service</i> . (Inter. Avia., No. 893, 8/11/43, p. 15.)
102	20158 U.S.A.	... <i>Gruman F6F Hellcat Carrier Fighter</i> . (Inter. Avia., Nos. 898-899, 11/12/43, pp. 1, 17-18.)
103	20159 U.S.A.	... <i>Curtiss P-40N (Obsolescent)</i> . (Inter. Avia., Nos. 898-899, 11/12/43, p. 18.)
104	20202 U.S.A.	... <i>Bell TP-39 Airacobra for Transition Training</i> . (Aviation, Vol. 42, No. 12, Dec., 1943, p. 230.)
105	20677 U.S.A.	... <i>North American B-25 "Mitchell" (Destroyer Version)</i> . (Inter. Avia., No. 900, 24/12/43, p. 14.)
106	20683 U.S.A.	... <i>Taylorcraft Light Reconnaissance "Auster" (Photograph)</i> . (Inter. Avia., No. 900, 24/12/43, p. 1.)
107	20692 U.S.A.	... <i>Boeing B-17E, F and G (Fortress)</i> . (Inter. Avia., Nos. 901-902, 10/1/44, pp. 1, 18.)
108	20693 U.S.A.	... <i>Martin PB2M-1 Mars</i> . (Inter. Avia., Nos. 901-902, 10/1/44.)
109	20694 U.S.A.	... <i>Douglas C-47 "Skytrain," Seaplane Version</i> . (Inter. Avia., Nos. 901-902, 10/1/44, p. 19.)
110	20695 U.S.A.	... <i>Beech AT-10 "Wichita" Bomber Trainer</i> . (Inter. Avia., Nos. 901-902, 10/1/44, p. 19.)
111	20706 U.S.A.	... <i>Boeing B-25 "Mitchell" (Special Version for Aerial Mapping) (Photograph)</i> . (Inter. Avia., Nos. 901-902, 10/1/44, p. 1.)
112	20765 U.S.A.	... <i>Piper P.T. Trainer</i> . (Inter. Avia., Nos. 886-887, 27/9/43, pp. 19-20.)
113	20770 U.S.A.	... <i>Consolidated Liberator</i> . (Inter. Avia., Nos. 886-887, 27/9/43, p. 18.)
114	20771 U.S.A.	... <i>North American Mustang II (P-51B)</i> . (Inter. Avia., Nos. 886-887, 27/9/43, p. 19.)
115	20772 U.S.A.	... <i>Martin .B-26 Marauder</i> . (Inter. Avia., Nos. 886-887, 27/9/43, pp. 1, 19.)
116	20809 U.S.A.	... <i>More Details of the Lockheed P38 Fighter</i> . (Automotive and Aviation Industries, Vol. 89, No. 11, 1/12/43, pp. 30-32.)
117	20982 U.S.A.	... <i>Vultee "Vengeance" Dive Bomber</i> . (E. H. Forbes, U.S. Air Services, Vol. 28, No. 10, October, 1943, pp. 34-35.)
118	21096 U.S.A.	... <i>Martin Mariner (Detail Drawings)</i> . (Aero Digest, Vol. 43, No. 4, October, 1943, pp. 212-213.)
Military Types of Aircraft (U.S.S.R.).		
119	20099 U.S.S.R.	... <i>PE-2 Light Bomber (with Sketch)</i> . (Inter. Avia., Nos. 894-895, 18/11/43, pp. 1, 9-12.)
120	20219 U.S.S.R.	... <i>Aircraft in Flying Attitudes (Yak 1, Wig 3, Lagg 3, Stormovik)</i> . (Flight, Vol. 45, No. 1,835, 24/2/44, pp. 204-205.)

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121	20704 U.S.S.R.	... <i>Yak 9 Single-Seater Fighter</i> . (Inter. Avia., Nos. 901-902, 10/1/44, p. 26.)
122	20916 U.S.S.R.	... <i>Russian DB-3F Bomber (Photo)</i> . (Aeroplane, Vol. 66, No. 1,711, 10/3/44, p. 264.)
123	21003 U.S.S.R.	... <i>Aeroplanes of the Red Air Forces—VII (Silhouettes)</i> . (Aeroplane, Vol. 66, No. 1,712, 17/3/44, p. 298.)

Military Types of Aircraft (Germany).

124	20023 Germany	... <i>Messerschmitt Me. 323 Large Transport</i> . (Inter. Avia., Nos. 896-897, 30/11/43, pp. 1, 19.)
125	20112 Germany	... <i>Me. 410 Long Range Fighter</i> . (Inter. Avia., No. 893, 8/11/43, p. 10.)
126	20113 Germany	... <i>Junkers 87 D-2 Dive Bomber</i> . (Inter. Avia., No. 893, 8/11/43, p. 11.)
127	20153 Germany	... <i>Junkers Ju. 188 Medium Bomber</i> . (Inter. Avia., Nos. 898-899, 11/12/43, p. 15.)
128	20245 Germany	... <i>Arado 196A Seaplane (Photo)</i> . (Aeroplane, Vol. 66, No. 1,709, 25/2/44, p. 207.)
129	20441 Germany	... <i>Wreckage of Dornier Do. 21 M1 (Photo)</i> . (Aeroplane, Vol. 66, No. 1,710, 3/3/44, p. 239.)
130	20447 Germany	... <i>The Messerschmitt Me. 109G (Recognition Details)</i> . (Aeroplane, Vol. 66, No. 1,710, 3/3/44, pp. 248-249.)
131	20641 Germany	... <i>Giant Aircraft of German Design (Ju. 905 and its Predecessors)</i> . (Luftwelt, Vol. 10, No. 23, 1/12/43, pp. 462-464.)
132	20675 Germany	... <i>Bucker B-182 "Kornet" Trainer</i> . (Inter. Avia., No. 900, 24/12/43, pp. 1, 12-13.)
133	20685 Germany	... <i>Focke Wulf "Moskito" (Wood Construction)</i> . (Inter. Avia., Nos. 901-902, 10/1/44, p. 14.)
134	20687 Germany	... <i>Siebel Si. 204 Liaison Plane Built in France</i> . (Inter. Avia., Nos. 901-902, 10/1/44, p. 22.)
135	20764 Germany	... <i>British Report on German and Italian Aircraft Captured in Tunisia (Me. 109G, F.W. 190, Ju. 87D, Me. 110G, Me. 210 A-1, Ju. 88, Hs. 129, Ju. 908, Me. 323, SM. 84)</i> . (Inter. Avia., Nos. 886-887, 27/9/43, pp. 1, 12-15.)
136	20919 Germany	... <i>The Dornier 217E (Recognition Details)</i> . (Aeroplane, Vol. 66, No. 1,711, 10/3/44, p. 275.)
137	20959 Germany	... <i>The Junkers Ju. 86P High Altitude Reconnaissance Bomber (Photo)</i> . (Flight, Vol. 45, No. 1,838, 16/3/44, p. 282.)
138	21011 Germany	... <i>News of New German Aircraft Types (Me. 410. He. 219, Arado 240)</i> . (Aeroplane, Vol. 66, No. 1,712, 17/3/44, pp. 289-290.)

Military Types of Aircraft (Japan).

139	20027 Japan	... <i>Shoki Interceptor Fighter</i> . (Inter. Avia., Nos. 896-897, 30/11/43, pp. 11, 20.)
140	20115 Japan	... <i>New Japanese Types (S-01 Fighter, OB-01 Bomber, RT-00 Carrier Catapult)</i> . (Inter. Avia., No. 893, 8/11/43, pp. 11-12.)

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| 141 | 20669 | Japan ... <i>The Donryu—New Twin-Engined Japanese Bomber (Photo)</i> . (Flight, Vol. 45, No. 1,836, 2/3/44, p. 230.) |
| 142 | 20766 | Japan ... <i>New Japanese Operational Types (Shitei Reconnaissance, Shoki Interceptor, Donryu Bomber)</i> . (Inter. Avia., Nos. 886-887, 27/9/43, p. 15.) |
| Military Types of Aircraft (Italy). | | |
| 143 | 20024 | Italy ... <i>Macchi MC. 203 Fighter</i> . Inter. Avia., Nos. 896-897, 30/11/43, p. 20.) |
| 144 | 20025 | Italy ... <i>Reggiane Re. 2003 Fighter</i> . (Inter. Avia., Nos. 896-897, 30/11/43, p. 20.) |
| Military Types of Aircraft (Spain, France). | | |
| 145 | 20114 | Spain ... <i>Two-Seater Trainer M.1.</i> (Inter. Avia., No. 893, 8/11/43, p. 11.) |
| 146 | 20564 | France ... <i>Mureaux 190 C1 Single-Seater Fighter</i> . (Flugsport, Vol. 35, No. 14, 20/10/43, pp. 206-207.) |
| Gliders and Sailplanes. | | |
| 147 | 20166 | G.B. ... <i>U.S. Naval Transport Gliders (Bristol LRO-1 and Allied Aviation LRA-1)</i> . (Inter. Avia., Nos. 898-899, 11/12/43, p. 19.) |
| 148 | 20399 | U.S.A. ... <i>What Future Has the Glider?</i> (H. J. Maynard, Aero Digest, Vol. 43, No. 6, December, 1943, pp. 162-163, 271-272.) |
| 149 | 20442 | G.B. ... <i>Heinkel Glider Tug</i> . (Aeroplane, Vol. 66, No. 1,710, 3/3/44, p. 239.) |
| 150 | 20562 | G.B. ... <i>Airspeed "Horsa" Glider</i> . (Flugsport, Vol. 35, No. 14, 20/10/43, pp. 204-205.) |
| Fleet Air Arm. | | |
| 151 | 20028 | U.S.A. ... <i>New Aircraft Carriers for the U.S. Naval Air Service</i> . (Inter. Avia., Nos. 896-897, 30/11/43, p. 25.) |
| 152 | 20201 | U.S.A. ... <i>Goodyear M-1 Blimp Begins Test Flights</i> . (Aviation, Vol. 42, No. 12, Dec., 1943, p. 230.) |
| 153 | 20528 | U.S.A. ... <i>Navy Synthetic Training Devices (the Training of Mechanics)</i> . (Aviation Maintenance, Vol. 1, No. 2, Jan., 1944, pp. 56-58.) |
| 154 | 20539 | G.B. ... <i>The Future of the Aircraft Carrier</i> . (B. J. Hurren, Engineer, Vol. 177, No. 4,599, 3/3/44, pp. 174-175.) |
| 155 | 20796 | U.S.A. ... <i>Naval Aircraft in Combat</i> . (J. B. Goodman, U.S. Air Services, Vol. 29, No. 1, January, 1944, pp. 14-15.) |
| 156 | 20800 | U.S.A. ... <i>U.S. Navy's Newest and Largest Non-Rigid Airship (M-1) (Photo)</i> . (U.S. Air Services, Vol. 29, No. 1, January, 1944, p. 29.) |
| Maintenance. | | |
| 157 | 20156 | U.S.A. ... <i>Lockheed Maintenance Plants in G.B. (50 per cent. of all Aircraft Going on European Operations Require Repair on Return)</i> . (Inter. Avia., Nos. 898-899, 11/12/43, p. 17.) |

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158	20185 U.S.A.	... <i>Mobile Service Units of 8th Air Force Service Command Repair Damaged Aircraft in Britain.</i> (M. V. Cave, <i>Aviation</i> , Vol. 42, No. 12, Dec., 1943, pp. 124-127, 308.)
159	20186 U.S.A.	... <i>Maintenance and Repair of Navy's Blimps.</i> (R. E. Huse, <i>Aviation</i> , Vol. 42, No. 12, Dec., 1943, pp. 128-135, 321.)
160	20527 U.S.A.	... <i>R.A.F. Salvage Methods for Damaged Aeroplanes. II—Propellers, Gun Turrets, etc.</i> (G. E. C. Lywood, <i>Aviation Maintenance</i> , Vol. 1, No. 2, Jan., 1944, pp. 52-55.)
161	20532 U.S.A.	... <i>Field Maintenance—The Mobile Instrument Shop.</i> (<i>Aviation Maintenance</i> , Vol. 1, No. 2, Jan., 1944, pp. 66-67.)
162	20533 U.S.A.	... <i>Winterization (Operation of Aircraft Under Winter Conditions).</i> (H. C. Burghduff, <i>Aviation Maintenance</i> , Vol. 1, No. 2, Jan., 1944, pp. 68-69, 120-138.)
163	21082 U.S.A.	... <i>Makeshift Propeller Maintenance in Africa.</i> (<i>Aero Digest</i> , Vol. 43, No. 4, October, 1943, pp. 126, 237.)
164	21084 U.S.A.	... <i>Canada Keeps Them Flying (New Maintenance Plan—Concentration on One Aircraft at a Time).</i> (<i>Aero Digest</i> , Vol. 43, No. 4, October, 1943, pp. 142, 232.)

Anti-Aircraft.

165	18597 U.S.A.	... <i>37 mm. Trainer for Individual Tracer Control.</i> (R. M. Bleier, <i>Coast Artillery Journal</i> , Vol. 86, No. 3, May-June, 1943, pp. 24-27.)
166	18599 U.S.A.	... <i>Assignment of Targets in Quick Night Actions, etc. (Need for Proper Distribution of Fire).</i> <i>Coast Artillery Journal</i> , Vol. 86, No. 3, May-June, 1943, p. 32.)
167	18604 U.S.A.	... <i>Improvised Sea Coast Devices (Set Forward Scale Chart, Tide Chart, Muzzle Velocity Chart).</i> (W. Watts, <i>Coast Artillery Journal</i> , Vol. 86, No. 3, May-June, 1943, pp. 51-54.)
168	18605 U.S.A.	... <i>Exterior Ballistics and Differential Effects.</i> (K. C. Smith, <i>Coast Artillery Journal</i> , Vol. 86, No. 3, May-June, 1943, pp. 56-57.)
169	18606 U.S.A.	... <i>The Relationship of the Eye to A.A. Gunnery.</i> (E. E. Grossman, <i>Coast Artillery Journal</i> , Vol. 86, No. 3, May-June, 1943, pp. 58-59.)
170	18612 U.S.A.	... <i>The .50 Browning Machine Gun as a Sub-Calibre for the 40 mm. Automatic Gun.</i> (<i>Coast Artillery Journal</i> , Vol. 86, No. 4, July-August, 1943, pp. 20-23.)
171	18614 U.S.A.	... <i>Barrage Balloon Operations Board.</i> (J. S. Webb, <i>Coast Artillery Journal</i> , Vol. 86, No. 4, July-August, 1943, pp. 30-31.)
172	18613 U.S.A.	... <i>Stereoscopic Viewer.</i> (M. Morgan, <i>Coast Artillery Journal</i> , Vol. 86, No. 4, July-August, 1943, pp. 28-29.)

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173	18615 U.S.A.	... <i>Training Aids (Work of the Coast Artillery Replacement Training Centre)</i> . (S. Horowitz, Coast Artillery Journal, Vol. 86, No. 4, July-August, 1943, pp. 32-33.)
174	18617 U.S.A.	... <i>Individual Tracer Control</i> . (G. W. Race, Coast Artillery Journal, Vol. 86, No. 4, July-August, 1943, pp. 36-41.)
175	18619 U.S.A.	... <i>Practice Spotting Trainer</i> . (J. S. Piram, Coast Artillery Journal, Vol. 86, No. 4, July-August, 1943, pp. 44-45.)
176	18620 U.S.A.	... <i>Solving Trial Shot Problems</i> . (J. Parmakian, Coast Artillery Journal, Vol. 86, No. 4, July-August, 1943, pp. 46-48.)
177	18622 U.S.A.	... <i>Shadowgraph for Recognition Training</i> . (J. F. Carson, Coast Artillery Journal, Vol. 86, No. 4, July-August, 1943, pp. 50-51.)
178	18624 U.S.A.	... <i>A Method of Emergency Range Finding</i> . (G. E. Ellard, Coast Artillery Journal, Vol. 86, No. 4, July-August, 1943, pp. 54-55.)
179	18626 U.S.A.	... <i>High Speed Targets for Training</i> . (Coast Artillery Journal, Vol. 86, No. 4, July-August, 1943, p. 59.)
180	18627 U.S.A.	... <i>Model Plane Targets</i> . (Coast Artillery Journal, Vol. 86, No. 4, July-August, 1943, p. 64.)
181	20438 U.S.A.	... <i>New Mg. Anti-Aircraft Gun Director</i> . (Mechanical Engineering, Vol. 66, No. 2, February, 1944, p. 139.)
182	20615 U.S.A.	... <i>Structural Protection Against Incendiary Bombs</i> . (Journal of the Franklin Institute, Vol. 233, No. 4, April, 1942, pp. 381-382.)
183	20754 Germany	... <i>Distant Control for A.A. Artillery</i> . (H. Hopf, Z.V.D.I., Vol. 87, Nos. 49-50, 11/12/43, pp. 785-790.)
184	21039 U.S.A.	... <i>A.A. Artillery with the Infantry Division</i> . (R. W. Moore, Coast Artillery Journal, Vol. 86, No. 5, Sept.-Oct., 1943, pp. 23-25.)
185	21040 U.S.A.	... <i>Controlled Spotting—the Frazer Trainer</i> . (H. W. Wandersee and R. F. Wood, Coast Artillery Journal, Vol. 86, No. 5, Sept.-Oct., 1943, pp. 28-31.)
186	21041 U.S.A.	... <i>A.A. Guns and the Fire Direction Centre</i> . (B. D. Gill, Coast Artillery Journal, Vol. 86, No. 5, Sept.-Oct., 1943, p. 32.)
187	21042 U.S.A.	... <i>Anti-Motor Torpedo Boat Target</i> . (C. L. Beaudry, Coast Artillery Journal, Vol. 86, No. 5, Sept.-Oct., 1943, p. 33.)
188	21043 U.S.A.	... <i>German No. 5 mm. A.A. Gun (Photo)</i> . (Coast Artillery Journal, Vol. 86, No. 5, Sept.-Oct., 1943, p. 34.)
189	21044 U.S.A.	... <i>Combat Conditioning</i> . (V. Usera, Coast Artillery Journal, Vol. 86, No. 5, Sept.-Oct., 1943, pp. 36-38.)
190	21045 U.S.A.	... <i>Spotting by Sensing for Rapid Fire Batteries</i> . (F. G. Tandy, Coast Artillery Journal, Vol. 86, No. 5, Sept.-Oct., 1943, pp. 39-40.)

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| 191 | 21046 U.S.A. | ... <i>Determination and Use of Certain Statistical Averages in Sea Coast Artillery Fire Control.</i> (Coast Artillery Journal, Vol. 86, No. 5, Sept.-Oct., 1943, pp. 41-42.) |
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| 192 | 18621 U.S.A. | ... <i>Individual Protective Cover Against Effects of Vesicant Gases.</i> (Coast Artillery Journal, Vol. 86, No. 4, July-August, 1943, p. 49.) |
| 193 | 19499 G.B. ... | ... <i>The Removal of Mustard Gas from Fats.</i> (H. C. Lockwood, Chemistry and Industry, Vol. —, No. 6, 5/2/44, pp. 50-51.) |
| 194 | 19812 U.S.A. | ... <i>Activated Charcoal Produced from Sawdust for Use in Gas Mask Canisters.</i> (Army Ordnance, Vol. 26, No. 142, Jan.-Feb., 1944, p. 128.) |

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| 195 | 20035 U.S.A. | ... <i>Aspect Ratio Corrections.</i> (K. D. Wood, Journal of the Aeronautical Sciences, Vol. 10, No. 8, Oct., 1943, pp. 270-272.) |
| 196 | 20038 U.S.A. | ... <i>Characteristics of Airfoils in a Cylindric Axial-Flow Grid.</i> (J. R. Weske and F. E. Marble, Journal of the Aeronautical Sciences, Vol. 10, No. 8, Oct., 1943, pp. 289-294.) |
| 197 | 20041 U.S.A. | ... <i>Contraction Cone for a Wind Tunnel.</i> (B. Szczeniowski, Journal of the Aeronautical Sciences, Vol. 10, No. 8, Oct., 1943, pp. 311-312.) |
| 198 | 20042 U.S.A. | ... <i>A Multiple Recording Manometer (for Recording the Pressures Encountered in Wind Tunnel Testing.</i> (P. J. Campbell, Journal of the Aeronautical Sciences, Vol. 10, No. 8, Oct., 1943, pp. 313-317.) |
| 199 | 20066 U.S.S.R. | ... <i>On Atmospheric Turbulence (Abstract).</i> (A. M. Obukhov, Journal of Physics, U.S.S.R., Vol. 6, No. 5, 1942, pp. 228-229.) |
| 200 | 20067 U.S.S.R. | ... <i>On Shock Waves (Abstract).</i> (L. D. Landau, Journal of Physics, U.S.S.R., Vol. 6, No. 5, 1942, pp. 229-230.) |
| 201 | 20128 Germany | ... <i>The Aerodynamics of Model Aircraft in Free Flight.</i> (F. W. Schmitz, Abstract, Book published Volckmann Nachf, 1942.) |
| 202 | 20233 U.S.A. | ... <i>An Experimental Investigation of the Flow of Air in a Flat Broadening Channel.</i> (Report No. 137 of the Central Aero-Hydrodynamical Institute, Moscow, 1926.) (A. N. Vedernikoff, N.A.C.A. Tech. Memo. No. 1,059, Jan., 1944.) |
| 203 | 20388 G.B. ... | ... <i>Experimental Fluid Dynamics Applied to Engineering Practice.</i> (G. A. Hankins, Engineering, Vol. —, No. —, 25/2/44, pp. 158-160.) |
| 204 | 20549 G.B. ... | ... <i>Experimental Fluid Dynamics Applied to Engineering Practice—II.</i> (G. A. Hankins, Engineering, Vol. 156, No. 4,077, 3/3/44, pp. 177-180, 171-172.) |

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205	20619 U.S.A.	... <i>Variable Speed Drive for U.S. Army Air Corps Wind Tunnel at Wright Field (Abstract)</i> . (A. D. Dickey and others, <i>Journal of the Franklin Institute</i> , Vol. 233, No. 4, April, 1942, p. 482.)
206	20750 U.S.A.	... <i>Some Two-Dimensional Adiabatic Compressible Flow Patterns</i> . (H. Kraft and C. G. Dibble, <i>Preprints of the Institute of the Aeronautical Sciences</i> , 12th Annual Meeting, 25/1/44, pp. 1-26.)
207	20847 U.S.S.R.	... <i>A New Method for Calculating the Boundary Layer and Determining the Separation Point</i> . (L. E. Kalikhman, <i>Reports of the Academy of Sciences</i> , Vol. 38 (New Series), Nos. 5-6, 1943, pp. 180-185.)
208	20852 U.S.S.R.	... <i>The Solution of an Equation in the Boundary Layer Theory by the Method of Finite Differences</i> . (N. S. Piskunov, <i>Reports of the Academy of Sciences</i> , Vol. 37 (New Series), Nos. 5-6, 1942, pp. 157-159.)
209	20853 U.S.S.R.	... <i>On the Problem of Flow Separation in a Viscous Fluid</i> . (N. S. Piskunov, <i>Reports of the Academy of Sciences</i> , Vol. 37 (New Series), No. 2, 1942, pp. 43-45.)
210	20854 U.S.S.R.	... <i>An Approximate Method of Calculating the Laminar Boundary Layer</i> . (N. E. Kochin and L. G. Loytzensky, <i>Reports of the Academy of Sciences</i> , Vol. 36 (New Series), No. 9, 1942, pp. 262-266.)
211	20855 U.S.S.R.	... <i>Laminar Boundary Layer on a Body of Revolution</i> . (L. G. Loytzensky, <i>Reports of the Academy of Sciences</i> , Vol. 36 (New Series), No. 6, 1942, pp. 166-168.)
212	20858 U.S.S.R.	... <i>The Local Structure of Turbulence in Incompressible Viscous Fluid for Very Large Reynolds Numbers</i> . (A. Kolmogoroff, <i>Reports of the Academy of Sciences</i> , Vol. 30 (New Series), No. 4, 1941, pp. 301-305.)
213	20932 G.B.	... <i>Use of Radon (Radio Active Gas) to Trace the Flow Pattern of Gases in Furnaces</i> . (R. Mayereas and M. W. Thring, <i>Nature</i> , Vol. 152, No. 3,868, 18/12/43, pp. 723-724.)

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214	20065 U.S.S.R.	... <i>Equations of Turbulent Flow of an Incompressible Viscous Liquid (Abstract)</i> . (A. N. Kolmogorov, <i>Journal of Physics</i> , U.S.S.R., Vol. 6, No. 5, 1942, pp. 227-228.)
215	20232 U.S.A.	... <i>Profile Measurements During Cavitation</i> . (Reprint of Paper Presented at Congress on Hydro-mechanical Problems of Ship Propulsion at Hamburg, May 18-19, 1932.) (O. Walchner, N.A.C.A. Tech. Memo., No. 1,060, Jan., 1944, pp. 1-9.)

