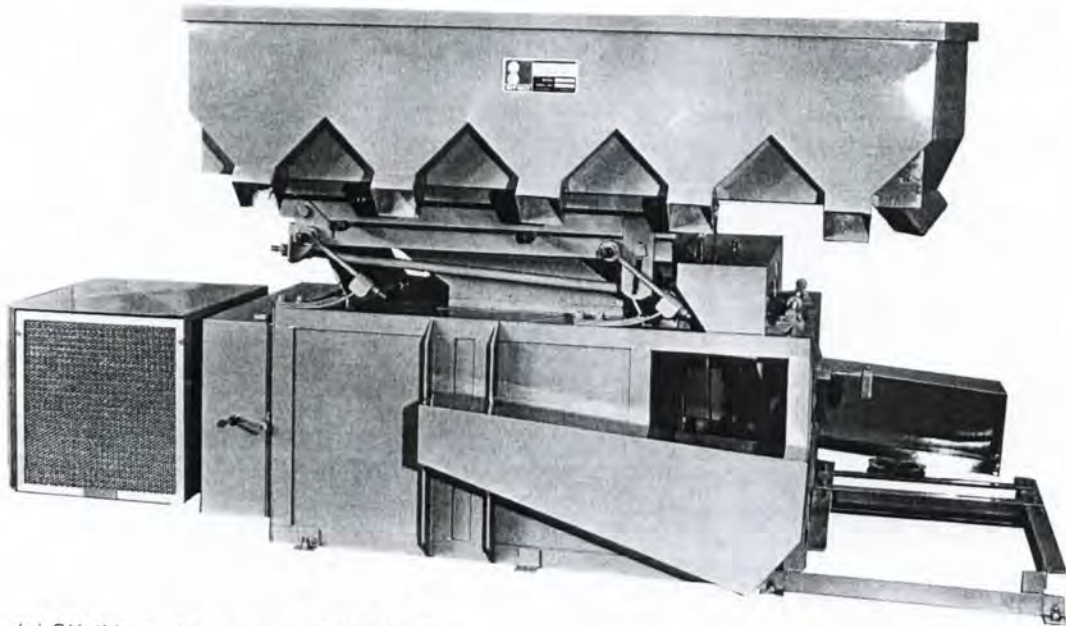


KIPP KELLY

SPECIFIC GRAVITY SEPARATOR



Model SY (Motor Available at Extra Cost)

Product, grade and impurity separations are effected by weight differences only. Material is "floated" by air action on the porous deck which is oscillated rapidly and controllable in pitch laterally and longitudinally. This compact unit is constructed for continuous 24 hour heavy duty service and effective separation is made possible by the use of the variable controls which adjust degree of deck inclination, eccentric speed and air volume.

The Kipp Kelly separation method is based on weight differences and has proven vastly superior to any fanning or screening processes in use in the dry separations field.

Maintenance is simple, power requirements low and parts replacements, under normal operating conditions, negligible.

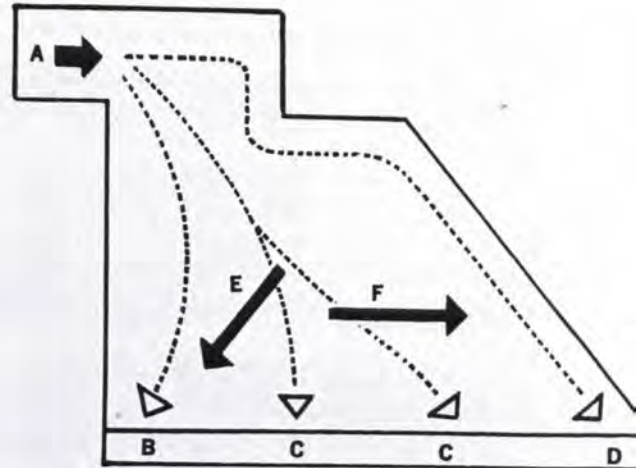
Manufactured for commercial application of the air flotation process — for multiple or complex high volume dry commodity separations by weight differences not by shape or size.

