

J. D. HAMACHER.

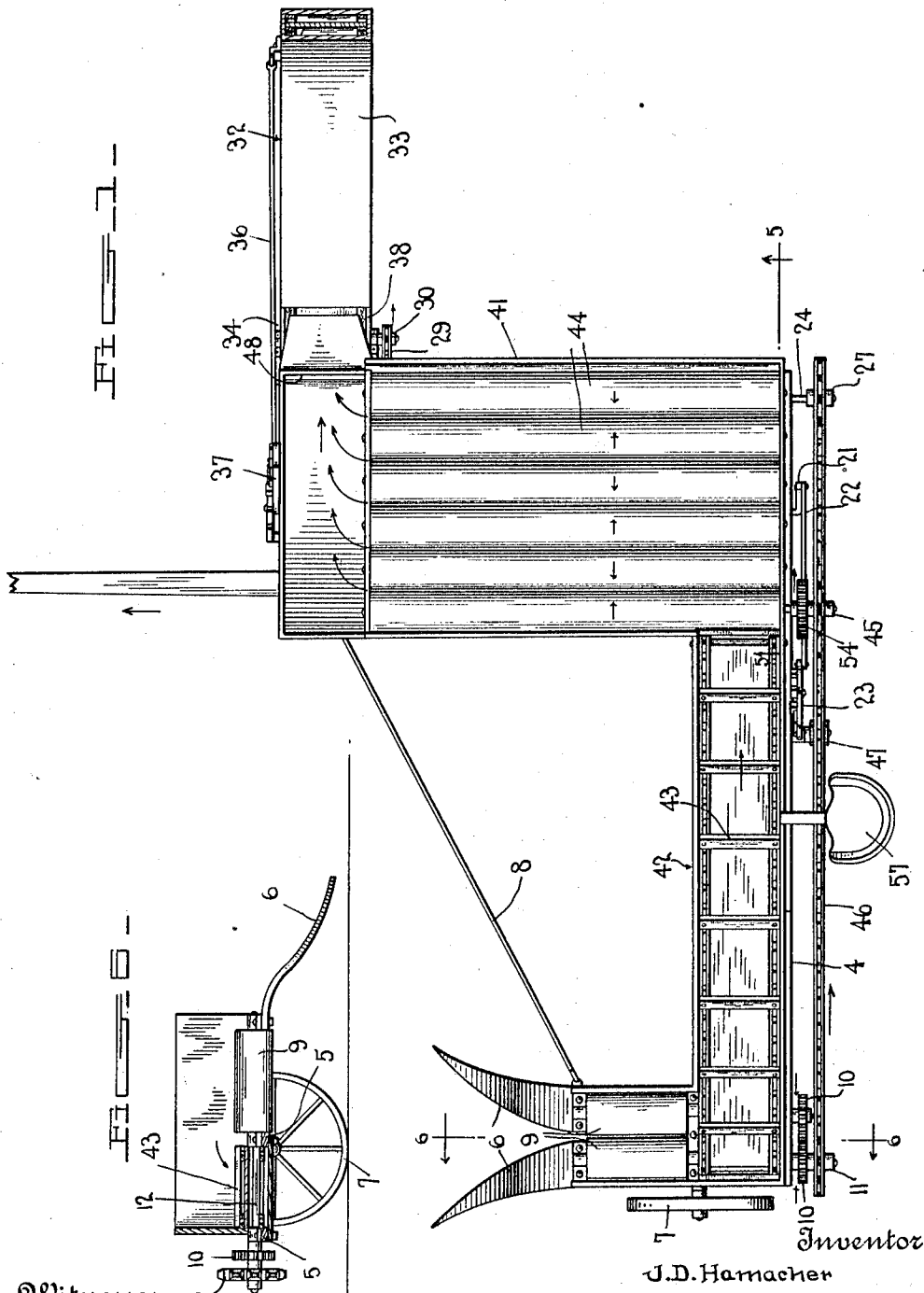
CORN HARVESTER.

APPLICATION FILED SEPT. 21, 1911.

1,041,070.

Patented Oct. 15, 1912.

