

RESEARCH ON IMPROVING THE PLOWING QUALITY AND REDUCING THE FUEL CONSUMPTION IN THE WORK OF PLOWING AND SUBSEQUENT AGRICULTURAL WORK BY EDITING THE SHAPE BY MOLDBOARD

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Abstract

This work relates to a plough's corps consisting of a mouldboard mounted on frame on which is still mounted the additional mouldboard . The semicircular chest of the mouldboard is provided with a self-sharpening blade on the semicircular side, the mouldboard's tail being composed of bands (strips). At the bottom of the mouldboard is mounted the plaz and plowshare which is provided with self-sharpening blade, and on the mouldboard tail's bands are mounted knives of special shape by welding or with screws which are designed to cut and grind the share during work.

Is performed simultaneously and the strips strengthening, thus increasing their stability.

By modifying the self-sharpening blade of the mouldboard's chest and plowshare is found as the resistance to advancement of mouldboard lowers, resulting fuel economy at the work of plowing and subsequent agricultural work.

Key words: mouldboard, mouldboard chest, mouldboard tail, bands (strips), plowshare, self-sharpening.

The paper refers to a plough's corps destined for normal plowing, superficial or deep.

To achieve a share is known a corps for plough that has the moldboard made of bands (strips), (German patent DE 3318159A1) which aims to decrease resistance to the submission of the corps(bars, moldboard, share) reducing the active area of the mouldboard and achieving a high degree of grind soil at the work of plowing.

This mouldboard presents the disadvantage that the advancement of the degree of the grind soil to work is not enough and that the bands (strips) which consists of moldboard are unstable during work.

Also be aware that a moldboard in which the chest is concave (circle arc) in order that the soil resistance is distributed over a larger area that the soil resistance to advancement on cm² to decline thereby achieving an economy of fuel in the work of plowing (German patent 3323791A1)

Problems which are resolved by this paper are those to increase the degree of grind soil to show, increased the stability of the bands (strips) during work, the saving of

fuel at the agricultural work and the subsequent work, transformation of the moldboard from a piece with the main role to overturn the share in a more active part having the role to topple the share and to cut and chip it at the agricultural work.

The plough's corps consists of a mouldboard mounted on frame on which is still mounted the additional mouldboard . The semicircular chest of the mouldboard is provided with a self-sharpening blade on the semicircular side, the mouldboard's tail being composed of bands (strips). At the bottom of the mouldboard is mounted the plaz and plowshare which is provided with self-sharpening blade, and on the mouldboard tail's bands are mounted knives of special shape by welding or with screws which are designed to cut and grind the share during work.

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Next we give an example of achieving a technical solution proposed in connection with Figure 1 which represents an overview of the plough's corps with the section A-A representing a cross section through the tail, the selfsharpening knives and through the demicircular mouldboard's chest provided on the active (demicircular) with selfsharpening edges and with section G-G through share with selfsharpening edges, Figure 2 representing the details of the section trough the moldboard, mouldboard knives and chest and details of section G-G through share, Figure 3 representing from the front of a knife mounted on the mouldboard with details of the cross section C-C through the middle of the knife and E-E through the tip of the knife Figure.4 that represents the lateral view of the knife (view D) and Figure 5 is the view from the back of the knife (which is the mount by welding or by screws on the mouldboard's surface).

The plough's corps consists of moldboard 1 mounted on frame 2 which is still mounted the additional mouldboard 3, on mouldboard in which the mouldboard's demicircular chest with selfsharpening edges all over the arched surface and the mouldboard's tail consists of bands (strips) 4, at the bottom of the mouldboard being mounted plaz 5 and share 6 with selfsharpening edges will sharpen at the same time with the increasing of wear.

On the cylinder, screw or other form of the mouldboard's tail, on the frontal part made of bands (strips) are mounted knives 7 by welding or by screws, selfsharpening knives and edged of the demicircular mouldboard's chest and of share with the role to cut and grind the soil, which subsequently will be shattered almost immediately, while increasing the strength of the mouldboard's bands and their stability during work.

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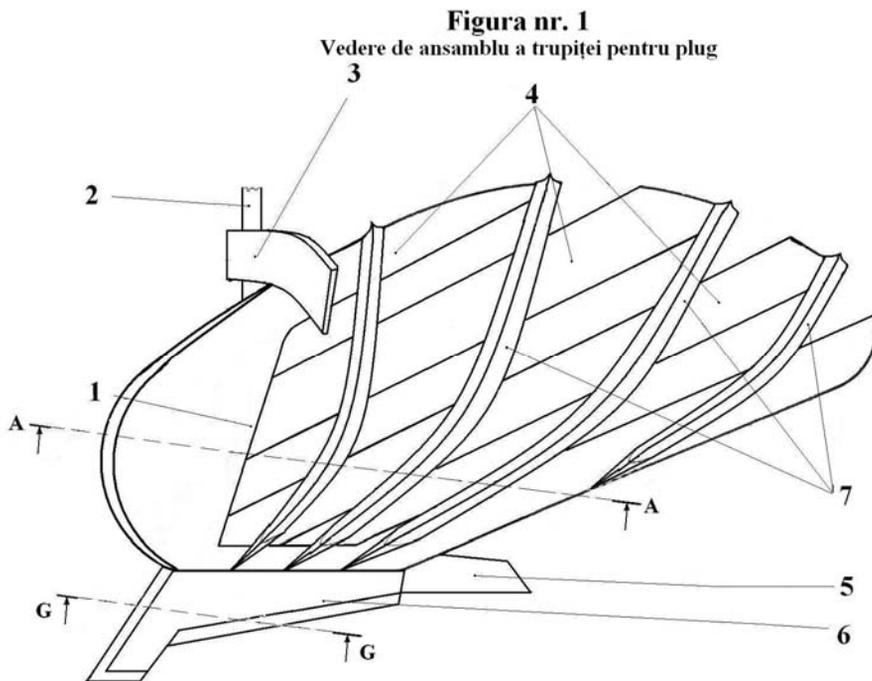
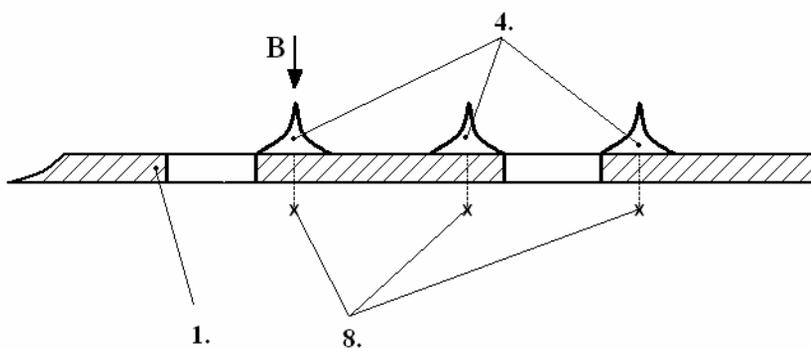


Fig. nr.2
Secțiunea A-A
Secțiune prin cormană, cuțite și pieptul cormanei



Secțiune G-G
Secțiune prin brăzdar



Fig. nr. 3

