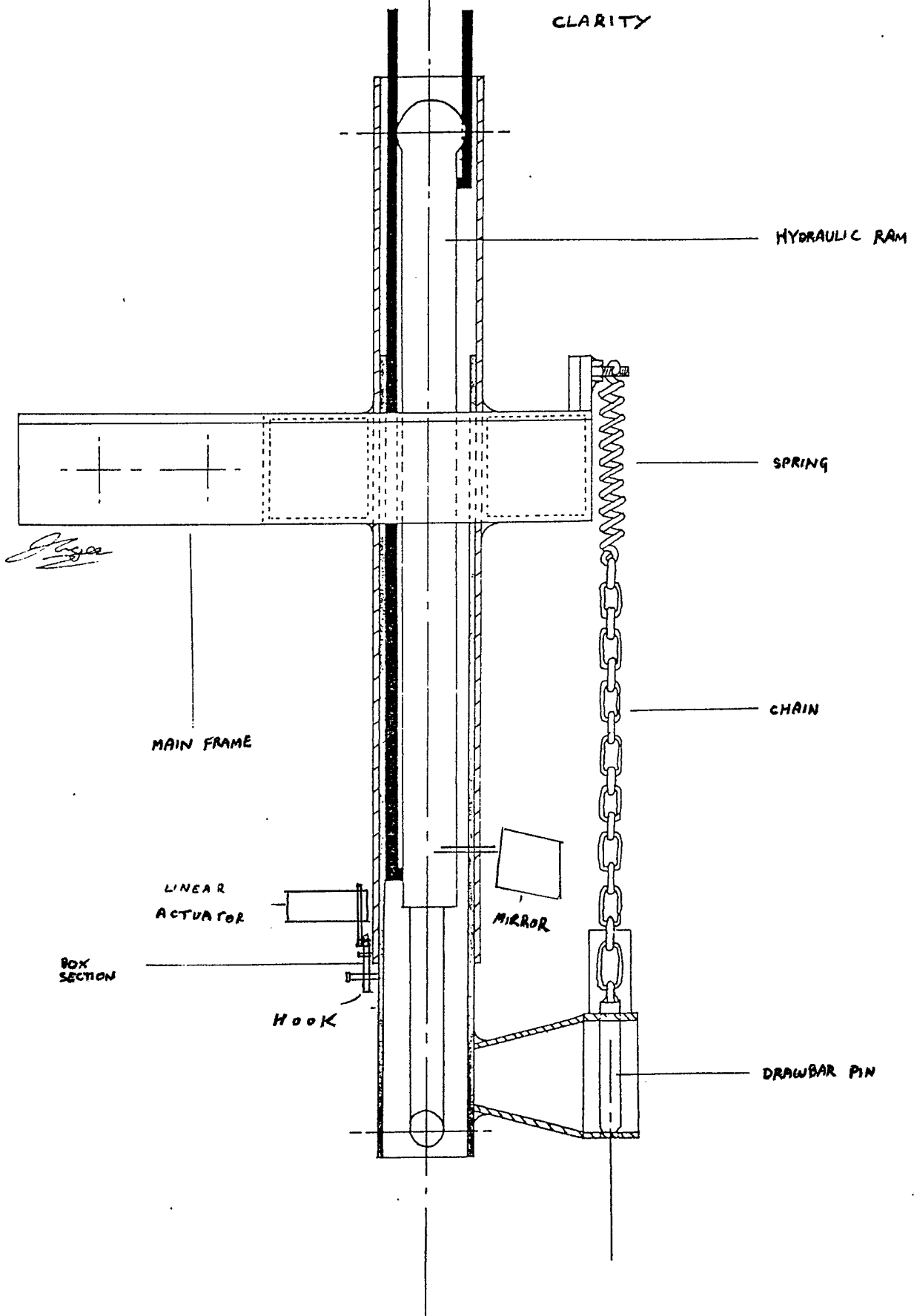


HYDRAULIC FRONT PICKUP

SELF LOCKING MECHANISM
EXCLUDED FOR
CLARITY



HYDRAULIC RAM

SPRING

CHAIN

MAIN FRAME

LINEAR ACTUATOR

BOX SECTION

HOOK

MIRROR

DRAWBAR PIN

TRACTOR FRONT MOUNTED PICK UP WITCH.