KIPP KELLY LIMITED

KIPP KELLY SPECIFIC GRAVITY SEPARATOR

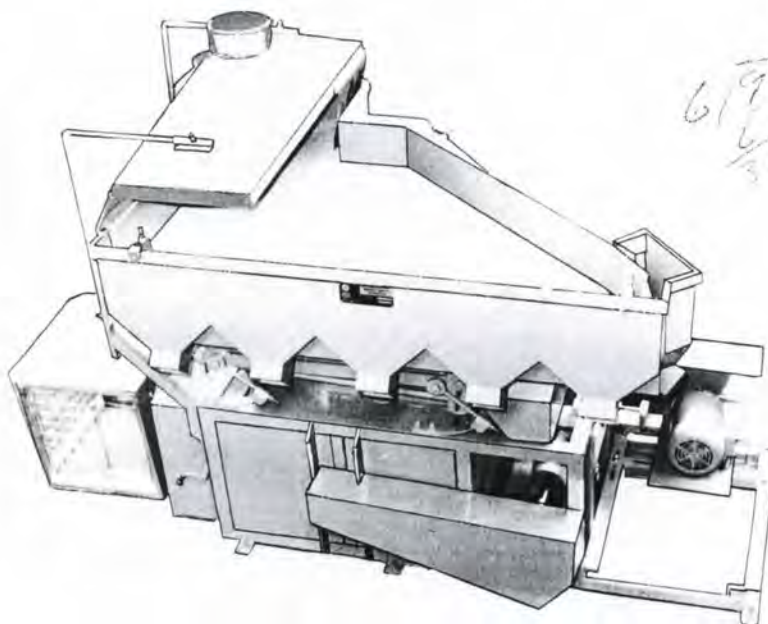
PRINCIPLE OF OPERATION

The Kipp Kelly Specific Gravity Separator is designed to separate materials by specific gravity only. Material to be processed is fed across the surface of a reciprocating deck which is covered with one of a variety of porous cloth or metal materials depending upon the material to be treated. Air is passed upward through the deck under pressure from a fan built into the table frame, with an air gate on the suction side of the fan. Air enters the chamber below the deck and is then controlled precisely in distribution and degree of pressure. The air is thus used to "float" the material in such a way that it will be stratified, the heavier particles settling and lighter particles rising to the top of the bed. The motion of the separator deck, air volume and oscillation speed and longitudinal and lateral slopes of the deck all combine to cause the heavier particles to settle and travel further along the deck. The heavier particles travel to the direction of deck motion and are discharged close to the narrow end while the lighter particles are floated by air and travel across the line of motion of the deck and are discharged at the broad end.



Plan of air table illustrating flow of material in relation to pitch, influence of gravity flow and direction of stroke.

- A. product flow
- B. tailings
- C. good product
- D. heavy components
- E. inclination of table (gravity flow)
- F. direction of movement caused by table oscillation



MODEL 300 SEPARATOR
WITH OPTIONAL MOTOR AND
FEED AREA DUST HOOD,
FULL DUST HOODS ARE ALSO
AVAILABLE.

SEED AND GRAIN SEPARATIONS



ORIGINAL
Sample of Wheat containing garlic
and other weed seeds.



TAILINGS
The tailings are almost entirely weed
seeds and contain no good wheat.



CLEAN PRODUCT
The final product is absolutely clean
wheat.

The Specific Gravity Separator readily handles seed and cereals from the smallest in size to the large heavy grains. It would be difficult to enumerate all the separations being obtained by specific gravity in detail. The following are a few of the more common separations being secured.

CLOVER AND ALFALFA

The Gravity Separator is used in nearly every seed plant in America that handles clover or alfalfa. It will remove green, immature seeds, blighted seeds, frosted seeds, inert matter such as mud and stones. It removes thistles of all kinds, quack grass, foxtail, lambsquarter, sorrel, wild oats, peppergrass, dragonhead, docks and many other weed seeds.

TIMOTHY

The separator when used on timothy will remove all inert matter and all the weed seeds mentioned above.

GRASS SEED

The Separator will remove all sand and other inert matter as well as most weed seeds. The Separator will also separate the fertile from the infertile seeds and can be used to control the germination to any desired point.

FLOWER SEED

Flower seeds down to the very smallest size can be treated on the Gravity Separator. The loss in discard in treating over the table is very small and the resulting product is of a much superior quality with higher germination.

WHEAT

The Gravity Separator will remove foreign seeds from wheat that cannot be removed by any other method. It readily takes out kingshead, ragweed, garlic, oats, barley and other seeds. It also discards mud and other inert matter as well as broken and shrivelled grains and ergot.

OATS

The Gravity Separator will remove foreign seeds, stones, and other inert matter from oats. The Separator is also very valuable in a mill for removing hulled from unhulled oats.

BARLEY

The Gravity Separator will remove foreign seeds, including wild oats, stones and other inert matter from barley. It will also grade according to germination which is of great value in preparing barley for malting.

RYE

The Gravity Separator will remove foreign matter from rye including ergot which is very difficult to remove by any other method.

MUSTARD SEED

The unit effectively cleans the seed removing dodder and most troublesome weeds.

RAPSEED • CANOLA

Removes immature, frozen and damaged seed as well as weed seeds.



ORIGINAL
Alfalfa containing Russian Thistle
and other weed seeds.



TAILINGS
Tailings contain very little Alfalfa.



CLEAN PRODUCT
Alfalfa containing no weed seeds of
any kind.

FOOD PROCESSING THROUGHOUT THE WORLD



ORIGINAL RICE



TAILINGS



CLEAN RICE

RICE

The Gravity Separator will remove all foreign seeds, stones, mud and other contaminating elements from rice stocks. The Separator will also grade broken rices, removing chalky, imperfect, and fine sized grains so as to improve the quality of the stock. When rice has been stored for some time the Separator will remove all weevil-eaten and other damaged grains.

There are also a number of rice mills using the Gravity Separators for separating the brown rice from the rough rice reporting from the paddy machines. By removing the brown rice at this point results in considerably less breakage. The Separator can also be used for classifying the finished rice into standard grades.

COFFEE

The Specific Gravity Separator will remove light beans, elephant ears, shells, stones, nubbins and other imperfections usually found with the coffee bean. Users report that the machine reduces the cost of hand picking up to ninety percent.

The machine also can be advantageously used for raising the grade of the coffee by removing imperfect beans, etc. This operation can become very profitable to the operator who wishes to take advantage of price spreads as the operation can be very finely controlled and the loss in discard held to a minimum.

SCREENINGS

In any grain or seed cleaning operation no matter what type of machines are used there is, almost invariably, a quantity of good marketable seed lost in the tailings. Many operators use the Specific Gravity Separator solely for the recovery of these good seeds and find it a very profitable operation.