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216	20111	U.S.A. ... <i>Post-War Problems of the International Air Services (IV)</i> . (Inter. Avia., No. 893, 8/11/43, pp. 1-10.)
217	20127	Switzerland ... <i>Traffic Convention at Zurich (Post-War Problem of Rail, Road, Water and Air Transport)</i> . (Inter. Avia., No. 893, 8/11/43, pp. 26-27.)
218	20141	Canada ... <i>Airway Traffic Control in Canada</i> . (E. D. Boyd, Commercial Aviation, Vol. 5, No. 11, Nov., 1943, pp. 154-160, 164.)
219	20162	U.S.A. ... <i>Civil Aircraft Accidents in 1942</i> . (Inter. Avia., Nos. 898-899, 11/12/43, p. 30.)
220	20241	G.B. ... <i>Air Transport as a Career</i> . (Aeroplane, Vol. 66, No. 1,709, 25/2/44, pp. 218-219.)
221	20242	G.B. ... <i>The Future of Air Transport in Europe (II)</i> . (G. Perier, Aeroplane, Vol. 66, No. 1,709, 25/2/44, p. 220.)
222	20248	U.S.A. ... <i>Aeroplanes for Peace (Future of Air Transport, Glider Pick-up, etc.)</i> . (G. Loening, Atlantic Monthly, Vol. 172, No. 5, Nov., 1943, pp. 41-45.)
223	20270	U.S.A. ... <i>Requirements of Local Air Transport Service</i> . (Edward Warner, Paper Presented at the Air Transport Meeting of the Institute of Aeronautical Sciences, 26/10/43, pp. 1-42.)
224	20365	U.S.A. ... <i>Post-War Cargo Handling (Review of Handling Equipment and Practices)</i> . (G. Herrick, Air Transport, Vol. 1, No. 2, Oct., 1943, pp. 22-27.)
225	20366	U.S.A. ... <i>Civil Air Regulations for Transport Category Aircraft</i> . (W. C. Mentzer, Air Transport, Vol. 1, No. 2, Oct., 1943, pp. 28-31.)
226	20370	U.S.A. ... <i>Post-War Airways. II—Use of Ultra High Frequencies in Post-War Aviation</i> . (A. Scott, Air Transport, Vol. 1, No. 2, Oct., 1943, pp. 53-55.)
227	20444	G.B. ... <i>Australia's Airlines</i> . (Aeroplane, Vol. 66, No. 1,710 3/3/44, p. 241.)
228	20445	G.B. ... <i>The Future Importance of Air Tramp Traffic</i> . (T. Olsen, Aeroplane, Vol. 66, No. 1,710, 3/3/44, p. 242.)
229	20453	G.B. ... <i>World Plans for World Aviation</i> . (W. Southcote, Aeronautics, Vol. 10, No. 1, Feb., 1944, pp. 50-51.)
230	20668	G.B. ... <i>Safety in the Air (Thoughts on Post-War Air Transport)</i> . (H. R. L. Smith, Flight, Vol. 45, No. 1,836, 2/3/44, pp. 227-229.)
231	20707	Sweden ... <i>Swedish North Atlantic Service Projects</i> . (Inter. Avia., Nos. 901-902, 10/1/44, pp. 31-33.)
232	20708	G.B. ... <i>Air Line Developments in G.B.</i> (Inter. Avia., Nos. 901-902, 10/1/44, pp. 34-35.)
233	20981	U.S.A. ... <i>Air Trailers—Post-War Freighters of the Skyways</i> . (R. Parkinson, U.S. Air Services, Vol. 28, No. 10, October, 1943, pp. 18/22.)
234	21002	G.B. ... <i>Air Mail</i> . (Aeroplane, Vol. 66, No. 1,712, 17/3/44, pp. 295-296.)

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235	19930 G.B. <i>An Air Freighter of the Future (Percival Aircraft Project)</i> . (The Aeroplane, Vol. 66, No. 1,708, 18/2/44, pp. 188-191.)
236	20120 U.S.A. ...	... <i>Martin Cargo Aircraft Projects (86,000 lb. Gross)</i> . (Inter. Avia., No. 893, 8/11/43, pp. 1, 15.)
237	20161 U.S.A. ...	... <i>Waco C-62 Cargo Transport</i> . (Inter. Avia., Nos. 898-899, 11/12/43, pp. 18-19.)
238	20165 U.S.A. ...	... <i>Hughes-Kaiser Grant Flying Boat</i> . (Inter. Avia., Nos. 898-899, 11/12/43, pp. 1, 19.)
239	20222 Germany ...	... <i>Siebel Si. 204 Four-Engines Civil Aircraft</i> . (Flight, Vol. 45, No. 1,835, 24/2/44, p. 206.)
240	20404 G.B. ...	... <i>British Design Post-War Airliner (Miles X)</i> . (Aero Digest, Vol. 43, No. 6, December, 1943, pp. 180-182.)
241	20561 Germany ...	... <i>Single-Seater Gotha GÖ. 179 Civil Aircraft</i> . (Flugsport, Vol. 35, No. 14, 20/10/43, pp. 202-204.)
242	20682 G.B. ...	... <i>Avro York Transport (Photograph)</i> . (Inter. Avia., No. 900, 24/12/43, p. 1.)
243	20689 Germany ...	... <i>Heinkel 274 Transport Built in France</i> . (Inter. Avia., Nos. 901-902, 10/1/44, p. 22.)
244	20697 France ...	... <i>Pressure Cabin Aircraft, Type 3,020</i> . (Inter. Avia., Nos. 901-902, 10/1/44, p. 24.)
245	20699 France ...	... <i>Commercial Transport Planes Designed by S.N.C.A. (45 Tons)</i> . (Inter. Avia., Nos. 901-902, 10/1/44, p. 24.)
246	20700 France ...	... <i>Amiot Designs for Commercial Transport (70 Tons)</i> . (Inter. Avia., Nos. 901-902, 10/1/44, p. 25.)
247	20701 France ...	... <i>Breguet 1,011, 760, 840 and 500—Commercial Transport Designs (20-70 Tons)</i> . (Inter. Avia., Nos. 901-902, 10/1/44, pp. 25-26.)
248	20938 Germany <i>Fokker F-24 Civil Aircraft</i> . (Der Deutsche Sportflieger, Vol. 10, No. 11, Nov., 1943, p. 184.)
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249	18535 U.S.A. <i>The Post-War Private Aeroplane</i> . (W. B. Hall, S.A.E. Preprints, 10-14/1/44, pp. 1-6.)
250	20036 U.S.A. ...	... <i>Effects of Yielding and Perforations on a Wing Tension Surface</i> . (R. K. Koegler and A. Schmitt, Journal of the Aeronautical Sciences, Vol. 10, No 8, Oct, 1943, pp. 273-284, 321.)
251	20039 U.S.A. ...	... <i>Tension Joints in Aircraft Structures (Riveted Joint Analysis: Effect of Holes on the Strength of Tension Members, etc.)</i> . (C. H. Holleman, Journal of the Aeronautical Sciences, Vol. 10, No. 8, Oct., 1943, pp. 295-302, 310.)
252	20044 U.S.A. ...	... <i>The Influence of Sweep on the Spanwise Lift Distribution of Wings (Correspondence)</i> . (A. Gail, Journal of the Aeronautical Sciences, Vol. 10, No. 8, Oct., 1943, pp. 320-321.)
253	20149 Canada <i>Comparison of Structural Details of Leading German Aircraft (Part II)</i> . (Commercial Aviation, Vol. 5, No. 11, Nov., 1943, pp. 90-100.)

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254	20315 Spain	... <i>Transport Aircraft (Continuation and Conclusion)</i> . (Revista de Aeronautica, Vol. 75, No. 23, Oct., 1942, pp. 239-242.)
255	20326 Spain	... <i>Steel Aircraft Girders</i> . (Anon, Revista de Aeronautica, Vol. 75, No. 23, Oct., 1942, pp. 298-299.)
256	20339 Spain	... <i>Modern Problems of Aircraft Design</i> . (L. De Azcárraga, Revista de Aeronautica, Vol. 74, No. 22, Sept., 1942, pp. 197-206.)
257	20340 Spain	... <i>Economy in the Use of Special Steel in Aeronautical Construction</i> . (T. Mayano, Revista de Aeronautica, Vol. 73, No. 21, August, 1943, pp. 121-130.)
258	20396 U.S.A.	... <i>Continental Aircraft Design Scholarship Awards (Models of the "Venturer" Prize-Winning Aircraft Design and "Adastra")</i> . (Aero Digest, Vol. 43, No. 6, December, 1943, pp. 122-123, 274-278.)
259	20409 U.S.A.	... <i>Cargo Plane Design Considerations</i> . (C. Wood, Aero Digest, Vol. 43, No. 6, December, 1943, pp. 203-211, 280-282.)
260	20454 G.B. ...	... <i>Protective Processes for Aircraft Metals (Anodic Treatment, Cadmium Plating, Zinc Plating, etc.)</i> . (W. J. Roberts, Aeronautics, Vol. 10, No. 1, Feb., 1944, pp. 54-56.)
261	20457 G.B. ...	... <i>Folding Wing Development</i> . (Aeronautics, Vol. 10, No. 1, Feb., 1944, p. 59.)
262	20605 U.S.A.	... <i>Aeroplane Wings of Magnesium</i> . (V. H. Pavlecka and J. K. Northrop, Metal Progress, Vol. 45, No. 1, January, 1944, pp. 128-132.)
263	20729 U.S.A.	... <i>Recent Progress in Stabilised Base Construction</i> . (A. H. D. Markwick, Reprint from Highways, Bridges and Aerodromes, Vol. —, 17/11/43, p. 4.)
264	20740 U.S.A.	... <i>Iridium in Aviation</i> . (W. S. Murray, Preprints of the Institute of the Aeronautical Sciences, 25/1/44, pp. 1-7.)
265	20742 U.S.A.	... <i>New Wrought Aluminium Alloys for Aircraft and New Temper Modifications of Present Alloys</i> . (D. A. Lawless, Preprints of the Institute of the Aeronautical Sciences, 25/1/44, pp. 1-11.)
266	20743 U.S.A.	... <i>Preliminary Structural Analysis and Weight Investigation of Wings</i> . (F. N. Platt, Preprints of the Institute of the Aeronautical Sciences, 25/1/44, pp. 1-47.)
267	20745 U.S.A.	... <i>Resin Adhesives for Aircraft</i> . (T. D. Perry and H. Grinsfelder, Preprints of the Institute of the Aeronautical Sciences, 12th Annual Meeting, 25/1/44, pp. 1-24.)
268	20746 U.S.A.	... <i>The Trend of Wood Use in Aircraft</i> . (R. W. Hess, Preprints of the Institute of the Aeronautical Sciences, 12th Annual Meeting, 25/1/44, pp. 1-12.)
269	20758 Germany	... <i>Development of Large Aircraft in Germany</i> . (Z.V.D.I., Vol. 87, 11/12/43, pp. 792-793.)

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270	20785 G.B. ...	<i>Disposition of Spring Sections.</i> (C. R. Uden, <i>Mechanical World</i> , Vol. 115, No. 2,982, 25/2/44, pp. 226-227.)
271	20834 G.B. ...	<i>List of References on Integral Fuel Tanks</i> (Jan., 1944). (R.T.P.3 Bibliography No. 94.)
272	20935 Germany ...	<i>The Problems of the Engineer Pilot in the Preliminary Design and Final Test Stage of the Aircraft.</i> (H. Quenzler, <i>Der Deutsche Sportflieger</i> , Vol. 10, No. 11, Nov., 1943, p. 177.)

Windshields, Landing Gear, Fuel Tanks, Controls.

273	20002 U.S.A. ...	<i>Goodrich Self-Starting Tyre (Starts Spinning Before Plane Lands) (Photo).</i> (<i>American Aviation</i> , Vol. 7, No. 16, 15/1/44, p. 86.)
274	20190 U.S.A. ...	<i>Continental Air Lines Improves Cowl Flaps.</i> (<i>Aviation</i> , Vol. 42, No. 12, Dec., 1943, p. 147.)
275	20212 U.S.A. ...	<i>Synthetic Rubber Used to Seal Petrol Tanks.</i> (<i>Aviation News</i> , Dec., 1943, p. 15.)
276	20243 G.B. ...	<i>Undercarriage Development (Levered Suspension Shock Absorber).</i> (<i>Aeroplane</i> , Vol. 66, No. 1,709, 25/2/44, p. 221.)
277	20566 Germany ...	<i>Locknuts—Example of Principal Types.</i> (<i>Flugsport</i> , Vol. 35, No. 14, 20/10/43, pp. 207-208.)
278	20733 U.S.A. ...	<i>Aircraft Remote Controls and Automatic Controls.</i> (R. M. Mock, Preprints of the Institute of the Aeronautical Sciences, 25/1/44, pp. 1-11.)
279	20739 U.S.A. ...	<i>Impact Resistant Windshield Construction.</i> (G. L. Pigman, Preprints of the Institute of the Aeronautical Sciences, 25/1/44, pp. 1-18.)
280	20963 G.B. ...	<i>Making One Runway Do (the Maclaren Drift Undercarriage).</i> (<i>Flight</i> , Vol. 45, No. 1,838, 16/3/44, pp. 291-292.)

Patents (General).

281	18653 Germany ...	<i>Automatic Stabilisation of Air and Marine Craft by Means of Free Main and Linked Servo Rudder.</i> (740,217.) (E.C.A., <i>Flugsport</i> , Vol. 35, No. 16, 15/12/43, p. 73.)
282	18654 Germany ...	<i>Automatic Course Setting with Constant Rudder Efficiency Over a Wide Speed Range.</i> (739,611.) (Siemens, <i>Flugsport</i> , Vol. 35, No. 16, 15/12/43, p. 74.)
283	18655 Germany ...	<i>Automatic Course Setting, Restoring Force being Proportional to Pressure on Rudder.</i> (739,467.) (Siemens, <i>Flugsport</i> , Vol. 35, No. 16, 15/12/43, p. 74.)
284	18656 Germany ...	<i>Coupling for Disconnecting Connecting Servo Motor from Hand-Operated Controls.</i> (738,468.) (Askains, <i>Flugsport</i> , Vol. 35, No. 16, 15/12/43, p. 75.)
285	18637 Germany ...	<i>Chain or Belt Convertor for Changing Rotary into Translatory Motion (Control Rod Operation).</i> (739,162.) (Siemens, <i>Flugsport</i> , Vol. 35, No. 16, 15/12/43, p. 75.)

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286	18658 Germany	... <i>Compensating Device for Controlling Slack Due to Thermal Expansion in Control Cables.</i> (740,160.) (Heinkel, Flugsport, Vol. 35, No. 16, 15/12/43, pp. 75-76.)
287	19872 Germany	... <i>Suspension Inside Fuselage for Jettisonable Loads.</i> (739,163.) (Junkers, Flugsport, Vol. 36 No. 1, 19/1/44, p. 85.)
288	19873 Germany	... <i>Adjustable Flexible Steel Strip for the Suspension of Horizontally Suspended Jettisonable Loads.</i> (740,161.) (Neubrandenburg, Flugsport, Vol. 36, No. 1, 19/1/44, p. 86.)
289	19875 Germany	... <i>High Pressure Electric Vapour Lamp for Illuminating Landing Fields with Spectrum Adjustment to Allow for Nature of Ground.</i> (738,684.) (A.E.G., Flugsport, Vol. 36, No. 1, 19/1/44, p. 87.)
290	19876 Germany	... <i>Smoke or Fog Generator (Signalling or Ground Wind Indicator).</i> (737,140.) (Svenska Gasaccumulator A.B., Flugsport, Vol. 36, No. 1, 19/1/44, p. 87.)
291	19877 Germany	... <i>Distant Controlled Mechanical Wind Direction Indicator.</i> (732,539.) Siemens, Flugsport, Vol. 36, No. 1, 19/1/44, p. 87.)
292	19893 Germany	... <i>Jettisoning Fuel Through Wing Flap.</i> (739,931.) (Junkers, Flugsport, Vol. 36, No. 1, 19/1/44, p. 84.)
293	19911 Germany	... <i>Retractable Aircraft Searchlight.</i> (733,385.) (Zeirs, Flugsport, Vol. 35, No. 15, 17/11/43, p. 72.)
294	19912 Germany	... <i>Smoke Generator for Ground Wind Direction Indicator.</i> (734,609, 734,809.) (Abreus, Flugsport, Vol. 35, No. 15, 17/11/43, p. 72.)
295	20456 G.B.	... <i>Balance Machine for Determining the C.G. of a Loaded Aircraft (Patent).</i> (Aeronautics, Vol. 10, No. 1, Feb., 1944, pp. 58-59.)
296	20570 Germany	... <i>Combined Epicyclic Reduction Gear and Auxiliary Drive Mechanism.</i> (735,301.) (Auto Union, Flugsport, Vol. 35, No. 14, 20/10/43, p. 60.)
297	20574 Germany	... <i>Collecting Condensed Water from Wing Surface Condensers.</i> (736,722.) (Heinkel, Flugsport, Vol. 35, No. 14, 20/10/43, pp. 61-62.)
298	20575 Germany	... <i>Combined Spinner and Cooling Cowl.</i> (738,081.) (V.D.M., Flugsport, Vol. 35, No. 14, 20/10/43, pp. 57-58.)
299	20576 Germany	... <i>Cabin Air Heater (Exhaust Operated).</i> (734,304.) (Junkers, Flugsport, Vol. 35, No. 14, 20/10/43, p. 62.)
300	20579 Germany	... <i>Engine Cowling Fastener.</i> (736,012.) (Blohm and Voss, Flugsport, Vol. 35, No. 14, 20/10/43, p. 59.)
301	20580 Germany	... <i>Quick Release for Jettisoning Aircraft Power Plants.</i> (735,508.) (Arado, Flugsport, Vol. 35, No. 14, 20/10/43, p. 59.)
302	20581 Germany	... <i>Boundary Layer Control by Suction.</i> (736,114.) (Junkers, Flugsport, Vol. 35, No. 14, 20/10/43, p. 62.)

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303	20582	Germany ... <i>Method of Ventilating and Heating Pressure Cabins (Energy Content of Air Leaving Cabin Under Pressure Utilised to Provide Part of Compression Work of Fresh Air).</i> (737,644.) (D.V.L., Flugsport, Vol. 35, No. 14, 20/10/43, pp. 59-60.)
304	20964	G.B. ... <i>Bristol Exhaust-Actuated Boundary Layer Control.</i> (Flight, Vol. 45, No. 1,838, 16/3/44, p. 292.)

General Equipment.

305	20323	Spain ... <i>Aircraft Fire Extinguishers.</i> (L. P. Pezer, Revista de Aeronautica, Vol. 75, No. 23, Oct., 1942, pp. 287-291.)
306	20328	Spain ... <i>Fire Extinction by Foam.</i> (J. Cachofund F. Arias, Revista de Aeronautica, Vol. 77, No. 25, Dec., 1942, pp. 421-424.)
307	20747	U.S.A. ... <i>Development of Stall Warning Indicators.</i> (J. George, Preprints of the Institutè of the Aeronautical Sciences, 12th Annual Meeting, 25/1/44, pp. 1-13.)
308	21060	G.B. ... <i>Aircraft Electrical Equipment.</i> (Electrical Times, Vol. 105, No. 2,733, 9/3/44, pp. 276-279.)
309	21070	Canada ... <i>Fire Fighting Equipment for Aircraft Fires.</i> (Canadian Aviation, Vol. 17, No. 1, January, 1944, pp. 56-57, 97.)
310	21072	Canada ... <i>Rotol Auxiliary Generating Plant.</i> (Canadian Aviation, Vol. 17, No. 1, January, 1944, pp. 80-82.)
311	21073	Canada ... <i>The Avia Electric Aircraft Heater.</i> (Canadian Aviation, Vol. 17, No. 1, January, 1944, p. 88.)

Seaplanes and Flying Boats.

312	20214	G.B. ... <i>The Flying Boat.</i> (G. A. H. Pollitt, Flight, Vol. 45, No. 1,835, 24/2/44, pp. 196-198.)
313	20235	U.S.A. ... <i>Determination of the Stresses Produced by the Landing Impact in the Bulkheads of a Seaplane Bottom.</i> (Report No. 449 of the Central Aero-Hydrodynamical Institute, Moscow, 1939.) (V. M. Darevsky, N.A.C.A. Tech. Memo., No. 1,055, Jan., 1944, pp. 1-23.)
314	20698	France ... <i>Flight Tests of Latécoère 631 (Giant Flying Boat).</i> (Inter. Avia., Nos. 901-902, 10/1/44, p. 24.)
315	20735	U.S.A. ... <i>Directional Stability of Flying Boat Hulls During Taxiing.</i> (J. D. Pierson, Preprints of the Institute of the Aeronautical Sciences, 25/1/44, pp. 1-13.)

Helicopters and Autogyros.

316	20100	U.S.A. ... <i>Helicopter and Gyroplane Developments in the U.S.A.</i> (Inter. Avia., Nos. 894-895, 18/11/43, pp. 18-19.)
317	20106	G.B. ... <i>Helicopter Developments in Great Britain.</i> (Inter. Avia., Nos. 894-895, 18/11/43, p. 15.)
318	20140	Canada ... <i>Structural Differences—Autogyro and Helicopter.</i> (Commercial Aviation, Vol. 5, No. 11, Nov., 1943, p. 140.)

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| 319 | 20183 U.S.A. | ... <i>What is the Helicopter's True Commercial Future?</i> (H. E. Larsen and J. S. Pecker, <i>Aviation</i> , Vol. 42, No. 12, Dec., 1943, pp. 116-117, 328-335.) |
| 320 | 20209 U.S.A. | ... <i>Higgins Helicopters (Designs for 14-Passenger Air-liners)</i> . (<i>Aviation News</i> , Dec., 1943, pp. 9-10.) |
| 321 | 20563 U.S.A. | ... <i>Sikorsky Helicopter V.S. 300</i> . (<i>Flugsport</i> , Vol. 35, No. 14, 20/10/43, pp. 205-206.) |
| 322 | 20798 U.S.A. | ... <i>The Helicopter and Autogyro</i> . (U.S. Air Services, Vol. 29, No. 1, January, 1944, p. 26.) |
| 323 | 20921 G.B. ... | ... <i>A Jet Propelled Helicopter</i> . (<i>Aeroplane</i> , Vol. 66, No. 1,711, 10/3/44, p. 279.) |
| Propellers. | | |
| 324 | 20338 Spain | ... <i>The Contra-Rotating Airscrew in Substratosphere Flight</i> . (Anon, <i>Revista de Aeronautica</i> , Vol. 71, No. 19, June, 1942, pp. 437-438.) |
| 325 | 20571 Germany | ... <i>Propeller Hub-Crankshaft Coupling</i> . (734,891.) (Rupp, <i>Flugsport</i> , Vol. 35, No. 14, 20/10/43, p. 57.) |
| 326 | 20572 Germany | ... <i>Propeller Blade Root Support (Self-Adjusting)</i> . (735,883.) (Argus, <i>Flugsport</i> , Vol. 35, No. 14, 20/10/43, p. 57.) |
| 327 | 20573 Germany | ... <i>Spinner for V.P. Airscrews</i> . (734,008.) (Messerschmitt, <i>Flugsport</i> , Vol. 35, No. 14, 20/10/43, p. 57.) |
| 328 | 20577 Germany | ... <i>Variable Pitch Mechanism Operated by Thermal Expansion of Control Member (Electrically Heated)</i> . (734,871.) (A.E.G., <i>Flugsport</i> , Vol. 35, No. 14, 20/10/43, p. 58.) |
| 329 | 20578 Germany | ... <i>Hydraulically Operated V.P. Airscrew</i> . (734,941.) (Escher Wyss, <i>Flugsport</i> , Vol. 35, No. 14, 20/10/43, p. 58.) |
| 330 | 20651 U.S.A. | ... <i>Airscrew Having a Variable Pitch</i> . (Patent Specification 2,138,339.) (Lucien Edouard Chauviere.) |
| 331 | 20731 U.S.A. | ... <i>Aerodynamic Instability in Unbalanced Lifting Rotor Blades</i> . (R. M. Rosenberg, Preprints of the Institute of the Aeronautical Sciences, 12th Annual Meeting, 25/1/44, pp. 1-38.) |
| 332 | 20744 U.S.A. | ... <i>Propeller Design Requirements</i> . (H. M. McCoy, Preprints of the Institute of the Aeronautical Sciences, 12th Annual Meeting, 25/1/44, pp. 1-26.) |
| 333 | 21093 U.S.A. | ... <i>Propeller Coefficients</i> . (M. M. Munk, <i>Aero Digest</i> , Vol. 43, No. 4, October, 1943, pp. 196-202.) |
| 334 | 29943 U.S.A. | ... <i>A Tabular Method of Propeller Blade Stress Analysis (Correspondence)</i> . (Various Authors, <i>Journal of the Aeronautical Sciences</i> , Vol. 10, No. 8, Oct., 1943, pp. 317-320.) |
| Performance, Stability, Take-off. | | |
| 335 | 20031 U.S.A. | ... <i>Experimental Investigations in Aircraft Dynamics (Experimental Vibration Studies)</i> . (W. B. Bergen, <i>Journal of the Aeronautical Sciences</i> , Vol. 10, No. 8, Oct., 1943, pp. 233-249.) |

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| 336 | 20050 U.S.A. | ... <i>Rudder Control and the Manœuvrability of Ships.</i> (R. A. Collacott, Journal of the American Society of Naval Engineers, Vol. 55, No. 4, November, 1943, pp. 704-714.) |
| 337 | 20083 G.B. ... | ... <i>Vibrations in Aircraft.</i> (R. G. Manley, Aircraft Engineering, Vol. 16, No. 180, Feb., 1944, pp. 38-40, 49.) |
| 338 | 20176 U.S.A. | ... <i>The Elements of Field Weight and Balance Control.</i> (J. Syers, S.A.W.E. Preprints, Paper No. 19.) |
| 339 | 20177 U.S.A. | ... <i>The Effect of Overload and Unbalance on Long Range Operation.</i> (J. B. Childers, S.A.W.E. Preprints, Paper No. 25.) |
| 340 | 20199 U.S.A. | ... <i>Cruise Control for Flying Efficiency. Part V—Time and Fuel Requirements.</i> (D. Speas and others, Aviation, Vol. 42, No. 12, Dec., 1943, pp. 215-217, 324-328.) |
| 341 | 20416 U.S.A. | ... <i>Measuring the Take-off:</i> (M. M. Munk, Aero Digest, Vol. 43, No. 6, December, 1943, pp. 242, 266-268.) |
| 342 | 20730 U.S.A. | ... <i>A Direct Method of Calculating the Maximum Rate of Climb, Top Speed and Other Useful Performance Characteristics of a Helicopter in Powered Flight.</i> (W. Castles, Preprints of the Institute of the Aeronautical Sciences, 25/1/44, pp. 1-21.) |
| 343 | 20734 U.S.A. | ... <i>The Correlation of Aircraft Take-off and Landing Characteristics with Airport Size.</i> (A. L. Morse, Preprints of the Institute of the Aeronautical Sciences, 25/1/44, pp. 1-13.) |

Testing and Calculations.

