



I. Introduction

Roller drill Model 2BG-6A can be used for ditching, covering, rolling and pulverizing when attached with Intelli – Trek brand power tiller /walking tractor Model IT-15. It is suitable for wheat drill and direct drill(without ploughing) and board sowing cover in all kinds of fields with its moisture content less than 30%. Using drill has the result of increasing production and reduced costs.

II. Main technical specifications.

1	Dimensions (LxWxH) mm	720x1320x700
2	Structure weight (kg)	
	1) with roller	162
	2) with leveller	145
3	Attached power	Power Tiller IT-15
4	Operation method	Full-row/narrow-row cultivating drill
5	Operation speed (km/n)	1.4 2.5 4.1
	Walking speed (km/n)	5.3 9.4
	Turning speed of shaft (rpm)	512
	Diameter of shaft (mm)	300

1	Working width (mm)	1200
2	Row number	Choice in 6
3	Row spacing (inch)	6.4x8 9x4 7.5x5 12x3
4	Coverage of single row	
	Full drill	1.5 – 2.5
	Narrow row (without ploughing)	1.5
5	Max. tilling depth (mm)	60
6	Drilling depth	10-50
7	Capacity	38
8	Volume of drilling (kg/ha)	450
9	Drilling efficiency (ha/h)	0.3 – 0.4

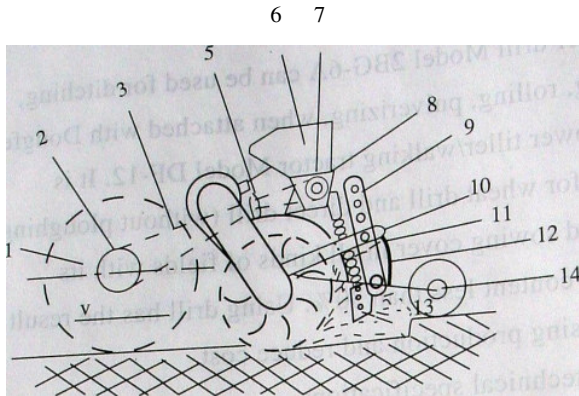


Fig. 1 Illustration of drill

1 Driving wheel	8. Dispatcher
2. Transmission sprocket	9. Roller adjusting plate
3. Chain	10. Connecting plate
4. Tilling blade	11. Dispatching tube
5. Tension wheel	12. Rubber guard
6. Seeds box	13. Drill
7. Transmission chain sprocket	14. Roller

III Main structure and principle

The drill is made up of pulverizer, transmission, drill head and rise-drop device.

1. Principle

When the drilling set going ahead, the tilling blades will turn and till soil, then throw the tilled soil back. At the same time, the sprocket mounted at the left driving shaft drive another sprocket mounted freely at the dispatcher shaft by a chain. Then, turn the dispatcher shaft and channel wheel, and the dispatched seeds are conveyed to the drill head through dispatcher tube, and the drill plate (inside the drill head) will well-distribute the seeds into the channel ditched by the drill head and the seeds are covered by thrown soil, and roll the soil at last.

2. Structure

1) Pulverizing device

Its main parts are a tilling shaft, 48 pieces blades, cover, 2 supporting brackets, transmission box and other transmitting parts. Its main purpose is tilling and soil throwing and seeds covering.

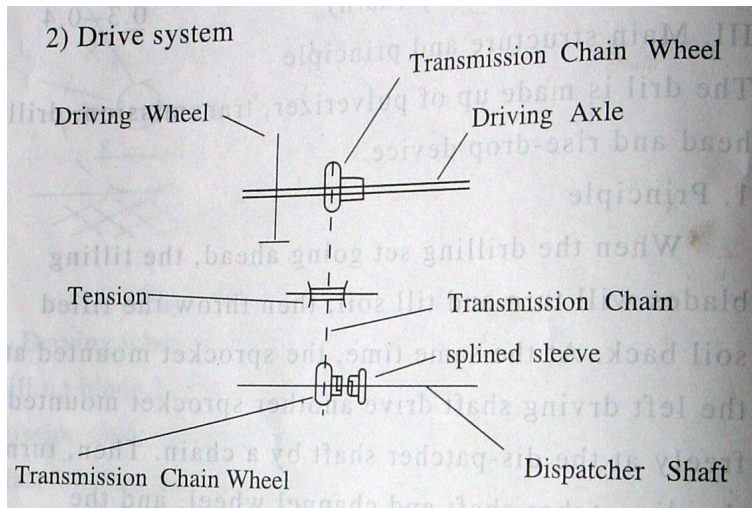


Fig 2. Illustration of Transmission

The daillis featured by one-stage drive and the system realized by sprocket 1 (20 teeth), sprocket 2 (19 teeth), splined sleeve, chain and tightening device.

3) Dispatching device

The dispatching device is made up of seeds box, supporting frame, dispatcher, dispatching shaft, dispatching tube, adjusting device of quantity and single-row on/off device. Its purpose is to store and distribute seeds. If necessary, some dispatching tubes can be stipped to change the drilling row number. The dispatch assembly is a main part of the drill.

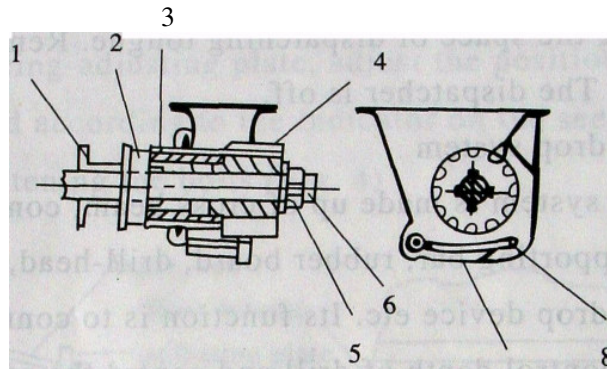


Fig. 3 The structure of dispatcher and its principle

1. Fin
2. Sleeve
3. Channeled-wheel
4. Adjusting wheel
5. Ring
6. Shaft
7. Dispatching tank
8. Dispatching tongue

This set adopt plastic channeled-wheel type dispatcher, and is made up of dispatching box.

channeled-wheel. dispatcher adjusting wheel and the dispatcher tongue. The single-row on-off device is dual-pin-clutch type and it is used for control the on/off. The device is made up of fixed sleeve, free pin, etc.

When the dispatcher is on work, the dispatching shaft turn the plastic channeled wheel, the wheel will release seeds from the outlet, the longer the wheel, the bigger the dispatching tongue. Remove the free pin. The dispatcher is off.

4) Rise- drop system

The system is made up of cross beam, connectin plage, supporting bar, rubber boardm drill-head, roller and rise-drop device etc. Its function is to connect parts to control depth of drill and control the row spacing.

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