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## ❖ **SEED DRILL :**

Seed drill is a machine for placing the seed in a continuous stream in furrows at uniform rate and at controlled depth with an arrangement of covering the seeds with soil.

## ❖ **FUNCTION OF SEED DRILL:**

Seed drill performs the following functions

I ) to carry the seeds.

li) to open furrow to an uniform depth

lii) to place the seed in furrows in an acceptable pattern

lii) to cover the seeds and compact the soil around the seed.



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## ❖ Classification of seed drill:

- ❑ According to power source:
  - I ) bullock drawn seed drill.
  - li) tractor drawn seed drill.
- ❑ According to the type of seed metering done animal drawn seed drill.
  - I) manually metered seed drill.
  - ii) mechanically metered seed drill.
- In manually metered seed drills a person drops the seeds in furrows , in mechanically Metered seed drills a mechanical device called seed metering mechanism is used to meter the seeds.
- There are many design of bullock seed drills and tractor drawn seed drills which are used for sowing...



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**Gorru**



**Bullock drawn seed drill**



**Tractor drawn seed drills**



**Tractor drawn seed drills**



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## ❖ **COMPONENTS OF SEED DRILL**

A seed drill with mechanical seed metering device mainly consists of :-frame ,seed box ,furrow openers , covering device and transport wheels .

**FRAME:** the frame is usually made of iron with suitable brace and brackets. The frame is strong enough to withstand all types of loads in working condition.

**SEED BOX:** it may be made of mild steel sheet or galvanized iron with a suitable cover.

**COVERING DEVICE:** it is a device to refill a furrow after the seed has been placed in it.

**TRANSPORT WHEEL :** there are two wheels fitted on the main axle .the wheels have suitable attachments to transmit power to operate seed dropping mechanism.

**DRILLER :** pointed end that used to drill a hole for seed and to the machines is a point where seeds enters the soil.



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## ❖ **SEED METERING MECHANISM:**

the mechanism which pick up seed box and delivers them in to the seed tube is called seed metering mechanism.

or the mechanism of seed drill or fertilizer distributor which deliver seeds or fertilizers from the hopper at selected rates is called seed metering mechanism.

Seed metering mechanism may be several types;

I) fluted feed type

II) internal double run type

III) cell feed mechanism

IV) brush feed mechanism

V) augur feed mechanism.

VI) picker wheel mechanism.

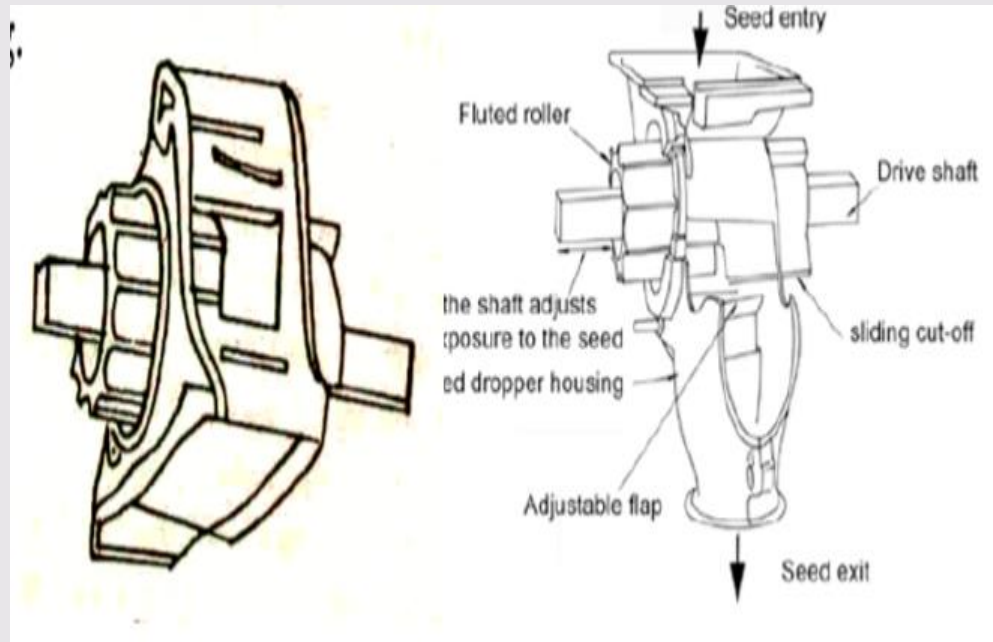
VII) star wheel mechanism.



