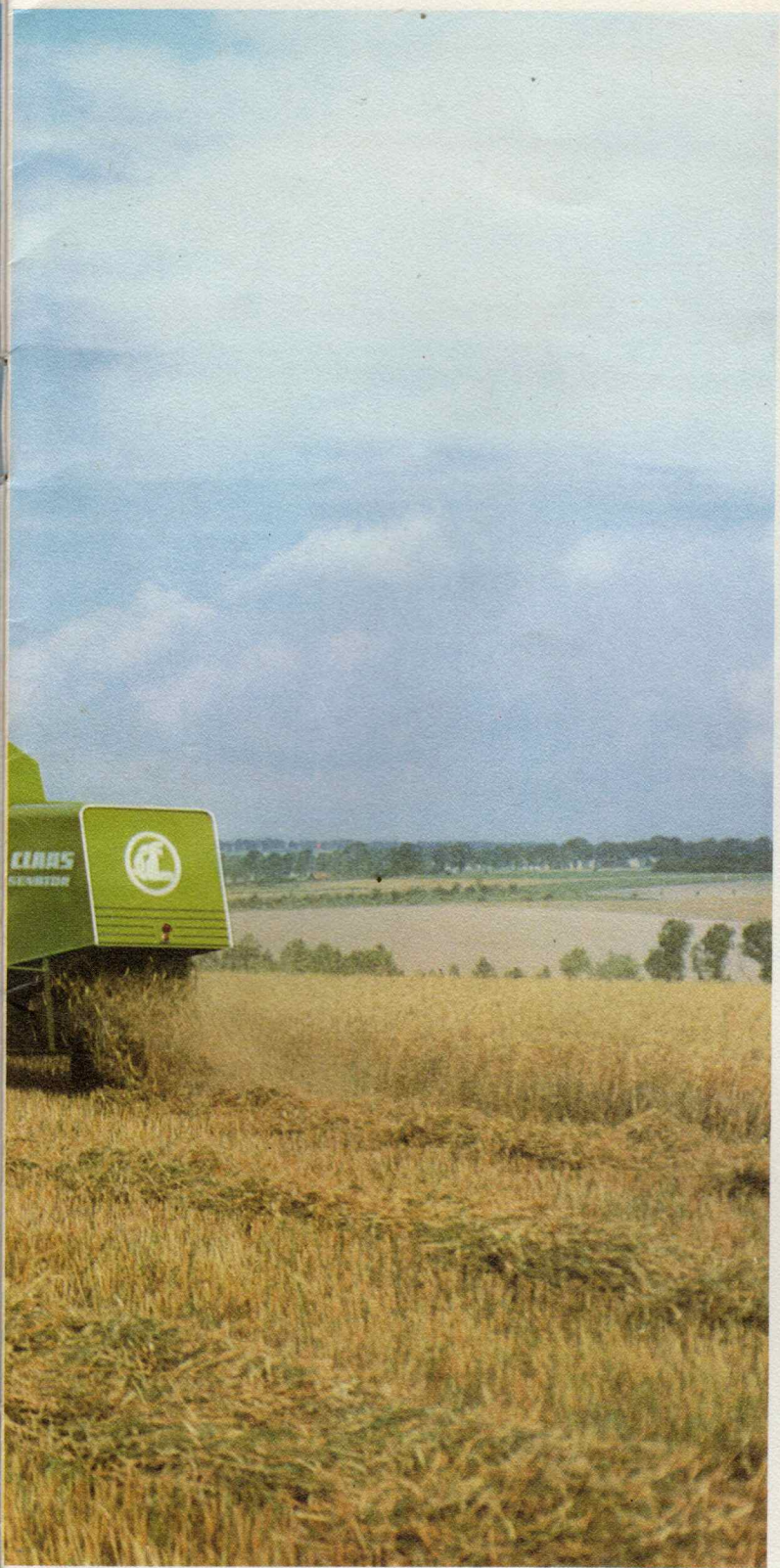
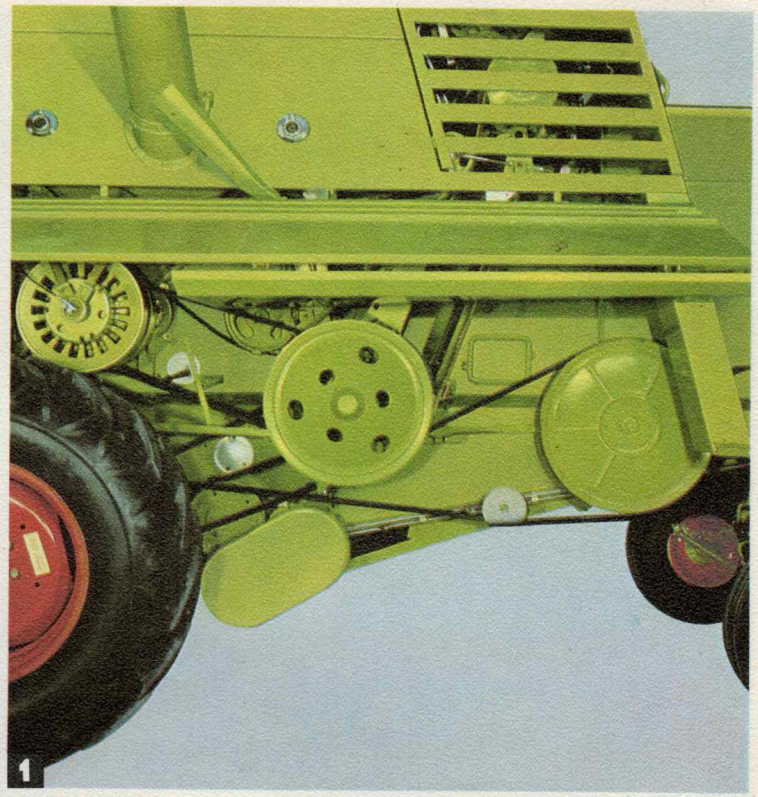
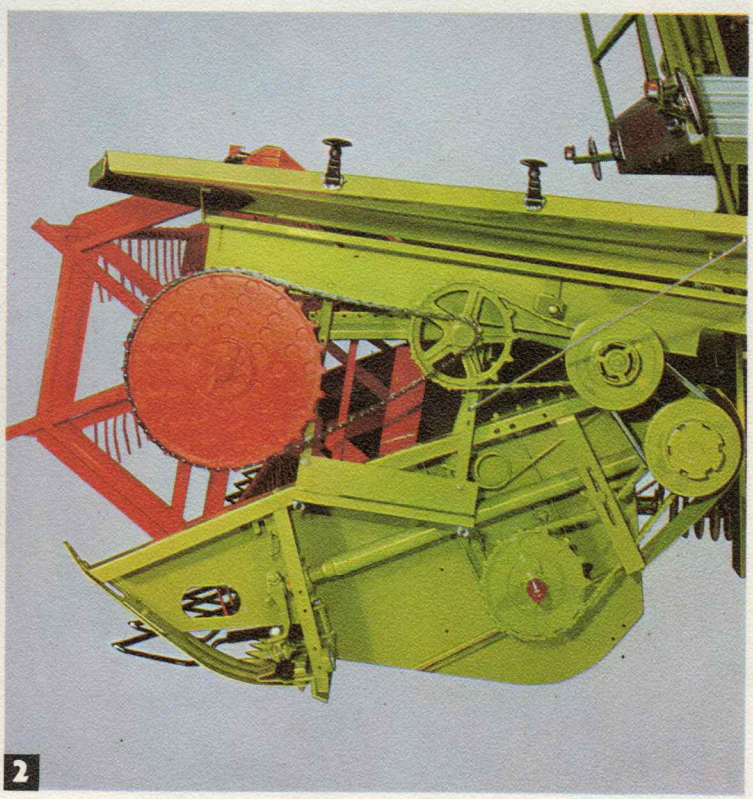
CLAAS-SENATOR