GENERAL

Any seeds which have been run over the Specific Gravity Separator will give a greater yield; because all the light and infertile seeds are removed leaving only the strong, healthy seeds with a high percentage of germination which are more able to withstand adverse growing conditions and disease.

PEAS

This unit is especially recommended for use by the pea canner. It will efficiently discard the wrinkled and weeviled peas from the canning stock, and when used as a grader on seed stocks, will deliver a seed product running high in fertility, thus supplying a grade of seed to the grower which will materially benefit both the grower and canner.

This unit should be provided with a small elevator, when used as a grader, to receive a small middling product from the machine and to return same to the feed of the machine through the usual feed bin. This arrangement enables the production of a constant even grade of finished stock.

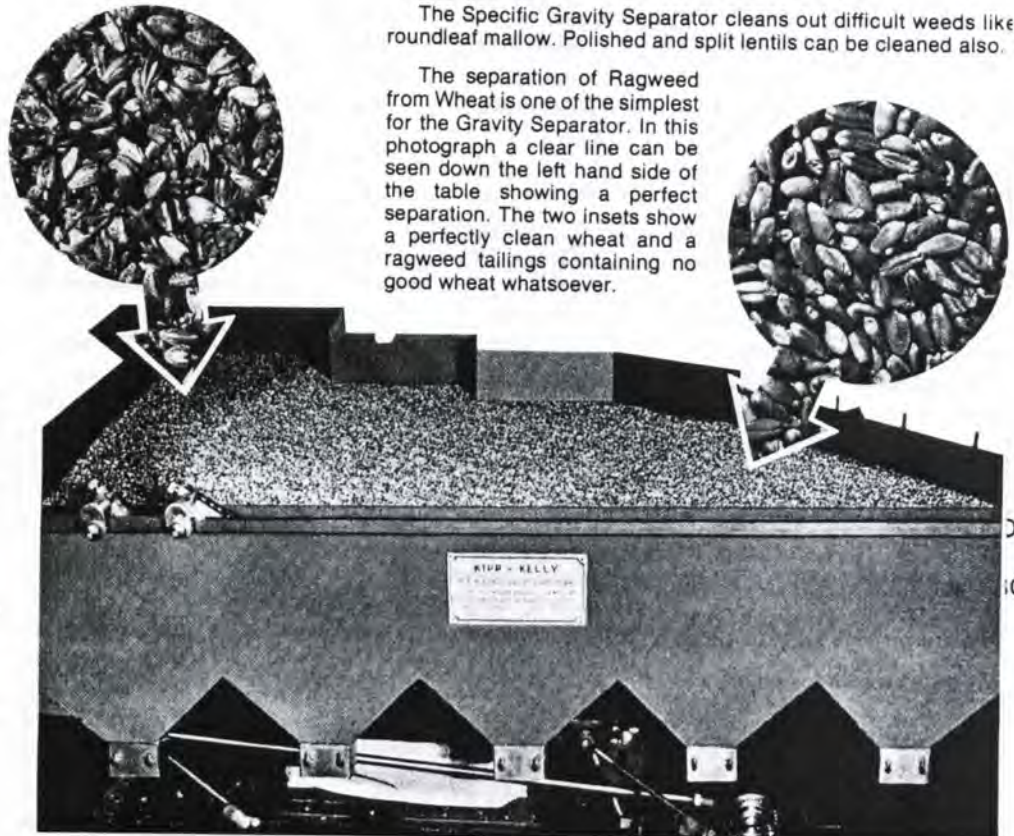
BEANS

This unit is especially recommended for the cleaning and grading of bean stocks. It will efficiently remove insect damaged and poor beans and thus greatly reduce the cost of hand-picking. From seventy-five to ninety percent of the usual hand-picking costs can be saved by its use.

LENTILS

The Specific Gravity Separator cleans out difficult weeds like roundleaf mallow. Polished and split lentils can be cleaned also.

The separation of Ragweed from Wheat is one of the simplest for the Gravity Separator. In this photograph a clear line can be seen down the left hand side of the table showing a perfect separation. The two insets show a perfectly clean wheat and a ragweed tailings containing no good wheat whatsoever.



KIPP KELLY AIR FLOTATION TABLES

SIZE 300 TYPE SY SERIAL # 2211

EJECTION:

GENERAL ARRANGEMENT: As shown on attached drawing.

FOUNDATION:

A substantial level foundation must be provided and the machine securely bolted down. Lugs for the holding-down bolts are provided on the base of the machine. If the machine is to be located on an upper floor, careful attention should be payed to the position of the supporting beams or columns. The separator should be located in the building so as to take maximum advantage of the supporting structure. Placing the equipment directly over the beams, or providing cross supports to carry the machine loads to the beams are the best rules to follow. The object of this is to eliminate false motion in the deck of the separator, which directly reduces the operating efficiency of the machine.

The weight of the machine set up to run is approximately 1275 lbs. or 580 kg.

The live loads imposed by the machine are:

283 lbs. (108 kg.) Horizontal

412 lbs. (190 kg.) Vertical

The frequency of these loads is 350 to 460 cycles per minute.

MOTOR:

This machine is to be driven by a $7\frac{1}{2}$ HP 1800 RPM motor, though a V-belt drive, which consists of:

1	<u>6.4" PITCH</u> Diameter	<u>3</u>	Groove Motor Sheave;
1	<u>7.4" PITCH</u> Diameter	<u>3</u>	Groove Machine Sheave;
	<u>3</u>		V-Belts.