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| 344 | 19172 G.B. ... | ... <i>The Polish Stratosphere Balloon.</i> (S. Mazurek, Aeronautics, Vol. 9, No. 3, October, 1943, pp. 39-41.) |
| 345 | 20193 U.S.A. | ... <i>Flight Testing with a Thrust Meter.</i> (G. L. Brady, Aviation, Vol. 42, No. 12, Dec., 1943, pp. 179-183, 303.) |
| 346 | 20211 U.S.A. | ... <i>Wright Field's New All-Weather Chamber for Testing Army Equipment for Use in Any Climate.</i> (Aviation News, Dec., 1943, p. 13.) |
| 347 | 20336 Spain | ... <i>Different Methods of Determining Rising Air Currents.</i> (F. Mararambros, Revista de Aeronautica, Vol. 71, No. 19, June, 1942, pp. 427-433.) |
| 348 | 20363 U.S.A. | ... <i>C.A.A. Develops Devices for Testing Pilots' Aptitude.</i> (Civil Aeronautics Journal, Vol. 5, No. 1, 15/1/44, p. 7.) |
| 349 | 20741 U.S.A. | ... <i>The Influence of Structural Deformation on Aeroplane Characteristics.</i> (A. H. Flax, Preprints of the Institute of the Aeronautical Sciences, 25/1/44, pp. 1-30.) |

De-icing.

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| 350 | 20015 U.S.A. | ... <i>Exhaust Heat Wing De-icing Adopted by the U.S.A.</i> (Inter. Avia., Nos. 896-897, 30/11/43, p. 14.) |
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351	20169	Switzerland ... <i>New De-icing Developments.</i> (Inter. Avia., Nos. 898-899, 11/12/43, p. 20.)
352	20329	Spain ... <i>Icing of Aircraft.</i> (J. B. L. Cayetano, Revista de Aeronautica, Vol. 77, No. 25, Dec., 1942, pp. 442-449.)
353	20337	Spain ... <i>Experimental Contribution of the Problem of Air-screw De-icing.</i> (Anon, Revista de Aeronautica, Vol. 71, No. 19, June, 1942, pp. 435-437.)
354	20459	G.B. ... <i>De-icing Variable Control.</i> (Aeronautics, Vol. 10, No. 1, Feb., 1944, p. 71.)
355	20983	U.S.A. ... <i>New Device Keeps Ice from Propellers (Use of Conductive Rubber-Uskon).</i> (U.S. Air Services, Vol. 28, No. 10, October, 1943, p. 46.)

Maintenance and Salvage.

356	19396	U.S.A. ... <i>Aircraft Repair and Maintenance (Organisation of Aircraft Repair, Ltd., of Edmonton).</i> (G. McCallum, Commercial Aviation, Vol. 5, No. 10, October, 1943, pp. 71-76.)
357	19505	U.S.A. ... <i>American Airlines Propeller Overhaul Shop.</i> (E. E. Thorp, Aviation, Vol. 42, No. 11, November, 1944, pp. 205-208, 290-291.)
358	19592	U.S.A. ... <i>Cracking of Wooden Wing Spars in Aeroplanes Operated in Arid Regions (C.A.A. Regulations).</i> (Civil Aeronautics Journal, Vol. 4, No. 12, 15/12/43, p. 166.)
359	19635	U.S.A. ... <i>Air Service Command Salvages Aircraft (Methods of Picking Up Wrecked Aircraft).</i> (Aviation Maintenance, Vol. 1, No. 1, December, 1943, pp. 67-72.)
360	20187	U.S.A. ... <i>Engineering Aspects of Airline Maintenance (American Airlines Practice).</i> (D. North, Aviation, Vol. 42, No. 12, Dec., 1943, pp. 136-137, 344.)
361	20188	U.S.A. ... <i>Navy Ingenuity in Propeller Maintenance.</i> (Aviation, Vol. 42, No. 12, Dec., 1943, pp. 142-143.)
362	20191	U.S.A. ... <i>Watch Your Tyres! (Methods of Tyre Inspection and Maintenance).</i> (Aviation, Vol. 42, No. 12, Dec., 1943, pp. 156-158.)
363	20401	U.S.A. ... <i>Switchgear Maintenance.</i> (P. R. Pierson, Aero Digest, Vol. 43, No. 6, December, 1943, pp. 170, 268-271.)
364	20522	U.S.A. ... <i>American Airlines Maintenance.</i> (Aviation Maintenance, Vol. 1, No. 2, Jan., 1944, pp. 25-34.)
365	20523	U.S.A. ... <i>De-icer Care and Maintenance.</i> (Aviation Maintenance, Vol. 1, No. 2, Jan., 1944, pp. 35-38, 116-120.)
366	20525	U.S.A. ... <i>C.A.A. Inspects for Safety.</i> (A. F. Notley, Aviation Maintenance, Vol. 1, No. 2, Jan., 1944, pp. 48-49, 142-146.)
367	20529	U.S.A. ... <i>Magnetic Inspection.</i> (Aviation Maintenance, Vol. 1, No. 2, Jan., 1944, pp. 60, 108-110.)
368	20530	U.S.A. ... <i>Maintenance of Aircraft Control Cords and Cables.</i> (A. J. Morgan, Aviation Maintenance, Vol. 1, No. 2, Jan., 1944, pp. 61-63.)

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369	20531 U.S.A.	... <i>Snow and Ice on Airport Pavements.</i> (Aviation Maintenance, Vol. 1, No. 2, Jan., 1944, pp. 64-65, 140-142.)
370	20535 U.S.A.	... <i>Facts About Taps (Prevention of Tapping Speeds and Lubricants).</i> (Aviation Maintenance, Vol. 1, No. 2, Jan., 1944, pp. 72-73.)
371	20536 U.S.A.	... <i>Care of Tyres and Tubes (Charts, etc.).</i> (Aviation Maintenance, Vol. 1, No. 2, Jan., 1944, pp. 74-86.)

Airfields and Seadromes.

372	20001 U.S.A.	... <i>Unique Seadrome Markers to Aid Night Flight Operations (Photo).</i> (American Aviation, Vol. 7, No. 16, 15/1/44, p. 80.)
373	20026 Switzerland	... <i>Swiss Aerodrome Projects.</i> (Inter. Avia., Nos. 896-897, 30/11/43, p. 30.)
374	20126 U.S.A.	... <i>Idlewild Airport—New York.</i> (Inter. Avia., No. 893, 8/11/43, pp. 1, 24.)
375	20271 U.S.A.	... <i>Airport Design Information (8/5/41).</i> (C.A.A. Publications of the Department of Commerce, pp. 1-61.)
376	20272 U.S.A.	... <i>Installation of Airport Rotating Beacon.</i> (C.A.A. Airport Division Specification No. L-101, 1/11/43.) (C.A.A. Publications of the Department of Commerce, pp. 1-5.)
377	20273 U.S.A.	... <i>Installation of Airport Code Beacon (Airport Identification Beacon).</i> (C.A.A. Airport Division Specification No. L-102, 1/11/43.) (C.A.A. Publications of the Department of Commerce, pp. 1-4.)
378	20274 U.S.A.	... <i>Installation of Airport Beacon Towers.</i> (C.A.A. Airport Division Specification No. L-103, 1/11/43.) (C.A.A. Publications of the Department of Commerce, pp. 1-8.)
379	20275 U.S.A.	... <i>Installation of Contact Lights and Other Flush Marker Lights.</i> (C.A.A. Airport Division Specification No. L-104, 1/11/43.) (C.A.A. Publications of the Department of Commerce, pp. 1-7.)
380	20276 U.S.A.	... <i>Installation of Cone Mounted Lights.</i> (C.A.A. Airport Division Specification No. L-105, 1/11/43.) (C.A.A. Publications of the Department of Commerce, pp. 1-5.)
381	20277 U.S.A.	... <i>Airport Lighting.</i> (Civil Aeronautics Bulletin No. 10, 1/3/44.) (C.A.A. Publications of the Department of Commerce, pp. 1-39.)
382	20278 U.S.A.	... <i>Installation of Obstruction Lights.</i> (C.A.A. Airport Division Specification No. L-106, 1/11/43.) (C.A.A. Publications of the Department of Commerce, pp. 1-4.)
383	20279 U.S.A.	... <i>Installation of Illuminated Wind Cone.</i> (C.A.A. Airport Division Specification No. L-107, 1/11/43.) (C.A.A. Publications of the Department of Commerce, pp. 1-4.)

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384	20280 U.S.A.	... <i>Installation of Underground Cable.</i> (C.A.A. Airport Division Specification No. L-108, 1/11/43.) (C.A.A. Publications of the Department of Commerce, pp. 1-8.)
385	20281 U.S.A.	... <i>Installation of Transformer Vault.</i> (C.A.A. Airport Division Specification No. L-109, 1/11/43.) (C.A.A. Publications of the Department of Commerce, pp. 1-6.)
386	20282 U.S.A.	... <i>Installation of Underground Duct.</i> (C.A.A. Airport Division Specification No. L-110, 1/11/43.) (C.A.A. Publications of the Department of Commerce, pp. 1-6.)
387	20283 U.S.A.	... <i>Installation of Building Wiring.</i> (C.A.A. Airport Division Specification No. L-111, 1/11/43.) (C.A.A. Publication of the Department of Commerce, pp. 1-9.)
388	20284 U.S.A.	... <i>Standard Specifications for Airport Lighting. Part I—Equipment and Materials.</i> (Specification C.A.A. 606, 1/5/42.) (C.A.A. Publications of the Department of Commerce, pp. 1-58.)
389	20295 G.B. ...	... <i>Practical Considerations on the Bearing Capacity of Ground.</i> (R. R. Minikin, Civil Engineering, Vol. 39, No. 451, Jan., 1944, pp. 4-8.)
390	20296 G.B. ...	... <i>Development in Solidifying Loose Soils.</i> (A. G. Arend, Civil Engineering, Vol. 39, No. 451, Jan., 1944, pp. 16-17.)
391	20374 U.S.A.	... <i>Los Angeles Airport to be Developed in Five Stages.</i> (Air Transport, Vol. 1, No. 2, Oct., 1943, pp. 73-74.)
392	20587 Germany	... <i>Aerodrome Beacon with Uneven Rotation (Elliptic Gears).</i> (733,349.) A.E.G., Flugsport, Vol. 35, No. 14, 20/10/43, p. 64.)
393	20626 U.S.A.	... <i>Soil Pressure Distribution Along Flexible Foundations.</i> (A. Bull, Journal of the Franklin Institute, Vol. 233, No. 6, June, 1943, pp. 559-580.)
394	20688 G.B. ...	... <i>Wire Netting Runways (Not Suitable for Removal to Alternate Aerodromes).</i> (Inter. Avia., Nos. 901-902, 10/1/44, p. 15.)
395	20709 Switzerland	... <i>Utzenstorf Airport Plans.</i> (Inter. Avia., Nos. 901-902, 10/1/44, pp. 36-37.)
396	20710 G.B. ...	... <i>Gatwick Airport Plans.</i> (Inter. Avia., Nos. 901-902, 10/1/44, pp. 35-36.)
397	21007 G.B. ...	... <i>Aerodrome Defence.</i> (Aeroplane, Vol. 66, No. 1,712, 17/3/44, pp. 304-305.)
398	21086 U.S.A.	... <i>Hot Dope Finishing of Fabric Surfaces (Adopted by Pan-American Airways).</i> (H. B. Marsh and R. H. Natwick, Aero Digest, Vol. 43, No. 4, October, 1943, pp. 152-156.)
General (Historical, etc.).		
399	19258 U.S.A.	... <i>Wilbur and Orville Wright (Review of Their Contribution to Aeronautical Science; Numerous Photographs) (40th Anniversary Number).</i> (Various Authors, U.S. Air Services, Vol. 28, No. 12, Dec., 1943, pp. 9-30.)

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400	20097	Switzerland ... <i>The Fate of Aeronautics in France.</i> (Inter. Avia., Nos. 894-895, 18/11/43, pp. 1-6.)
401	20104	France ... <i>Two-Seater Trainer and Towing Aircraft, Design Competition.</i> (Inter. Avia., Nos. 894-895, 18/11/43, pp. 13-14.)
402	20310	Spain ... <i>An Extraordinary Flight; Communication Between Rome and Tokyo.</i> (R. M. de B., <i>Revista de Aeronautica</i> , Vol. 75, No. 23, Oct., 1942, pp. 269-279.)
403	20394	U.S.A. ... <i>The Birth of Aviation.</i> (Aero Digest, Vol. 43, No. 6, December, 1943, pp. 113-115, 260-262.)
404	20537	G.B. ... <i>Research for Aeronautics: Its Planning and Application—II.</i> (W. S. Farren, Engineer, Vol. 177, No. 4,599, 3/3/44, pp. 164-167.)
405	20567	Germany ... <i>Prize Award of Lilienthal Society for 1943 (Total 100,000 Marks).</i> (Flugsport, Vol. 35, No. 14, 20/10/43, p. 214.)
406	20568	Germany ... <i>Results of Model Aircraft Competition (Power-Driven Oscillating Wing Type Covers 5 km. in 16 Minutes).</i> (Flugsport, Vol. 35, No. 14, 20/10/43, p. 219.)
407	20691	France ... <i>French National Aircraft Development Centre at Cannes.</i> (Inter. Avia., Nos. 901-902, 10/1/44, pp. 22-28.)
408	20936	Germany ... <i>Jachtmann's 56-Hour Glider Record.</i> (A. Juhre, <i>Der Deutsche Sportflieger</i> , Vol. 10, No. 11, Nov., 1943, pp. 178-179.)

ENGINES AND ACCESSORIES.

Named Engine Types.

409	20014	U.S.A. ... <i>Franklin Air-Cooled Engines for Light Aircraft.</i> (Inter. Avia., Nos. 896-897, 30/11/43, p. 13.)
410	20020	G.B. ... <i>Bristol Sleeve Valve Engine Developments (Hercules and Centaurus).</i> (Inter. Avia., Nos. 896-897, 30/11/43, pp. 16-17.)
411	20021	G.B. ... <i>Rotol Auxiliary Power Plants P. 6 Weighing 450 lb. (60 h.p. Engine Driving 20 Kilowatt A.C. and 3 Kilowatt D.C. Generators).</i> (Inter. Avia., Nos. 896-897, 30/11/43, pp. 17-18.)
412	20150	Canada ... <i>More Power for the Anson V (Fitted with P. and W. Wasp Engines).</i> (Commercial Aviation, Vol. 5, No. 11, Nov., 1943, p. 102.)
413	20400	U.S.A. ... <i>New Wright 220 h.p. Engine—The Cyclone 18.</i> (Aero Digest, Vol. 43, No. 6, December, 1943, p. 166.)
414	20763	Germany ... <i>Junkers' Jumo 211D Petrol Injection Engine.</i> (Inter. Avia., Nos. 886-887, 27/9/43, p. 12.)
415	20806	U.S.A. ... <i>Improvements in German DB-601 N Aircraft Engine.</i> (M. W. Bourdon, Automotive and Aviation Industries, Vol. 89, No. 11, 1/12/43, pp. 22-25.)
416	20807	U.S.A. ... <i>Inertia Scavenging and Uniflow Operation Combined in New Swedish Two-Stroke Engine (Kylen).</i> (Automotive and Aviation Industries, Vol. 89, No. 11, 1/12/43, pp. 25, 92.)

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REF. | TITLE AND JOURNAL. |
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| 417 | 20828 G.B. ... | <i>The "Griffon" Twelve-Cylinder Aero Engine.</i> (Engineer, Vol. 177, No. 4,600, 10/3/44, pp. 196-197.) |
| 418 | 20915 G.B. ... | <i>New Gnome-Rhone Air-Cooled Radial Engine.</i> (Aeroplane, Vol. 66, No. 1,711, 10/3/44, p. 260.) |
| Design and Installation. | | |
| 419 | 20325 Spain ... | <i>Progress in Air-Cooled Aero Engines.</i> (Anon, Revista de Aeronautica, Vol. 75, No. 23, Oct., 1942, p. 296.) |
| 420 | 20584 Germany ... | <i>Elastic Support for Engines Mounted in Tandem.</i> (736,594.) (Voigt, Flugsport, Vol. 35, No. 14, 20/10/43, pp. 60-61.) |
| 421 | 20585 Germany ... | <i>Combinations of Fixed and Retractable Radiators.</i> (735,302.) (Arado, Flugsport, Vol. 35, No. 14, 20/10/43; p. 61.) |
| 422 | 20732 U.S.A. ... | <i>Aircraft Power Plant Fire Protection.</i> (H. L. Hansberry, Preprints of the Institute of the Aeronautical Sciences, 25/1/44, pp. 1-25.) |
| 423 | 20965 G.B. ... | <i>The Ducted Radiator (Thrust from Increased Air Velocity).</i> (C. L. Hinings, Flight, Vol. 45, No. 1,838, 16/3/44, p. 294.) |
| 424 | 21006 G.B. ... | <i>Synthetic Rubber Components in Aero Motors.</i> (Aeroplane, Vol. 66, No. 1,712, 17/3/44, p. 303.) |
| 425 | 21062 G.B. ... | <i>Installation and Care of Electric Motors.</i> (Mechanical World, Vol. 115, No. 2,981, 18/2/44, pp. 171-175.) |
| Wear and Efficiency. | | |
| 426 | 20147 Canada ... | <i>Efficiency of the "Cheetah" Engine.</i> (H. P. Wells, Commercial Aviation, Vol. 5, No. 11, Nov., 1943, pp. 69-72, 80.) |
| 427 | 20167 Switzerland ... | <i>American Statistics of Civil Aircraft Accidents Due to Engine Failure (Engines of 90 h.p. or Less).</i> (Inter. Avia., Nos. 808-899, 11/12/43, p. 20.) |
| 428 | 20940 Germany ... | <i>Power Plant and High Altitude Flight (Slightly Abridged Version of Article by Same Author in Luftwissen, Vol. 10, No. 8, p. 9).</i> (W. von der Null, Motor Schau, Vol. 7, Nos. 10, 11, 12, Oct., Nov., Dec., 1943, pp. 214-221.) |
| 429 | 21048 U.S.A. ... | <i>Part-Throttle Operation and Control of a Piston Ported Two-Stroke Cylinder.</i> (A. R. Rogowski and C. F. Taylor, N.A.C.A. Technical Notes, Vol. —, No. 919, November, 1943, pp. 1-27.) |
| 430 | 21049 — ... | <i>The Effect of Inlet Valve Design, Size and Lift on the Air Capacity and Output of a Four-Stroke Engine.</i> (J. C. Livengood and J. D. Stanitz, N.A.C.A. Technical Notes, No. 915, November, 1943, pp. 1-20.) |
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| 431 | 19673 Germany ... | <i>Friction Measurements on Small Oil Lubricated Bearings.</i> (Z.V.D.I., Vol. 87, Nos. 51-52, 25/12/43, p. 808.) |

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433	20220 — <i>Air Filtration (Account of Two Types of Filters—The Vokes Aerovee and the Vokes Three-Ply).</i> (Flight, Vol. 45, No. 1,835, 24/2/44, pp. 207-209.)
434	20234 U.S.A. ...	... <i>Piston Ring Pressure Distribution.</i> (A.T.Z., Vol. 45, No. 3, 10/2/42.) (M. Kuhn, N.A.C.A. Tech. Memo., No. 1,056, Dec., 1943, pp. 1-11.)
435	20266 G.B. ...	... <i>Pressed Aircraft Pistons—Part II.</i> (Aircraft Production, Vol. 6, No. 65, March, 1944, pp. 139-142.)
436	20286 U.S.S.R. ...	... <i>Adaptation of Carburettors for Low Grade Fuels.</i> (Perchikhin, M.T.S. (Tractor Engineering Survey), Vol. 3, No. 3, March, 1943, pp. 33-36.)
437	20300 U.S.S.R. ...	... <i>Increasing the Efficiency of Chain Drives.</i> (Dymshuz, Mechanical Engineering News, Nos. 9-10, Sept.-Oct., 1943, pp. 11-22.)
438	20301 U.S.S.R. ...	... <i>Theoretical Principles for Increasing the Life of Piston Rings.</i> (Ginzburg, Mechanical Engineering News, Nos. 9-10, Sept.-Oct., 1943, pp. 23-40.)
439	20342 G.B. ...	... <i>Variable Speed Electrical Couplings.</i> (H. E. Hutter, Mechanical World, Vol. 115, No. 2,980, 11/2/44, pp. 147-148.)
440	20343 G.B. ...	... <i>The Fitting and Maintenance of Ball and Roller Bearings.</i> (R. K. Allan, Mechanical World, Vol. 115, No. 2,980, 11/2/44, pp. 149-152.)
441	20702 France ...	... <i>Transmission Gear for Side by Side Engines Developed by Centre N.C. 71 (Photograph).</i> (Inter. Avia., Nos. 901-902, 10/1/44, p. 1.)
442	20718 G.B. ...	... <i>Powdered Metal Piston Rings.</i> (British Patent No. 551,232.) (Automobile Engineer, Vol. 34, No. 447, March, 1944, p. 126.)
443	20756 Germany ...	... <i>Replacement of Bronze by Steel in Worn Gears.</i> (Z.V.D.I., Vol. 87, Nos. 49-50, 11/12/43, pp. 790-792.)
444	20778 G.B. ...	... <i>Valves, Gauges and Similar Fittings for Land Boiler Installations.</i> (G. H. Pearson, Mechanical World, Vol. 115, No. 2,982, 25/2/44, pp. 199-202.)
445	20837 G.B. ...	... <i>Bibliography on Tilting Pad Bearings.</i> (Michell, Feb., 1944.) (R.T.P.3, Bibliography No. 97.)
446	20997 G.B. <i>Valves, Gauges and Similar Fittings for Land Boiler Installations—II.</i> (G. H. Pearson, Mechanical World, Vol. 115, No. 2,983, 3/3/44, pp. 249-251.)

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447	20034 U.S.A. <i>Temperature Effects on Turbine Supercharger Installations.</i> (P. Colman, Journal of the Aeronautical Sciences, Vol. 10, No. 8, Oct., 1943, pp. 261-269.)
448	20139 Canada <i>Supercharging Aircraft Engines (Part I).</i> (P. Hoffman, Commercial Aviation, Vol. 5, No. 11, Nov., 1943, pp. 122-134.)