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# 1.FLUTED FEED TYPE:

it is a seed meeting devices with adjustable fluted roller to collect and deliver the seeds into the seed tube . Fluted feed type mechanism consists of a fluted feed wheel , feed roller , feed cut-off and adjustable gate for different sizes of grains.

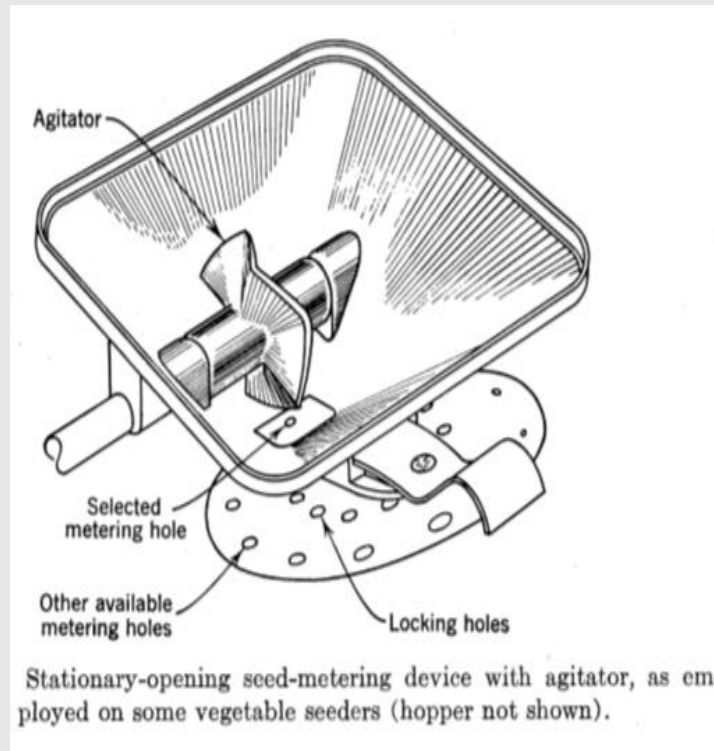




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## 2.INTERNAL DOUBLE RUN TYPE :

It is a seed metering device in which the feed wheel is provided with fine and coarse ribbed flanges .it consists of disc, mounted on a spindle and housed in a casing fitted below the seed box.

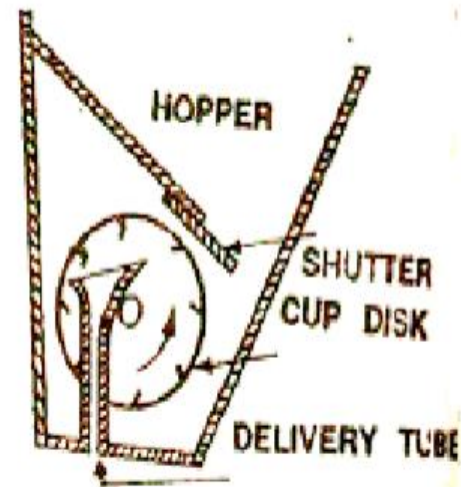




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## 3 CUP FEED MECHASM:

it is the mechanism that consist of cups of spoons and the periphery of a vertical rotating disc which pics up the seeds from the hopper and delivers them into the seed tubes.it consists of a seed hopper which has two parts , the upper one is called gain box and the lower one is