Place the motor on the motor rails, fit the sheave on the motor shaft and line up with the machine sheave. Place belts on sheaves, and bolt motor to the rails. The V-belts supplied with this machine are ample to transmit the power required by the machine. The motor should now be tightened until the V-belts have a $\frac{3}{4}$ " 19" deflection when pushed in the center of their span. A sheet steel guard is provided for this drive, and it should be bolted on before the machine is started up.

SPEEDS:

At the specific motor speed of 1750 RPM the fan will run at 1450 RPM, the lower cone shaft 410 RPM and will allow a variation through the cone pulleys of from 350 RPM to 460 RPM of the eccentric shaft.

AIR SUPPLY:

Clean air must be supplied to the machine. The cell type air filter supplied with the machine must be carefully erected and far enough away from the machine so that any dust rising from the deck of the machine will not foul the filter inserts. If this is not done, the inserts will soon become clogged up and their efficiency impaired.

Whenever possible, the air filter should be placed in a separate dust-free room.

To erect the air filter, place the sheet metal base in a chosen location and connect the machine by means of a 1 1/2" diameter duct. Make sure that there are no leaks in this duct, we suggest pasting strips of heavy Kraft paper over the joints.

SOURCE OF FEED:

The source of feed may be governed by present position of bins. It is advisable to put in a small receiving bin over the feed hopper to assure an even and continuous flow of stock. This receiving bin should be hoppersed and spouted into the feed hopper. The end of this pipe should end slightly below the top of the feed hopper, with the feed corner of the deck at its highest position.

The feed hopper can then be adjusted vertically without interfering with the chute or feed stream. Do not build feed chute down tight on top of the feed hopper.

We have found that better results are secured if the feed hopper is set so that the material being fed to the table does not bounce on to the deck.

CAUTIONS:

Be sure this machine is securely bolted down, and level in both directions.

Take care there are no leaks on the suction side of the machine.

Do not remove protective covering from deck until ready to operate the machine.

GROUNDING:

It is possible in some atmospheric conditions to build up a static electric charge on these machines and we would recommend wherever possible grounding (or earthing) the main frame of the machine.

OPERATIONS:

The operation of this machine is quite simple, and all adjustments, except the variable eccentrics, can be made while the machine is running. All moving parts are guarded and there is no danger to the operator. The simplest way to learn the effects of the various adjustments or settings is to run a small quantity of stock over the Table. When the machine is set at the following positions:

FEED	<u>4-6</u>	AIR CONTROL	<u>4-6</u>
SIDE PAISE	<u>1 1/2</u>	END PAISE	<u>5-6</u>
SPEED	<u>5-6</u>	ECCENTRICS	<u>7-10</u>

Observe the appearance of the deck load and make one adjustment at a time. Re-run the same stock for each adjustment and observe the effect of each adjustment. We have found that it is quite advisable to have one man learn to run this machine. A crowd of people usually has the effect of confusing the operator by suggesting changes of settings before he has thoroughly grasped the effects of the various controls. The deck load should be fluid but not bubbling or boiling. (This boiling condition is caused by too much air). The controls, except the feed, are all within easy reach.

ADJUSTMENTS.

There are eight adjustments on these machines: 1) Rate of feed. 2) Volume of air. 3) Side raise of the deck. 4) End raise of the deck. 5) RPM eccentric shaft. 6) Length of throw. 7) Position of cutting fingers. 8) Angle of toggles.

- 1) RATE OF FEED is controlled by opening or closing sliding gate in feed hopper.
- 2) VOLUME OF AIR is controlled by position of airgate on suction side of fan and is regulated from airgate control handle.
- 3) SIDE RAISE is adjusted by loosening the side raise clamp at motor end of machine and adjusting jack-screw located under the side raise frame on the back rail.
- 4) END RAISE is adjusted by loosening the end raise clamp and adjusting the jack-screw located under the end raise from the end rail.
- 5) RPM OF ECCENTRIC SHAFT is controlled by speed change handle located above the motor platform.
- 6) LENGTH OF THROW is controlled by changing the setting of the variable throw eccentrics. This machine is fitted with two variable throw eccentrics which can be adjusted in 18 steps from 0 to 3/8" (10 mm) throw. To adjust, remove guard, loosen set screws in outer rim; remove knurled pin, rotate rim to desired settings; replace knurled pin; tighten set screws; replace guard.

CAUTION: Be sure that both eccentrics are set at the same number. The eccentrics are set 7 when shipped. Machine must be stopped when adjusting eccentrics. Use set screw wrenches and tommy bar provided when making adjustments.

- 7) POSITION OF CUTTING FINGERS is governed by the work being done on the deck. To adjust, loosen knurled screw in clamp and slide cutting finger along discharge hopper rail; lock to rail by tightening screw and adjust for angle by knurled screw on top of cutting finger.
- 8) ANGLE OF TOGGLES - the toggles are set at the factory at an angle which we have found to be satisfactory for most operations. However, it is sometimes desirable to alter the angle and obtain a different lift to the Table. Adjustment of the toggle angle is made by lengthening or shortening the eccentric rods. Long threads are provided on these rods for this purpose.

CAUTION:

If the toggle angles are changed make particularly sure that each rod is tightened up equally, and that the distance from the centre line of the eccentric shaft to the connecting rod is the same on both sides.

MAINTENANCE:

Whenever it is necessary to sweep off the deck, have the machine running and use the soft brush supplied. The air coming through the deck will prevent particles being forced into the porous deck material and blinding the deck.