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449	20216 G.B. ...	<i>Turbo-Supercharging (Details of the G.E.C. Unit).</i> (Flight, Vol. 45, No. 1,835, 24/2/44, p. 200.)
450	20386 G.B. ...	<i>Corrosion of Boiler Tubes.</i> (S. B. Jackson, Engineering, 25/2/44, p. 154.)
451	20431 U.S.A. ...	<i>Conservation of Centrifugal Pumps.</i> (B. L. Cody, Chemical and Engineering News, Vol. 21, No. 24, 25/12/43, pp. 2103-2106.)
452	20628 U.S.A. ...	<i>The Gas Turbine.</i> (J. T. Retaliata, Vol. 233, No. 6, Journal of the Franklin Institute, June, 1943, pp. 614-615.)
453	20703 France ...	<i>Gnome Rhone Three-Speed Supercharger.</i> (Inter. Avia., Nos. 901-902, 10/1/44, p. 26.)
454	20830 G.B. ...	<i>Transportable Turbo-Alternators.</i> (Engineer, Vol. 177, No. 4,600, 10/3/44, p. 198.)
455	20905 G.B. ...	<i>Efficiencies and Outputs of Combustion Turbines.</i> (S. J. Davies, Engineering, Vol. 157, No. 4,078, 10/3/44, pp. 181-184.)
456	20912 G.B. ...	<i>Bellows Type Vacuum Pumps.</i> (Engineering, Vol. 157, No. 4,078, 10/3/44, p. 200.)
457	20970 G.B. ...	<i>The Future of the Gas Turbine, No. 1.</i> (B. Wood, Engineer, Vol. 177, No. 4,601, March, 1944, pp. 202-204.)
458	21064 G.B. ...	<i>A Modern Producer-Gas Plant (Marischka Producer).</i> (H. R. Forman, Mechanical World, Vol. 115, No. 2,981, 18/2/44, pp. 178-179.)
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459	20051 U.S.A. ...	<i>A New Prime Mover (Aerodynamic Heat Power Plant).</i> (Journal of the American Society of Naval Engineers, Vol. 55, No. 4, November, 1943, pp. 714-718.)
460	20288 G.B. ...	<i>Fractional Horse-Power Motors.</i> (Electrician, Vol. 132, No. 3,428, 11/2/44, pp. 115-116.)
461	20302 U.S.S.R. ...	<i>A New Gas Engine.</i> (Keimach, Mechanical Engineering News, Nos. 9-10, Sept.-Oct., 1943, p. 46.)
462	20322 Spain ...	<i>Investigation on the Combustion Lag in the Diesel Cycle.</i> (J. H. Cots, Revista de Aeronautica, Vol. 75, No. 23, Oct., 1942, pp. 279-285.)
463	20827 G.B. ...	<i>The Three-Cylinder Doxford Opposed Piston Marine Oil Engine.</i> (W. H. Purdie, Engineer, Vol. 177, No. 4,600, 10/3/44, pp. 194-196.)
464	20385 G.B. ...	<i>1,000 kW. Wind Power Electric Generating Plant (Further Data).</i> (Engineering, Vol. 157, No. 4,076, 25/2/44, p. 148.)
465	20971 G.B. ...	<i>The Three-Cylinder Doxford Opposed Piston Marine Oil Engine—II.</i> (W. H. Purdie, Engineer, Vol. 177, No. 4,601, March, 1944, pp. 207-208.)
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466	20192 U.S.A. ...	<i>Review of Maintenance Equipment (Portable Oil Tank Cleaner, Spark Plug, Electric Profiler, etc.).</i> (Aviation, Vol. 42, No. 12, Dec., 1943, pp. 163-177.)
467	20208 Sweden ...	<i>High Altitude Engine Test Benches (German and Italian).</i> (G. Larsson, Flyg, No. 22, 4-17/11,43, pp. 21-24.)

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469	20908 G.B. Structural Analysis by Models. (Engineering, Vol. 157, No. 4, 078, 10/3/44, pp. 191-192.)
470	20941 Germany	... Flight Testing of B.M.W. Engines. (W. Farrenkopf, Motor Schau, Vol. 7, Nos. 10, 11, 12, Oct., Nov., Dec., 1943, pp. 222-224.)

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471	20142 Canada	... New Type Portable Engine Heater (Herman Nelson). (Commercial Aviation, Vol. 5, No. 11, Nov., 1943, p. 162.)
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472	20254 G.B. Jet Propulsion for Aircraft. (Engineer, Vol. 177, No. 4, 598, 25/2/44, p. 149.)
473	20690 G.B. ...	... Jet Propulsion Developments in Great Britain and the U.S.A. (Inter. Avia., Nos. 901-902, 10/1/44, pp. 16-17.)
474	20973 G.B. The Jet Propulsion of Aircraft. (R. M. Helsdon, Engineer, Vol. 177, No. 4, 601, March, 1944, p. 213.)

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475	20173 Switzerland	... A.B.A. Pressure Priming System for Starting Up Aircraft Engines. (Inter. Avia., Nos. 898-899, 11/12/43, pp. 23-24.)
476	20373 U.S.A.	... Ignition Troubles Relieved by Air Pump (Super-charged Ignition Harness). (R. L. Anderson, Air Transport, Vol. 1, No. 2, Oct., 1943, pp. 64-66.)
477	20458 G.B. Cartridge Starting Device for Aero Engines (Bendix Patent). (Aeronautics, Vol. 10, No. 1, Feb., 1944, p. 59.)

FUELS AND LUBRICANTS.

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478	20292 G.B. Liquid Fuels and Organic Chemicals from Coal and Home-Refined Petroleum. (H. Moore, Petroleum Times, Vol. 48, No. 1, 214, 5/2/44, pp. 67-70, 79-86.)
479	20334 Spain	... Knocking and Anti-Knock Mixtures. (B. Rocchi, Revista de Aeronautica, Vol. 70, No. 18, May, 1942, pp. 364-365.)
480	20494 G.B. ...	... Electronic "Chemist" to Speed Petrol and Synthetic Rubber (Use of "Mass Spectrometer" as Laboratory Tool). (Petroleum Times, Vol. 47, No. 1, 211, 25/12/43, p. 706.)
481	20720 G.B. ...	... Home Produced Fuel. (Automobile Engineer, Vol. 34, No. 447, March, 1944, pp. 85-86.)
482	20753 Germany	... Nomogram for Determining H_2 Content of Diesel Fuels from the Calorific Value. (Z.V.D.I., Vol. 87, Nos. 49-50, 11/12/43, p. 784.)

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483	20841 G.B. ...	Summary of Literature on the Determination of Dew Points of Complex Hydrocarbon Mixtures, with Particular Reference to Petrols and Kerosenes (Prepared by the R.A.E.). (R.T.P.3, Bibliography No. 101.)
484	20270 G.B. ...	Petroleum Refining Terminology (with Discussion) (Benzine Manufacture and Refining). (M. E. Kelly and D. A. Howes, Journal of the Institute of Petroleum, Vol. 30, No. 241, January, 1944, pp. 1-2.)
485	20892 G.B. ...	The Filter Freezing Temperature of Aviation Fuels. (J. M. A. Court, Journal of the Institute of Petroleum, Vol. 29, No. 239, November, 1943, pp. 329-331.)
486	20906 G.B. ...	Liquid Fuels and Chemicals from Coal Petroleum. (H. Moore, Engineering, Vol. 157, No. 4,078, 10/3/44, p. 185.)
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487	20061 G.B. ...	Viscosities at the Boiling Point of Some Primary Amines, Cyclohexane and Some of its Derivatives. (J. H. Friend and W. D. Hargreaves, Philosophical Magazine, Vol. 35, No. 240, Jan., 1944, pp. 57-64.)
488	20493 G.B. ...	The 100-Octane Production Programme (Present State of Plant Construction in U.S., Canada and N.W.I.). (Petroleum Times, Vol. 47, No. 1,211, 25/12/43, pp. 704, 724.)
489	20681 Switzerland ...	New Fuels Render B.M.F.P. 500 Psi Possible. (Inter. Avia., *No. 900, 24/12/43, pp. 16-17.)
490	21059 U.S.A. ...	100 Octane Production in the U.S.A. (P.A.W. Brochure). (National Petroleum News, Vol. 35, No. 50, 15/12/43, pp. 26-30, 42-43.)
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491	20285 U.S.S.R. ...	Diluted Gases. (Sokolov, M.T.S. (Tractor Engineering Survey), Vol. 3, No. 3, March, 1943, pp. 25-27.)
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493	20341 G.B. ...	The Lubrication of Wire Ropes. (E. V. Paterson, Mechanical World, Vol. 115, No. 2,980, 11/2/44, pp. 143-146, 163-165.)
494	20376 U.S.A. ...	Aircraft Engine Lubricating Oils. (Air Transport, Vol. 1, No. 2, Oct., 1943, pp. 83-84.)
495	20410 U.S.A. ...	Union Oil Opens New High Octane Refinery. (Aero Digest, Vol. 43, No. 6, December, 1943, p. 213.)
496	20495 G.B. ...	Oil Transport and Post-War Reconstruction in Europe. (P. H. Frankel, Petroleum Times, Vol. 47, No. 1,211, 25/12/43, pp. 708-714.)
497	20496 G.B. ...	A.S.T.M. Standards on Petroleum Products and Lubricants, 1943. (Petroleum Times, Vol. 47, No. 1,211, 25/12/43, p. 714.)

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499	20498 G.B. <i>The Hydrogenation Process (Survey of Developments and the Co-operation Efforts of the I.G. Farbenindustrie and Standard Oil).</i> (R. T. Haslam, Petroleum Times, Vol. 47, No. 1,211, 25/12/43, pp. 699-700, 723-724.)
500	20557 G.B. ...	... <i>Oil from Sunflower Plants.</i> (Nature, Vol. 153, No. 3,878, 26/2/44, p. 248.)
501	20594 G.B. ...	... <i>The Factor of Estonian Oil in the War Strategy.</i> (Petroleum Times, Vol. 48, No. 1,216, 4/3/44, p. 146.)
502	20713 G.B. ...	... <i>Engine Lubrication—the Problem of Oil Stability.</i> (Automobile Engineer, Vol. 34, No. 447, March, 1944, pp. 107-108.)
503	20863 U.S.A. ...	... <i>Standard Oil Development Company and its Contribution to Chemical Technology.</i> (F. A. Howard, Industrial and Engineering Chemistry (News Edition), Vol. 22, No. 2, 25/1/44, pp. 98-102.)
504	20889 G.B. <i>A Study of Oil Oxidation as Related to Lubrication. Part I—Apparatus, Technique and Preliminary Results.</i> (P. G. Exline and others, Journal of the Institute of Petroleum, Vol. 29, No. 239, November, 1943, pp. 295-307.)
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506	20998 G.B. <i>Cutting Oil Economy (Bulletin of the Ministry of Fuel and Power).</i> (Mechanical World, Vol. 115, No. 2,983, 3/3/44, p. 251.)
507	21029 G.B. <i>Cutting Oils.</i> (Machinery, Vol. 64, No. 1,636, 17/2/44, pp. 182-183.)

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508	20007 G.B. <i>The Catalysis of the Liquid-Phase Stage of Coal Hydrogenation.</i> (N. Booth, J. of the Soc. of Chem. Ind., Vol. 63, No. 1, Jan., 1944, pp. 1-3.)
509	20524 U.S.A. ...	... <i>U.S. Army, Navy, R.A.F. Standardisation of Petroleum Speciality Products (Chart).</i> (Aviation Maintenance, Vol. 1, No. 2, Jan., 1944, pp. 39-41.)
510	20843 G.B. ...	... <i>Preventing Internal Corrosion of Refinery Piping—Advantages in Use of Sodium Nitrite.</i> (Petroleum Times, Vol. 48, No. 1,216, 4/3/44, pp. 149-150.)
511	20871 G.B. ...	... <i>Collection of Abstracts.</i> (Journal of the Institute of Petroleum, Vol. 30, No. 241, January, 1944, pp. 1A-54A.)
512	20890 G.B. <i>Petroleum as a Source of Synthetic Materials (Discussion).</i> (Journal of the Institute of Petroleum, Vol. 29, No. 239, November, 1943, pp. 368-322.)

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513	20891 G.B. ...	<i>Estimation of Mercaptan Sulphur Alone or in Presence of Elementary Sulphur in Petroleum Products.</i> (E. R. H. Davies and J. W. Armstrong, Journal of the Institute of Petroleum, Vol. 29, No. 239, November, 1943, pp. 323-328.)
514	20893 G.B. ...	<i>Collection of Abstracts.</i> (Journal of the Institute of Petroleum, Vol. 29, No. 239, November, 1943, pp. 399A-420A.)
515	21058 U.S.A. ...	<i>What Will We Do with Post-War Fuels?</i> (C. A. Chayne, National Petroleum News, Vol. 35, No. 50, 15/12/43, pp. 17-20.)

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516	20053 U.S.A. ...	<i>Tapered and Stepped Columns.</i> (A. H. Church, Journal of the American Society of Naval Engineers, Vol. 55, No. 4, November, 1943, pp. 756-766.)
517	20084 G.B. ...	<i>Analysis of Plane Braced Frames (Secondary Stresses Due to Rigidity of Joints).</i> (R. J. Cornish, Aircraft Engineering, Vol. 16, No. 180, Feb., 1944, pp. 41-45.)
518	20086 G.B. ...	<i>Shear Stress in a Tapering Beam.</i> (G. B. Saksena, Aircraft Engineering, Vol. 16, No. 180, Feb., 1944, pp. 47-49.)
519	20299 U.S.S.R. ...	<i>The Safety Factor Under Alternating Loads.</i> (Likharev, Mechanical Engineering News, Nos. 9-10, Sept.-Oct., 1943, p. 510.)
520	20333 Spain ...	<i>Strength Calculation of Monocoque Fuselages (Conclusion).</i> (Anon, Revista de Aeronautica, Vol. 69, No. 17, April, 1942, pp. 281-286.)
521	20358 G.B. ...	<i>Partial Yielding Round a Cylindrical Cavity Under Internal Pressure (with Particular Reference to the Plastic Field Round a Solid Rivet in Thin Plating).</i> (K. H. Swainger.)
522	20613 U.S.A. ...	<i>Optical Aspects of Three-Dimensional Photoelasticity.</i> (R. D. Mindlin, Journal of the Franklin Institute, Vol. 233, No. 4, April, 1942, pp. 349-363.)
523	20630 U.S.A. ...	<i>An Elastic Theory for Rubber.</i> (E. Latshaw, Journal of Franklin Institute, Vol. 234, No. 1, July, 1942, pp. 63-73.)
524	20737 U.S.A. ...	<i>Flexural Strength in the Plastic Range of Rectangular Magnesium Extrusions.</i> (F. A. Rappleyea and E. J. Eastman, Preprints of the Institute of the Aeronautical Sciences, 25/1/44, pp. 1-13.)
525	20845 U.S.S.R. ...	<i>The Liquid Shear Modulus and its Temperature Relationship.</i> (M. Kornfeld, Reports of the Academy of Sciences, Vol. 38, No. 9, 1943, pp. 312-315.)
526	20850 U.S.S.R. ...	<i>Infinite Cylindrical Shell and Unbounded Thick Plate Under Stress.</i> (G. S. Shapiro, Reports of the Academy of Sciences, Vol. 37 (New Series), No. 9, 1942, pp. 258-260.)

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528	21047 U.S.A.	... <i>The Strength of Thin Wall Cylinders of D Cross-Section in Combined Pure Bending and Torsion.</i> (A. W. Sherwood, N.A.C.A. Technical Notes, No. 904, September, 1943, pp. 1-12.)
529	21051 —	... <i>The Effect of the Type of Specimen on the Shear Strengths of Driven Rivets.</i> (W. H. Sharp, N.A.C.A. Technical Notes, Vol. —, No. 916, November, 1943, pp. 1-5.)
530	21052 U.S.A.	... <i>The Effect of Surface Finish on the Fatigue Performance of Certain Propeller Materials.</i> (H. W. Russell, H. W. Gillett, L. R. Jackson and G. M. Foley, N.A.C.A. Technical Notes, No. 917, December, 1943, pp. 1-18.)

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A. Properties.

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531	20040 U.S.A.	... <i>On the Torsional Damping Capacity of Solid Magnesium Alloy Rods as Affected by Cold Working.</i> (A. U. Kutsay and A. J. Yorgiadis, Journal of the Aeronautical Sciences, Vol. 10, No. 8, Oct., 1943, pp. 303-310.)
532	20377 G.B.	... <i>Magnesium Alloy Technology (Heat Treatment, Choice of Casting Alloys, Wrought Alloys).</i> (F. A. Fox, Metal Industry, Vol. 64, No. 8, 25/2/44, pp. 114-116.)
533	20380 U.S.A.	... <i>Aluminium-Silicon Casting Alloys—Effect of Minor Alloying Elements.</i> (W. Bonsack, Metal Industry, Vol. 64, No. 8, 25/2/44, pp. 123-124.)
534	20381 G.B.	... <i>Manufacture of Magnesia.</i> (Metal Industry, Vol. 64, No. 8, 25/2/44, pp. 125-126.)
535	20422 G.B.	... <i>Aluminium-Silicon Casting Alloys—The Effect of Minor Alloying Elements (Aluminium-Magnesium and Aluminium-Zinc-Magnesium Alloys).</i> (W. Bonsack, Metal Industry, Vol. 44, No. 9, 3/3/44, p. 132.)
536	20423 G.B.	... <i>Magnesium Alloy Technology (Surface Protection, Machinability, Recent Research, Applications).</i> (F. A. Fox, Metal Industry, Vol. 44, No. 9, 3/3/44, pp. 133-135.)
537	20602 U.S.A.	... <i>Aluminium Alloys—Compositions, Properties and Designations of American Commercial Alloys (Data Sheet).</i> (Metal Progress, Vol. 45, No. 1, January, 1944, p. 102.)
538	20617 U.S.A.	... <i>Process to Expand Magnesium Supply (Abstract).</i> (L. Velic, Journal of the Franklin Institute, Vol. 233, No. 4, April, 1942, p. 390.)
539	20780 G.B.	... <i>The Working of Aluminium Bronzes.</i> (R. A. Collacott, Mechanical World, Vol. 115, No. 2, 982, 25/2/44, pp. 207-209.)

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540	20823 G.B. ...	<i>Magnesium Products from Brine</i> (U.S.A. Patent No. 554,760). (Metal Industry, Vol. 64, No. 10, 10/3/44, p. 156.)
541	20824 G.B. ...	<i>Magnesium from Scrap</i> (Patent No. 555,412). (Metal Industry, Vol. 64, No. 10, 10/3/44, p. 156.)
542	20925 Germany ...	<i>Modern Views on Light Alloy Sheet Forming and Pressing</i> (Effect of Nature and Heat Treatment of Various Al. and Mg. Alloys on Range of Deformation). (H. Hornauer, Aluminium, Vol. 25, No. 6, June, 1943, pp. 229-239.)
543	20926 Germany ...	<i>Comparison of Stress Corrosion of Al.-Zn.-Mg. and Al.-Cu.-Mg. Alloys.</i> (H. Stiller, Aluminium, Vol. 25, No. 6, June, 1943, pp. 240-246.)
544	20927 Germany ...	<i>Field of Application of Secondary Al. Casting Alloys.</i> (A. Buckeley, Aluminium, Vol. 25, No. 6, June, 1943, pp. 247-250.)
545	20928 Germany ...	<i>The Electrometric Determination of Al. in Mg. Alloy by the Fluorid Methods.</i> (W. Mannchen, Aluminium, Vol. 25, No. 6, June, 1943, pp. 250-252.)
546	20948 G.B. ...	<i>Alloy Deposition—Present Position and Future Developments.</i> (J. R. I. Hepburn, Metal Industry, Vol. 64, No. 11, 17/3/44, pp. 168-170.)
547	20992 G.B. ...	<i>Deburring Aluminium Sections.</i> (Machinery, Vol. 64, No. 1,638, 2/3/44, p. 240.)
548	21050 U.S.A. ...	<i>Certain Mechanical Strength Properties of Aluminium Alloys 25 S-T and X 76 S-T.</i> (Thomas J. Dolan, N.A.C.A. Technical Notes, No. 914, October, 1943, pp. 1-30.)

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549	19671 Germany ...	<i>Weld Crack Sensitivity of Steel and Method of Testing</i> (Digest). (K. L. Zeyn, Z.V.D.I., Vol. 87, Nos. 51-52, p. 802.)
550	20033 U.S.A. ...	<i>Mechanical Properties of Austenitic Stainless Steels.</i> (R. A. Lincoln and W. H. Mather, Journal of the Aeronautical Sciences, Vol. 10, No. 8, Oct., 1943, pp. 253-260, 272.)
551	20090 G.B. ...	<i>The Production of Low Sulphur Sponge Iron.</i> (Engineering, Vol. 157, No. 4,075, 18/2/44, p. 127.)
552	20311 U.S.S.R. ...	<i>The Improvement of Structural Carbon Steels.</i> (Gulyaev and Halperin, Steel, Vol. 3, Nos. 5-6, 1943, pp. 49-51.)
553	20391 G.B. ...	<i>Sheet Steel for Electrical Plant.</i> (Nature, Vol. 153, No. 3,876, 12/2/44, pp. 192-193.)
554	20464 G.B. ...	<i>The Use of Wetting Agents in the Degreasing of Sheet Steel.</i> (P. M. Fisk and F. F. Pollak, Sheet Metal Industries, Vol. 19, No. 203, March, 1944, p. 427.)
555	20466 G.B. ...	<i>The Mechanical Properties of Austenitic Stainless Steels.</i> (R. A. Lincoln and W. H. Mather, Sheet Metal Industries, Vol. 19, No. 203, March, 1944, pp. 435-438, 443.)

ITEM NO.	R.T.P. REF.	TITLE AND JOURNAL.
556	20598 U.S.A.	... <i>Trends in Iron Foundry Metallurgy.</i> (J. S. Vanick, Metal Progress, Vol. 45, No. 1, January, 1944, pp. 83-85.)
557	20599 U.S.A.	... <i>Future Trends in High Alloy Steels.</i> (S. M. Norwood, Metal Progress, Vol. 45, No. 1, January, 1944, pp. 86-87.)
558	20603 U.S.A.	... <i>Production, Utility and Acceptance of the N.E. Steels.</i> (Various authors, Metal Progress, Vol. 45, No. 1, January, 1944, pp. 109-144, 124.)
559	20953 G.B.	... <i>Alloy Steels—High Temperature Tests.</i> (Electrical Review, Vol. 134, No. 3,456, 18/2/44, p. 230.)
560	21019 G.B.	... <i>Modern Steel Making.</i> (Electrical Review, Vol. 134, No. 3,459, March, 1944, pp. 326-330.)
Non-Ferrous Alloys.		
561	20060 G.B.	... <i>Note on the Solubility of Hydrogen in Palladium.</i> (E. H. Owen, Philosophical Magazine, Vol. 35, No. 240, Jan., 1944, pp. 50-57.)
562	20198 U.S.A.	... <i>Association Standards for Copper and Brass (Data Sheets).</i> (Aviation, Vol. 42, No. 12, Dec., 1943, pp. 207-209.)
563	20287 G.B.	... <i>Copper Metallurgy—Problems of Concern to the Electrical Machine Designer.</i> (Electrician, Vol. 132, No. 3,428, 11/2/44, pp. 114-115.)
564	20298 U.S.S.R.	... <i>The Dispersion of Collagen and its Tanning Products in Copper-Ammonium Solution.</i> (Feldmann and Sokoloff, Light Industries, U.S.S.R., Vol. 3, No. 5; May, 1943, p. 2.)
565	20357 U.S.A.	... <i>The Working of Cast Copper Base Alloys (Classification of Cast Copper Base Alloys, Machining and Finishing Operations, etc.).</i> (Machinist, Vol. 87, No. 41, 29/1/44, p. 16.)
566	20379 G.B.	... <i>Test Bars for Non-Ferrous Castings—Need for Standardisation.</i> (W. A. Baker, Metal Industry, Vol. 64, No. 8, 25/2/44, pp. 119-122.)
567	20382 U.S.A.	... <i>The Outlook for Zinc.</i> (Metal Industry, Vol. 64, No. 8, 25/2/44, p. 113.)
568	20425 G.B.	... <i>Nickel and Nickel Alloys—Physical Characteristics at Sub-Zero Temperatures.</i> (W. A. Mudge, Metal Industry, Vol. 44, No. 9, 3/3/44, pp. 136-137.)
569	20428 G.B.	... <i>Long Length Copper Tubes (I.C.I. Development).</i> (Metal Industry, Vol. 44, No. 9, 3/3/44, p. 140.)
570	20593 G.B.	... <i>Bulletin of the British Non-Ferrous Metals.</i> (Feb., 1944, No. 176.)
571	20820 G.B.	... <i>Metals of the Future (the Possible Future Utilisation of the Unfamiliar Metals).</i> (C. H. Mathewson, Metal Industry, Vol. 64, No. 10, 10/3/44, pp. 150-152.)
572	20822 G.B.	... <i>Secondary Copper Base Materials—General and Economic Considerations Governing Their Utilisation.</i> (H. J. Miller, Metal Industry, Vol. 64, No. 10, 10/3/44, pp. 153-156.)
573	20946 G.B.	... <i>Secondary Copper Base Materials.</i> (H. J. Miller, Metal Industry, Vol. 64, No. 11, 17/3/44, pp. 162-165.)