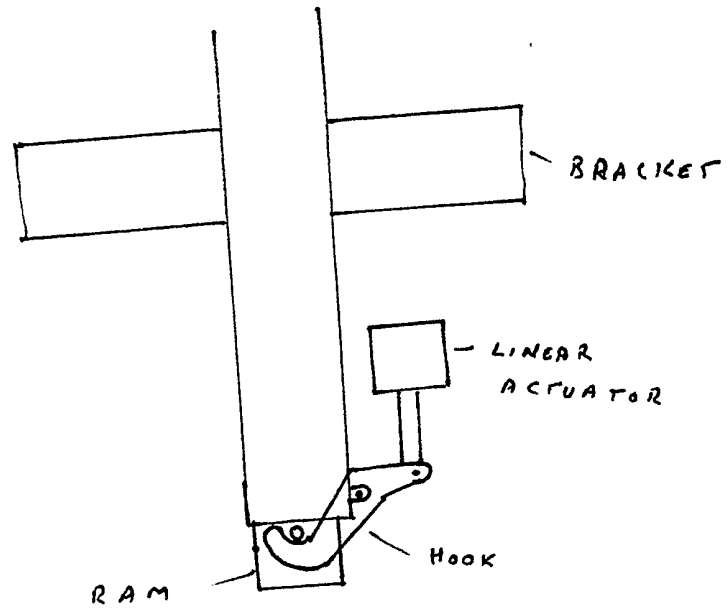


DIAGRAM 2

SPECIFICATION

Tractor front mounted pick-up hitch

5 This invention relates to a tractor front mounted pick-up hitch.

It is normal for a tractor (particularly an agricultural tractor) to be fitted with a fixed or variable height pick-up hitch to the rear. Occasionally a fixed clevis and pin type hitch is fitted to the front end. This leads to difficulties in parking trailers and trailed machinery particularly in low sheds due to lack of visibility when reversing and manoeuvrability due to the cab.

According to the present invention a hitch is provided at the front of the tractor consisting of a hydraulic ram which runs up and down in a hollow steel section. The ram is operated by a hydraulic spool valve from inside the tractor cab. The other end of the hydraulic ram is fitted with another piece of hollow section which fits inside the first hollow section and supports the hitch assembly. Its position is sensed by a micro-switch or similar and indicated in the cab. This hitch assembly consists of a "V" shaped opening with a hitch pin running down through the centre. Alternatives to the hitch may be fixed. e.g. (a) pallet forks (b) arms to take front end weights. The hitch pin may be operated by (1) mechanical method using spring and chain which comes into operation when main ram is lowered. See Diagram (1). (2) Hydraulic ram control or (3) Solenoid. The position of the hitch would be sensed by a micro-switch or similar and indicated in the cab by a dashboard light.

The ram maybe locked in the up position by a linear actuator operated hook. See Diagram (2). This is sensed by a micro-switch or similar and is indicated in the cab. The hook may alternatively be operated by a hydraulic ram or an electrical solenoid.

The positioning of the trailer hook to the hitch is observed in a mirror fixed to one side of the ram support.

The front mounted hitch is fixed to the front trunion block of the tractor. The design of the brackets will depend on the make and size of tractor.

A typical example is when a tractor driver simply unhitches the trailer from the rear of the tractor and while remaining in the cab re-hitches it to the front by lowering the ram; aligning hitch as seen in mirror to the trailer hook; lifting ram and remotely controlling the pin insertion; when ram returns to full height initiating locking device and then driving tractor forward to push the trailer into the shed. Putting the machine into the shed this way around will enable him to see exactly where it should be positioned.

55 CLAIMS

1. A front mounted pick up hitch.
2. A front mounted pick up hitch as claimed in Claim (1) with a variable height control using a hydraulic ram.
3. A front mounted pick up hitch as claimed in Claim (2) with remote control.
4. A front mounted pick up hitch as claimed in Claim (2) or (3) with cab indicator.
5. A front mounted pick up hitch as claimed in

Claims 1-6 with controlled hitch pin.

6. A front pointed pick up hitch as claimed in Claim (5) with remote control.

70 7. A front mounted pick up hitch as claimed in Claims (5) and (6) with indicator.

8. A front mounted pick up hitch as claimed in Claims (1) to (7) with locking system.

75 9. A front mounted pick up hitch as claimed in Claims (1) to (8) with solenoid operated locking system.

10. A front mounted pick up hitch as claimed in Claim (9) with indicator in cab.

80 11. A front mounted pick up hitch as claimed in Claims (1) to (10) except the hitch may be replaced by other attachments such as pallet forks.

12. A front mounted pick up hitch as claimed in claims (1) to (10) except hitch replaced by front end weights.

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