Experience and Progress



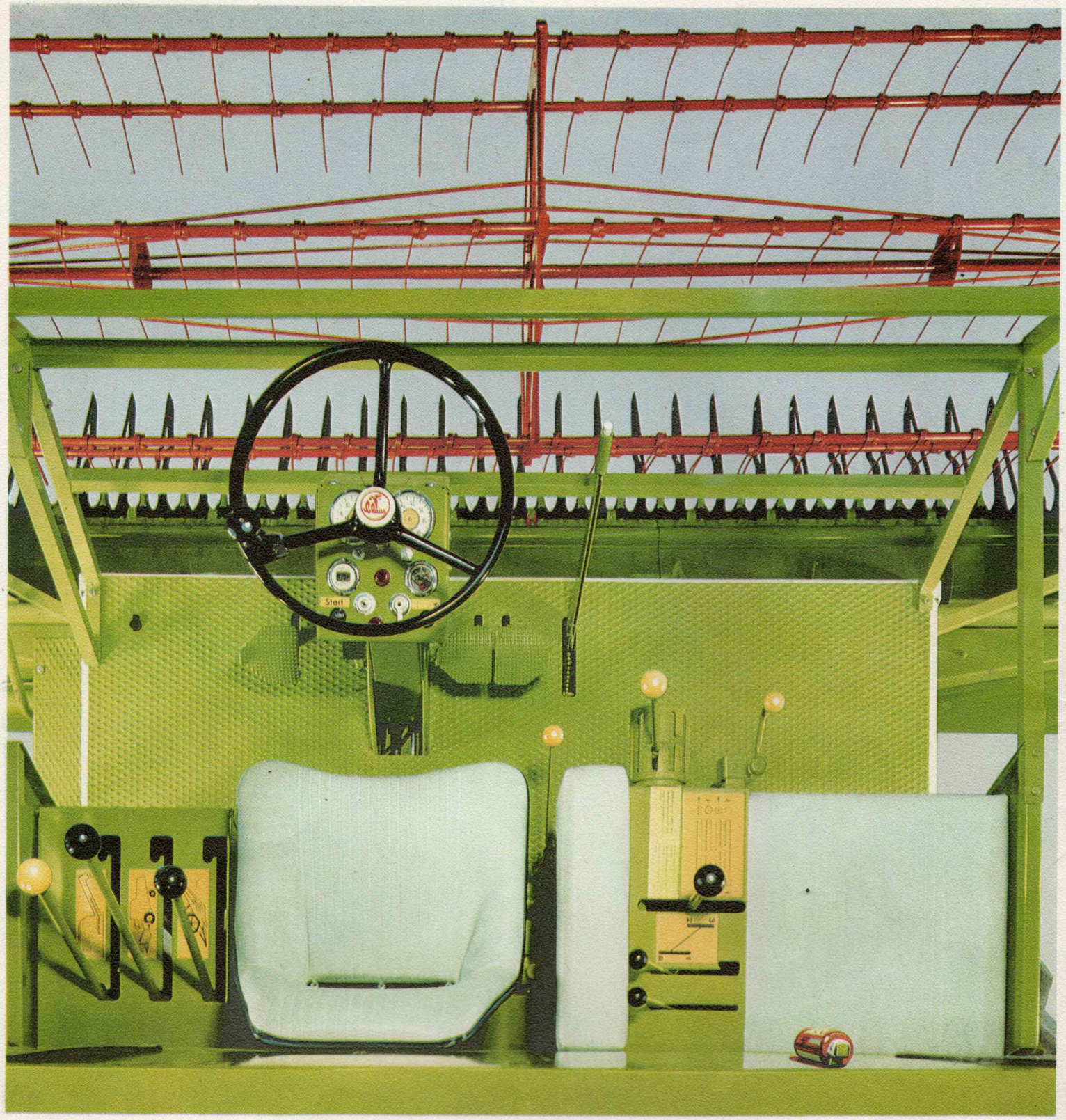




But the appearance is not an end in itself. All cladding is functional and can be raised quickly. Access for instance to the main drive, reel and knife drive are easy.

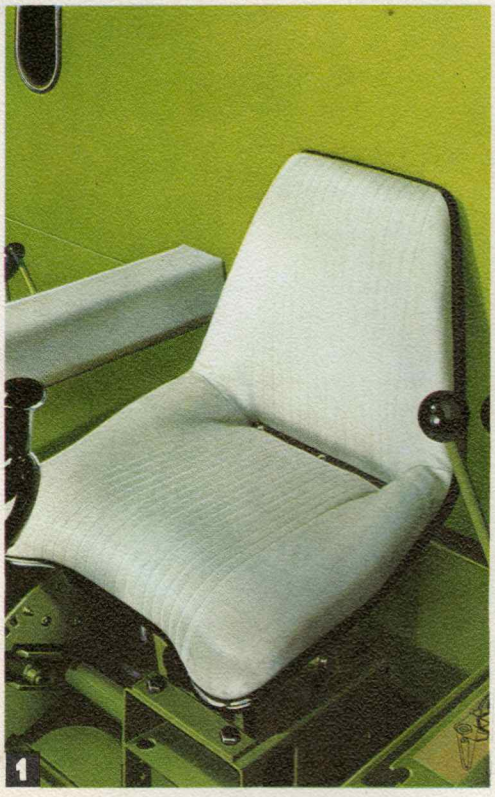
Only very few progressively minded persons in the early thirties would have given the combine harvester much chance in Europe. We, at CLAAS, were among these few. We were the first to develop a combine harvester especially designed to deal with the difficult and uncertain conditions of a European harvest. In 1937 already we went over to serial production, and this was the beginning of a development that up to date has produced no fewer than 200.000 combine harvesters. We have come a long way since those early days, marked by milestones of hard and unremitting work and our constant desire to remain in the lead of progress. A wealth of experience that we have gained in practically all parts of the world under every possible condition is at our disposal. A team of specialist draughtsmen and designers are here to analyse these data. Our aim: to make ever better and more efficient combine harvesters.

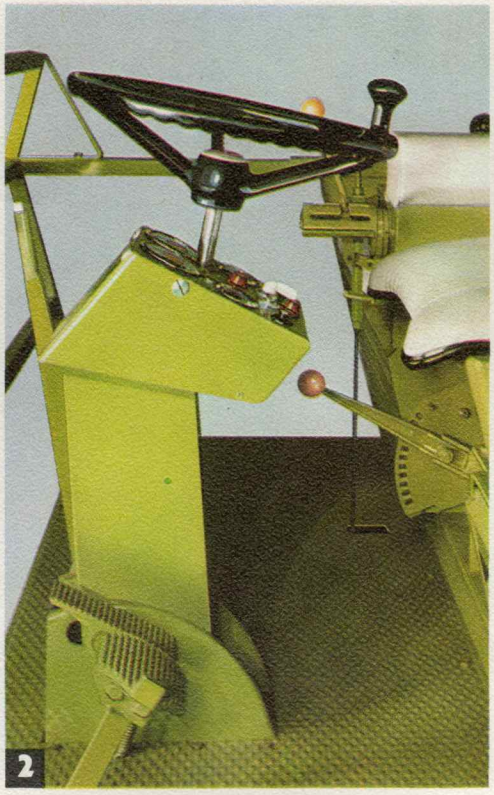
It is for this reason that we are proud of our CLAAS-SENATOR. Our far reaching experience and progressive thinking represents the true worth of this High Capacity Combine. This machine shows clearly how serious are our intentions to develop ever better combines, and to come as close as possible to realising all wishes of practical farmers. The CLAAS-SENATOR sets a new standard in the International conception of combine harvester construction: colossal output, simple maintenance, elegant appearance.

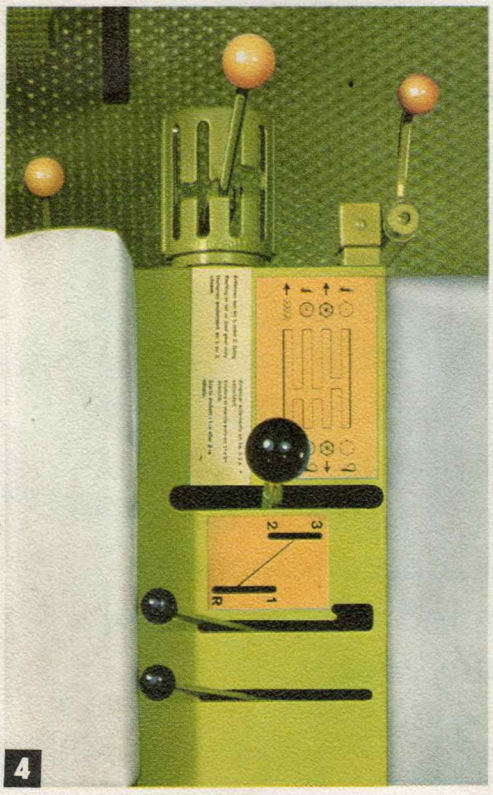


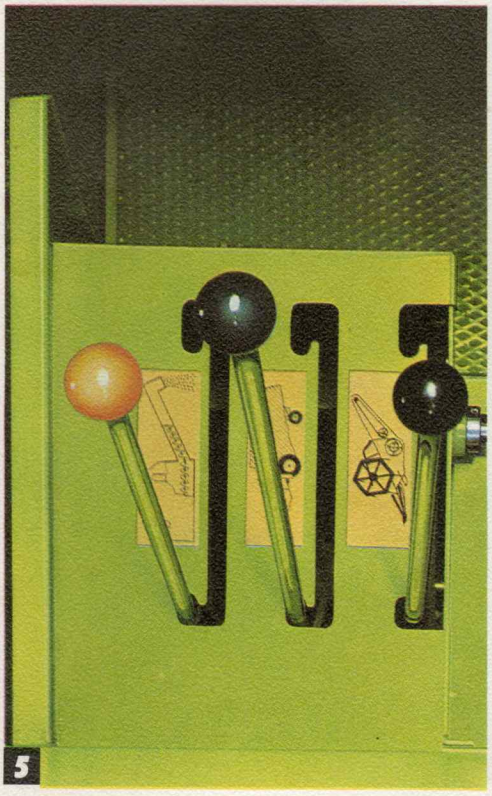
Is Comfort Luxury?