It is sometimes necessary to take the deck off the Separator and clean the air chest and underside of the deck thoroughly and also to blow out the deck covering. We have found that a certain amount of dust will get into the suction side of the fan in spite of all the air filters we can supply and after awhile this dust is deposited on the underneath side of the deck covering. To remove this, we suggest taking the deck off the air chest and placing it face up on two tressels and blowing out by means of compressed air. The air should be applied from the top of the deck so as to blow back any particles that are stuck underneath. The pressure should not be over 25 to 30 lbs. as the deck fabric may be damaged with higher pressures.

All Bearings are fitted with SKF bearings and have sufficient lubricant for six months. Use only ball bearing grease and clean out old grease before putting in new grease into bearing housing.

AIR BAFFLES:

These baffles in the air chest have been set at the factory and air test taken. The attached air distribution charts will guide you in making adjustments.

SHOD TESTS:

Each machine has been given a running test at the factory and carefully inspected.

* * * * *

DIRECTIONS FOR REMOVING, GREASING AND REPLACING
FAN SHAFT BEARING

1. Remove cover. (1)
2. Raise lip of lockwasher (3) from groove in locknut (4). Now locknut (4) is free to turn.
3. Turn locknut (4) about three or four times.
4. Place a piece of copper or bronze bar against locknut (4) and rap with a hammer. This releases grip of adapter sleeve (5) on shaft.

N.P. Do Not remove locknut (4) from adapter sleeve (5).
5. Now remove bearing (6), adapter sleeve (5), locknut (4), and lockwasher (3) as one unit.
6. Carefully clean all parts. Remove all old grease.
7. Put some grease on ball-bearing race.
8. Replace bearing (6), adapter sleeve (5), locknut (4), and lockwasher (3) as a loose unit, same as when it was removed.
9. Locknut (4) to be screwed up hand-tight and one lip of lockwasher (3) bent back into a groove of locknut (4).
10. Fill bearing half full with Keystone ball-bearing grease.
11. Replace cover (1).

Chart #57-A.