4 SHEETS-SHEET 1.



Witnesses  
L. B. James  
O. B. Hopkins

by *H. B. Wilson & Co.*  
Attorneys

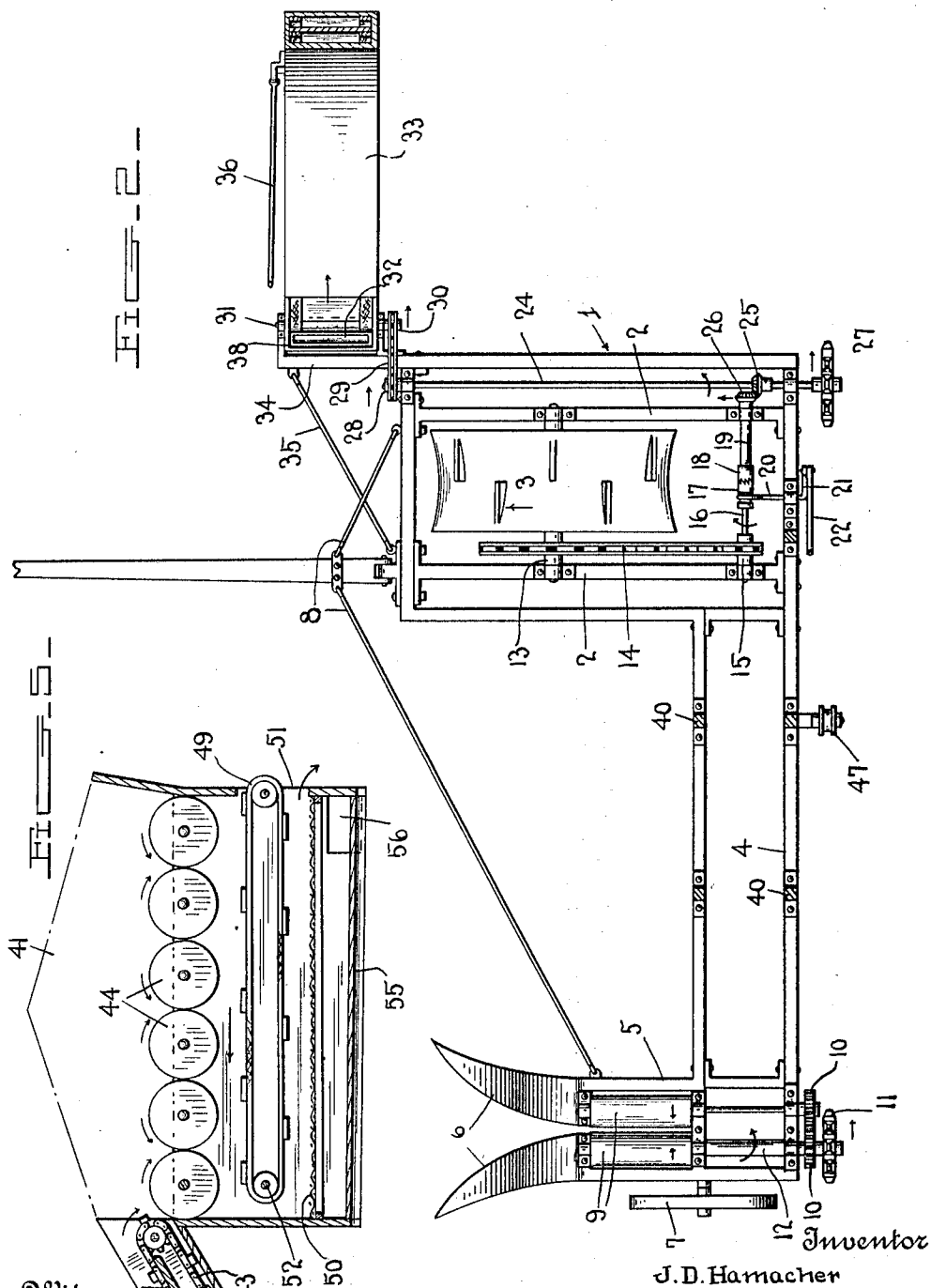
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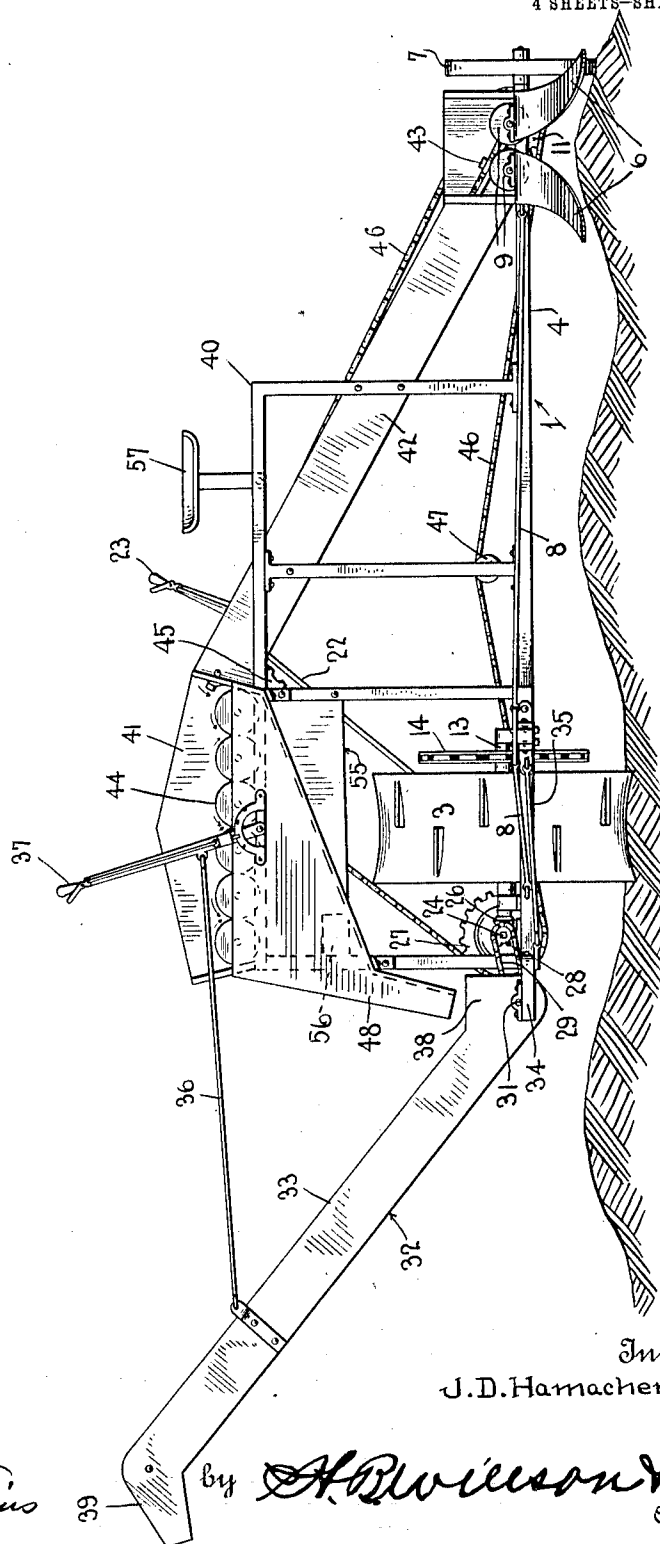
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4 SHEETS-SHEET 3.