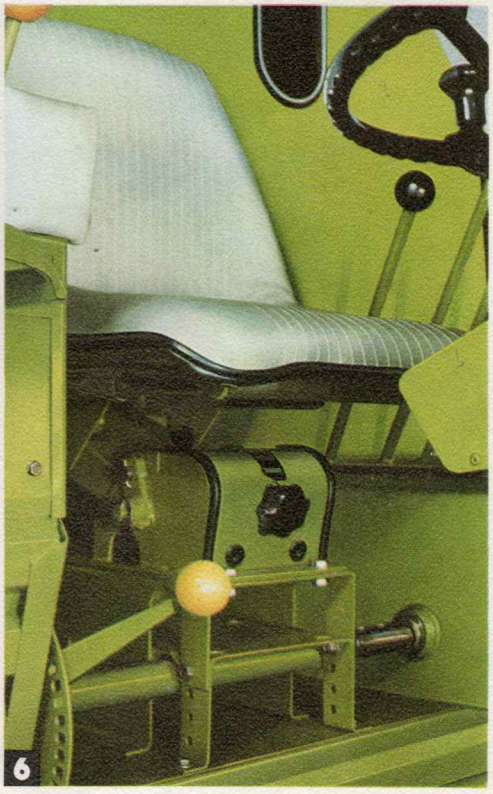
Not for the Combine operator. For him comfort is not a luxury, but a necessity because it profits both his work and his health. It is for this reason that everything on the Operator's Platform of the CLAAS-SENATOR is designed for comfort. Such convenience you must experience to believe. Only then will you be able to judge just how much thought and how much care our designers and engineers have devoted to every detail. The adjustable operator's seat made from resilient material offers relaxation, you have a clear vision of the whole cutterbar. The steering column is adjustable to suit yourself. A comfortable arm rest is provided on which to rest your right arm:





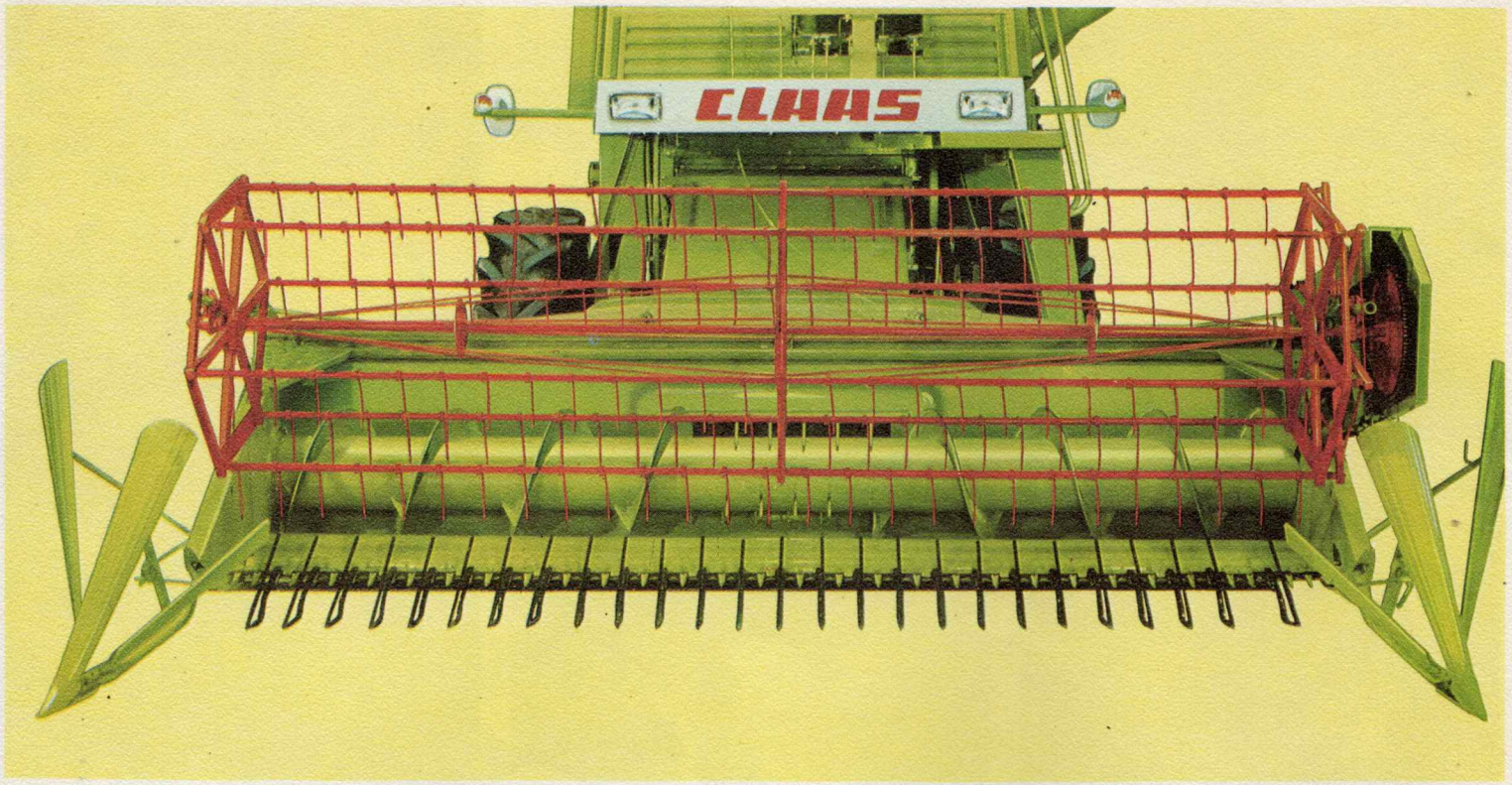






1 Comfortable, sprung Operator's Seat. 2 Steering Column, variably adjustable simply by depressing a foot pedal. 3 Instrument Panel (within vision of the operator) including indicators for the speeds both of the drum and the road drive, also oil pressure and water temperature gauges, ignition switch, starter and trafficator control. 4 Hydraulic Control Unit for the variable hydraulic adjustment of the height of the cutterbar and the reel and also to adjust variably through the hydraulic control system the speed of the drum as well as the forward speed of the machine. There are also the gear lever, the throttle and the crank for adjusting the speed of the reel. 5 Levers (from the left) to operate the grain tank unloading mechanism, the friction clutch for the drum and the cutterbar mechanism. 6 Instant setting of the concave by one only lever, which the operator can manipulate from his seat on the Platform.

and without additional movement you can thus operate the hydraulic control unit. In your immediate reach you will find such controls as the gear lever, the means to vary the speed of the reel, the lever to set the concave and also the throttle control. On your left, again within your immediate reach are the levers for the clutches operating the grain tank unloading mechanism, the drum and the cutterbar. Powerful hydraulic brakes help you to control your machine. All these facts help to make operating the SENATOR as simple as possible. You waste no strength and after many hours of constant combining you are still relaxed and fresh.



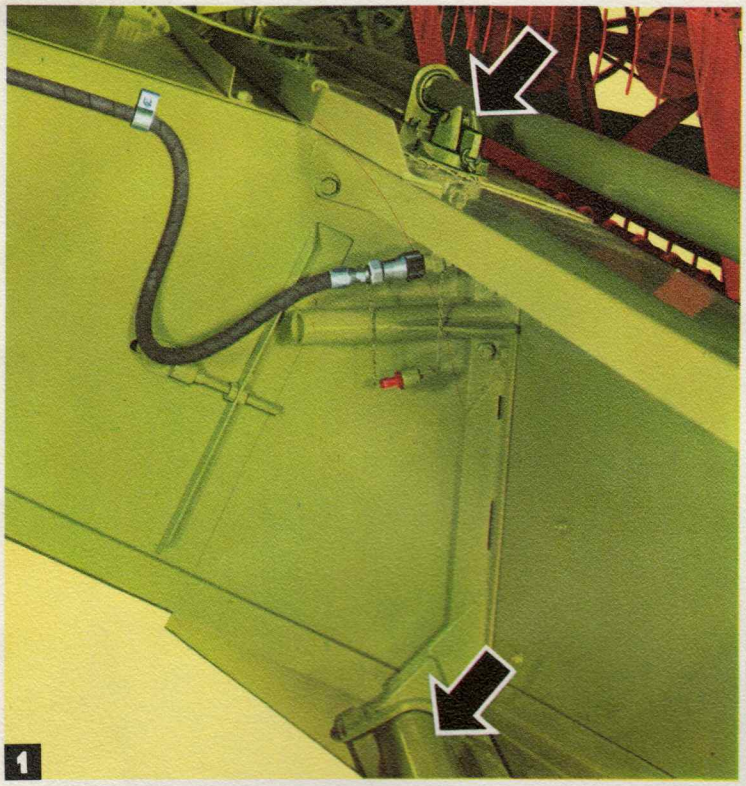
What farmer is not aware of such a sight? Laid and tangled crops - twisted by rain and wind and far worse, - grown through - liable to grow out at any time - yet, even such conditions need not cause you any worry.

No worry nor fear through laid crops?

Like all CLAAS Combines the SENATOR is fitted as standard equipment with a cutterbar specially designed for such hard and difficult conditions. No matter how flat or grown through the crop — this cutterbar takes it all in its stride. Many acres of valuable crops which previously would have had to be written off have been harvested safely and completely with CLAAS Combine Harvesters.

Long, moveable dividers, spring suspended grain lifters, wide distance between knife and main table auger, "floating cutterbar" — all these are but a few of the special features of the CLAAS-SENATOR that make working in heavily laid crops so easy. You can proceed with your harvest just as if the corn was standing and nothing but a clean field remains behind.