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574	20947 G.B. ...	<i>Metals of the Future—Possible Utilisation of the Unfamiliar Metals (Titanium, Zirconium, Hafnium, Thorium, etc.).</i> (C. H. Mathewson, <i>Metal Industry</i> , Vol. 64, No. 11, 17/3/43, pp. 166-167.)
575	20987 G.B. ...	<i>Stellite Alloy in Small Mechanisms (Instrument Bearing Pivots, Needle Valves, etc.).</i> (<i>Machinery</i> , Vol. 64, No. 1,638, 2/3/44, p. 237.)
Plastics.		
576	20093 G.B. ...	<i>Thermoplastic Cables.</i> (<i>Engineering</i> , Vol. 157, No. 4,075, 18/2/44, p. 132.)
577	20622 U.S.A. ...	<i>New Insulating Material (Perlite).</i> (<i>Journal of the Franklin Institute</i> , Vol. 233, No. 5, May, 1942, p. 464.)
578	20643 U.S.A. ...	<i>Improvements in Production of Synthetic Resins and the Manufacture of Films or Sheets Therefrom (Patent Specification 483,222).</i> (Kodak, Ltd.)
579	20644 U.S.A. ...	<i>Polyvinyl Acetal Resins (Patent Specification 483,223).</i> (Kodak, Ltd.)
580	20645 Germany ...	<i>Manufacture of Polymeric Basic Compounds (Patent Specification 509,012).</i> (I.G. Farbenindustrie Aktiengesellschaft.)
581	20646 Germany ...	<i>Manufacture of Polyvinyl Acetals (Patent Specification 482,219).</i> (I.G. Farbenindustrie Aktiengesellschaft.)
582	20647 Canada ...	<i>Improvements in and Relating to Manufacture of Vinyl Resins (Patent Specification 465,873).</i> (Shawinigan Chemicals, Ltd.)
583	20648 U.S.A. ...	<i>Polyvinyl Acetal Resin Compositions (Patent Specification 497,737).</i> (Carbide and Carbon Chemicals Corporation.)
584	20649 U.S.A. ...	<i>Polyvinyl Acetal Resin Compositions (Patent Specification 497,739).</i> (Carbide and Carbon Chemicals.)
585	20650 G.B. ...	<i>Improvements in and Relating to the Production of Synthetic Resins for Moulding (Patent Specification 498,396).</i> (Imperial Chemical Industries, Ltd.)
586	20653 U.S.A. ...	<i>Method of Preventing Polymerization of Vinyl Compounds and Reaction of Same with Aldehydes (Patent Specification 1,768,434).</i> (Kenneth G. Blaikie.)
587	20654 U.S.A. ...	<i>Production of Artificial Masses from Polymerized Vinyl Alcohols and Aliphatic Aldehydes and Products Obtainable Thereby (Patent Specification 1,955,068).</i> (Heinrich Hopff.)
588	20655 Germany ...	<i>Manufacture of Artificial Threads from Cellulose Derivatives (Patent Specification 367,274).</i> (I.G. Farbenindustrie Gesellschaft.)
589	20656 Germany ...	<i>Manufacture of Sheets and Other Articles from Cellulose Derivatives. (Patent Specification 372,637).</i> (I.G. Farbenindustrie Gesellschaft.)
590	20657 Germany ...	<i>Manufacture of Polymeric Compounds (Patent Specification 510,168).</i> (I.G. Farbenindustrie Gesellschaft.)

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591	20659 G.B. <i>Plastic Material and Method of Making (Patent Specification 2,070,331).</i> (Elmer R. Derby.)
592	20660 U.S.A. ...	... <i>Process for the Preparation of Condensation Products (Patent Specification 1,990,399).</i> (Maurice Bellow.)
593	20661 — ...	... <i>Porous or Spongy, Elastic and Flexible Products and Methods of Their Manufacture (Spongy, Polyvinyl Plastics) (Patent Specification 769,011).</i> (M. Georges Emmanuel Zelger.)
594	20662 Germany ...	... <i>A Process for Stabilising Vinylester Monomers of Organic Acids (Patent Specification 503,919).</i> (I.G. Farbenindustrie.)
595	20663 Germany ...	... <i>Manufacture of Highly Viscous Solutions from Polyvinyl Alcohols (Patent Specification 356,408).</i> (I.G. Farbenindustrie.)
596	20721 G.B. ...	... <i>Identifying Plastics.</i> (Plastics, Vol. 8, No. 82, March, 1944, pp. 98-99.)
597	20722 G.B. ...	... <i>The Welding of Thermoplastic Materials by Means of Radio Frequency Currents (with Comprehensive Bibliography, including Patents).</i> (H. P. Zade, Plastics, Vol. 8, No. 82, March, 1944, pp. 100-109.)
598	20723 G.B. ...	... <i>Metallizing Plastics (Metal Coatings Electrically Sputtered or Thermally Evaporated in Vacuum).</i> (E. E. Halls, Plastics, Vol. 8, No. 82, March, 1944, pp. 112-123.)
599	20724 G.B. ...	... <i>Coal in Relation to Plastics.</i> (H. R. Fleck, Plastics, Vol. 8, No. 82, March, 1944, pp. 124-127.)
600	20725 G.B. ...	... <i>Designing for Plastic Moulding.</i> (W. M. Holliday, Plastics, Vol. 8, No. 82, March, 1944, pp. 129-140.)
601	20726 G.B. ...	... <i>Resinoids and Other Plastics as Film Formers. XXIII—Coating Media on Vinyl Acetate and Polyvinyl Alcohol Base.</i> (B. J. Brajnikoff, Plastics, Vol. 8, No. 82, March, 1944, pp. 141-146.)
602	20727 G.B. ...	... <i>Brushes with Plastic Bristles (Abstract).</i> (From <i>Wärme</i> , Vol. 65, p. 266.) (Braithan, Plastics, Vol. 8, No. 82, March, 1944, p. 111.)
603	20862 U.S.A. ...	... <i>Post-War Development in Synthetics.</i> (J. E. Good, Industrial and Engineering Chemistry (News Edition), Vol. 22, No. 2, 25/1/44, pp. 94-96.)
604	20952 G.B. ...	... <i>Thermoplastic Cables—Scope and Methods of Handling.</i> (Electrical Review, Vol. 134, No. 3,456, 18/2/44, pp. 225-227.)
Rubber (Nat. and Syn.).		
605	20079 G.B. ...	... <i>Comparison of the Behaviour of Rubberlike Materials Under Constant Stress and Constant Strain Conditions.</i> (G. W. S. Blair and B. C. Veinoglou, Nature, Vol. 153, No. 3,875, 5/2/44, pp. 163-166.)
606	20157 U.S.A. ...	... <i>South American Natural Rubber.</i> (Inter. Avia., Nos. 898-899, 11/12/43, p. 29.)
607	20492 U.S.A. <i>Types of Synthetic Rubber.</i> (Mechanical Engineering, Vol. 66, No. 2, February, 1944, pp. 138-139.)

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608	20616 U.S.A.	... <i>Evaluation of Processes for the Production of Rubber.</i> (Journal of the Franklin Institute, Vol. 233, No. 4, April, 1942, pp. 383-386.)
609	20891 G.B.	... <i>Competitive Rubber Plants.</i> (G. Martin, Nature, Vol. 153, No. 3,877, February, 1944, pp. 212-215.)
610	21097 U.S.A.	... <i>Rubber Substitute Found in Vinyl-Type Plastic (Developed by Glenn Martin).</i> (Aero Digest, Vol. 43, No. 4, Oct., 1943, pp. 214, 237.)
Wood and Plywood.		
611	20080 G.B.	... <i>Plywood Adhesives and Linings (Indian Forest Research Institute Leaflets).</i> (Nature, Vol. 153, No. 3,875, 5/2/44, p. 173.)
612	20297 Germany	... <i>New Knowledge on Wood Impregnation (Abstract).</i> (Chemische Technik, Vol. 15, No. 5, 1942, pp. 56-57.) (A. Howak, Civil Engineering, Vol. 39, No. 451, Jan., 1944, p. 180.)
613	20305 U.S.S.R.	... <i>Consumption of Raw Material in the Production of Plywood.</i> (Moiseenko, Timber Industry, No. 9, Sept., 1943, pp. 15-17.)
614	20541 G.B.	... <i>Wood as an Engineering Material.</i> (Engineer, Vol. 177, No. 4,599, 3/3/44, pp. 170-171.)
615	20719 G.B.	... <i>Wood Dust in Moulding Sand—its Use as a Substitute for Coal Dust.</i> (Automobile Engineer, Vol. 34, No. 447, March, 1944, p. 128.)
616	20817 G.B.	... <i>The Fireproofing of Wood.</i> (N. C. Jones, Chemistry and Industry, No. 11, 11/3/44, pp. 98-99.)
617	21065 G.B.	... <i>Plywood Plate Girders for Buildings.</i> (Mechanical World, Vol. 115, No. 2,981, 18/2/44, p. 179.)
Glass, Silver.		
618	20059 G.B.	... <i>The Effect of Shape on the Thermal Endurance of Glass Rods.</i> (J. B. Murgatroyd, Philosophical Magazine, Vol. 35, No. 240, Jan., 1944, pp. 17-29.)
619	20349 G.B.	... <i>Glass Gauges.</i> (L. F. Gardiner, Machinery, Vol. 64, No. 1,633, 10/2/44, p. 151.)
620	20415 U.S.A.	... <i>New Glass Fibres Available.</i> (Aero Digest, Vol. 43, No. 6, December, 1943, p. 240.)
621	20559 G.B.	... <i>Solubility of Silver in Mercury.</i> (Nature, Vol. 153, No. 3,878, 26/2/44, p. 259.)
622	20627 U.S.A.	... <i>A New Chemical Method of Reducing the Reflectance of Glass.</i> (F. H. Nicoll, Journal of the Franklin Institute, Vol. 233, No. 6, June, 1943, p. 602.)
623	20752 Germany	... <i>Foam Glass as a Thermal Insulator.</i> (Z.V.D.I., Vol. 87, Nos. 49-50, 11/12/43, p. 795.)
624	20815 U.S.A.	... <i>Glass Overcoats for Protecting Storage Batteries Against Low Temperatures.</i> (Automotive and Aviation Industries, Vol. 89, No. 11, 1/12/43, p. 72.)
625	20842 G.B.	... <i>List of References on Glass Gauges, March, 1944.</i> (R.T.P.3, Bibliography No. 102.)
626	20846 U.S.S.R.	... <i>Simplest Inorganic Glasses on a Calcium Nitrate Base.</i> (A. G. Bergman, Reports of the Academy of Sciences, Vol. 38, No. 9, 1943, pp. 320-322.)

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627	20878 G.B. ...	<i>New Types of Optical Glass.</i> (W. M. Hampton and others, <i>Nature</i> , Vol. 153, No. 3,879, 4/3/44, p. 283.)
628	20991 G.B. ...	<i>Thickness of Silver-Brazed Joints.</i> (<i>Machinery</i> , Vol. 64, No. 1,638, 2/3/44, p. 247.)

General Properties, including Corrosion.

629	19589 U.S.A. ...	<i>A Principle of Maximum Plastic Resistance (Discussion).</i> (<i>Journal of Applied Mechanics</i> , Vol. 10, December, 1943, pp. A237-A239.)
630	20203 U.S.A. ...	<i>Metal Developments in the U.S.A. (Chicago War Conference Display).</i> (H. Chase, <i>Aviation</i> , Vol. 42, No. 12, Dec., 1943, pp. 194, 316-317.)
631	20231 G.B. ...	<i>Grid Support Wires of High Strength and Conductivity (Properties of Mallory 3M Wire by Comparison with Deoxidised Copper and Pure Nickel Annealed at 900-950°C.)</i> (L. B. Hunt, <i>Electronic Engineering</i> , Vol. 16, No. 192, February, 1944, pp. 388-389.)
632	20595 U.S.A. ...	<i>Metals and the War.</i> (C. Williams, <i>Metal Progress</i> , Vol. 45, No. 1, January, 1944, pp. 67-72.)
633	20596 U.S.A. ...	<i>Metals in Post-War America.</i> (E. E. Thum, <i>Metal Progress</i> , Vol. 45, No. 1, January, 1944, pp. 73-77, 126.)
634	20738 U.S.A. ...	<i>High Strength Casting Alloy with Natural Re-aging Properties.</i> (H. Brown, Preprints of the Institute of the Aeronautical Sciences, 25/1/44, pp. 1-13.)
635	20786 G.B. ...	<i>Atmospheric Corrosion.</i> (A. J. Brandram, <i>Mechanical World</i> , Vol. 115, No. 2,982, 25/2/44, p. 218.)
636	20856 U.S.S.R. ...	<i>New Conception of the Term "Hardness."</i> (M. I. Koifman, <i>Reports of the Academy of Sciences</i> , Vol. 30 (New Series), No. 9, 1941, pp. 830-831.)

Welding.

B. Fabrication.

637	20054 U.S.A. ...	<i>Under-Water Arc Welding.</i> (A. J. Hipperson, <i>Journal of the American Society of Naval Engineers</i> , Vol. 55, No. 4, November, 1943, pp. 766-771.)
638	20105 France ...	<i>Combination of Flat and Corrugated Sheet by Spot Welding (Ply Metal).</i> (<i>Inter. Avia.</i> , Nos. 894-895, 18/11/43, p. 14.)
639	20260 G.B. ...	<i>Instructional Films (How to Machine, Rivet and Weld Aluminium).</i> (<i>Aircraft Production</i> , Vol. 6, No. 65, March, 1944, p. 121.)
640	20303 U.S.S.R. ...	<i>Automatic Welders for Welding Under Flux.</i> (Dyatlov, <i>Mechanical Engineering News</i> , Nos. 9-10, Sept.-Oct., 1943, pp. 47-53.)
641	20481 G.B. ...	<i>The Spot-Welding Properties of Rust-Proofed Mild Steel Sheet.</i> (W. S. Simmie and A. J. Hipperson, <i>Sheet Metal Industries</i> , Vol. 19, No. 203, March, 1944, pp. 503-507.)
642	20482 G.B. ...	<i>The Spot Welding of Magnesium Base Alloys.</i> (<i>Sheet Metal Industries</i> , Vol. 19, No. 203, March, 1944, pp. 508-511.)

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643	20483 G.B. ...	<i>New Ideas in Welding (Review of Recent Patents).</i> (Sheet Metal Industries, Vol. 19, No. 203, March, 1944, pp. 512-513.)
644	20484 G.B. ...	<i>Welding in the Maintenance of Road Passenger Vehicles.</i> (N. H. Charles and G. Deacon, Sheet Metal Industries, Vol. 19, No. 203, March, 1944, pp. 515-518.)
645	20821 G.B. ...	<i>Welding Light Metals.</i> (Metal Industry, Vol. 64, No. 10, 10/3/44, p. 152.)
646	20910 G.B. ...	<i>American Spot and Seam Welding Practice.</i> (Engineering, Vol. 157, No. 4,078, 10/3/44, pp. 196-197.)
647	20993 G.B. ...	<i>Arc Welding Repair of Worm Wheels.</i> (Mechanical World, Vol. 115, No. 2,983, 3/3/44, pp. 229-231.)
648	20999 G.B. ...	<i>An Adaptable Welding Fixture.</i> (A. Keye, Mechanical World, Vol. 115, No. 2,983, 3/3/44, pp. 244-245.)
649	21015 Germany ...	<i>Butt Welding of Steel Tubes.</i> (A.E.G., Stahl und Eisen, Vol. 64, No. 7.)
Soldering, Brazing.		
650	20426 G.B. ...	<i>Aluminium Bronze Solder.</i> (Metal Industry, Vol. 44, No. 9, 3/3/44, p. 137.)
651	20478 G.B. ...	<i>Soldering Metal to Glass.</i> (Sheet Metal Industries, Vol. 19, No. 203, March, 1944, p. 494.)
652	20479 G.B. ...	<i>Hard Soldering Aluminium.</i> (Sheet Metal Industries, Vol. 19, No. 203, March, 1944, p. 495.)
653	20634 U.S.A. ...	<i>Lead-Base Soldered Joints in Copper Tubing.</i> (Journal of the Franklin Institute, Vol. 234, No. 2, August, 1942, pp. 164-165.)
654	20818 G.B. ...	<i>Aluminium¹ Brazing Sheet—A Consideration of the Fundamentals of Metal Flow.</i> (M. A. Miller, Metal Industry, Vol. 64, No. 10, 10/3/44, pp. 146-149.)
Joining, Jointing.		
655	20088 G.B. ...	<i>The Jointing of Metal.</i> (J. Aherne-Heron and L. N. Smith, Aircraft Engineering, Vol. 16, No. 180, Feb., 1944, pp. 59-60.)
656	20424 Germany ...	<i>Joining Zinc Alloys (Recommended German Welding Technique).</i> (A. G. Dornach, Metal Industry, Vol. 44, No. 9, 3/3/44, p. 135.)
Cutting, Boring, Stretch Forming.		
657	20351 G.B. ...	<i>Fine Boring Practice.</i> (P. Grodzinski, Machinery, Vol. 64, No. 1,635, 10/2/44, p. 155.)
658	20384 G.B. ...	<i>Flame Cutting of Metals by Enriched Coal Gas.</i> (Engineering, 25/2/44, p. 148.)
659	20398 U.S.A. ...	<i>Stretch-Forming of Sheet Metal.</i> (T. S. Clark and C. L. Fenn, Aero Digest, Vol. 43, No. 6, December, 1943, pp. 154-158, 250, 264-266.)
Plating, Spraying.		
660	20091 G.B. ...	<i>Determination of the Thickness of Tin Coatings on Metals (Tin Research Institute Publication, No. 115).</i> (Engineering, Vol. 157, No. 4,075, 18/2/44, p. 128.)

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| 661 | 20304 U.S.S.R. | ... <i>Practical Hints for Nitriding.</i> (Yakhonin, <i>Mechanical Engineering News</i> , Nos. 9-10, Sept.-Oct., 1943, p. 66.) |
| 662 | 20419 U.S.A. | ... <i>Problems in Spray Painting.</i> (P. J. Wilson, <i>Aero Digest</i> , Vol. 43, No. 6, December, 1943, pp. 253-254, 264.) |
| 663 | 20427 G.B. | ... <i>Development of Phosphate Coatings—Applications of Parkerizing and Bonderizing.</i> (R. C. Davies and S. J. Scouse, <i>Metal Industry</i> , Vol. 44, No. 9, 3/3/44, pp. 138-140.) |
| 664 | 20467 G.B. | ... <i>Electro-Tinning and Electro-Galvanizing of Strip Steel.</i> (<i>Sheet Metal Industries</i> , Vol. 19, No. 203, March, 1944, p. 439.) |
| 665 | 20480 G.B. | ... <i>The Adherence of Sheet Steel Vitreous Enamels.</i> (W. A. Deringer, <i>Sheet Metal Industries</i> , Vol. 19, No. 203, March, 1944, pp. 497-500.) |
| 666 | 20652 U.S.A. | ... <i>Coating Composition (Patent Specification 2,114,877).</i> (Ralph W. Hall.) |
| 667 | 20714 G.B. | ... <i>Rust-Proofing—Notes on the Use of Non-Metallic Phosphate Coatings (Parkerizing).</i> (<i>Automobile Engineer</i> , Vol. 34, No. 447, March, 1944, pp. 109-110.) |
| 668 | 20757 Germany | ... <i>Phosphatizing in the Cold (Anti-Rust).</i> (Z.V.D.I., Vol. 87, Nos. 49-50, 11/12/43, p. 794.) |
| 669 | 20819 G.B. | ... <i>Cadmium and Zinc Coatings—Revised American Specifications and Operating Conditions.</i> (<i>Metal Industry</i> , Vol. 64, No. 10, 10/3/44, p. 149.) |
| 670 | 20851 U.S.S.R. | ... <i>Chrome Plating of Steel and Iron Ware in the Gaseous Phase.</i> (N. S. Gorbunov and F. S. Baryshanskaya, <i>Reports of the Academy of Sciences</i> , Vol. 37 (New Series), No. 9, 1942, pp. 277-280.) |
| 671 | 20865 U.S.A. | ... <i>Protective Coating for Ceramics.</i> (<i>Industrial and Engineering Chemistry (News Edition)</i> , Vol. 22, No. 2, 25/1/44, p. 134.) |
| 672 | 20954 G.B. | ... <i>Insulating Varnishes—A Guide to Selection and Application.</i> (R. McGill, <i>Electrical Review</i> , Vol. 134, No. 3,456, 2/2/44, pp. 238-240.) |
| 673 | 20955 G.B. | ... <i>Protective Phosphate Coatings.</i> (<i>Electrical Review</i> , Vol. 134, No. 3,456, 18/2/44, p. 240.) |
| 674 | 20978 G.B. | ... <i>Protection by Paints Richly Pigmented with Zinc Dust.</i> (J. E. O. Mayne and U. R. Evans, <i>Chemistry and Industry</i> , No. 12, March, 1944, pp. 109-110.) |
| 675 | 21031 G.B. | ... <i>Design in Relation to Electrodeposition (Abstract).</i> (J. S. Jones and P. M. Walker, <i>Machinery</i> , Vol. 64, No. 1,636, 17/2/44, p. 186.) |
| Milling, Grinding, Turning. | | |
| 676 | 20353 G.B. | ... <i>Mixing Tank for Grinding Compounds.</i> (M. J. Thomas, <i>Machinery</i> , Vol. 64, No. 1,635, 10/2/44, p. 159.) |
| 677 | 20995 G.B. | ... <i>High Speed Milling (Woodworking Methods Applies to Light Alloys).</i> (P. Dubosclard, <i>Mechanical World</i> , Vol. 115, No. 2,983, 3/3/44, pp. 237-239.) |

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678	21024 G.B. <i>Turning and Other Operations on Die Castings.</i> (Machinery, Vol. 64, No. 1,637, February, 1944, pp. 217-219.)
Drawing, Rolling, Pressing.		
679	20310 U.S.S.R. ...	... <i>Cold Rolling Stresses.</i> (Turnovsky, Steel, Vol. 3, Nos. 5-6, 1943, pp. 32-35.)
680	20470 Germany ...	... <i>Time Study in Rolling Mills.</i> (K. Wuhrmann, Sheet Metal Industries, Vol. 19, No. 203, March, 1944, p. 444.)
Moulding, Casting.		
681	20136 G.B. ...	... <i>The Maintenance of Die Casting Dies.</i> (H. K. Barton, Machinery, Vol. 63, No. 1,629, 30/12/43, pp. 750-752.)
682	20262 G.B. ...	... <i>A Dual Purpose Air Press (for Compression Moulding and Light Metal Pressing).</i> (Aircraft Production, Vol. 6, No. 65, March, 1944, p. 124.)
683	20352 G.B. ...	... <i>Injection Moulding and Tools for Plastics.</i> (T. L. Daniels, Machinery, Vol. 64, No. 1,635, 10/2/44, pp. 157-159.)
684	20658 G.B. ...	... <i>Improvements in or Relating to Moulding Compositions (Patent Specification 410,770).</i> (Shawinigan Chemicals, Ltd.)
685	20784 G.B. ...	... <i>Gravity Die Casting in Non-Ferrous Alloys.</i> (E. A. H. Carlton, Mechanical World, Vol. 115, No. 2,982, 25/2/44, pp. 219-222.)
686	21025 G.B. <i>Aluminium Pressure Die Castings.</i> (Machinery, Vol. 64, No. 1,637, February, 1944, p. 219.)
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687	20094 G.B. <i>The Heating of Open-Hearth Furnaces with Mixed Gases.</i> (R. W. Evans, Engineering, Vol. 157, No. 4,075, 18/2/44, p. 136.)
688	20383 G.B. ...	... <i>The Heating of Open-Hearth Furnaces with Mixed Gases—II.</i> (R. W. Evans, Engineering, Vol. 157, No. 4,076, 25/2/44, pp. 145-146.)
689	20477 G.B. ...	... <i>Pressure Quenching of Rolled Steel.</i> (Sheet Metal Industries, Vol. 19, No. 203, March, 1944, p. 492.)
690	20548 G.B. ...	... <i>The Heating of Open-Hearth Furnaces with Mixed Gases—II.</i> (R. W. Evans, Engineering; Vol. 156, No. 4,077, 3/3/44, p. 176.)
691	20601 U.S.A. ...	... <i>Continuous Cooling Transformation Diagram (from Modified End-Quench Method).</i> (C. A. Liedholm, Metal Progress, Vol. 45, No. 1, January, 1944, pp. 94-99.)
692	20606 U.S.A. ...	... <i>Practical Application of Induction Heating Principles (Data Sheet).</i> (Metal Progress, Vol. 45, No. 1, January, 1944, p. 147.)
693	20618 U.S.A. ...	... <i>Hydrogen for High Frequency Cooling (Abstract).</i> (Journal of the Franklin Institute, Vol. 233, No. 4, April, 1942, p. 411.)
694	20633 U.S.A. <i>The Precipitation Hardening of Metals.</i> (P. D. Merion, Journal of the Franklin Institute, Vol. 234, No. 2, August, 1942, pp. 137-146.)