Fig. 3



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CORN HARVESTER.

Patented Oct. 15, 1912.

4 SHEETS—SHEET 4.

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# UNITED STATES PATENT OFFICE.

JONATHAN D. HAMACHER, OF HIAWATHA, KANSAS.

CORN-HARVESTER.

1,041,070.

Specification of Letters Patent.

Patented Oct. 15, 1912.

Application filed September 21, 1911. Serial No. 650,639.

*To all whom it may concern:*

Be it known that I, JONATHAN D. HAMACHER, a citizen of the United States, residing at Hiawatha, in the county of Brown and State of Kansas, have invented certain new and useful Improvements in Corn-Harvesters; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to improvements in corn harvesters.

One object of the invention is to provide a corn harvester having an improved construction and arrangement of husking mechanism whereby all the ears are husked and the husks and weeds entirely separated from the ears of corn.

Another object is to provide means whereby all of the corn shelled from the ears while the latter are being husked is separated from the husks and waste material and discharged into the corn elevator with the husked ears.

Another object is to provide a machine of this character which is simple, strong and durable in construction efficient and reliable in operation, light in draft and which will not become choked up with husks and weeds.

With the foregoing and other objects in view, the invention consists of certain novel features of construction, combination and arrangement of parts as will be more fully described and particularly pointed out in the appended claims.

In the accompanying drawings: Figure 1 is a plan view of my improved harvester; Fig. 2 is a horizontal sectional view of the supporting frame showing a plan view of the running gear snapping rollers and a section through the grain conveyer; Fig. 3 is a front view of the machine; Fig. 4 is a rear end view thereof; Fig. 5 is a vertical sectional view on the line 5—5 of Fig. 1 showing an end elevation of the husking rollers and separating mechanism; Fig. 6 is a vertical sectional view through the snapping rollers and outer end of the conveyer for carrying the snapped ears to the husking rolls.