A 14 ft. cutterbar is standard equipment of the CLAAS-SENATOR. Have you any objections to a 14 ft. cutterbar? Do you fear moving a combine of such width on the main roads or do you envisage difficulties when driving the machine along narrow lanes? Such reasons alone should not deter you from availing yourself of the many other advantages that come from a wide cutterbar. All you require is a cutterbar trailer for your SENATOR. The cutterbar head of the CLAAS-SENATOR has been designed in such a manner that it can be removed from the trunking in just a few minutes. Your



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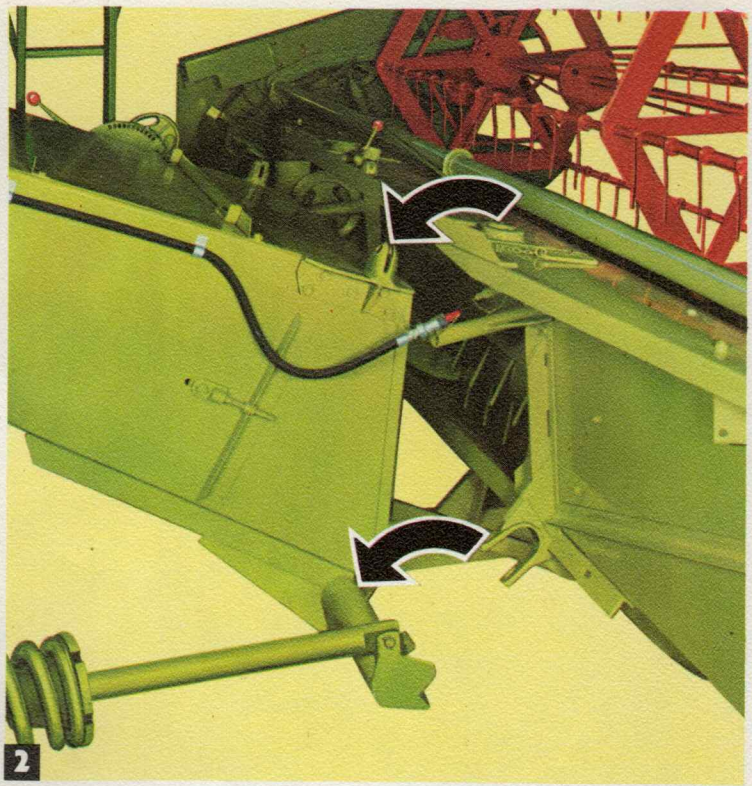

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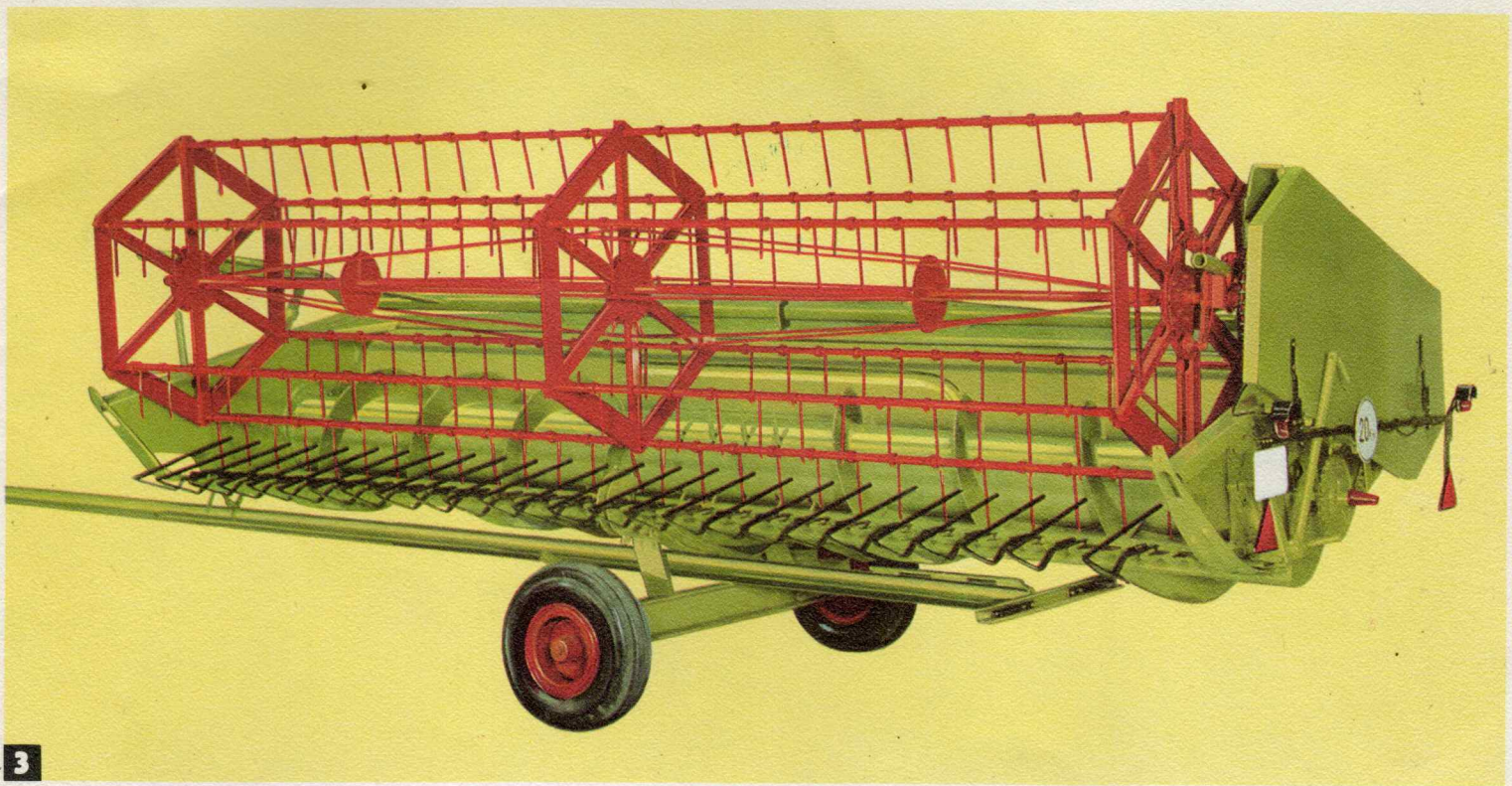

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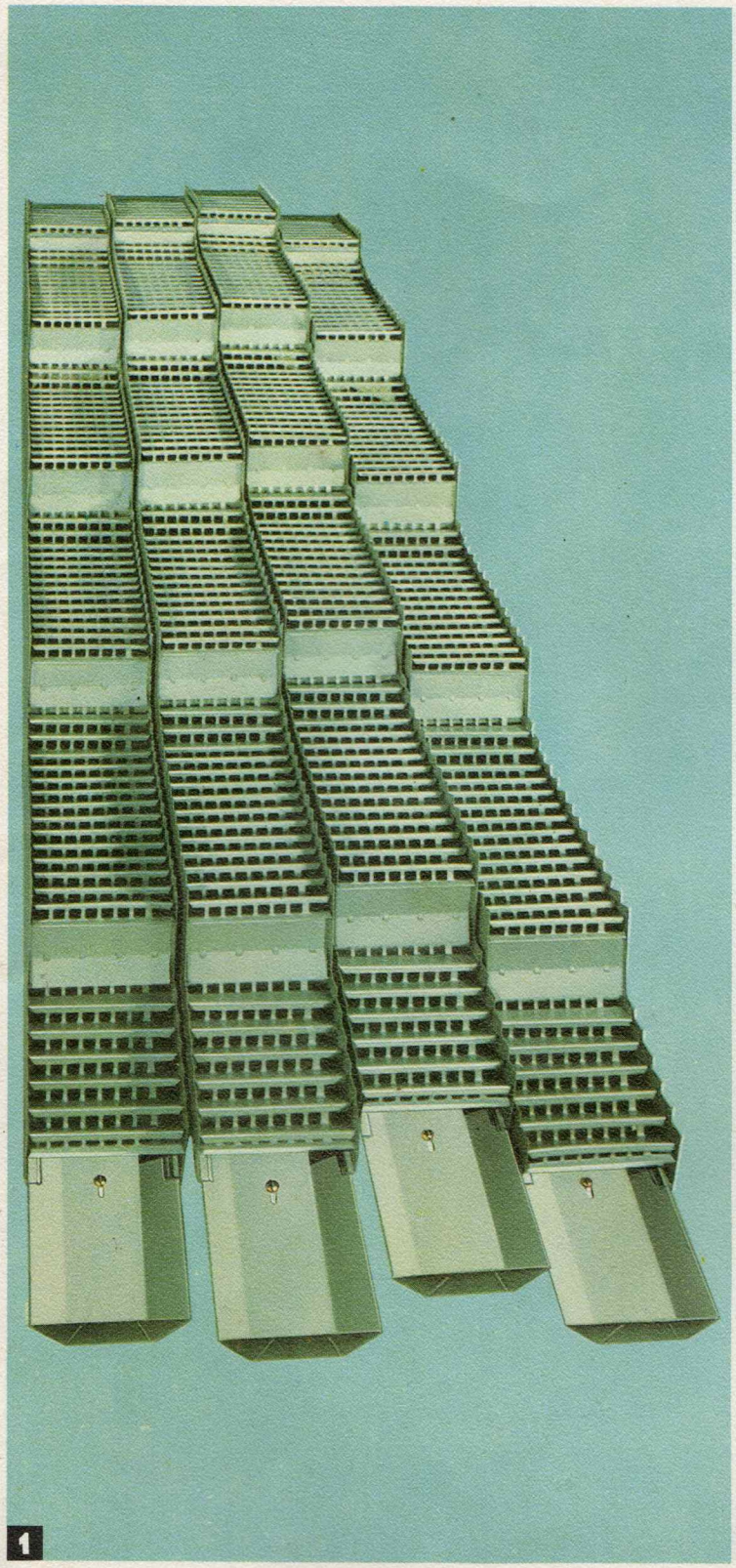
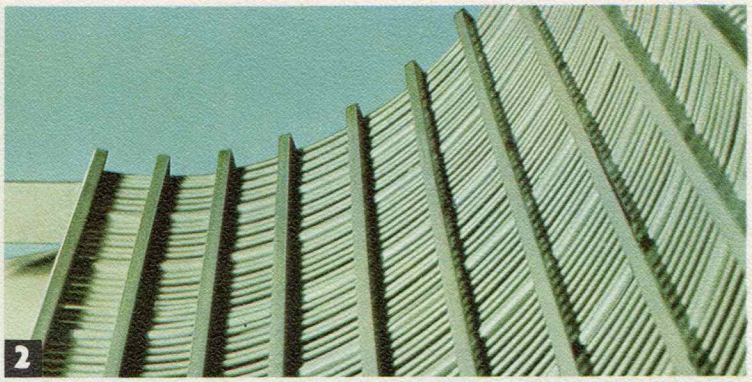
1 To detach the Cutterbar, first raise it by the hydraulics and then lower it onto the Cutterbar Trailer and fasten. Now disconnect the two holders by removing the wedges and disconnect the hydraulic pipe. Lower the Conveyor Channel to allow the retaining bolts to leave the cutterbar frame and reverse the Combine. 2 Connecting the Cutterbar is just as quick. Advance the Combine with the Conveyor Channel lowered towards the Cutterbar resting on the Trailer until the bolts on the Conveyor Channel engage in the corresponding recesses in the Cutterbar. Raise the Cutterbar by the hydraulic system from the Trailer. After replacing the wedges into the knuckles and re-connecting the hydraulic pipe combining can commence. 3 Illustration showing the dismantled Cutterbar resting on the Cutterbar Trailer.