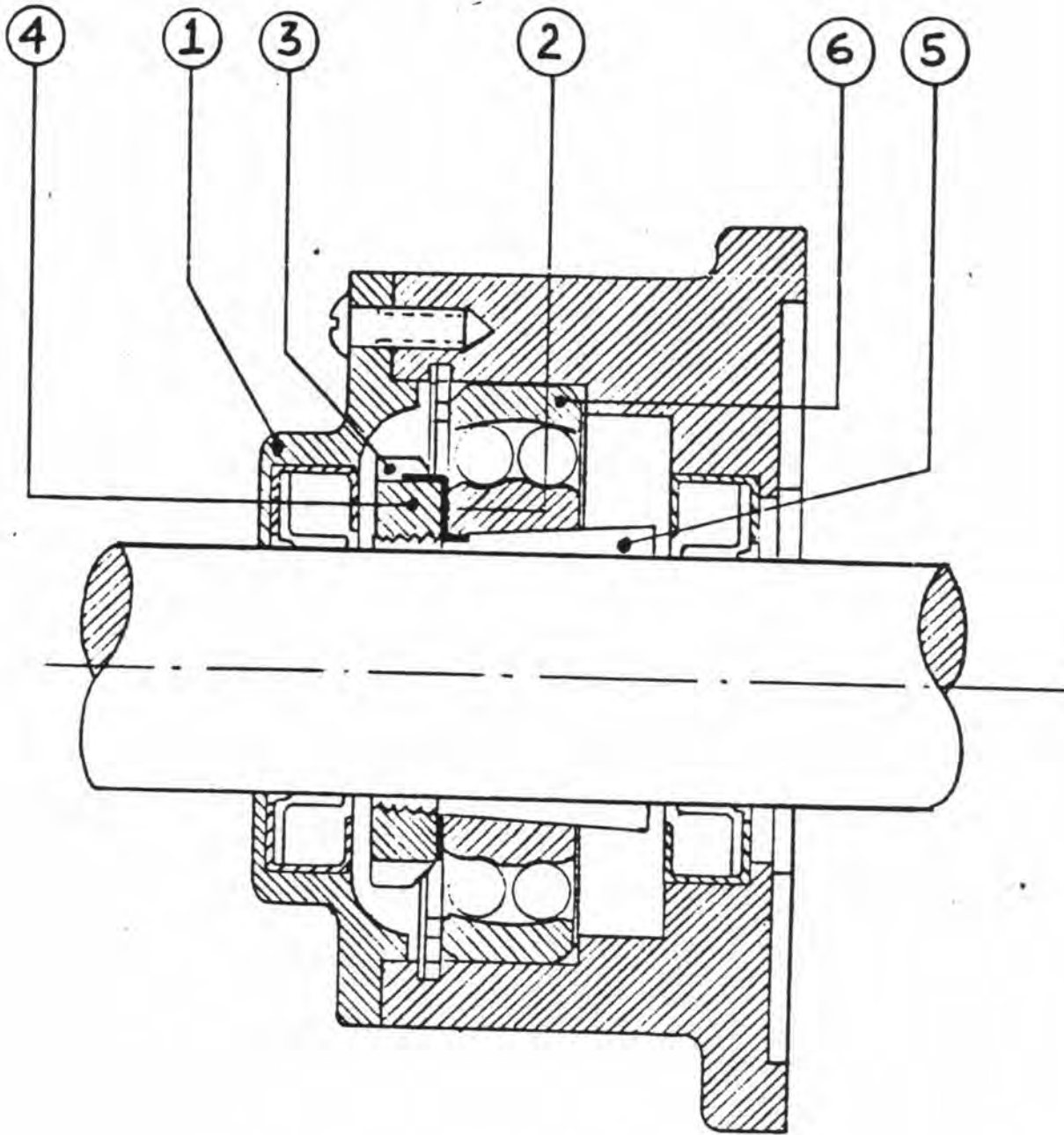


CHART #57

SPECIFIC GRAVITY SEPARATOR
FAN BEARING ASSEMBLY

DATE OCT 30/73.	DRAWN BY: DLPRADWBT	CHECKED BY	APPROVED BY	DRAWING NO. 6982
SCALE NTS.	ENGINEER'S NO.	SHOP O/NO.	SHEET NO.	



I N S T R U C T I O N S

All bearings on this machine are grease lubricated with Keystone #34 Lt. ball-bearing grease. There are, on this machine, ten ball-bearings: two on the fan shaft, two on the lower cone shaft, two on the eccentric shaft, one on each eccentric and two in the idler pulley on the speed change. To lubricate these bearings it is necessary to take off the bearing cover plates, clean out as much as possible of the old grease, flush bearing with oil, and put in a sufficient quantity of Keystone #34 Lt. grease.

FAN SHAFT BEARINGS: These bearing housings are not fitted with any grease cups or grease fittings and to clean and re-grease these bearings it is necessary to remove the bearing cover. Due to the compactness of the machine, it is necessary in both cases to pull off the V-belt sheaves for a sufficient distance to allow working space. These sheaves are a light press fit and can be easily pulled with any ordinary type of wheel puller found in all local garages. DO NOT ATTEMPT to barr the sheave clear, as this will put a stress on the ball-bearings and these are difficult to get and must be treated carefully. When sufficient clearance has been obtained, undo the cap screws in the bearing cover by means of the set screw wrench which was provided you with the machine. Ease back the cover and clean out the old grease, using a clean rag or the finger. After the old grease has been removed, wash out bearing with a seal oil or coal oil, then approximately one-quarter fill the housing with Keystone #34 Lt. grease. In this particular case, this will amount to about a heaping tablespoon full. Replace the cover and sheave; be sure to check alignment of sheave.

LOWER CONE SHAFT AND ECCENTRIC SHAFT: On these two shafts the bearings are housed in standard SKF pillow blocks and these are easily accessible. To get at those bearings, loosen the two nuts at the top of the bearing housing, lift off top half of cover and the bearing is in the clear. Remove all grease, wash out bearing and replace with the new Keystone #34 Lt. grease by pressing the grease in between the balls and about quarter filling the bottom half of the cover. Great care must be exercised in that you get the top half of the bearing housing properly back in position; otherwise, the bearing may be pinched and damaged.

ECCENTRIC: To lubricate the eccentric, remove the bearing cover, which is on the inner side of the eccentric, wash out the bearing and regrease by about quarter filling the bearing housing, using about the same amount of grease as for the main shaft. It is not necessary to completely disassemble this eccentric to lubricate it. Use Keystone #34 Lt. grease.

IDLER: To re-lubricate the idler, the idler itself must be removed from the yoke by undoing the bolts holding the shaft in the yoke. On this idler the shaft is dead and the outer race revolves. After the pulley has been removed from the cast iron yoke, the retaining rings, or discs, can be

easily removed by means of a screwdriver and the bearings cleaned out and repacked with Keystone #24 Lt. grease. In replacing the idler in its yoke, make sure that it is in the same position as originally and there will be no difficulty with the idler riding the side of the cone bolt.

TOGGLE SEATS: In our later model machines, the upper toggle seats are lubricated from the rear of the machine through grease cups. The lower toggle seats are just packed with grease and the covers replaced. In the older type machines, the upper toggle seats were provided with an oil hole in the upper toggle frame and the lower seats also provided with recesses for grease.

GENERAL: In re-greasing or lubricating this machine, great care must be taken to prevent any foreign matter or dirt getting into the bearings. Cleanliness is of paramount importance.

Ball-bearings are precision machines, and, at the present time, are almost irreplaceable.

Use only Keystone #24 Lt. ball-bearing grease. Cheap grease, which frequently contains acid, will ruin bearings in a very short time. One pound of ball-bearing grease will lubricate this machine for one year.

BALANCE SPRINGS: The springs are grease-lubricated and to re-grease, block up upper frame to take weight off the springs. Loosen spring bolts and smear each spring leaf with grease.

SPRING CLIPS: The recess in these clips should be kept filled with grease.

SHOULDER BOLTS: These are fitted with grease cups and should be checked for wear. This can be done by loosening the nuts in the spring adjusting bolts to release the tension and any wear or looseness will be noticed immediately.

If these instructions are carefully carried out, the bearings fitted to these machines will last indefinitely.

