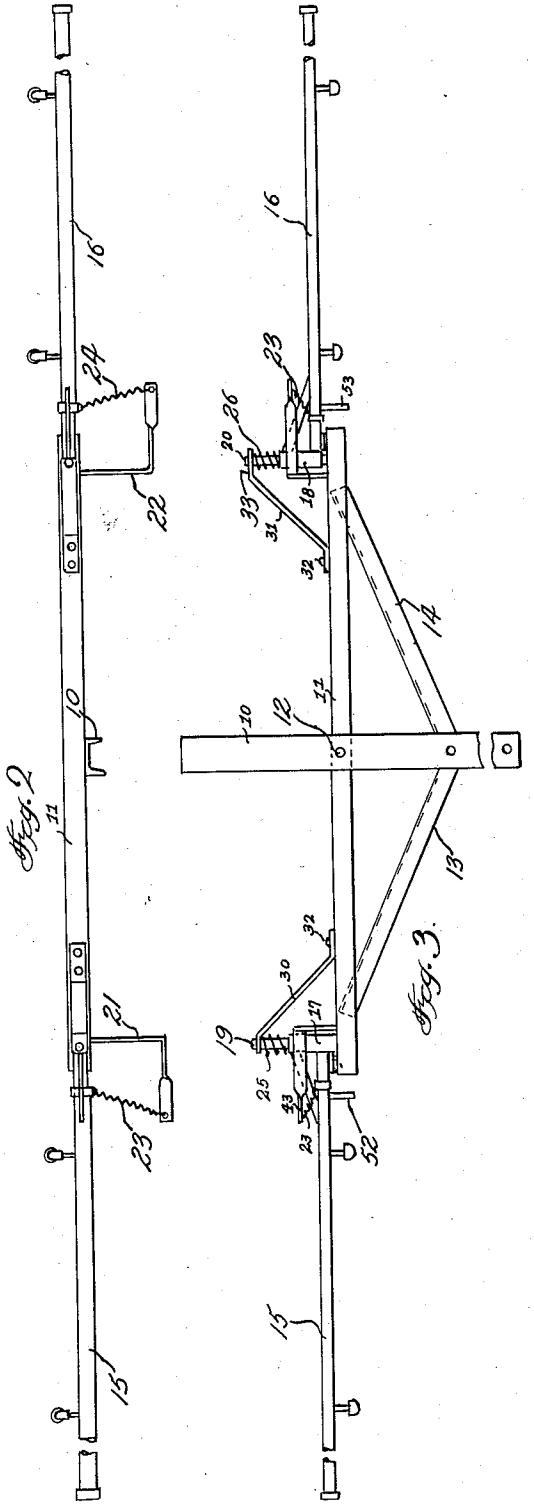
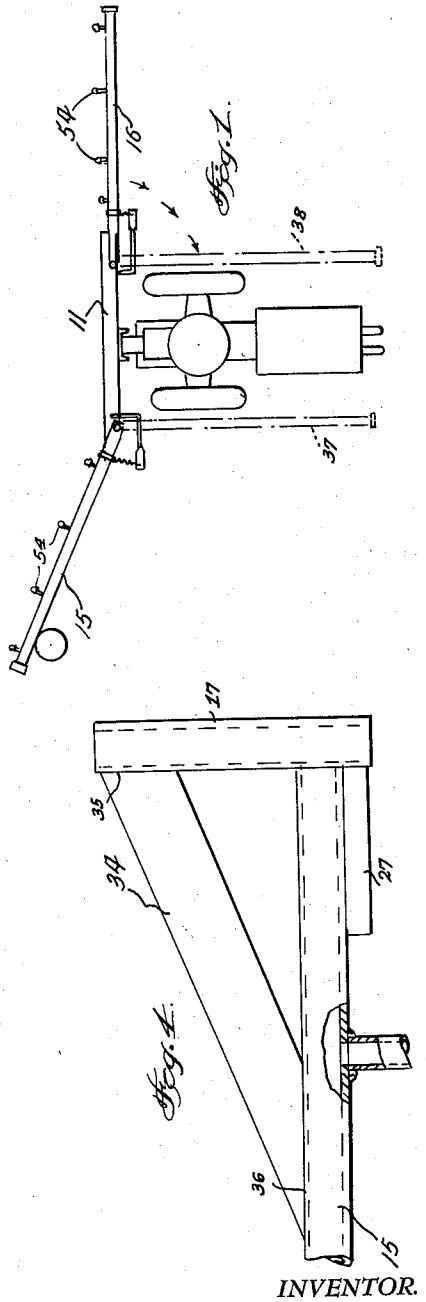
Oct. 27, 1959 C. E. BURROUGHS 2,910,245