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| 696 | 20783 G.B. | ... <i>Heat Treatment of Magnesium Castings.</i> (<i>Mechanical World</i> , Vol. 115, No. 2,982, 25/2/44, p. 215.) |
| 697 | 20967 U.S.A. | ... <i>Ratio and Multiple Fuel Controls in the Steel Industry (Accurate Control of the Furnace Atmosphere).</i> (H. Ziebolz, A.S.M.E. Preprints, Spring Meeting, 3-5/5/44, 13 pp.) |
| 698 | 20994 G.B. | ... <i>The Quenching of Gears for Heat Treatment.</i> (<i>Mechanical World</i> , Vol. 115, No. 2,983, 3/3/44, pp. 231-233.) |
| 699 | 21012 Germany | ... <i>The Influence of C Content on the Hot Zincing of Sheet Steel.</i> (W. Pungel, <i>Stahl und Eisen</i> , Vol. 64, No. 7, 17/2/44, pp. 101-105.) |
| 700 | 21013 Germany | ... <i>The Effect of Tempering Temperature on the Strength Characteristics of Heat Treatable Steels in the Absence of Molybdenum.</i> (A. Krisch, <i>Stahl und Eisen</i> , Vol. 64, No. 7, 2/2/44, pp. 105-110.) |
| 701 | 21016 Germany | ... <i>Electric Heat Treatment Furnace for Saw Blades.</i> (<i>Gas und Elektro Wärme</i> , Vol. 1,943, No. 4, July, 1943, pp. 74-77.) |
| 702 | 21068 G.B. | ... <i>Small Electric Furnace for Non-Ferrous Alloys.</i> (<i>Mechanical World</i> , Vol. 115, No. 2,981, 18/2/44, p. 189.) |
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| 703 | 20473 G.B. | ... <i>Metal Finishing. Part IV—Overcoming the Problems of Degreasing and Cleaning.</i> (H. Silman, <i>Sheet Metal Industries</i> , Vol. 19, No. 203, March, 1944, pp. 467-473.) |
| 704 | 20717 G.B. | ... <i>Surface Finish—Review of the Various Processes, including Measurement—II.</i> (W. E. R. Clay, <i>Automobile Engineer</i> , Vol. 34, No. 447, March, 1944, pp. 119-125.) |
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| 705 | 20814 U.S.A. | ... <i>Recent Developments in Powder Metallurgy.</i> (<i>Automotive and Aviation Industries</i> , Vol. 89, No. 11, 1/12/43, p. 64.) |
| 706 | 20873 G.B. | ... <i>Powder Metallurgy (with Discussion).</i> (W. D. Jones, <i>The Institution of Production Engineer</i> , Vol. 23, No. 2, Feb., 1944, pp. 35-58.) |
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| 707 | 20131 G.B. | ... <i>How to Get the Most Out of Carbide Tools.</i> (<i>Machinery</i> , Vol. 63, No. 1,629, 30/12/43, p. 735.) |
| 708 | 20134 G.B. | ... <i>Countersinking Cutter for Blind Holes.</i> (<i>Machinery</i> , Vol. 63, No. 1,629, 30/12/43, p. 743.) |
| 709 | 20135 G.B. | ... <i>Spindle Bearings for Machine Tools.</i> (F. Koenigsberger, <i>Machinery</i> , Vol. 63, No. 1,629, 30/12/43, p. 744.) |

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710	20265 G.B. ...	<i>Novel Bending Tool.</i> (Aircraft Production, Vol. 6, No. 65, March, 1944, p. 136.)
711	20471 G.B. ...	<i>A Brief Survey of Press Tool Cost Estimating.</i> (K. E. Harper, Sheet Metal Industries, Vol. 19, No. 203, March, 1944, pp. 447-448, 454.)
712	20486 U.S.A. ...	<i>Increasing Tool Life by Better Tool Finishing.</i> (V. H. Ericson, Mechanical Engineering, Vol. 66, No. 2, Feb., 1944, pp. 107-119.)
713	20491 U.S.A. ...	<i>Tool Life Tests—Proposed Standard of Tool Life Tests for Evaluating the Machinability of Single-Point Tools, Cutting Fluids, or Materials Cut.</i> (G. W. Boston, Mechanical Engineering, Vol. 66, No. 2, February, 1944, pp. 130-132.)
714	20550 G.B. ...	<i>Developments in Carbide-Tipped Tools.</i> (Engineering, Vol. 156, No. 4, 077, 3/3/44, p. 180.)
715	20600 U.S.A. ...	<i>Tools for High Speed Milling and for Shell Forging.</i> (N. G. Meagley, Metal Progress, Vol. 45, No. 1, January, 1944, pp. 91-93.)
716	20638 Germany ...	<i>Development in Multiple Wire Drawing Machines (American and German Designs).</i> (H. Mueke, Stahl und Eisen, Vol. 64, No. 5, February, 1944, pp. 69-76.)
717	20751 Germany ...	<i>Infinitely Variable Gears for Machine Tools (Mechanical and Electric Drives).</i> (H. Schopke, Z.V.D.I., Vol. 87, Nos. 49-50, 11/12/43, pp. 773-780.)
718	20968 U.S.A. ...	<i>Nitriding of Hardened High Speed Steel Tools.</i> (J. G. Morrison, A.S.M.E. Preprints, Spring Meeting, 3-5/4/44, 11 pp.)
719	20969 U.S.A. ...	<i>Performance of Cutting Tools Chromium Plated by Lundbye Process.</i> (A. Lundbye, A.S.M.E. Preprints, Spring Meeting, 3-5/4/44, 11 pp.)
720	20988 G.B. ...	<i>Tool Design and Improvisation.</i> (Machinery, Vol. 64, No. 1,638, 2/3/44, p. 237.)
721	20996 G.B. ...	<i>Handling Methods for the Direct Feeding of Machine Tools (Use of Electric Hoist).</i> (From Z.V.D.I., Vol. 86, 1942, p. 632.) (Mechanical World, Vol. 115, No. 2,983, 3/3/44, p. 246.)
722	21028 G.B. ...	<i>Special Chuck for Internal Grinding Machines.</i> (E. Boneham, Machinery, Vol. 64, No. 1,636, 17/2/44, pp. 181-182.)
723	21030 G.B. ...	<i>Tipping a Worn Broach with Carbide.</i> (Machinery, Vol. 64, No. 1,636, 17/2/44, p. 183.)

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724	20008 G.B. ...	<i>The Action of Ultra-Violet Light on Liquid Benzene.</i> (C. B. Allsopp and B. Szigeti, J. of the Soc. of Chem. Ind., Vol. 63, No. 1, Jan., 1944, pp. 30-31.)
725	20045 U.S.A. ...	<i>Some Experiments in Stress Relieving Castings and Welded Structures by Vibration.</i> (R. T. McGoldrick and H. E. Saunders, Journal of the American Society of Naval Engineers, Vol. 55, No. 4, November, 1943, pp. 589-609.)

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726	20047 U.S.A.	... <i>Speeding up the Chemical Analysis of Miscellaneous Ferrous Alloys by Means of the Spectrograph.</i> (W. H. Hammond and F. Fong, Journal of the American Society of Naval Engineers, Vol. 55, No. 4, November, 1943, pp. 620-627.)
727	20132 G.B. ...	... <i>Practical Application of Quality Control.</i> (W. A. Bennet and J. W. Rodgers, Machinery, Vol. 63, No. 1,629, 30/12/43, pp. 737-740.)
728	20133 G.B. ...	... <i>A Simple Method of Control for Fine Finished Surfaces (Using a Microscope to Observe the Interference Fringes Produced by Monochromatic Light).</i> (Machinery, Vol. 63, No. 1,629, 30/12/43, pp. 741-743.)
729	20148 Canada	... <i>Fluorescent Penetrant Inspection for Surface Defects.</i> (F. S. Catlin, Commercial Aviation, Vol. 5, No. 11, Nov., 1943, pp. 87-88.)
730	20179 Germany	... <i>The Effect of Annealing Temperature and Period on the Previously Cold Worked Metal (Crystal Recuperation and Recrystallisation Phenomena).</i> (A. Pemp and G. Niebeh, Zeitschrift fur Metallkunde, Vol. 35, No. 5, May, 1943, pp. 111-117.)
731	20180 Germany	... <i>Superstructure Markings on Al.-Mn. and Al.-Mg.-Si. Sheet Metal After Anodic Treatment.</i> (H. Rohrig and E. Kopernick, Zeitschrift fur Metallkunde, Vol. 35, No. 5, May, 1943, pp. 117-120.)
732	20181 Germany	... <i>The Systematics of Metals and Alloys in Melted State (Presence or Absence of Intermetallic Combinations and Transitive Phenomena).</i> (F. Sanerwald, Zeitschrift fur Metallkunde, Vol. 35, No. 5, May, 1943, pp. 105-111.)
733	20252 G.B. ...	... <i>The Determination of Stresses in Drop Stamps—No. III.</i> (A. Blainey, Engineer, Vol. 177, No. 4,598, 25/2/44, p. 144.)
734	20434 U.S.A.	... <i>Spectrographic Determination of Nickel and Chromium in Stainless Steel.</i> (J. H. Coulliette, Ind. and Eng. Chem. (Analyt. Edit.), Vol. 15, No. 12, 15/12/43, pp. 732-734.)
735	20436 U.S.A.	... <i>Determining the Mechanical Stability of Emulsions—A Rapid Quantitative Method.</i> (R. C. Merrill, Ind. and Eng. Chem (Analyt. Edit.), Vol. 15, No. 12, 15/12/43, pp. 743-746.)
736	20437 U.S.A.	... <i>Determination of Copper in Cast Iron by Direct Microelectrolysis.</i> (W. M. MacNevin and R. A. Bournique, Ind. and Eng. Chem. (Analyt. Edit.), Vol. 15, No. 12, 15/12/43, pp. 759-762.)
737	20465 Germany	... <i>The Study of Crystal Recovery and Recrystallisation in Cold Worked Metal by Observing the Time Elapsing on Heating to Induce Changes in Hardness and Texture.</i> (From Zeitschrift fur Metallkunde, Vol. 35.) (A. Pemp and G. Niebeh, Sheet Metal Industries, Vol. 19, No. 203, March, 1944, pp. 428-433.)
738	20469 G.B. <i>Determination of the Thickness of Electrodeposited Tin Coatings.</i> (Sheet Metal Industries, Vol. 19, No. 203, March, 1944, p. 444.)

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739	20475 G.B. <i>A Comparison of the Properties of a Passivated and a Plain Zinc Surface.</i> (F. Taylor, <i>Sheet Metal Industries</i> , Vol. 19, No. 203, March, 1944, pp. 477-483, 493.)
740	20476 G.B. ...	... <i>Tests and Comments on Anodic Films as Used on Aluminium Alloy Parts of German Aircraft (M.A.P. Report).</i> (<i>Sheet Metal Industries</i> , Vol. 19, No. 203, March, 1944, pp. 491-492.)
741	20569 Japan	... <i>Investigations on Natural and Artificial Snow Crystals (Review).</i> (V. Nakaya, <i>Flugsport</i> ; Vol. 35, No. 14, 20/10/43, p. 220.)
742	20590 G.B. ...	... <i>Scope and Limitations of Infra-Red Measurements in Chemistry.</i> (H. W. Thompson, <i>Nature</i> , Vol. 153, No. 3,877, February, 1944, pp. 209-211.)
743	20597 U.S.A.	... <i>Recent Developments in X-Ray Inspection.</i> (<i>Metal Progress</i> , Vol. 45, No. 1, January, 1944, pp. 78-82.)
744	20609 U.S.A.	... <i>Pressure Quenching—Early Detection of Fatigue Cracks (Simple Methods).</i> (<i>Metal Progress</i> , Vol. 45, No. 1, January, 1944, pp. 89-90.)
745	20610 U.S.A.	... <i>Wax Impregnated Broadcloth Superior for Rough Polishing (Preparing Specimens for Inspection).</i> (<i>Metal Progress</i> , Vol. 45, No. 1, January, 1944, pp. 89-90.)
746	20639 — ...	... <i>The Testing of Cast Iron (Selection Between Tensile and Flexural Strength and Effect of Dimensions of Test Sample).</i> (K. Hofer, <i>Stahl und Eisen</i> , Vol. 64, No. 5, February, 1944, pp. 76-80.)
747	20759 Germany	... <i>Special Ovens Enabling Simultaneous Group Tests on 200 Specimens at 500°C.</i> (<i>Z.V.D.I.</i> , Vol. 87, Nos. 49-50, 11/12/43, p. 794.)
748	20929 Germany	... <i>Non-Destructive Testing of Light Alloys by Means of a Search Coil (Electrical Conductivity).</i> (F. Forster and H. Breitfeld, <i>Aluminium</i> , Vol. 25, No. 6, June, 1943, pp. 253-256.)

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749	20032 U.S.A.	... <i>Altimeter Setting Indicator.</i> (C. H. Colvin, <i>Journal of the Aeronautical Sciences</i> , Vol. 10, No. 8, Oct., 1943, pp. 250-252.)
750	20155 Germany	... <i>Fuel Gauge Depending on Tank Weight (Resistance Wire Strain Gauges).</i> (<i>Inter. Avia.</i> , Nos. 898-899, 11/12/43, pp. 15-16.)

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751	19868 U.S.A.	... <i>Stretch Rheostat Rosette. Part I—Steam Star Formules. Preprint.</i> (Douglas Aircraft Co., Inc., Report S.M. 3,126, 25/3/41.)
752	20082 G.B. ...	... <i>Strain Gauge Rosette Formulæ.</i> (J. C. King, <i>Aircraft Engineering</i> , Vol. 16, No. 180, Feb., 1944, pp. 32-37, 49.)
753	20839 G.B. <i>Bibliography of Published Information on Steam Gauges (Feb., 1944).</i> (R.T.P 3, Bibliography No., 99.)

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754	20989 G.B. ...	<i>The Measurement of Large Ring Screw Gauges.</i> (J. W. Drinkwater, <i>Machinery</i> , Vol. 64, No. 1,638, 2/3/44, pp. 238-240.)

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755	20354 G.B. ...	<i>Electronic Tube Flaw Detector.</i> (<i>Machinery</i> , Vol. 64, No. 1,635, 10/2/44, p. 159.)
756	20736 U.S.A. ...	<i>The Electronic Turbo Regulator*</i> (Minneapolis-Honeywell). (W. H. Gilbe and H. T. Sparrow, <i>Preprints of the Institute of the Aeronautical Sciences</i> , 25/1/44, pp. 1-13.)
757	20792 G.B. ...	<i>Electron Microscope. Part II—Specimen Mounting and Typical Results.</i> (W. Wilson, <i>Electrical Review</i> , Vol. 134, No. 3,457, 25/2/44, pp. 254-257.)
758	20812 U.S.A. ...	<i>G.E.C. Electronic Flaw Detector for Non-Magnetic Metallic Tubing.</i> (Automotive and Aviation Industries, Vol. 89, No. 11, 1/12/43, p. 38.)
759	20898 G.B. ...	<i>The Electron Microscope.</i> (W. Wilson, <i>Electronic Engineering</i> , Vol. 16, No. 193, March, 1944, pp. 414-417.)
760	20950 G.B. ...	<i>Electron Microscope. Part I—The Instrument.</i> (W. Wilson, <i>Electrical Review</i> , Vol. 134, No. 3,456, 18/2/44, pp. 218-222.)

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761	20055 U.S.A. ...	<i>The Amplidyne.</i> (F. Felix, <i>Journal of the American Society of Naval Engineers</i> , Vol. 55, No. 4, November, 1943, pp. 774-778.)
762	20077 G.B. ...	<i>New Form of Microfilm Reader.</i> (E. N. J. Schuster, <i>Nature</i> , Vol. 153, No. 3,875, 5/2/44, pp. 155-157.)
763	20263 G.B. ...	<i>High Speed Movement (New Stroboscope Tachometer and Photographic Equipment for Studying Machine Performance).</i> (<i>Aircraft Production</i> , Vol. 6, No. 65, March, 1944, pp. 125-128.)
764	20290 G.B. ...	<i>Switchgear Instruments (Mounting and Operation).</i> (<i>Electrical Review</i> , Vol. 134, No. 3,455, 11/2/44, pp. 185-186.)
765	20417 U.S.A. ...	<i>The "Temp-Turb" Control Unit (New G.E.C. Air-Operated Thermal Sensitive Device Provides Temperature Control of Ducted Air.</i> (<i>Aero Digest</i> , Vol. 43, No. 6, December, 1943, pp. 244-245.)
766	20749 U.S.A. ...	<i>Theory of the Centrifugally Tuned Vibration Absorber.</i> (R. J. Harker, <i>Preprints of the Institute of the Aeronautical Sciences</i> , 12th Annual Meeting, 25/1/44, pp. 1-23.)
767	20877 G.B. ...	<i>Gyroscopic Principles and Applications.</i> (<i>Nature</i> , Vol. 153, No. 3,879, 4/3/44, pp. 277-278.)
768	20931 G.B. ...	<i>The British Scientific Instrument Industry.</i> (<i>Nature</i> , Vol. 152, No. 3,868, 18/12/43, pp. 704-706.)

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769	20145	Canada ... <i>Canada's Aircraft Production 1939-1943.</i> (W. A. Hunter, <i>Commercial Aviation</i> , Vol. 5, No. 11, Nov., 1943, pp. 48-54.)
770	20172	Switzerland ... <i>Allied Aircraft Production (16,500 Machines a Month).</i> (<i>Inter. Avia.</i> , Nos. 898-899, 11/12/43, p. 22.)
771	20178	U.S.A. ... <i>Weight Control and Organisation for Manufacturers.</i> (C. B. Peterson, S.A.W.E. Preprints, Paper No. 26.)
772	20184	U.S.A. ... <i>Manufacturing and Maintenance Join Hands (Douglas Scheme).</i> (D. S. Sprague, <i>Aviation</i> , Vol. 42, No. 12, Dec., 1943, pp. 120-123, 327.)
773	20189	U.S.A. ... <i>Curtiss-Wright Propeller Maintenance Organisation.</i> (<i>Aviation</i> , Vol. 42, No. 12, Dec., 1943, pp. 144-146.)
774	20213	U.S.A. ... <i>American Aircraft Output (8,789 Aircraft).</i> (S. Hershey, <i>Aviation News</i> , Dec., 1943, pp. 16-19.)
775	20439	U.S.A. ... <i>Critical Transition Period Facing U.S. Industry After Termination of Hostilities (Survey of Problems).</i> (J. F. Fennelly, <i>Mechanical Engineering</i> , Vol. 66, No. 2, February, 1944, pp. 105-106, 134.)
776	20542	G.B. ... <i>Joint Production Committees.</i> (<i>Engineer</i> , Vol. 177, No. 4,599, 3/3/44, p. 170.)
777	20551	G.B. ... <i>Planning and the Machinery of Government.</i> (<i>Nature</i> , Vol. 153, No. 3,878, 26/2/44, pp. 231-234.)
778	20636	Germany ... <i>Demarcation of Duties Between Ministry of Economics and Ministry of War Production (dated 23/12/43).</i> (<i>Stahl und Eisen</i> , Vol. 64, No. 4, January, 1944, p. 67.)
779	20696	U.S.A. ... <i>American Aircraft Production (Official Figures for 1943).</i> (<i>Inter. Avia.</i> , Nos. 901-902, 10/1/44, p. 20.)
780	20715	G.B. ... <i>America at War (Conservation of Critical Materials, Labour Organisation, etc.).</i> (<i>Automobile Engineer</i> , Vol. 34, No. 447, March, 1944, pp. 111-114.)
781	20761	Germany ... <i>Aircraft Production and Munitions. Authorities in Germany.</i> (<i>Inter. Avia.</i> , Nos. 886-887, 27/9/43, pp. 10-12.)
782	20767	U.S.A. ... <i>American Aircraft Production in 1943.</i> (<i>Inter. Avia.</i> , Nos. 886-887, 27/9/43, p. 20.)
783	20816	U.S.A. ... <i>Manpower Shortage with Special Reference to the Bearing Industry.</i> (<i>Automotive and Aviation Industries</i> , Vol. 89, No. 11, 1/12/43, pp. 17, 87-90.)
784	20838	U.S.A. ... <i>Bibliography of N.A.C.A. Technical Notes (Feb., 1944).</i> (R.T.P.3, Bibliography No. 98.)
785	20944	Germany ... <i>Methods of Saving Time and Material in the Shop (Drilling of Conical Holes, Fixing Tyres, etc.). (Selection of Staff Suggestions).</i> (A. Westrup, <i>Motor Schau</i> , Vol. 7, Nos. 10, 11, 12, Oct., Nov., Dec., 1943, pp. 240-242.)

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| 786 | 21089 U.S.A. | ... <i>Controlling Quality in Mass Production.</i> (E. D. Williams, <i>Aero Digest</i> , Vol. 43, No. 4, October, 1943, pp. 174-176, 226.) |
| Research and Training. | | |
| 787 | 20109 U.S.A. | ... <i>Survey of Aeronautical Research in the U.S.A. to be Carried Out by the N.A.C.A.</i> (Inter. Avia., Nos. 894-895, 18/11/43, p. 21.) |
| 788 | 20237 G.B. | ... <i>Industrial Education of Youth.</i> (J. Glover, <i>Aeroplane</i> , Vol. 66, No. 1,709, 25/2/44, p. 212.) |
| 789 | 20238 G.B. | ... <i>Training the Engineer.</i> (E. N. B. Bentley, <i>Aeroplane</i> , Vol. 66, No. 1,709, 25/2/44, p. 213.) |
| 790 | 20239 G.B. | ... <i>Westland Aircraft Education Scheme.</i> (<i>Aeroplane</i> , Vol. 66, No. 1,709, 25/2/44, p. 216.) |
| 791 | 20240 G.B. | ... <i>Aero Engine Apprentice Training (Rolls Royce Scheme).</i> (<i>Aeroplane</i> , Vol. 66, No. 1,709, 25/2/44, p. 217.) |
| 792 | 20253 G.B. | ... <i>Research of Aeronautics: Its Planning and Application—No. 1.</i> (W. S. Farren, <i>Engineer</i> , Vol. 177, No. 4,598, 25/2/44, pp. 146-148.) |
| 793 | 20361 G.B. | ... <i>The Education and Training of Aeronautical Engineers (Preprint).</i> (Royal Aeronautical Society, June, 1943.) |
| 794 | 20389 G.B. | ... <i>Regional Planning and Research in the U.S.A.</i> (<i>Nature</i> , Vol. 153, No. 3,876, 12/2/44, p. 200.) |
| 795 | 20412 U.S.A. | ... <i>Graphical Aids for Designer and Draftsman—Part I.</i> (H. C. Martin, <i>Aero Digest</i> , Vol. 43, No. 6, December, 1943, pp. 219-223, 272-274.) |
| 796 | 20430 U.S.A. | ... <i>Engineering Education in the Soviet Union.</i> (J. G. Tolpin, <i>Chemical and Engineering News</i> , Vol. 21, No. 24, 25/12/43, pp. 2090-2099.) |
| 797 | 20500 G.B. | ... <i>Simplified Drawings for Industrial Recruits.</i> (<i>Production and Engineering Bulletin</i> , Vol. 3, No. 14, January, 1944, pp. 19-20.) |
| 798 | 20518 G.B. | ... <i>Some Aspects of Invention and its Relation to Industry.</i> (E. W. Moss, <i>Journal of the Inst. of Electrical Engineers</i> , Vol. 91, No. 37, January, 1944, pp. 28-31.) |
| 799 | 20540 G.B. | ... <i>The Training of Metallurgists.</i> (<i>Engineer</i> , Vol. 177, No. 4,599, 3/3/44, pp. 176-177.) |
| 800 | 20348 G.B. | ... <i>Small Differences in Engineering Design Calculations.</i> (W. A. Tuplin, <i>Machinery</i> , Vol. 64, No. 1,635, 10/2/44, pp. 149-151.) |
| 801 | 20554 G.B. | ... <i>Science and Technology in North-West China.</i> (J. Needham, <i>Nature</i> , Vol. 153, No. 3,878, 26/2/44, pp. 238-241, 247.) |
| 802 | 20560 G.B. | ... <i>National Research Council of Canada.</i> (<i>Nature</i> , Vol. 153, No. 3,878, 26/2/44, pp. 262-263.) |
| 803 | 20588 U.S.A. | ... <i>Abstracts of Papers Presented at 12th Annual Meeting (Booklet).</i> (Institute of the Aeronautical Sciences 12th Annual Meeting, pp. 1-24.) |
| 804 | 20589 G.B. | ... <i>Library Resources of Great Britain.</i> (<i>Nature</i> , Vol. 153, No. 3,877, February, 1944, pp. 203-205.) |

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805	20632 U.S.A.	... <i>Aeronautical Research</i> . (J. C. Hunsaker, Journal of Franklin Institute, Vol. 234, No. 2, August, 1942, pp. 133-136.)
806	20840 G.B. ...	... <i>Bibliography of Published Information on the Education and Training of Engineers</i> (Dec., 1943). (R.T.P.3, Bibliography No. 100.)
807	20861 U.S.A.	... <i>Chemical Research for the Aeroplane Industry</i> (Metals, Plastics, Adhesives, etc.). (O. E. York, Industrial and Engineering Chemistry (News Edition), Vol. 22, No. 2, 25/1/44, pp. 86-88.)
808	20875 G.B. ...	... <i>Production Engineering Abstracts</i> . (The Institution of Production Engineers, Vol. 23, No. 2, Feb., 1944, pp. 13-22.)
Aircraft Production Methods.		
809	20087 G.B. ...	... <i>Perspective Drawings for Aeroplane Handbooks</i> . (J. H. Stevens, Aircraft Engineering, Vol. 16, No. 180, Feb., 1944, pp. 51-58, 60.)
810	20121 U.S.A.	... <i>Consolidated P4Y-1 Flying Boat in Production</i> . (Inter. Avia., No. 893, 8/11/43, p. 15.)
811	20123 U.S.A.	... <i>Glider Construction with U.S.A.</i> (Inter. Avia., No. 893, 8/11/43, p. 16.)
812	20146 Canada	... <i>Making Flying Suits for the R.C.A.F.</i> (G. Sinclair, Commercial Aviation, Vol. 5, No. 11, Nov., 1943, pp. 62-66.)
813	20151 Canada	... <i>Metal Wings for Martin's P.B.M.s</i> (Fairchild Wing Production Plant). (Commercial Aviation, Vol. 5, No. 11, Nov., 1943, pp. 108-112.)
814	20163 Switzerland	... <i>Sikorsky R-4 Helicopter in Quantity Production</i> . (Inter. Avia., Nos. 898-899, 11/12/43, p. 19.)
815	20258 G.B. ...	... <i>Straightening Light Alloy Sections</i> (Stretching and Detwisting Equipment). (Aircraft Production, Vol. 6, No. 65, March, 1944, pp. 107-110.)
816	20259 U.S.A.	... <i>Lockheed Lightning</i> (Design and Production Details). (Aircraft Production, Vol. 6, No. 65, March, 1944, pp. 111-121.)
817	20261 G.B. ...	... <i>Recent Developments in Heat Treatment Plant for the Aircraft Industry</i> . (Aircraft Production, Vol. 6, No. 65, March, 1944, pp. 122-124.)
818	20264 G.B. ...	... <i>Light Alloy Castings</i> (Gravity Die Casting the Avro Lancaster Undercarriage Support Beam). (Aircraft Production, Vol. 6, No. 65, March, 1944, pp. 131-136.)
819	20268 G.B. ...	... <i>Magnesium Casting Production</i> (for Pratt and Whitney Engine Components). (Aircraft Production Vol. 6, No. 65, March, 1944, pp. 145-148.)
820	20269 G.B. ...	... <i>Tubular Assembly Fixtures</i> (American Trends in the Design of Production Equipment). (Aircraft Production, Vol. 6, No. 65, March, 1944, pp. 149-150.)
821	20375 U.S.A.	... <i>Tool to Lap Engine Cylinders</i> . (Air Transport, Vol. 1, No. 2, Oct., 1943, pp. 78-79.)
822	20403 U.S.A.	... <i>Lofting Problems of Streamline Bodies</i> (Part 20). (C. M. Hartley and R. A. Liming, Aero Digest, Vol. 43, No. 6, December, 1943, pp. 176-179, 274.)