Referring more particularly to the drawing 1 denotes the main supporting frame in which is arranged parallel bearing bars 2 between which and revolubly mounted in suitable bearings thereon is a supporting

and operating wheel 3. On one side of the frame 1 at the rear end thereof is arranged a laterally projecting conveyer supporting frame 4 on the outer end of which is arranged a forwardly projecting snapping roll frame 5 having on its outer end forwardly projecting outwardly curved or diverging gathering or guide plates 6 which guide the stalks in between the snapping rolls. Arranged on the outer side of the frame 5 is a stub shaft or axle on which is revolubly mounted the grain wheel 7 of the machine, said wheel supporting the adjacent portion of the frame. To the front end of the frame 1 is secured a draft tongue, said tongue being connected to the frame 5 and outer portion of the frame 1 by brace rods 8 as shown.

Revolubly mounted in suitable bearings in the frame 5 is a pair of snapping rolls 9. The shafts of the snapping rolls extend rearwardly through the outer end of the conveyer frame 4 and are operatively connected together by spur gears 10. On the rear end of the shaft of the outer snapping roll 9 is fixedly mounted a sprocket gear 11 with which is engaged a sprocket chain hereinafter described. On the shaft of the outer snapping roll where the same passes through the frame 4 is fixedly mounted a drive pulley or roller 12 of an endless conveyer hereinafter described.

Fixedly mounted on the shaft of the driving and supporting wheel 3 is a drive sprocket 13 which is connected by a sprocket chain 14 to a sprocket pinion 15 on a drive shaft 16 revolubly mounted in the rear portion of the frame 1 as shown. On the shaft 16 is slidably keyed one member 17 of a clutch the opposite member 18 of which is arranged on the end of a sleeve or tubular shaft 19 which is loosely mounted on the shaft 16 and is adapted to be operatively engaged with and driven by the shaft 16 when the clutch member 17 is thrown into engagement with the clutch member 18 on said sleeve. The clutch member 17 is provided with a shifting lever 20 having on its outer end a crank arm 21 which is connected by an operating rod 22 to an operating lever 23 which is fixedly mounted in the frame within convenient reach of the driver and is provided with a suitable rack and pawl locking mechanism as shown. By thus arranging the clutch and its operating mechanism the sleeve 19 may be readily connected with and

driven by the drive shaft 16 whereby the motion of said shaft will be imparted to the operating mechanism of the machine hereinafter described.

5 Revolvably mounted in suitable bearings in the front and rear ends of the frame 1 is a power transmitting shaft 24 on which is fixedly mounted a bevel gear 25 having an operative engagement with a similar gear 26  
10 fixed on the adjacent end of the sleeve or tubular shaft 19 whereby said shaft 24 is driven. On the rear end of the shaft 24 is fixedly mounted a sprocket gear 27 the purpose of which will be hereinafter described.  
15 On the forward end of the shaft 24 is fixedly mounted a sprocket gear 28 which is connected by a sprocket chain 29 with a sprocket gear 30 on the end of the drive shaft 31 of a grain elevator 32 by means of which the  
20 husked ears and shelled out kernels of corn are elevated and discharged into a wagon or suitable receptacle provided to receive the same. The grain elevator 32 is arranged in a suitable casing 33 the lower end of which  
25 is pivotally supported in a bracket or extension 34 on the forward end of the frame 1, said bracket or extension being suitably braced and connected to the front end of the machine by a brace rod 35.  
30 The outer end of the elevator 32 is adapted to be raised and lowered and supported at any desired elevation by means of an elevating rod 36 which is connected at one end to the casing 33 of the elevator and at its opposite end to an elevating lever 37 suitably  
35 mounted on the frame of the machine and provided with a rack and pawl locking mechanism whereby the same may be held in its adjusted position. On the lower end of  
40 the frame 33 is arranged a hopper 38 into which the husked ears and shelled corn is discharged from the husking mechanism and on the upper end of said elevator casing is formed a discharge spout 39 through which  
45 said ears and corn is discharged into the wagon or receptacle provided to receive the same.