FOLDING SPRAY LEADER

Filed Dec. 6, 1957 2 Sheets-Sheet 1





INVENTOR.

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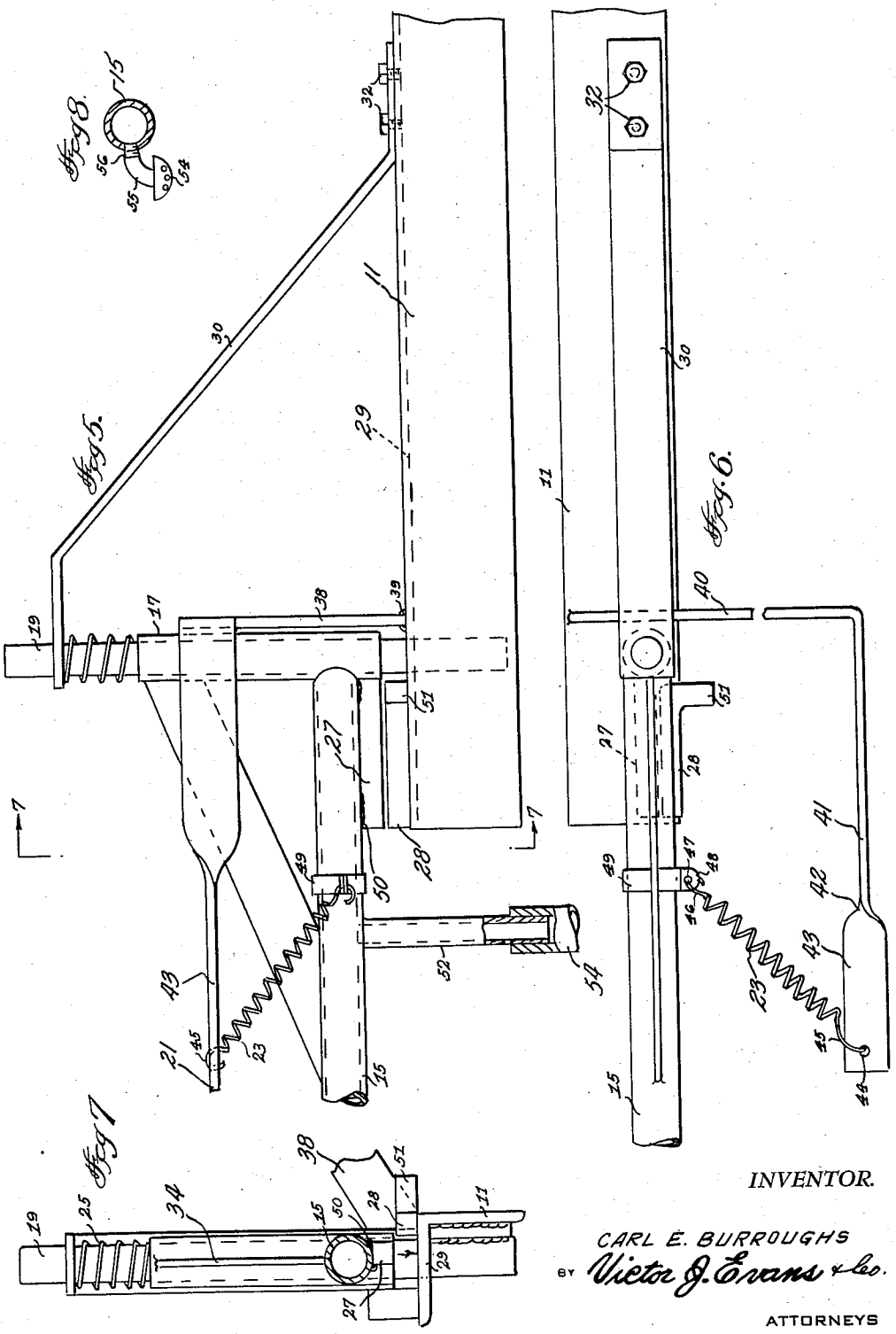
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Oct. 27, 1959 C. E. BURROUGHS 2,910,245