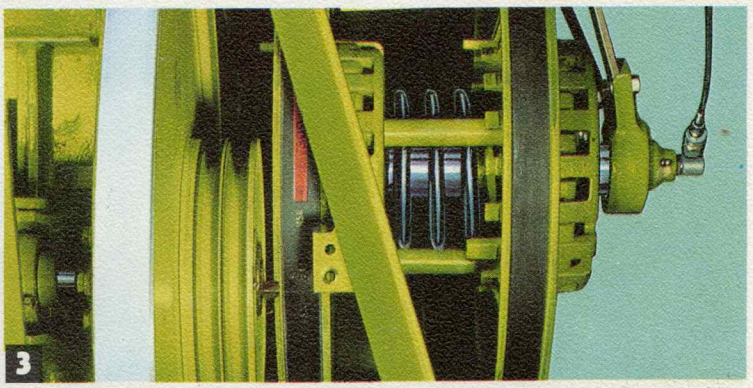
CLAAS dealer will be pleased to give you a complete demonstration. You will be surprised how quickly the cutterbar head can be taken off and also put back again. The trailer with cutterbar attached is then hitched to the rear axle and so trailed behind the machine. A very easy and practical solution that will appeal specially to the large contractor.

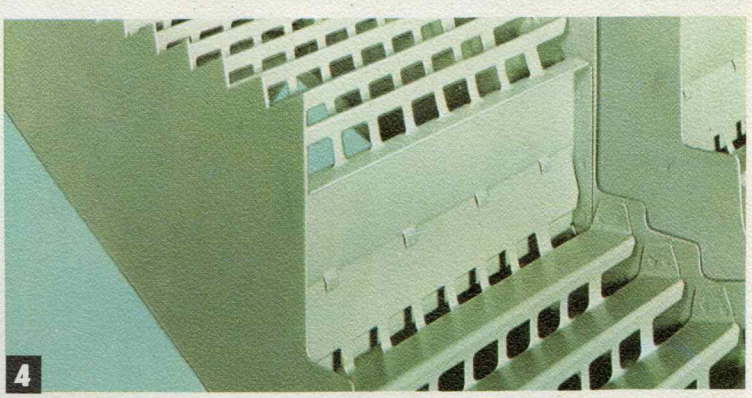
Well threshed

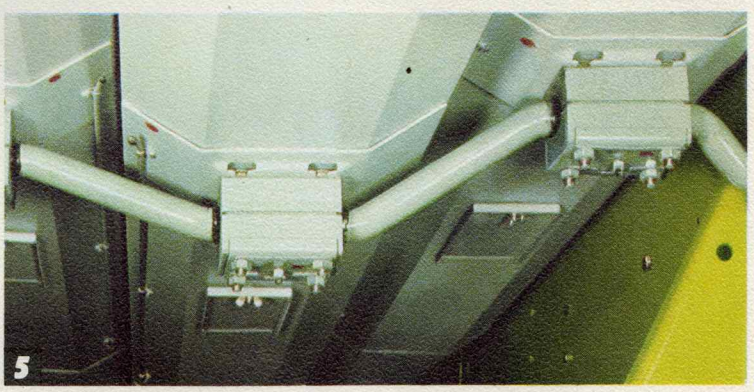
A 14 ft. cut, especially where the crop is heavy and laid, makes great demands both on the drum and the cleaning processes. The diameter of the drum is 18 inches, the optimum and ideal diameter, at which the drum speed remains constant under all conditions, also under varying load. After gentle threshing (hardly any short straw or







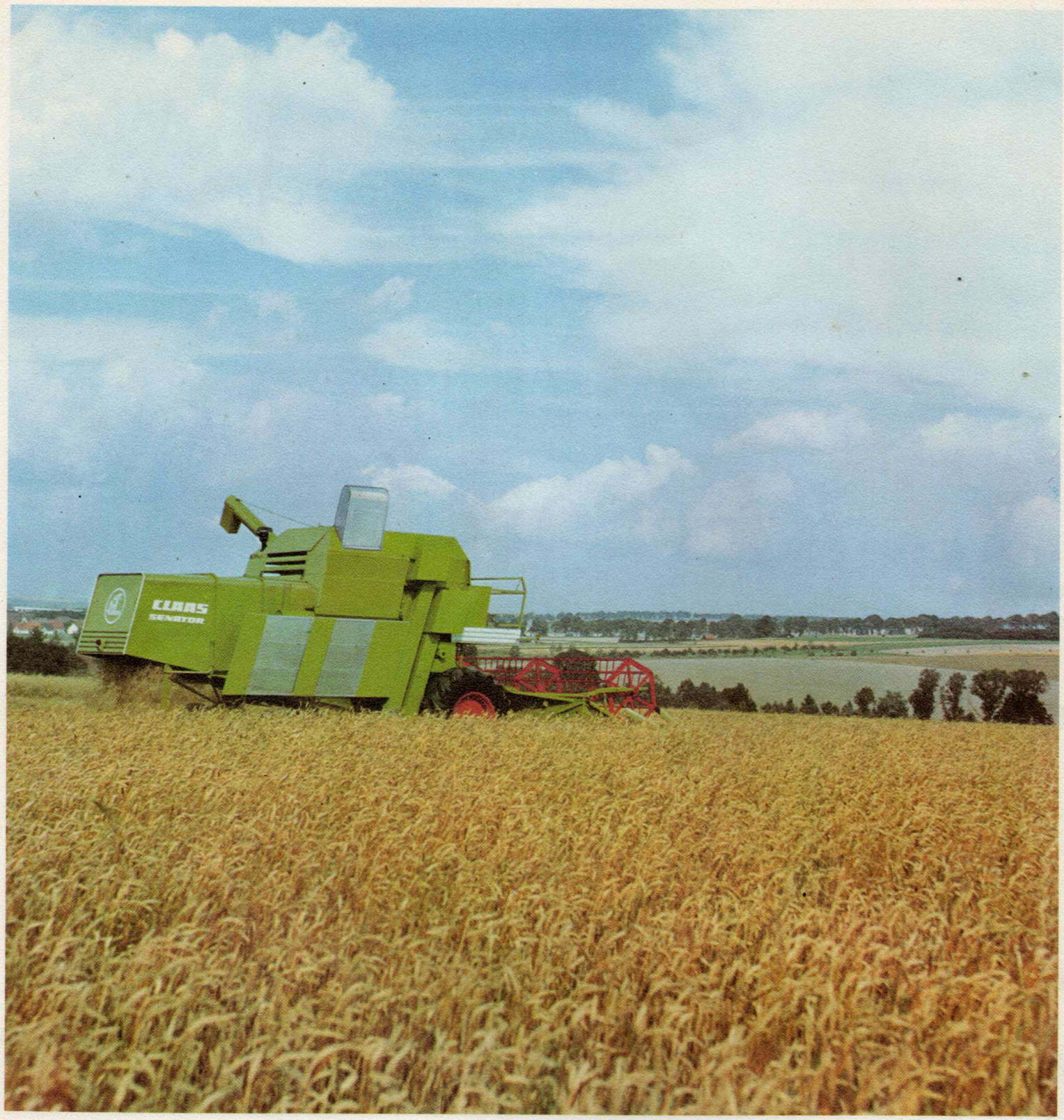




1 A full view of the high capacity straw walkers gives a true impression of their considerable and impressive size. 2 The concave of the CLAAS-SENATOR with its 10 rasp bars has been designed to ensure optimum threshing. 3 The speed of the drum can be variably adjusted through the hydraulic control system. A speedometer on the instrument panel shows the exact drum speed at all times. 4 One of the five high straw walker steps over which the straw must pass. Observe the considerable height of the step. It is one of the reasons why the straw is so well fluffed up and thoroughly shaken out. 5 The fact that the straw walkers are activated by two cranks is a further reason for the intensive separation of crop from straw.

cracked corn) the majority of the crop is already separated through the concave.
The separating area of the four high capacity straw walkers is 51 sq. ft. The straw must travel over 5 high steps in the course of which even long damp straw is well shaken out also where a considerable amount of weed and trash is present.