ITEM NO.	R.T.P. REF.	TITLE AND JOURNAL.
823	20407 U.S.A.	... <i>Packaging Precision Parts.</i> (Aero Digest, Vol. 43, No. 6, December, 1943, pp. 174, 274.)
824	20408 U.S.A.	... <i>Pre-Installation Testing of Accessories (Curtiss-Wright System).</i> (Aero Digest, Vol. 43, No. 6, December, 1943, pp. 196-200.)
825	20413 U.S.A.	... <i>Plane Production Illustration.</i> (O. J. Chayie and G. Tharratt, Aero Digest, Vol. 43, No. 6, Dec., 1943, pp. 224-229, 278-280.)
826	20418 U.S.A.	... <i>Boeing's New Piercing Die, Incorporating 388 Co-ordinated Punches.</i> (Aero Digest, Vol. 43, No. 6, December, 1943, pp. 247-248, 262.)
827	20526 U.S.A.	... <i>Receiving, Handling, Inspecting and Storing Aeroplane Glasses.</i> (Aviation Maintenance, Vol. 1, No. 2, Jan., 1944, pp. 50-51, 114-116.)
828	20543 G.B. ...	... <i>Features of German Aircraft Affecting Production and Maintenance.</i> (Engineering, Vol. 156, No. 4, 077, 3/3/44, pp. 161-163, 170.)
829	20604 U.S.A.	... <i>Steel Aircraft Tubing of NE. 8,630 Steel.</i> (A. J. Williamson, Metal Progress, Vol. 45, No. 1, January, 1944, pp. 115-118.)
830	20808 U.S.A.	... <i>Applications of Armasteel in War Products.</i> (J. H. Smith, Automotive and Aviation Industries, Vol. 89, No. 11, 1/12/43, pp. 28-29.)
831	20811 U.S.A.	... <i>Reduction of Assembly Time Through Maintenance of Dimensional Integrity in Production (Lockheed Methods of Drafting, Lofting, Photo-Templates, etc.).</i> (B. C. Boulton and H. N. Harrison, Automotive and Aviation Industries, Vol. 89, No. 1, 1/12/43, pp. 34-37, 69-70.)
832	20835 G.B. ...	... <i>Engineering Aspects of Plastics with Special Reference to Aircraft Construction (Jan., 1944).</i> (R.T.P.3, Bibliography No. 95.)
833	20836 G.B. ...	... <i>Standardisation (Materials, Aero Engines, Controls, Radio Equipment, etc.) (Jan., 1944).</i> (R.T.P.3, Bibliography No. 96.)
834	20874 G.B. ...	... <i>Assembling Bomber Wiring Cables.</i> (R. C. Willan, The Institution of Production Engineer, Vol. 23, No. 2, Feb., 1944, pp. 59-62.)
835	20920 G.B. ...	... <i>Stressed Cellular Construction for Aeroplanes.</i> (J. W. Taylor, Aeroplane, Vol. 66, No. 1, 711, 10/3/44, p. 278.)
836	20937 Germany	... <i>Italy's Aircraft Industry—Fiat Types.</i> (Der Deutsche Sportflieger, Vol. 10, No. 11, Nov., 1943, pp. 180-181.)
837	21063 G.B. ...	... <i>Manufacturing the Supercharger for Packard Built Rolls Royce Engines.</i> (Mechanical World, Vol. 115, No. 2, 981, 18/2/44, pp. 176-177, 179.)
838	21066 G.B. ...	... <i>Engine Features for Economical Production (Methods to Facilitate Batch Production of Medium-Sized Engines).</i> (R. E. Strub, Mechanical World, Vol. 115, No. 2, 981, 18/2/44, pp. 180-183, 191.)
839	21087 U.S.A.	... <i>Chevrolet Streamlined Aluminium Forge (for Propeller Production).</i> (F. M. Beck, Aero Digest, Vol. 43, No. 4, October, 1943, pp. 158-162.)

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| 840 | 21090 U.S.A. | ... <i>High Frequency Heating Applied to Aircraft Wood-work.</i> (P. H. Bilhuber and W. Godfrey, <i>Aero Digest</i> , Vol. 43, No. 4, October, 1943, pp. 178-186, 235.) |
| 841 | 21091 U.S.A. | ... <i>New Developments in Plastics for Aircraft (Low Pressure Laminating, Heatronic Moulding, Jet Moulding and Transfer Moulding).</i> (D. M. Buchanan, <i>Aero Digest</i> , Vol. 43, No. 4, October, 1943, pp. 188-192, 237.) |
| 842 | 21094 U.S.A. | ... <i>Lofting Problems of Streamline Bodies—Part 18.</i> (C. M. Hartley and R. A. Liming, <i>Aero Digest</i> , Vol. 43, No. 4, October, 1943, pp. 204-210.) |
| 843 | 21098 U.S.A. | ... <i>Projecting Labour Loads in Aircraft Production.</i> (P. B. Crouse, <i>Aero Digest</i> , Vol. 43, No. 4, Oct., 1943, pp. 216-218, 242-243.) |
| 844 | 21099 U.S.A. | ... <i>Changes in Aircraft Materials Distribution Programme (Work of the Aircraft Scheduling Unit).</i> (<i>Aero Digest</i> , Vol. 43, No. 4, Oct., 1943, pp. 220-224.) |
| Other Production Methods. | | |
| 845 | 20130 G.B. ... | ... <i>Mass Production of High Explosive Shells.</i> (<i>Machinery</i> , Vol. 63, No. 1,629, 30/12/43, pp. 729-734.) |
| 846 | 20138 Canada | ... <i>Degreasing for Greater Efficiency in Production.</i> (<i>Commercial Aviation</i> , Vol. 5, No. 11, Nov., 1943, p. 120.) |
| 847 | 20346 G.B. ... | ... <i>The Production of the Magazine for the Sten Gun.</i> (<i>Machinery</i> , Vol. 64, No. 1,635, 10/2/44, pp. 141-146.) |
| 848 | 20347 G.B. ... | ... <i>Welding in Shipbuilding.</i> (<i>Machinery</i> , Vol. 64, No. 1,635, 10/2/44, p. 148.) |
| 849 | 20350 G.B. ... | ... <i>Designing Castings for Production.</i> (<i>Machinery</i> , Vol. 64, No. 1,635, 10/2/44, p. 152-153.) |
| 850 | 20356 U.S.A. | ... <i>Rifling Gun Barrels by Broaching.</i> (I. A. Swidlo, <i>Machinist</i> , Vol. 87, No. 41, 29/1/44, p. 8.) |
| 851 | 20378 G.B. ... | ... <i>Some Principles of Cold-Working—Their Application to the Manufacture of Artillery Cartridge Brass.</i> (D. H. Lloyd, <i>Metal Industry</i> , Vol. 64, No. 8, 25/2/44, pp. 117-119.) |
| 852 | 20421 G.B. ... | ... <i>Some Principles of Cold-Working—Their Application to the Manufacture of Artillery Cartridge Cases—Part IX.</i> (D. H. Lloyd, <i>Metal Industry</i> , Vol. 44, No. 9, 3/3/44, pp. 130-132.) |
| 853 | 20432 U.S.A. | ... <i>New Dehydration Packaging Method.</i> (R. L. Hockley, <i>Chemical and Engineering News</i> , Vol. 21, No. 24, 25/12/43, pp. 2132-2136.) |
| 854 | 20472 Germany | ... <i>The Use of Phosphate Coated and Lacquered Steel Sheet for Food Can Manufacture.</i> (From <i>Stahl und Eisen</i> , Vol. 62, No. 33.) (L. Schuster, <i>Sheet Metal Industries</i> , Vol. 19, No. 203, March, 1944, pp. 449-454.) |
| 855 | 20502 G.B. ... | ... <i>Planned Production Gauging (Frame System Speeds Inspection Reduces Fatigue and Protects Gauges.</i> (<i>Production and Engineering Bulletin</i> , Vol. 3, No. 14, January, 1944, pp. 33-37.) |

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856	20503 G.B. ...	<i>Reclamation of Porous Castings.</i> (Production and Engineering Bulletin, Vol. 3, No. 14, January, 1944, pp. 39-41.)
857	20534 U.S.A. ...	<i>Navy Uses Microfilming to Aid Repair (Reproduction of Engineering Drawings).</i> (Aviation Maintenance, Vol. 1, No. 2, Jan., 1944, pp. 70-71.)
858	20712 G.B. ...	<i>Production Milling.</i> (Automobile Engineer, Vol. 34, No. 447, March, 1944, pp. 102-106.)
859	20779 G.B. ...	<i>Recent Welding Developments in British Merchant Shipbuilding.</i> (R. B. Shephard, Mechanical World, Vol. 115, No. 2,982, 25/2/44, pp. 203-206.)
860	20864 U.S.A. ...	<i>Plastic Tyres Announced by Goodyear (Plioflex).</i> (Industrial and Engineering Chemistry (News Edition), Vol. 22, No. 2, 25/1/44, p. 133.)
861	20939 Germany ...	<i>Armament Production (Photographs of Anti-Tank Guns, Tiger Tanks, etc.).</i> (Motor Schau, Vol. 7, Nos. 10, 11, 12, October. November, December, 1943, pp. 209-213.)
862	20984 G.B. ...	<i>Sten Gun Manufacture.</i> (Machinery, Vol. 64, No. 1,638, 2/3/44, pp. 225-229.)
863	20985 G.B. ...	<i>Production of Mountings for 90 mm. A.A. Guns.</i> (Machinery, Vol. 64, No. 1,638, 2/3/44, pp. 231-235.)
864	21017 Germany ...	<i>Flame Hardening in the Motor Car and Engine Industry.</i> (Gas und Elektro Wärme, Vol. 1,943, No. 4, July, 1943, pp. 84-86.)
865	21018 Germany ...	<i>The Rochling "O-Ce" Hardening Process for Gear Wheels containing .8 per cent. C.</i> (Gas und Elektro Wärme, Vol. 1,943, No. 4, July, 1943, p. 86.)
866	21020 G.B. ...	<i>Methods in the Production of the Sten Gun Magazine.</i> (Machinery, Vol. 64, No. 1,637, February, 1944, pp. 197-202.)
867	21022 G.B. ...	<i>Operations on 90 mm. A.A. Gun Mountings (Cutting, Welding and Other Processes).</i> (Machinery, Vol. 64, No. 1,637, February, 1944, pp. 205-209.)
868	21026 G.B. ...	<i>The Production of the Sten Gun (Press Tool Operations on the Magazine).</i> (Machinery, Vol. 64, No. 1,636, 17/2/44, pp. 169-173.)
869	21027 G.B. ...	<i>Manufacture of Steel Cartridge Cases.</i> (Machinery, Vol. 64, No. 1,636, 17/2/44, pp. 175-180.)
870	21034 G.B. ...	<i>Post-War Prospects of the Machine Tool Industry.</i> (R. E. Flanders, Machinery, Vol. 64, No. 1,636, 17/2/44, pp. 191-192.)
871	21053 G.B. ...	<i>Improvements in the Manufacture of Piston and Like Packing Rings (Powder Metallurgy Process).</i> (British Piston Ring Co., British Patent Specification No. 551,232.)
872	21054 G.B. ...	<i>Improvement in the Manufacture of Piston and Like Packing Rings (Powder Metallurgy Process).</i> (British Piston Ring Co., British Patent Specification No. 552,532.)

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873	21055 G.B. <i>Improvements in and in the Manufacture of Metal Inserts (Powder Metallurgy Process)</i> . (British Piston Ring Co., British Patent Specification No. 558,182.)
874	21056 G.B. ...	... <i>Improvements in or Relating to the Manufacture of Metal Articles or Masses (Piston Rings, Valve Guides, Valve Seat Inserts, etc., by the Powder Metallurgy Process)</i> . (British Patent Specification No. 538,227.)
875	21057 G.B. ...	... <i>Improvements in and in the Manufacture of Piston and Like Packing Rings (Powder Metallurgy Process)</i> . (British Piston Ring Co., British Patent Specification No. 558,408.)
Plant Equipment.		
876	20143 Canada ...	... <i>Unique Levelling Table for Making Propellers (Photo)</i> . (Commercial Aviation, Vol. 5, No. 11, Nov., 1943, p. 144.)
877	20267 G.B. ...	... <i>Workshop Micrometers (Suggestions to Reduce Rejected Work)</i> . (Aircraft Production, Vol. 6, No. 65, March, 1944, p. 142.)
878	20355 U.S.A. ...	... <i>Drilling Jig for Small Handwheels</i> . (W. Danks, Machinist, Vol. 87, No. 141, 29/1/44, p. 256E.)
879	20474 G.B. ...	... <i>Developments in Hydro-Pneumatic Squeeze Riveting Equipment</i> . (Sheet Metal Industries, Vol. 19, No. 203, March, 1944, pp. 475-476.)
880	20501 G.B. ...	... <i>Quality Control on Hand-Operated Machines</i> . (Production and Engineering Bulletin, Vol. 3, No. 14, January, 1944, pp. 11, 19-20.)
881	20504 G.B. ...	... <i>Shock-Absorbing Riveting Dolly</i> . (Production and Engineering Bulletin, Vol. 3, No. 14, January, 1944, p. 47.)
882	20544 G.B. ...	... <i>Pneumatic Riveter for Aircraft Construction</i> . (Engineering, Vol. 156, No. 4,077, 3/3/44, p. 166.)
883	20546 G.B. ...	... <i>The Engineering Outlook. VIII—Machine Tools</i> . (Engineering, Vol. 156, No. 4,077, 3/3/44, p. 174.)
884	20565 Germany ...	... <i>Device for Checking Sub-Contractors' Aircraft Jigs</i> . (Junkers, Flugsport, Vol. 35, No. 14, 20/10/43, p. 207.)
885	20793 G.B. ...	... <i>Immersion Heaters—Application to Industrial Processes</i> . (R. W. J. Cockram, Electrical Review, Vol. 134, No. 3,457, 25/2/44, pp. 263-264.)
886	20805 U.S.A. ...	... <i>Bendix-Westinghouse Organised to Produce Variety of Pneumatic Power Equipment (Routing Equipment, etc.)</i> . (J. Geschelin, Automotive and Aviation Industries, Vol. 89, No. 1, 1/12/43, pp. 18-21, 62-64.)
887	20866 U.S.A. ...	... <i>Tin Electroplating Process (Du Pont Halogen Tin Process)</i> . (Industrial and Engineer Chemistry (News Edition), Vol. 22, No. 2, 25/1/44, p. 134.)
888	21021 G.B. <i>The Jig and Tool Efficiency Engineer</i> . (Machinery, Vol. 64, No. 1,637, February, 1944, p. 203.)

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| 889 | 21032 G.B. ... | ... <i>Truing and Readjustment of Grinding Wheels (German Patent)</i> . (Machinery, Vol. 64, No. 1,636, 17/2/44, p. 187.) |
| 890 | 21033 G.B. ... | ... <i>Consolidated Pneumatic Tool 2,044 One-Shot Riveter</i> . (Machinery, Vol. 64, No. 1,636, 17/2/44, pp. 189-190.) |
| 891 | 21035 G.B. ... | ... <i>R.C.A. Electronic Rivet Detonator</i> . (Machinery, Vol. 64, No. 1,636, 17/2/44, p. 194.) |
| 892 | 21036 G.B. ... | ... <i>Geometrical v. Arithmetical Progression (for Speeds of Work in Machine Tool Design)</i> . (Machinery, Vol. 64, No. 1,636, 17/2/44, pp. 185-186.) |
| 893 | 21067 G.B. | ... <i>Metrovick "Lo-Volt" Miniature Electric Soldering Iron</i> . (Mechanical World, Vol. 115, No. 2,981, 18/2/44, pp. 186-187.) |
| 894 | 21092 U.S.A. ... | ... <i>Vertical Lofting Board Saves Space and Speeds Work</i> . (Aero Digest, Vol. 43, No. 4, October, 1943, p. 194.) |
| 895 | 21100 U.S.A. ... | ... <i>Redesign of Arc Welded Jigs Reduces Machining</i> . (H. V. Wenger, Aero Digest, Vol. 43, No. 4, October, 1943, pp. 228-230, 240.) |

Workers' Welfare.

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| 896 | 20255 G.B. ... | ... <i>The Fencing of Dangerous Parts of Machinery</i> . (H. A. Hepburn, Engineer, Vol. 177, No. 4,598, 25/2/44, pp. 149-151.) |
| 897 | 20448 G.B. ... | ... <i>Protective Creams for Hands of Industrial Workers</i> . (Aeroplane, Vol. 66, No. 1,710, 3/3/44, p. 235.) |
| 898 | 20488 U.S.A. ... | ... <i>Wage Incentives Under Wartime Conditions</i> . (J. W. Nickerson, Vol. 66, Mechanical Engineering, No. 2, February, 1944, pp. 115-118, 120.) |
| 899 | 20499 G.B. ... | ... <i>Employing Limbless Workers</i> . (Production and Engineering Bulletin, Vol. 3, No. 14, January, 1944, p. 2-11.) |
| 900 | 20635 Germany ... | ... <i>Psychological Tests in the Factory—Selection of Duties and Promotions (with Special Reference to the Training of Foremen)</i> . (E. Bornemann, Stahl und Eisen, Vol. 64, No. 3, January, 1944, p. 37.) |
| 901 | 20640 Germany ... | ... <i>Physiological Evaluation of Manual Labour (Differentiation Between Heavy and Light Work, Fatigue Reference Standards, etc.)</i> . (G. Lehmann, Stahl und Eisen, Vol. 64, No. 6, 10/2/44, pp. 85-90.) |
| 902 | 21088 U.S.A. ... | ... <i>Eliminating Test Stand Noise</i> . (P. J. Sturm, Aero Digest, Vol. 43, No. 4, October, 1943, pp. 172, 236.) |

TRANSPORT

(MILITARY VEHICLES, CARS, LOCOMOTIVES).

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| 903 | 20711 G.B. ... | ... <i>Daimler Armoured Car (Mark I)</i> . (Automobile Engineer, Vol. 34, No. 447, March, 1944, pp. 87-101.) |
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ITEM NO.	R.T.P. REF.	TITLE AND JOURNAL.
904	20755 Germany ...	<i>Self-Locking Differential Drives for Motor Transport (Thrust Limited by Slip of Both Wheels Instead of only One for Normal Drive)</i> . (Z.V.D.I., Vol. 87, Nos. 49-50, 11/12/43, p. 790.)
905	20760 Germany ...	<i>Motor Transport Over Snow—Modifications of Caterpillar Chains</i> . (Z.V.D.I., Vol. 87, Nos. 49-50, 11/12/43, p. 793.)
906	20774 U.S.A. ...	<i>Smoke Generators for Identifying Movement of Military Vehicles to the Air Observer</i> . (Inter. Avia., Nos. 886-887, 27/9/43, p. 29.)
907	20810 U.S.A. ...	<i>Morris Armoured Car with Frameless Chassis</i> . (M. W. Bourdon, Automotive and Aviation Industries, Vol. 89, No. 11, 1/12/43, pp. 33, 77.)
908	20825 G.B. ...	<i>Plastic Four-Wheeled Passenger Van</i> . (Engineer, Vol. 177, No. 4,600, 10/3/44, pp. 188-189.)
909	20829 G.B. ...	<i>Rapid Repair of Locomotives</i> . (Engineer, Vol. 177, No. 4,600, 10/3/44, pp. 197-198.)
910	20844 G.B. ...	<i>Motor Traffic in France</i> . (Petroleum Times, Vol. 48, No. 1,216, 4/3/44, p. 145.)
911	20942 Germany ...	<i>Mercedes-Benz Charcoal Gas Generators for Transport Vehicles</i> . (Motor Schau., Vol. 7, Nos. 10, 11, 12, Oct., Nov., Dec., 1943, pp. 229-231.)
912	20943 Germany ...	<i>Progress in Gas Generators of Swiss Design</i> . (W. Trachsel, Motor Schau, Vol. 7, Nos. 10, 11, 12, Oct., Nov., Dec., 1943, pp. 232-238.)

WIRELESS AND ELECTRICITY.

Radio and Telecommunication.

913	20206 Germany ...	<i>A Precision Wave Meter for the 14cm. Wave Length Range</i> . (A. Weissfloch, E.T.Z., Vol. 64, Nos. 39-40, 7/10/43, p. 539.)
914	20226 G.B. ...	<i>Aerial Characteristics. VI—Thin Cylindrical Aerials (Data Sheets)</i> . (Electronic Engineering, Vol. 16, No. 192, February, 1944, pp. 373-376.)
915	20324 Spain ...	<i>Radiolocation by Night</i> . (Anon., Revista de Aeronautica, Vol. 75, No. 23, Oct., 1942, pp. 291-292.)
916	20392 G.B. ...	<i>Radio Technology (Book Review)</i> . (B. F. Weller, Nature, Vol. 153, No. 3,876, 12/2/44, p. 180.)
917	20516 G.B. ...	<i>Inaugural Address (Development of Telecommunications and the Need for International Regulation and Standardization)</i> . (Sir A. Stanley Angwin, Journal of the Inst. of Electrical Engineers, Vol. 91, No. 37, January, 1944, pp. 15-20.)
918	20520 — ...	<i>Wireless Developments (Chairman's Address)</i> . (T. E. Goldup, Journal of the Inst. of Electrical Engineers, Vol. 91, No. 37, January, 1944, pp. 39-48.)
919	20880 G.B.	<i>Enemy Airborne Radio Equipment</i> . (Nature, Vol. 153, No. 3,879, 4/3/44, pp. 209-211.)
920	20883 U.S.A. ...	<i>Theoretical Limitation to Transconductance in Certain Types of Vacuum Tubes</i> . (J. R. Pierce, Procs. of the Institute of Radio Engineers, Vol. 31, No. 12, December, 1943, pp. 657-663.)