On the main frame 1 is arranged a superimposed frame 40 on one end of which over  
50 the supporting wheel 3 is arranged a hopper 41. With one end of the hopper 41 is connected the upper end of a conveyer frame 42 in which is arranged an endless slatted conveyer 43 the lower end of which is disposed  
55 opposite to the inner ends of the snapping rolls 9 and is adapted to receive the ears snapped from the stalks by said rolls and to convey said ears upwardly and discharge the same into the hopper 41 and onto a series of parallel longitudinally disposed husking rolls 44 which are revolvably mounted in the upper portion of the hopper 41 as shown.

60 The shaft of one of the husking rolls is extended rearwardly through the rear end of the hopper and has fixedly mounted

thereon a sprocket gear 45 which is connected by a sprocket chain 46 to the sprocket gear 27 on the power transmitting shaft 24. The chain 46 is also engaged with the sprocket gear 11 on the shaft of the outer snapping roll whereby said rolls are also  
70 driven. The lower stretch of the chain 46 passes over and is supported by an idle pulley 47 arranged in the rear portion of the frame as shown. By thus connecting the  
75 sprocket gear 45 on one of the husking rolls to the driving mechanism, said roll will be operated in the proper direction and the motion thereof will be imparted to the other husking rolls through their frictional  
80 engagement with each other to turn the same in the proper direction for pulling the husks from the ears when discharged thereon by the conveyer 43. After the husks have thus been pulled from the ears the latter will be  
85 discharged from the forward ends of the rolls into a trough or chute 48 from which they are discharged into the hopper 38 at the lower end of the grain elevator 32 and by the latter conveyed to and discharged  
90 into the wagon. The husks while being pulled from the ears by the husking rollers pass between said rollers onto a slatted conveyer 49 arranged beneath the husking rolls and are carried around by said conveyer  
95 over a screen 50 and are discharged from the latter through a suitable discharge opening 51 in one side of the hopper 41 as clearly shown in Fig. 5 of the drawings. One of the shafts 52 of the conveyer 49  
100 projects rearwardly through the rear side of the hopper 41 and has fixedly mounted thereon a spur gear pinion 53 which meshes with a spur gear 54 fixedly mounted on the adjacent end of the husking roll shaft having the sprocket gear 45 whereby the motion of said shaft is imparted to the endless conveyer 49 to turn the same in the proper  
105 direction for discharging the husks from the hopper. Any kernels of corn which may be shelled out while the husks are being removed from the ears will pass between the rollers and will fall through the slatted conveyer 49 and screen 50 onto an inclined grain pan 55 from which said kernels of  
115 corn are discharged through a discharge passage 56 into the chute 48 and from thence discharged into the hopper 38 and onto the conveyer 32 whereby said shelled corn is carried up with the ears and discharged  
120 into the wagon. The screen 50 arranged below the conveyer 49 will effectually prevent any husks, weeds or other foreign matter passing between the husking rolls from being discharged with the grains of shelled  
125 corn into the wagon. Arranged in a suitable position on the superimposed frame 40 is a driver's seat 57.

From the foregoing description taken in connection with the accompanying draw- 130

ings, the construction and operation of the invention will be readily understood without requiring a more extended explanation.

Various changes in the form, proportion and the minor details of construction may be resorted to without departing from the principle or sacrificing any of the advantages of the invention as defined in the appended claim.

10 Having thus described my invention, what I claim is:

15 In a corn harvester, a main supporting frame, a frame superimposed on said main frame, longitudinally disposed husking rolls mounted horizontally on said superimposed frame, a conveyer supporting frame extending laterally from the rear end of said main frame in a plane at right angles to the husking rolls, a horizontal snapping  
20 roll frame projecting forwardly from the free end of said conveyer supporting frame in a plane at right angles to said conveyer frame and parallel with said husking rolls,

a pair of longitudinally disposed snapping rolls mounted in said snapping roll frame, 25 forwardly projecting diverging gathering blades secured to the outer end of the snapping roll frame, the space between said blades alining with the space between the snapping rolls, the husking rolls being 30 mounted in a horizontal plane above said snapping rolls, a conveyer traveling in said laterally extending frame to carry the corn from the snapping rolls to the husking rolls, a grain elevator arranged to receive the 35 husked ears from said husking rolls, and means for discharging the husked ears from the machine.

In testimony whereof I have hereunto set my hand in presence of two subscribing witnesses. 40

JONATHAN D. HAMACHER.

Witnesses:

SAMPLE F. NEWLON,  
GEORGE W. FOX.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."