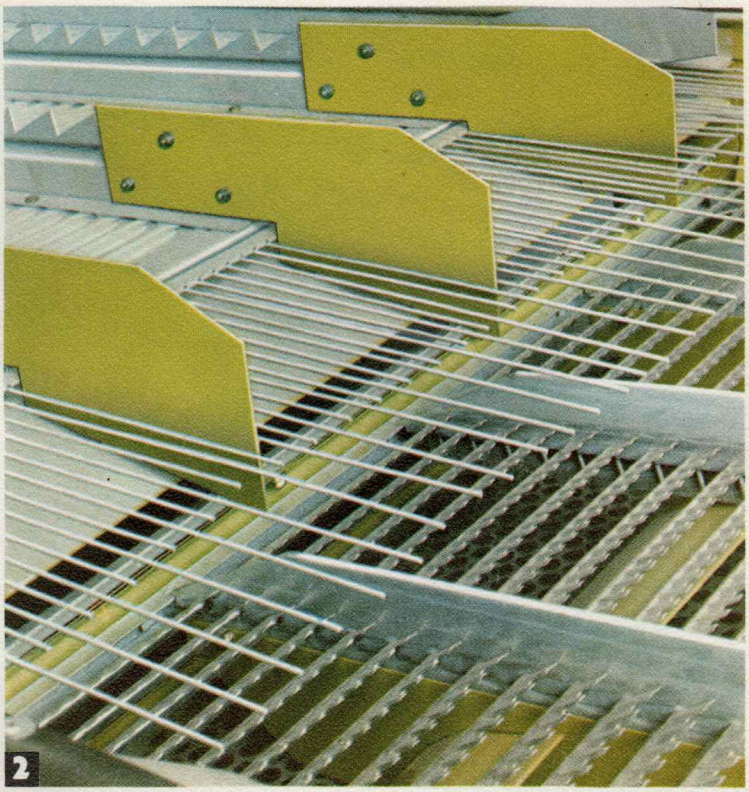
Underneath each straw walker is a returns pocket. When combining on slopes these pockets ensure that the corn coming from the straw walkers reaches the sieve box evenly over the whole sieving area and so prevent the crop from sliding to one side.

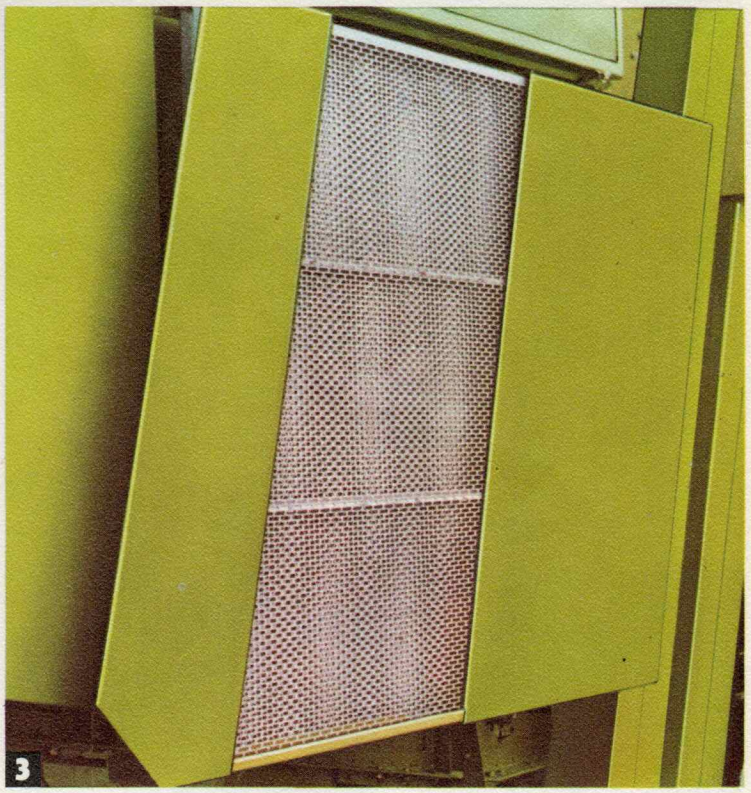


Well cleaned

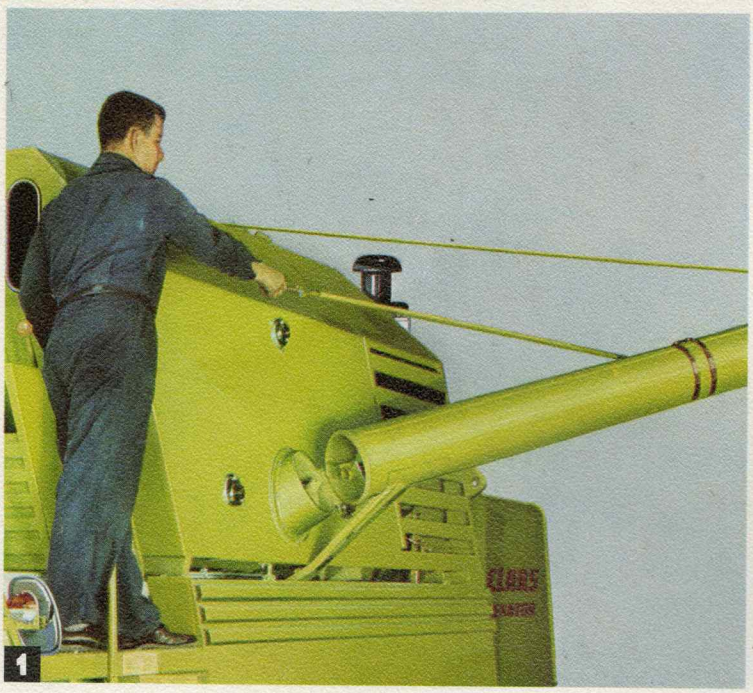
The output and efficiency of the CLAAS-SENATOR is exceptional. Many hundredweights of corn must be thoroughly cleaned every minute! Not only has the cleaning area of the sieve box been kept particularly large for this purpose (34 1/2 sq. ft.) but its whole design has been calculated to ensure optimum cleaning of the large volume of crop coming from the cutterbar.

Thorough pre-grading begins already on the preparing pan. Through the wire rake at the end of the preparing pan part of the crop drops already on to the entrance of the frogmouth sieve. The gap between the wire rake and the frogmouth sieve is considerable with the result that the mixture of corn, short straw and chaff cascades loosely. The blast from the fan which blows evenly through the whole sieving area can make its full influence felt. In this manner a considerable part of the crop is already separated completely at the entrance of the frogmouth sieve which helps materially to relieve the cleaning process further on. The graepel plate at the end of the sieve box makes it possible to use maximum blast without corn loss.





1 Total view of the large sieve box with 34 1/2 sq. ft. sieving area complete with preparing floor, wire rake, high fall, frogmouth sieve and graepel plate. Guide ribs are fitted both on the preparing floor and on the frogmouth sieve and they ensure that when combining on slopes the crop is yet distributed evenly over the whole sieving area and not allowed to drift to one side. 2 Close-up of the high gap between wire rake and frogmouth sieve: a considerable part of the threshed crop is already separated at the entrance of the frogmouth sieve. 3 Four flat sieves suitable for different types of crops are standard equipment. Three of these act as guards to the drives on the offside of the machine when not in use.



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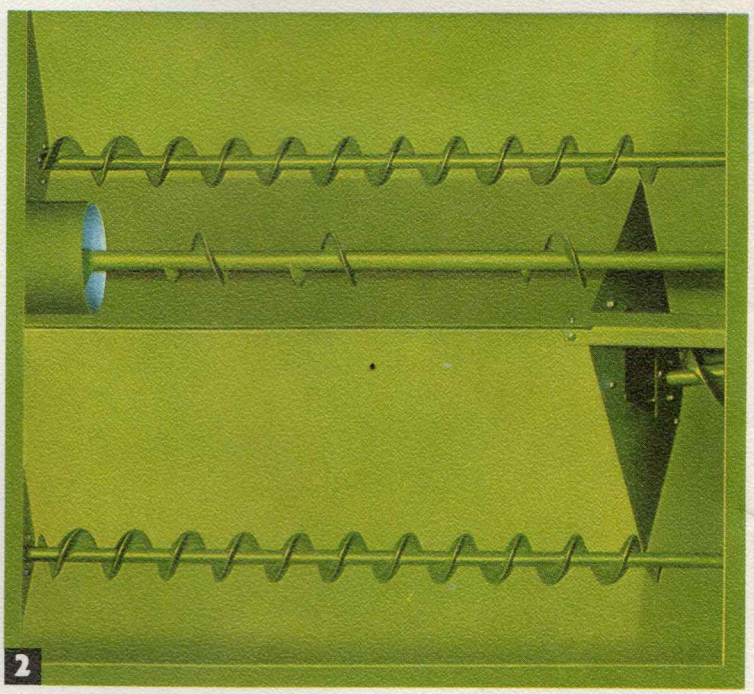