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| 921 | 20884 U.S.A. | ... <i>Neutralization of Screen-Grid Tubes to improve the Stability of Intermediate-Frequency Amplifiers.</i> (C. A. Hultberg, Procs. of the Institute of Radio Engineers, Vol. 31, No. 12, December, 1943, pp. 663-665.) |
| 922 | 20885 U.S.A. | ... <i>The Principle of Reciprocity in Antenna Theory.</i> (M. S. Neiman, Procs. of the Institute of Radio Engineers, Vol. 31, No. 12, December, 1943, pp. 666-671.) |
| 923 | 20886 U.S.A. | ... <i>Antenna Arrays Around Cylinders.</i> (P. S. Carter, Procs. of the Institute of Radio Engineers, Vol. 31, No. 12, December, 1943, pp. 671-693.) |
| 924 | 20887 U.S.A. | ... <i>The Radiation Field of a Symmetrical Centre-Driven Antenna of Finite Cross Section.</i> (C. W. Harrison and R. King, Procs. of the Institute of Radio Engineers, Vol. 31, No. 12, December, 1943, pp. 693-697.) |
| 925 | 20896 G.B. ... | ... <i>Recording of High Speed Transients.</i> (H. Moss, Electronic Engineering, Vol. 16, No. 193, March, 1944, p. 411.) |
| 926 | 20897 G.B. ... | ... <i>Tracking in Superheterodyne Receivers—Part I.</i> (S. W. Amos, Electronic Engineering, Vol. 16, No. 193, March, 1944, pp. 412-413, 422-423.) |
| 927 | 20974 G.B. ... | ... <i>Royal Signals Mobile Wireless Station.</i> (Engineer, Vol. 177, No. 4,601, March, 1944, pp. 251-256.) |
| 928 | 21075 Canada | ... <i>Radio Range Monitor (Guards Airlines Approach to Salt Lake City).</i> (Canadian Aviation, Vol. 17, No. 1, January, 1944, p. 108.) |

Electricity (General).

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| 929 | 20009 G.B. ... | ... <i>The Measurement of the Dielectric Constant.</i> (P. H. Amphlett, J. of the Soc. of Chem. Ind., Vol. 63, No. 1, Jan., 1944, pp. 31-32.) |
| 930 | 20037 U.S.A. | ... <i>Resonant Electrical Control Systems.</i> (D. W. Moore, Journal of the Aeronautical Sciences, Vol. 10, No. 8, Oct., 1943, pp. 285-288, 321.) |
| 931 | 20046 U.S.A. | ... <i>Shipboard Power Circuit Relaying.</i> (B. Shipley, Journal of the American Society of Naval Engineers, Vol. 55, No. 4, November, 1943, pp. 610-629.) |
| 932 | 20048 U.S.A. | ... <i>Voltage Drop Calculations for Navy Standard Cables (Preparation of Charts).</i> (H. Schaevitz, Journal of the American Society of Naval Engineers, Vol. 55, No. 4, November, 1943, pp. 628-647.) |
| 933 | 20062 G.B. ... | ... <i>Modifications of Appleton's Method of Measuring the Mutual Conductance of a Valve.</i> (L. F. Bates and W. F. Lovering, Philosophical Magazine, Vol. 35, No. 240, Jan., 1944, pp. 64-72.) |
| 934 | 20081 G.B. ... | ... <i>Locating Buried Cables Electrically.</i> (Nature, Vol. 153, No. 3,875, 5/2/44, pp. 173-174.) |
| 935 | 20096 G.B. ... | ... <i>The Work of the Electrical Research Association.</i> (Engineering, Vol. 157, No. 4,075, 18/2/44, pp. 137-138.) |

ITEM NO.	R.T.P. REF.	TITLE AND JOURNAL.
936	20204 Germany ...	<i>The Electrical Properties of Lacquered Wire for Localisation of Faults, Adhesion Under Tension, Insulation Resistance, Dielectric Loss</i> . (W. Helzel, E.T.Z., Vol. 64, Nos. 39-40, 7/10/43, pp. 529-532.)
937	20223 G.B. ...	<i>Variable Frequency Resistance Capacity Oscillators</i> . (J. A. B. Davidson, <i>Electrical Engineering</i> , Vol. 16, No. 192, Feb., 1944, pp. 361-364.)
938	20230 G.B. ...	<i>Dust Cored Coils (Correspondence)</i> . (E. R. Friesländer and V. G. Welsby, <i>Electronic Engineering</i> , Vol. 16, No. 192, February, 1944, pp. 388-389.)
939	20306 U.S.S.R. ...	<i>The Use of Liquid Rheostats for Controlling Centrifugal Machinery</i> . (Korsak, <i>Electrical Power Stations</i> , Vol. 14, No. 9, pp. 4-5.)
940	20307 U.S.S.R. ...	<i>The Efficiency Loss of Cationic Filters</i> . (<i>Electrical Power Stations</i> , Vol. 14, No. 9, p. 6.)
941	20308 U.S.S.R. ...	<i>Forming and Discharging Stationary Storage Batteries without Resistances</i> . (Bonchkovsky, <i>Electrical Power Stations</i> , Vol. 14, No. 9, p. 15.)
942	20309 U.S.S.R. ...	<i>The Measurement of Unbalanced Currents by the Asynchronous Potential Method</i> . (Elkind, <i>Electrical Power Stations</i> , Vol. 14, No. 9, p. 16.)
943	20312 U.S.S.R. ...	<i>Compound Excitation of Synchronous Generators</i> . (Zhdanov, <i>Electrical Trades News</i> , Vol. 14, No. 9, Sept., 1943, pp. 1-4.)
944	20313 U.S.S.R. ...	<i>The Steady State and Stability of Compound Synchronous Generators</i> . (Zukernik, <i>Electrical Trades News</i> , Vol. 14, No. 9, Sept., 1943, pp. 5-10.)
945	20314 U.S.S.R. ...	<i>Voltage Stabilization of Electric Generators</i> . (Meyerov, <i>Electrical Trades News</i> , Vol. 14, No. 9, Sept., 1943, pp. 11-13.)
946	20390 G.B. ...	<i>Conductor Sagging in Overhead Lines</i> . (<i>Nature</i> , Vol. 153, No. 3,876, 12/2/44, p. 192.)
947	20517 G.B. ...	<i>Electrical Installations—The Present and the Future</i> . (A. G. Ramsey, <i>Journal of the Inst. of Electrical Engineers</i> , Vol. 91, No. 37, January, 1944, pp. 21-27.)
948	20519 G.B. ...	<i>Technical Developments in the Transmission Field (Gas in Cables; Vacuum Tube; Synthetics) (Chairman's Address)</i> . (T. R. Scott, <i>Journal of the Inst. of Electrical Engineers</i> , Vol. 91, No. 37, January, 1944, pp. 33-38.)
949	20592 G.B. ...	<i>Relationship Between Dielectric Constant of Liquids and Solids and Dipole Moments</i> . (S. K. K. Jatkár, <i>Nature</i> , Vol. 153, No. 3,877, February, 1944, p. 222.)
950	20624 U.S.A. ...	<i>Electrode Shaping to Establish a Uniform Electric Field Along High Voltage Resistors</i> . (P. Shallcross, <i>Journal of the Franklin Institute</i> , Vol. 233, No. 5, May, 1942, pp. 471-484.)
951	20791 G.B. ...	<i>Resistance of Conduit Joints</i> . (<i>Electrician</i> , Vol. 132, No. 3,429, 18/2/44, pp. 139-140.)

ITEM NO.	R.T.P. REF.	TITLE AND JOURNAL.
952	20794 G.B. ...	... <i>Pressure Switches for Controlling Electrically Driven Air Compressors.</i> (Electrical Review, Vol. 134, No. 3,457, 25/2/44, p. 268.)
953	20894 G.B. ...	... <i>X-Rays in Electrical Engineering.</i> (L. Mullins, Electronic Engineering, Vol. 16, No. 193, March, 1944, pp. 405-407.)
954	20951 G.B. <i>Electricity in Ships—Some Disadvantages of A.C.</i> (Electrical Review, Vol. 134, No. 3,456, 18/2/44, p. 223.)
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955	20205 Germany <i>Photocells for High Frequency Modulated Light (10⁷ cycles/sec.).</i> (M. P. Grivet, E.T.Z., Vol. 64, Nos. 39-40, 7/10/43, pp. 538-539.)
956	20224 G.B. ...	... <i>Laminated Wood as an Insulator.</i> (A. E. L. Jervis, Electronic Engineering, Vol. 16, No. 192, Feb., 1944, pp. 365-368.)
957	20225 — ...	... <i>The Recording of High Speed Transient Phenomena by the Hot Cathode, Glass Bulb, Cathode-Ray Oscillograph.</i> (W. Nethercot, Electronic Engineering, Vol. 16, No. 192, Feb., 1944, pp. 369-371.)
958	20227 G.B. ...	... <i>Some Unusual Applications of the Cathode Ray Oscillograph.</i> (G. M. Patchett, Electronic Engineering, Vol. 16, No. 192, February, 1944, pp. 378-380.)
959	20228 G.B. ...	... <i>High Frequency Oscillations from Thyratrons.</i> (Electronic Engineering, Vol. 16, No. 192, February, 1944, p. 380.)
960	20229 G.B. ...	... <i>High Frequency Therapy. Part VI—Output Circuit Therapy and Measurement.</i> (W. D. Oliphant, Electronic Engineering, Vol. 16, No. 192, Feb., 1944, pp. 382-386.)
961	20882 U.S.A. ...	... <i>Analysis and Characteristics of Vacuum Tube Thyatron Phase Control Circuit.</i> (S. C. Coroniti, Procs. of the Institute of Radio Engineers, Vol. 31, No. 12, December, 1943, pp. 653-656.)
962	20895 G.B. ...	... <i>Pulse Generation (Application to Control of Thyatron Circuits, Television, etc.).</i> (J. M. A. Lenihan, Electronic Engineering, Vol. 16, No. 193, March, 1944, pp. 408-410.)
963	20900 G.B. ...	... <i>High Frequency Therapy—Part VII.</i> (W. D. Oliphant, Electronic Engineering, Vol. 16, No. 193, March, 1944, pp. 426-430.)
964	20901 G.B. ...	... <i>Electronic Oxide Finishes for Aluminium.</i> (Electronic Engineering, Vol. 16, No. 193, March, 1944, p. 431.)
965	20902 G.B. ...	... <i>Laminated Wood as an Insulator (Corrections).</i> (A. E. L. Jervis, Electronic Engineering, Vol. 16, No. 193, March, 1944, p. 431.)
966	20903 G.B. ...	... <i>Industrial Electronic Heating (Abstract).</i> (J. P. Jordan, Electronic Engineering, Vol. 16, No. 193, March, 1944, p. 436.)
967	20904 G.B. <i>Electronic Stabiliser for Calibrating Voltage.</i> (Electronic Engineering, Vol. 16, No. 193, March, 1944, p. 438.)

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968	20063 U.S.S.R.	... <i>Theory of the Coastal Refraction of Electromagnetic Waves.</i> (G. A. Grünberg, Journal of Physics, U.S.S.R., Vol. 6, No. 5, 1942, pp. 185-209.)
969	20078 G.B.	... "Magnetic" Current. (J. T. Kendall, Nature, Vol. 153, No. 3,875, 5/2/44, pp. 157-158.)
970	20804 G.B.	... <i>Lifting Magnet for Reclamation Work.</i> (Electrical Times, Vol. 105, No. 2,732, 2/3/44, p. 265.)
971	20859 U.S.S.R.	... <i>The Magnetic Spectrum at Ultra Low Frequencies.</i> (S. S. Lavrehtiev, Reports of the Academy of Sciences, Vol. 38 (New Series), No. 8, 1943, pp. 262-265.)
972	20899 G.B.	... <i>Ehrenhaft's Magnetic Current.</i> (Electronic Engineering, Vol. 16, No. 193, March, 1944, pp. 424, 433.)

SOUND AND LIGHT.**Sound Emission.**

973	20068 U.S.S.R.	... <i>Emission of Sound by a Moving Source (Abstract).</i> (D. I. Blochintzev, Journal of Physics, U.S.S.R., Vol. 6, No. 5, 1942, p. 230.)
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974	20129 U.S.A.	... <i>Black Body Radiation.</i> (F. Benford, Journal of the American Society of Naval Engineers, Vol. 55, No. 4, November, 1943, pp. 718-738.)
975	20552 G.B.	... <i>The Fundamental Colour Sensations in Man's Colour Sense.</i> (G. F. Gothlin, Nature, Vol. 153, No. 3,878, 26/2/44, pp. 235-236.)
976	20789 G.B.	... <i>Design and Maintenance of Fluorescent Lighting Installations.</i> (J. N. Aldington, Electrical Times, Vol. 105, No. 2,731, 24/2/44, pp. 222-225.)
977	20933 G.B.	... <i>Binoculars' Focussing of a Repeated Pattern (Stereoscopic Discrimination and Changes of Conversion).</i> (N. Henderson, Nature, Vol. 152, No. 3,868, 18/12/43, p. 726.)
978	20956 G.B.	... <i>Design and Maintenance of Fluorescent Lighting Installations—Part I.</i> (J. H. Aldington, Electrical Times, Vol. 105, No. 2,730, 17/2/44, pp. 192-196.)
979	20986 G.B.	... <i>Coloured Fluorescent Light to Detect Flaws.</i> (Machinery, Vol. 64, No. 1,638, 2/3/44, p. 233.)

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980	20247 G.B.	... <i>Flashlight Bombing Pictures.</i> (Aeroplane, Vol. 66, No. 1,709, 25/2/44, pp. 202-203.)
981	20461 G.B.	... <i>R.A.F. Photographic School.</i> (Aeronautics, Vol. 10, No. 1, Feb., 1944, p. 75.)
982	20555 G.B.	... <i>Photographic Photometry.</i> (Nature, Vol. 153, No. 3,878, 26/2/44, pp. 241-243.)
983	20629 U.S.A.	... <i>Differentiation with the Cinema Integrator.</i> (C. L. Pekeris and W. T. White, Journal of Franklin Institute, Vol. 234, No. 1, July, 1942, pp. 17-73.)

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| 984 | 20679 | Switzerland ... <i>Trimetrogon System of Camera Installation.</i> (Inter. Avia., No. 900, 24/12/43, pp. 1, 15-16.) |
| 985 | 21085 | U.S.A. ... <i>Perspective Drawings by Photographing Sectional Views.</i> (G. J. Hood, Aero Digest, Vol. 43, No. 4, October, 1943, pp. 150-151, 194.) |

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| 986 | 20367 | U.S.A. ... <i>Look to Weather Elements for Successful Flight (Study of Turbulence, Icing, etc.).</i> (E. J. Minser, Air Transport, Vol. 1, No. 2, Oct., 1943, pp. 32-37.) |
| 987 | 20450 | G.B. ... <i>Ferrying Weather.</i> (Aeronautics, Vol. 10, No. 1, Feb., 1944, pp. 38-46.) |
| 988 | 20623 | U.S.A. ... <i>Historical Note on the Deflecting Influence of the Rotation of the Earth (Dynamical Meteorology).</i> (E. W. Woolard, Journal of the Franklin Institute, Vol. 235, No. 5, May, 1942, pp. 465-470.) |
| 989 | 20642 | Germany ... <i>Dangers of the Atmosphere (Translation of Abstract).</i> (T. O. Eriksson, Flying, Vol. 20, No. 15; Abstracted in Luftwissen, Vol. 10, No. 4, April, 1943, p. 22.) |

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| 990 | 20003 | U.S.A. ... <i>Medical Problems in the R.C.A.F.</i> (J. W. Tice, Aviation Medicine, Vol. 14, No. 1, February, 1943, pp. 4-9.) |
| 991 | 20004 | U.S.A. ... <i>Development of All-Purpose Single Aperture Goggles (Dark Adaptor and Aviation Types).</i> (L. O. Carson, Aviation Medicine, Vol. 14, No. 1, February, 1943, pp. 10-14.) |
| 992 | 20005 | U.S.A. ... <i>The Army Air Force Medical Service.</i> (D. N. W. Grant, Aviation Medicine, Vol. 14, No. 1, Feb., 1943, pp. 15-22.) |
| 993 | 20006 | U.S.A. ... <i>Effects of Total Ventilation by Obstructing Blood Vessels and by Muscular Effort.</i> (J. R. Delucchi, Aviation Medicine, Vol. 14, No. 1, February, 1943, pp. 23-27.) |
| 994 | 20069 | U.S.A. ... <i>A Pursuitemeter with an Application to Aviation Medicine.</i> (H. Lamport and others, Journal of Aviation Medicine, Vol. 14, No. 6, December, 1943, pp. 336-345.) |
| 995 | 20070 | U.S.A. ... <i>The Effects of Pressure on the Carotid Sinus at Various Altitudes (Case Reports).</i> (L. Palitz and others, Journal of Aviation Medicine, Vol. 14, No. 6, Dec., 1943, pp. 346-355.) |
| 996 | 20071 | U.S.A. ... <i>Flicker Fusion Tests as a Measure of Fatigue in Aviators.</i> (A. Graybiel and others, Journal of Aviation Medicine, Vol. 14, No. 6, Dec., 1943, pp. 356-359.) |
| 997 | 20072 | U.S.A. ... <i>Report of a Case of Severe Anoxic Anoxia with Recovery.</i> (R. L. Ward and C. C. Olson, Journal of Aviation Medicine, Vol. 14, No. 6, Dec., 1943, pp. 360-365.) |

ITEM NO.	R.T.P. REF.	TITLE AND JOURNAL.
998	20073 U.S.A.	... <i>Air Sickness in Bomber Crews.</i> (D. M. Green, Journal of Aviation Medicine, Vol. 14, No. 6, Dec., 1943, pp. 366-372.)
999	20074 U.S.A.	... <i>Aeroneuroses in a Bomb Training Unit.</i> (D. M. Green, Journal of Aviation Medicine, Vol. 14, No. 6, Dec., 1943, pp. 373-377.)
1000	20075 U.S.A.	... <i>Medical Problems of the Civil Air Patrol, Office of Civilian Defence.</i> (J. G. Stubenbord, Journal of Aviation Medicine, Vol. 14, No. 6, Dec., 1943, pp. 378-382.)
1001	20207 G.B. ...	... <i>Penicillin.</i> (E. Chain and H. W. Florey, Endeavour, Vol. 3, No. 9, January, 1944, pp. 3-14.)
1002	20321 Spain	... <i>What a Doctor is Able and Should Do in Aircraft Accidents.</i> (E. de E. Lainer, Revista de Aeronautica, Vol. 75, No. 23, Oct., 1942, pp. 273-276.)
1003	20395 U.S.A.	... <i>How Aviation Medicine is Reducing Hazards of Flying.</i> (Aero Digest, Vol. 43, No. 6, December, 1943, pp. 116-119, 124, 234-237, 284-286.)
1004	20505 G.B. ...	... <i>Myocardial Damage Resulting from High Oxygen Tension (Abstract).</i> (J. Aviation Med., Vol. 13, No. 4, Dec., 1942, pp. 267-271.) (J. Kaunitz, Bulletin of War Medicine, Vol. 4, No. 4, p. 244.)
1005	20506 G.B. ...	... <i>Specifications for Dark-Adaptation Tests.</i> (Brit. Med. J., 22/5/43, pp. 632-633.) (K. J. W. Craik, Bulletin of War Medicine, Vol. 4, No. 4, Dec., 1943, pp. 244-245.)
1006	20507 G.B. ...	... <i>A Critique of the Bishop Harman Test for Night Vision.</i> (Brit. Med. J., 22/5/43, pp. 633-635.) (J. Yudkin, Bulletin of War Medicine, Vol. 4, No. 4, Dec., 1943, p. 245.)
1007	20508 G.B. ...	... <i>Paratrooper Fracture.</i> (Arch. Surgery Vol. 46, No. 5, May, 1943, pp. 780-783.) (W. J. Tobin, Bulletin of War Medicine, Vol. 4, No. 4, Dec., 1943, p. 211.)
1008	20509 U.S.A.	... <i>Air Sickness in a Primary Air Force Training Detachment (Abstract).</i> (J. Aviation Med., Vol. 13, No. 4, Dec., 1942, pp. 272-276.) (J. H. Rubin, Bulletin of War Medicine, Vol. 4, No. 4, December, 1943, pp. 241-242.)
1009	20510 U.S.A.	... <i>Selection of Military Aircraft Pilots.. Our Viewpoints About Professional Selection and Psychological Examination (Abstract).</i> (J. Aviation Med., Vol. 13, No. 4, Dec., 1942, pp. 234-244.) (Bulletin of War Medicine, Vol. 4, No. 4, Dec., 1943, p. 242.)
1010	20511 Germany	... <i>Medical Question of Stratosphere Flights (Abstract).</i> (Luftfahrtmedizin, Vol. 7, No. 4, Dec., 1942, p. 390.) (Kilches, Bulletin of War Medicine, Vol. 4, No. 4, December, 1943, p. 242.)
1011	20512 Germany	... <i>The Electroencephalogram After Interruption of Oxygen Supply at Various Altitudes (Abstract).</i> (Luftfahrtmedizin, Vol. 7, No. 4, 30/1/43 pp. 305-318.) (A. Beigel and others, Bulletin of War Medicine, Vol. 4, No. 4, December, 1943, p. 242.)

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| 1012 | 20513 | Germany ... <i>Adaptation to Anoxia Shown in the Electroencephalogram (Abstract)</i> . (Luftfahrtmedizin, Vol. 7, No. 4, 30/1/43, pp. 319-334.) (A. Beigel and others, Bulletin of War Medicine, Vol. 4, No. 4, December, 1943, p. 243.) |
| 1013 | 20514 | U.S.A. ... <i>The Administration of Helium and Oxygen Mixtures in the Treatment of Disabling Ear Symptoms Caused by Changes in Atmospheric Pressure (Abstract)</i> . (U.S. Nav. Med. Bull., Vol. 41, No. 2, March, 1943, pp. 378-385.) (I. J. Thorne, Bulletin of War Medicine, Vol. 4, No. 4, December, 1943, pp. 243-244.) |
| 1014 | 20515 | U.S.A. ... <i>Responses in Size, Output and Efficiency of the Human Heart to Acute Alteration in the Composition of Inspired Air (Abstract)</i> . (Amer. J. Physiol., Vol. 638, No. 5, 1/4/43, pp. 763-771.) (A. Keys and others, Bulletin of War Medicine, Vol. 4, No. 4, December, 1943, p. 244.) |
| 1015 | 20558 | G.B. ... <i>Total Colour Blindness of Hysterical Origin</i> . (R. W. Pickford, Nature, Vol. 153, No. 3,878, 26/2/44, pp. 256-257.) |
| 1016 | 20803 | G.B. ... <i>The Status of the Auditory Mechanism in the Pilot of Extensive Experience. An Evaluation of the Factors Contributing to the State of Hearing Diminution in the Experienced Pilot, and a Correlation of Them into Otological Entities</i> . (Laryngoscope, Vol. 53, No. 6, June, 1943, pp. 419-430.) (C. Firestone, Bulletin of War Medicine, Vol. 4, No. 6, February, 1944, pp. 367-368.) |

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| 1017 | 20058 | G.B. ... <i>The New Algebras and Their Significance for Physics and Philosophy</i> . (E. T. Whittaker, Philosophical Magazine, Vol. 35, No. 240, Jan., 1944, pp. 1-15.) |
| 1018 | 20064 | U.S.S.R. ... <i>On the Rigidity of Liquids (Abstract)</i> . (M. C. Kornfeld, Journal of Physics, U.S.S.R., Vol. 6, No. 5, 1942, p. 227.) |
| 1019 | 20359 | G.B. ... <i>The Effect of Changes in a Torsionally Vibrating System on the Natural Frequencies of the System (Preprint)</i> . (W. A. Tuplin, Philosophical Magazine, Ser. 7, Vol. 21, June, 1936, p. 1097.) |
| 1020 | 20360 | G.B. ... <i>Torsional Vibration in Certain Mechanical Systems (Preprint)</i> . (W. A. Tuplin, Philosophical Magazine, Ser. 7, Vol. 24, Nov., 1938, p. 729.) |
| 1021 | 20608 | U.S.A. ... <i>The Radio Spectrum, Ether Spectrum, Audible Spectrum, Photoelectric Spectrum (Data Sheet)</i> . (Metal Progress, Vol. 45, No. 1, January, 1944, p. 177.) |
| 1022 | 20612 | U.S.A. ... <i>Some Refinements in Methods of Graphical Integration</i> . (L. H. Donnell, Journal of the Franklin Institute, Vol. 233, No. 4, April, 1942, pp. 331-348.) |

ITEM NO.	R.T.P. REF.	TITLE AND JOURNAL.
1023	20614 U.S.A.	... <i>Some Improvements in Practical Fourier Analysis and Their Application to X-Ray Scatter from Liquids.</i> (G. C. Danielson and C. Larczos, Journal of the Franklin Institute, Vol. 233, No. 4, April, 1942, pp. 365-380.)
1024	20620 U.S.A.	... <i>Some Improvements in Practical Fourier Analysis and Their Application to X-Ray Scatter from Liquids—II.</i> (G. C. Danielson and C. Larczos, Journal of the Franklin Institute, Vol. 233, No. 5, May, 1942, pp. 435-452.)
1025	20621 U.S.A.	... <i>The Nature of Static Friction.</i> (W. Claypoole and D. B. Cook, Journal of the Franklin Institute, Vol. 233, No. 5, May, 1942, pp. 453-463.)
1026	20849 U.S.S.R.	... <i>Maintained Oscillations of Automatically Controlled Systems.</i> (B. V. Bulgakov, Reports of the Academy of Sciences, Vol. 37 (New Series), 1942, pp. 250-253.)