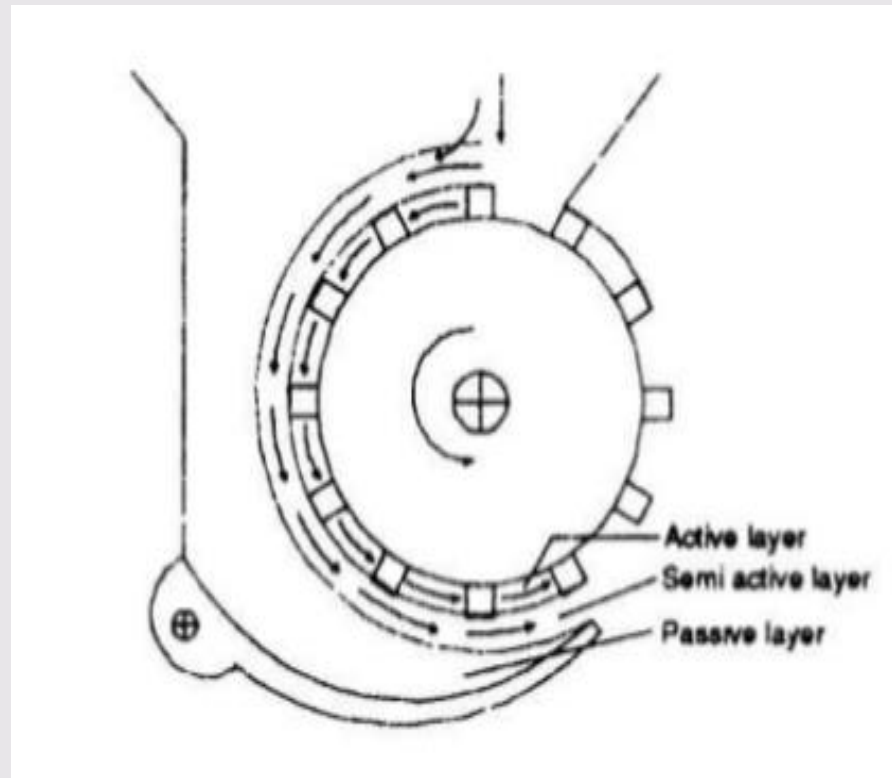




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## 4 CELL FEED MECHANISM:

It is a mechanism in which seeds are collected and delivered by a series of equally spaced cells on the periphery of a circular plate or wheel.

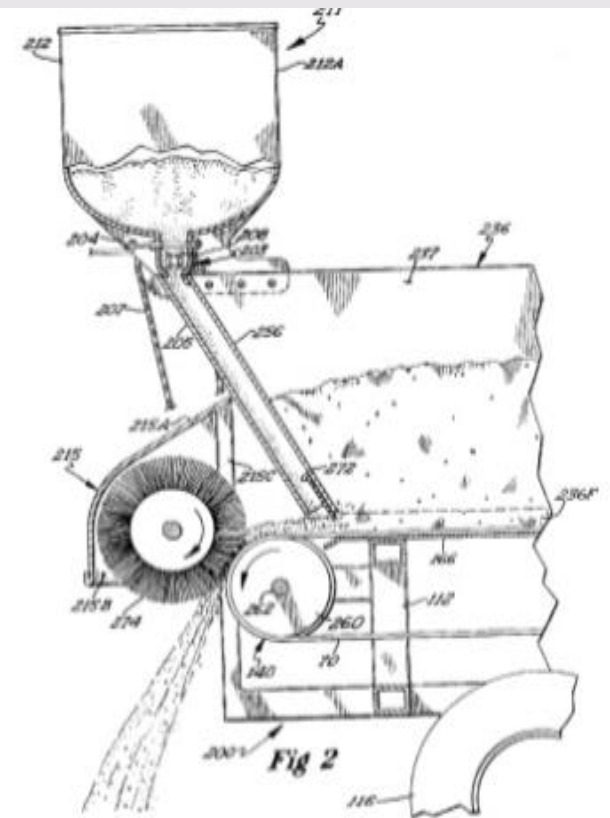




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## 5. BRUSH FEED MECHANISM:

It is a mechanism in which a rotating brush regulates the flow of seed from the hopper. the following is diagram of brush feed mechanism.





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## **6.AUGUR FEED MECHANISM:**

It is a distributing mechanism consisting of an auger which causes a substance to flow evenly in the field through an aperture at the base or on the side of hopper.

## **7.PICKER WHEEL MECHANISM:**

It is a mechanism in which vertical plate is provided with radially projected arms which drop the large seeds like potato in furrows with the help of suitable jaws.