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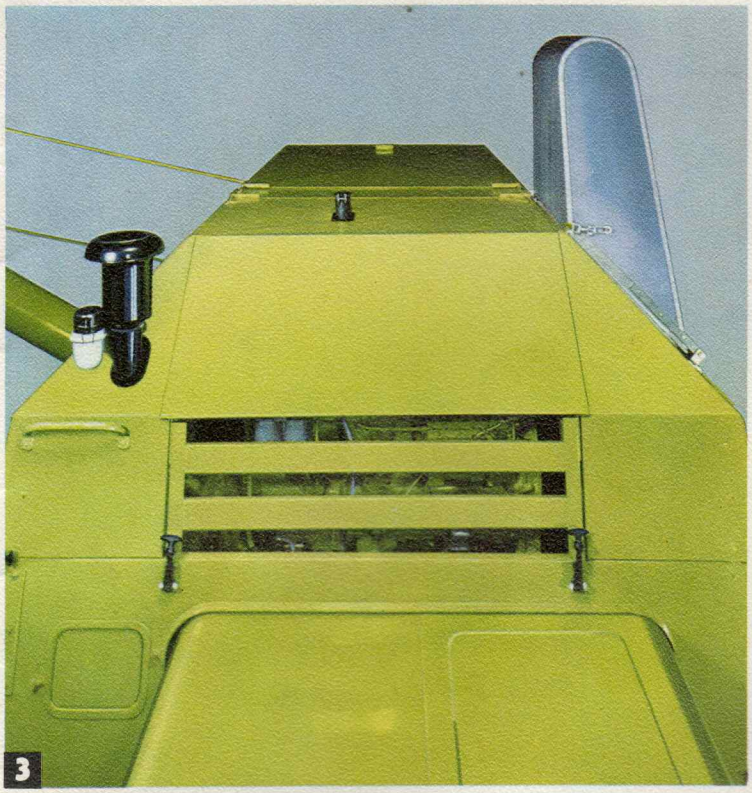
1 With a quick movement the unloading tube can be returned into its resting position against the hull for road transport. 2 A view into the colossal grain tank. Centrally in the top is the inlet auger. The unloading augers lie in the front and at the back and they propel the crop towards the outlet tube. With the crop reasonably dry the grain tank can be unloaded in just 100 seconds.

Power and capacity

The grain tank of this high capacity combine — the CLAAS-SENATOR has a capacity of 88 bushels. This represents more that 50 cwt of wheat. You can therefore combine well over 2 acres before having to unload the grain tank. If the crop is reasonably dry the grain tank can be unloaded in about 100 seconds. By means of



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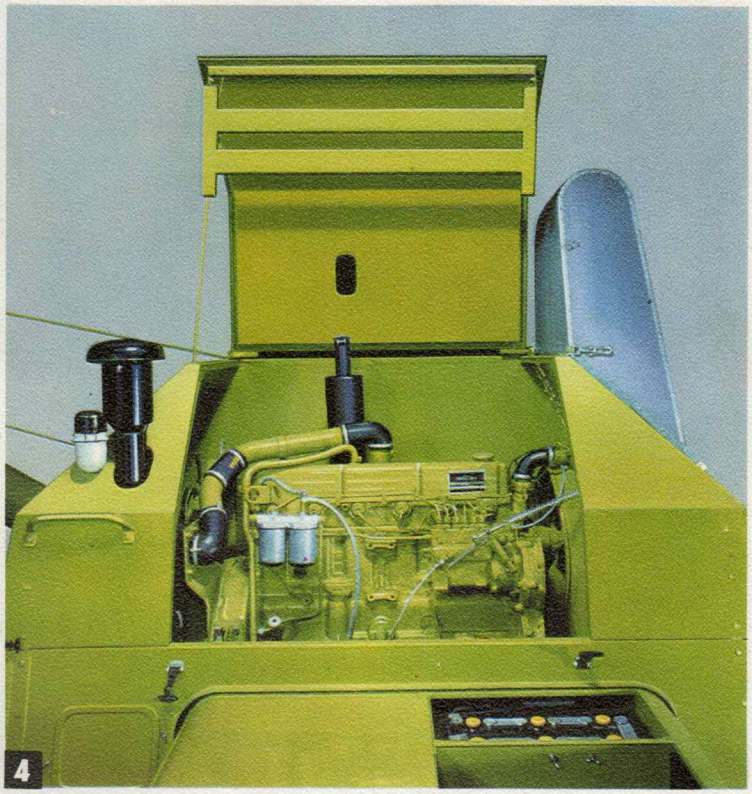

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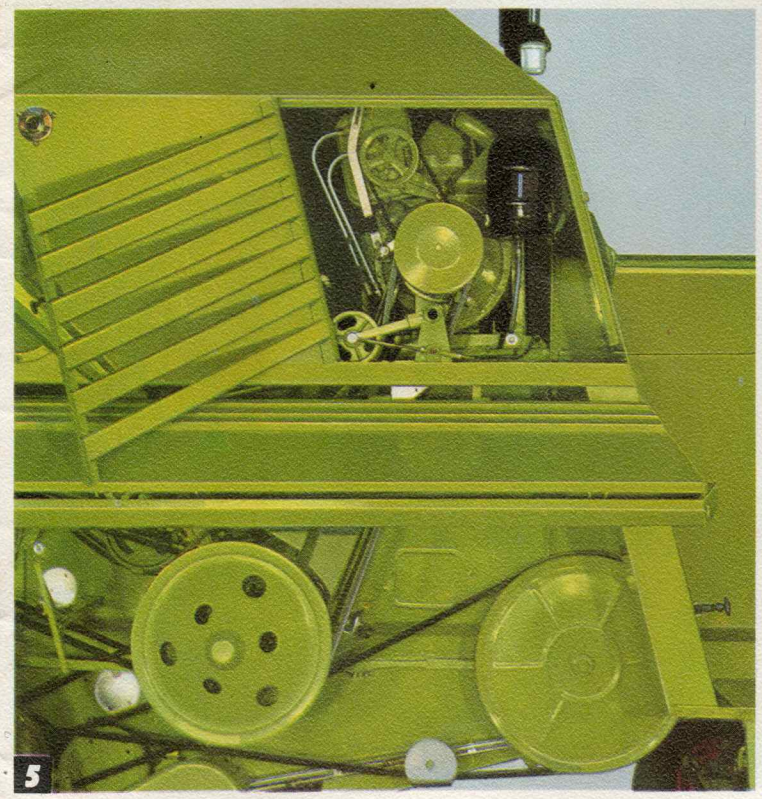

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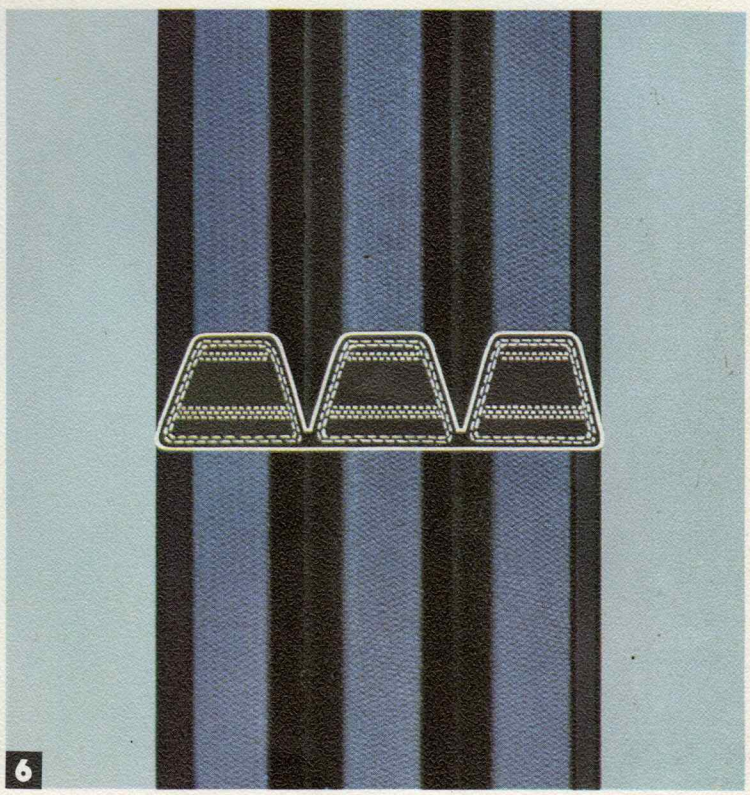

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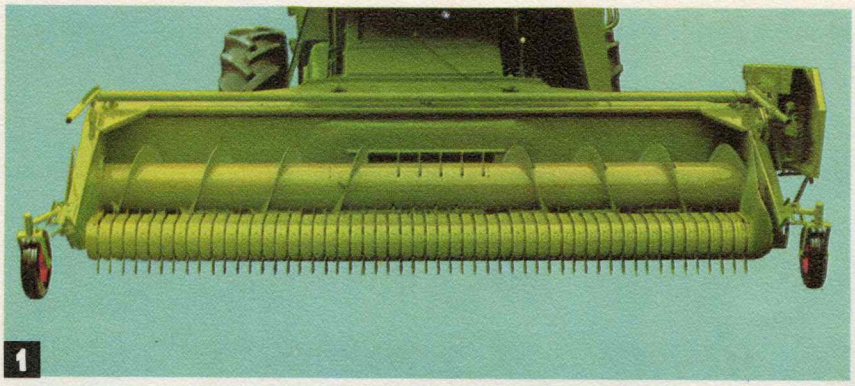
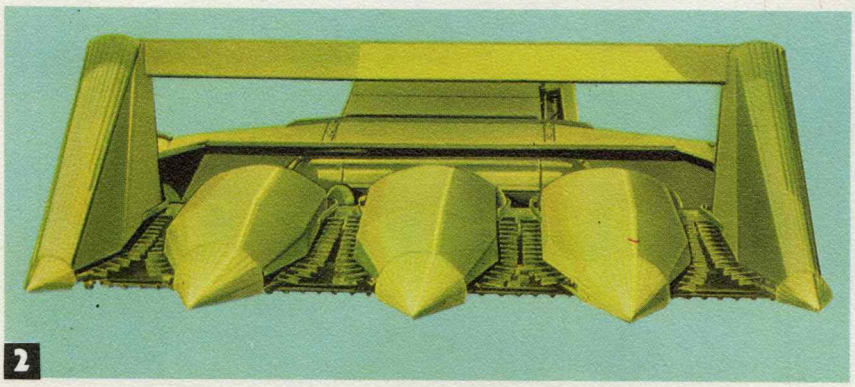
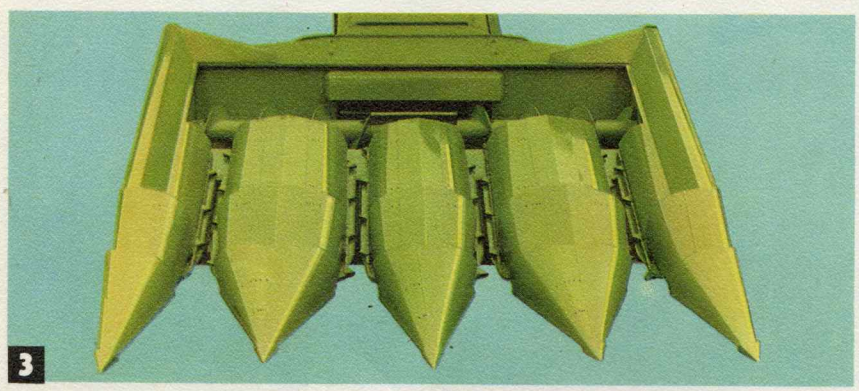
3 + 5 The engine is fully encased yet easily accessible. The battery as well as the straw walkers are reached quickly through the opening shown in illustration 4. Sectional view of the power band 6.