LUBRICATION
SPECIFIC GRAVITY SEPARATORS

<u>BEARING LOCATION</u>	<u>BEARING HOUSING</u>	<u>BEARING PART NO.</u>	<u>INSERT</u>	<u>SEAL</u>	<u>RECOMMENDED LUBRICANT KEYSTONE #84 LT.</u>	<u>CLEANING & RELUBRICATION PERIOD HOURS</u>
Fan Shaft	KK 7976	1209K	HA209	CR14283	#84 Lt.	1800 hrs.
Eccentric Shaft Upper & Lower	SN 509	1209K	HA209		#84 Lt.	3600 hrs.
Eccentric	KK 7901	6211	NA	NA	#84 Lt.	3600 hrs.
Speed Change Pulley	KK 9669	6205RS	NA	NA	#84 Lt.	3600 hrs.
Toggle Seats Upper & Lower	NA	NA	NA	NA	#84 Lt.	1000 hrs.
Spring Adjustment Bolts	NA	NA	NA	NA	#84 Lt.	1000 hrs.

LUBRICANT SPECIFICATIONS:

#84 Lt. - Lithium Base -
Operating Temperature - 60° C to 105° C
Drop Point - 180° C
NLGI Rating - 2

INSTRUCTIONS ON CLEANING & RELUBRICATION

- A) Remove all old grease.
- B) Flush bearing with light oil heated to approximately 90° C.
Soaking the bearing may be required to remove the badly oxidized grease.
- C) Inspect bearings and seals for damage, replace if necessary.
- D) Repack bearings with the specified grease.
CAUTION: Excessive lubricant may cause serious overheating.

February 23, 1979.

INSTRUCTIONS FOR THE USE AND MAINTENANCE OF THE AIR FILTER

ONE TYPE OF AIR FILTER, A WOVEN SCREEN, OIL IMPREGNATED, INSERT FILTER IS SUPPLIED FOR USE WITH THE SPECIFIC GRAVITY SEPARATOR AND THE AIR FLOTATION STONER. THIS TYPE OF FILTER IS SUITABLE FOR USE WITH CLOTH-COVERED DECKS #1, #2, AND #3, AND WIRE-COVERED DECKS #7 AND #7H. WHEN CHANGING OVER THE DECK FROM CLOTH TO WIRE DECK, IT IS NOT NECESSARY TO CHANGE THE FILTERS.

THESE FILTER INSERTS FIT INTO A FRAME AND ARE EASILY CHANGED.

THE OIL IMPREGNATED FILTERS ARE EASILY CLEANED, AS FOLLOWS:

- 1) REMOVE THE FILTER INSERT FROM THE FILTER FRAME.
- 2) DIRECT A STREAM OF HOT OR COLD WATER AT THE DIRTY SIDE OF THE FILTER; THE DIRT AND LINT ARE QUICKLY LOOSENED AND CARRIED THROUGH THE LARGE TRIANGULAR PASSAGE (SPRAYING THE FILTER ON BOTH SIDES IS RECOMMENDED - A FLY SPRAY WOULD BE THE IDEAL THING FOR THIS). NO DRAINING IS REQUIRED.

AFTER CLEANING OIL IMPREGNATED FILTERS, THESE MUST BE RE-OILED.

A WHITE OIL OF VISCOSITY S.A.E. 30 IS RECOMMENDED FOR SPRAYING.

CLEANING OF SCREEN TYPE HARDWARE CLOTH FILTERS, AS FOLLOWS:

- 1) REMOVE THE FILTER INSERT FROM THE FILTER FRAME.
- 2) BLOW OUT THE FILTER WITH AIR AND BRUSH OFF.

INSTRUCTIONS FOR COVERING SPECIFIC
GRAVITY SEPARATOR DECKS

Carefully remove screws holding the banking rail and hold down clamps. Note method of fastening and location of each piece.

Remove felt strip which is under the banking rail.

Remove the protective metal strip on the discharge rails and the wooden fillet, which is underneath this metal strip. In case your Deck is not fitted with the wearing metal strip, you will only have to remove the hardwood fillet which is fastened to the deck rails with wood screws. With these strips removed, the tacking which holds the cloth in place is exposed.

Loosen the tacks holding the cloth and remove cloth.

Make sure there are no tacks or splinters of wood left on the deck after the cloth has been removed.

Clean the rib structure and air vanes by gently blowing with compressed air.

The deck is now ready to put on a new cloth.