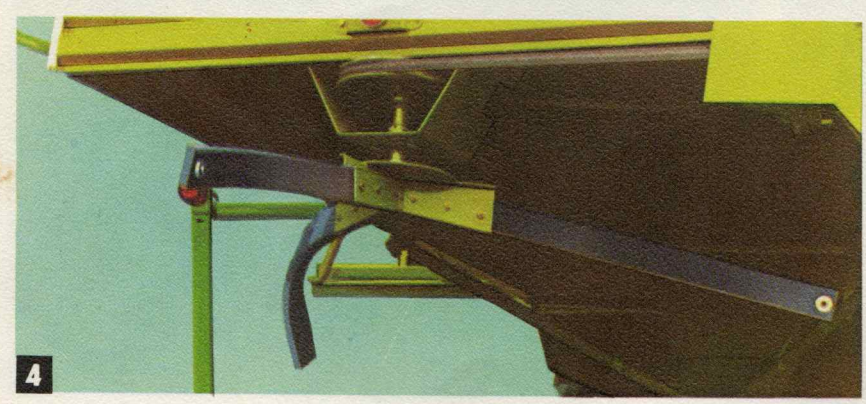
a hand lever the unloading tube can be returned into resting position by the operator from his platform.

The CLAAS-SENATOR is fitted with a high performance six cylinder Diesel engine with an output of 105 H. P., mounted on top of the combine behind the grain tank in a dust free zone. Encased on all sides the engine is protected from all influence of the weather. Yet the panels can easily be removed for maintenance and service of the engine: simply by raising the hood or opening the side panels. The engine is then fully accessible. Ample reserve of power is provided by this 105 H. P. engine, even under most difficult conditions. Even when combining on steep slopes or on soft ground there is no drop of output. A power band is fitted for the main drive of the CLAAS-SENATOR. Its particular serrated profile guarantees full transmission of the power output of the engine to the main drive pulley even under heavy conditions.









1 With the Spring-tine Pickup-Drum (13 ft. 6 in.) two swaths can be picked up simultaneously. **2** The CLAAS Maize Cutterbar is available with either three or four rows. To combine maize special maize threshing equipment is also necessary which takes the place of the standard drum and concave for cereals. **3** The CLAAS Maize Picker (also available with three or four rows) only harvests the cobs. This particular equipment is thoroughly recommended where large tracts of maize are grown. **4** The Straw Distributor broadcasts the straw in its full length over an area equal to the width of the Cutterbar. **5** The new CLAAS Chopper chops the straw into extremely short pieces. The central Chopper drum revolves at a speed of about 3.000 r. p. m. lacerating the straw instead of just cutting it. Since the knives swing freely in their holders they give way to solid objects, so avoiding damage to themselves. **6** A sun-roof is available for protection against intense heat. **7** The Driver's Cabin permits good vision all round. It is thoroughly recommended for the maize harvest which frequently extends well into the Winter.

Auxiliary Equipment

The CLAAS-SENATOR is an all purpose thresher. With special equipment fitted, this machine is capable of dealing efficiently with grass seeds or rape seed, beans or peas just as easily and cleanly as with the bigger seeds of maize or rice — just to name a few specialised crops. The usefulness and economy of the machine is thereby considerably increased. You could start the season with combining grass seeds and rape seed for which purpose a Pickup-Drum must be fitted to the cutterbar, and conclude your work after the cereal harvest by combining maize — either with the maize cutterbar or, alternatively, with the special maize picker. A special threshing drum and concave and also crawler equipment is necessary for the rice harvest. If you do not want the straw, a chopper will cut it up into small pieces and distribute it evenly over the ground. A straw broadcaster on the other hand, will broadcast the straw in its full length over the field. A driver's cabin is available for the comfort of the operator, who, of necessity, must combine throughout the Autumn under inclement conditions such crops as maize or rice.

Technical Data

Cutterbar: Cutterbars from 10 ft. — 20 ft. widths are available (14 ft. Cutterbars are standard). Automatically the Cutterbar follows all contours of the ground and through the hydraulic system can be adjusted between – 3 in. to + 34 in. Grain Lifters are standard equipment as is a cutting height indicator and an Instant Stopping Device for the Cutterbar Mechanism.

Dividers: Three sectional, sideways adjustable and mounted on a pivot for adaptability to the contours of the ground, are available either with short or long deflectors. Two dividers are supplied as standard equipment.

Reel: Eccentric spring-tine pickup-reel hydraulically adjustable for height, variable reel speed.

Drum: 18 ins. diameter, 49 ins. wide with 6 beater bars, hydraulically adjustable for variable speed between 650 and 1400 r.p.m. which can be checked on the drum speed revolution counter mounted in full view of the operator.

Disawning: New type two-stage Disawning. First Stage = Extension of Concave by 3 Rasp Bars. Second Stage = Increased Rasp action in the Concave. Both stages can be engaged quickly and easily.

Concave: 10 bars (13 when the disawner in engaged), and stone trough, instantaneously adjustable, by one only lever.

Shakers: 4 straw walkers mounted on 2 crankshafts. Shaker area 51 sq. ft. — total separating area 59 sq. ft.

Cleaning: High efficiency sieve box on two levels, total sieving area, 34 1/2 sq. ft.

Grain Tank: Capacity 88 bushels. Fitted with a special distributing auger for overall filling, and 2 windows to check the level of the grain.

Safety clutches: Spring loaded double disc slip clutches protect the reel, the table auger, the impeller, the grain auger and the returns auger against damage from shock loads. Many other safety measures and devices are incorporated into the machine.

Engine: Six cylinder diesel engine of 105 h.p.; water cooled.

Gear box: Gear box with three forward speeds; — single plate dry clutch; — range of speeds from just over 1 mile per hour to 11 miles per hour. Reverse gear 2 m.p.h. to 5 m.p.h. The whole range of speeds is variable and hydraulically adjustable through the variable speed pulley cluster. A speed indicator is fitted.

Brakes: Mechanical hand brake and separate hydraulic foot brake — (which can also be used as steering brakes).

Tyre equipment: Front: 15 x 30 A.S. Rear: 11.5 x 15 AM. Width of track — Front: 8 ft. 2 ins. Rear: 6 ft. 9 ins. Distance between front and rear wheels centre to centre 10 ft. 6 ins. hydrostatic steering.

Lighting equipment: The following standard lighting equipment is fitted: headlights, side lights, flashing trafficators, reflectors and rear lights, mirrors.

Dimensions: (with 14 ft. cutterbar)

In Working Position:		
Length:	32 ft. 6 ins.	(with long divider)
Width:	19 ft.	(according to the position of the outer deflector)
Height:	13 ft. 0 ins.	
For Road Transport:		
Length:	28 ft. 6 ins.	
Width:	15 ft.	(9 ft. 10 ins. with cutterbar head detached)
Height:	11 ft. 4 ins.	

Weight: Approximately 6 tons.

Additional equipment: Straw Broadcaster — Straw Chopper — Spring-tine Pickup-Drum — Cutterbar Trailer — Special Equipment for Maize and Rice Harvesting, etc.

All technical data, weights and measurements are approxiamate and the manufacturers reserve the right to make alterations without notice.

Harvest — The Modern Way! 125 acres of oats must be combined. Here the CLAAS-SENATOR truly shows its efficiency. Unceasingly the machine works on, hour after hour. The operator obviously enjoys his work. And he has good reason for doing so. The Operator's Platform is comfortable. He can sit in his specially designed seat for many hours without fatigue. He can have every confidence in his machine. He knows that she comes from the largest factory in Europe making combine harvesters which are designed and constructed for greatest output and built with high grade material by experienced specialists. He knows that this SENATOR has undergone inspections at various stages and has been thoroughly tested in every detail. This has resulted in a machine of highest reliability assuring high output, even under the most strenuous and prolongued working conditions. And that is what is expected here: combining large areas quickly, saving time and money — performance and efficiency as is expected today of a high capacity combine. You will always be satisfied with a CLAAS-SENATOR.

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