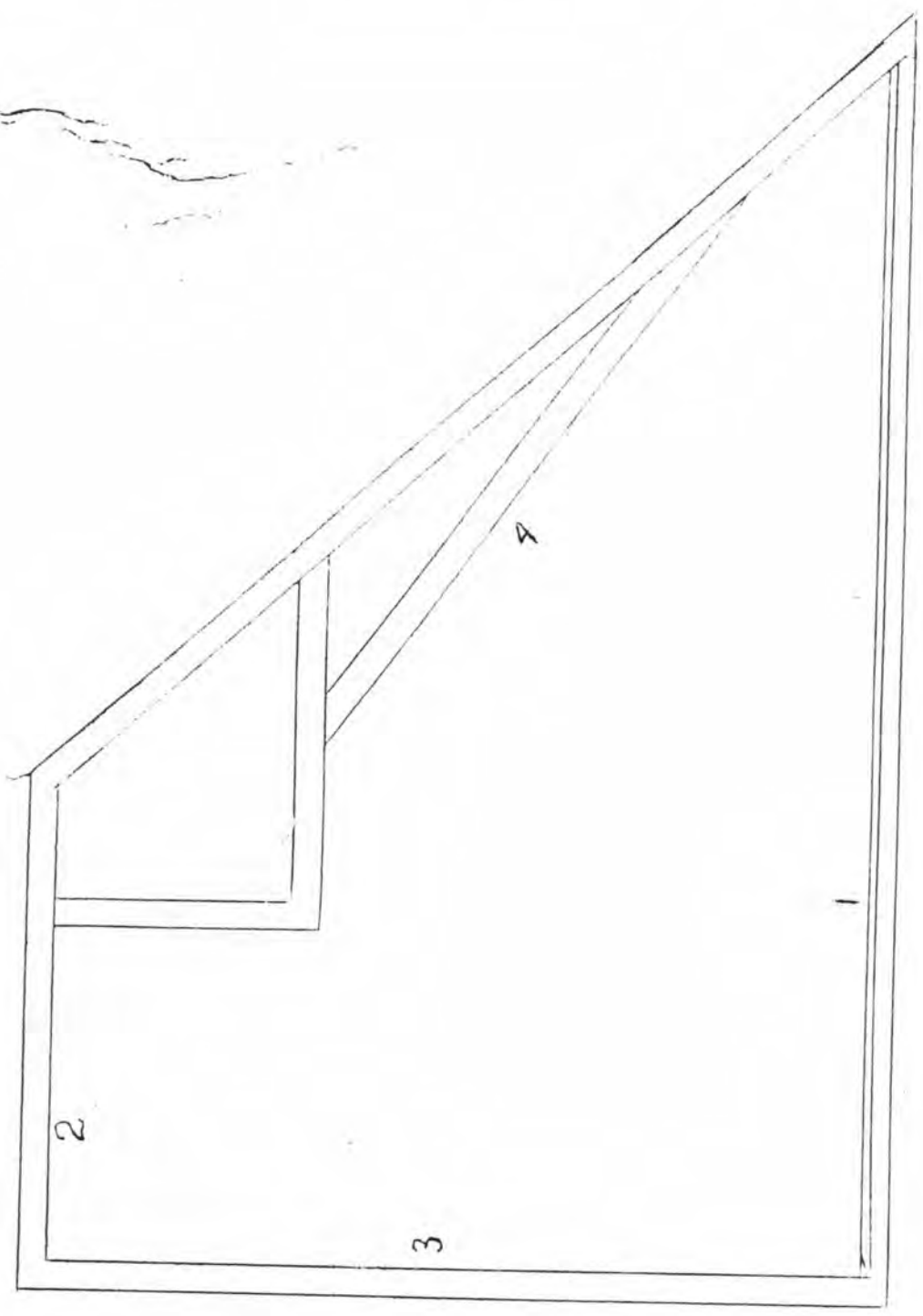
Place the cloth over the deck structure, (the cloth is marked "This side up", and if it is not marked, either side can be used). With selvage to the long discharge rail, which is shown on the sketch as No. 1, tack securely in rabbeted section. These tacks should be about 1-1/4 apart. After the cloth is tacked in this space, go to the other side of the deck and stretch the cloth tightly, taking care to keep the weave SQUARE, and tack to rail No. 2. Then by gently stretching to maintain the square weave, tack to rail No. 3 for a distance of 8" from No. 1 rail. Then stretch tightly and tack to rail No. 4, beginning at the head end of the deck, and finishing at the point of this rail.

If you have been careful, the deck is now completely covered, and the cloth is evenly stretched and the weave remains square to the long discharge rail, or No. 1 rail.

Next place the felt which was removed from under the banking rail, taking care that the felt does not project beyond the rails to which it is tacked.

Next, replace cutting gates, banking rail, handles, clamps, etc. Be sure to fasten these securely. A little care in stretching the cloth and by noting carefully how the parts are fitted at the Factory, you will have no difficulty in recovering this deck as expertly as we can do it here.

KA - DECK



SPECIFIC GRAVITY SEPARATORS

EFFECT OF ADJUSTMENTS

AN INCREASE IN END RAISE:

- (a) Retards the climb of material up the Deck.
- (b) Causes more material to come off the Table at the low end.

AN INCREASE IN SIDE RAISE:

- (a) Increases the rate of flow of material out of the feed area.
- (b) Causes more material to come off the Table at the low end.

AN INCREASE IN SPEED:

- (a) Increases the rate of climb of material up the Deck.
- (b) Livens up the action of the material on the Deck.

AN INCREASE IN ECCENTRIC THROW:

- (a) Increases the rate of climb of material up the Deck.

AN INCREASE IN AIR:

- (a) Retards the climb of material up the Deck.

TO MAKE AND MAINTAIN A SEPARATION, it is essential that:

1. Enough air to "float" the material be used.
2. There be sufficient end raise to cause the material to flow evenly off the Deck, and also to prevent light material from climbing up the Deck.
3. There be sufficient side raise, so that the material flows freely out of the feed area.
4. The feed area be completely covered by material.
5. The speed be high enough to cause the material to climb up and discharge evenly off the Deck, for that particular setting of the eccentrics.
6. The material be flowed on to the Deck and not splashed on.
7. The flow of feed remain uniform in volume.

INSTALLATION INSTRUCTIONS
GRAVITY SEPARATOR

Important note on tension on the 2" (50.8mm) x 56" (1422mm) flat belt for speed adjustment.

Breakage problems of this belt is usually due to over tensioning, therefore when installing this belt the correct tension is essential. Tension is adjusted by the varying height of the shims located under the pillow block bearings on the upper shaft of the speed adjustment assembly.

Tension should be adjusted so that there is 1 inch (25.4mm) free slack. The speed adjustment pulley will then maintain the proper tension.

KIPP KELLY LIMITED.

April 16, 1979.