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FOLDING SPRAY LEADER

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2 Claims. (Cl. 239—167)

This invention relates to spray devices used primarily in agriculture for spraying plants, trees, and in particular spray headers pivotally mounted on ends of a beam designed to be transversely positioned on a tractor in which the spray headers are urged against stops by springs for retaining the headers in extended positions, the springs permitting the headers to swing rearwardly when engaging a tree, post, or other fixed obstruction and the headers also being designed to fold forwardly to positions on the sides of a tractor for transportation.

The purpose of this invention is to provide a support for pivotally mounting spray headers on a tractor wherein the headers are free to swing rearwardly upon engagement thereof with fixed obstructions and wherein the headers are designed to fold to nested positions at the sides of a tractor to facilitate the tractor upon which the spray headers are mounted traveling to a different location.

Various types of spray headers have been provided for use on tractors and other farm implements and in most instances the headers are suspended by cables on posts at the center or on the sides of a tractor whereby the headers are free to sway back and forth with the operation of the tractor however upon accidental engagement thereof with fixed objects it is necessary to stop the tractor and manually move the header to such a position that the tractor may pass the obstruction after which the header is again mounted in the operative position.

The object of this invention is, therefore, to provide a spraying device in which spray headers are positioned on ends of a beam carried by a post wherein the headers are pivotally mounted and urged toward extended positions by springs so that upon engagement thereof with fixed objects they are moved rearwardly against the tension of the springs until such an object is cleared.

Another object of the invention is to provide means for mounting spray headers on a tractor, wherein the headers are retained in extended positions by springs which hold the headers against stops and wherein by elevating the headers over the stops the headers may be folded to nested positions on the sides of a tractor for transportation.

A further object of the invention is to provide means for mounting spray headers on tractors which permits the headers to swing rearwardly upon engagement with fixed objects and which also permits the headers to be folded to nested positions on the sides of a tractor in which the device is of a simple and economical construction.

With these and other objects and advantages in view the invention embodies a post designed to be mounted on the housing of a tractor, a transversely disposed beam carried by the upper part of the post, pivot posts spaced inwardly from ends of the beam and extended upwardly therefrom, sleeves pivotally mounted on the pivot posts, spray headers extended from the sleeves, stops on the ends of the beam for limiting forward movements of the

headers, springs for urging the headers against the stops, braces extended from the intermediate part of the beam to upper ends of the pivot posts, and springs on the pivot posts for urging the sleeves and headers downwardly into engagement with the stops.

Other features and advantages of the invention will appear from the following description taken in connection with the drawings, wherein:

Figure 1 is a plan view showing the spray headers mounted on a tractor with the headers in extended positions in full lines and in folded positions upon the tractor in broken lines.

Figure 2 is a plan view of the improved spray header assembly.

Figure 3 is an end elevational view showing the device with the headers extended.

Figure 4 is an elevational view showing the inner end of one of the spray headers with the header portion thereof broken away, with other parts omitted and with the parts shown on an enlarged scale.

Figure 5 is an end elevational view also with the parts shown on an enlarged scale illustrating the mounting of the spray headers on transversely disposed beams carried by a tractor.

Figure 6 is a plan view of the assembly shown in Figure 5 with parts broken away.

Figure 7 is a vertical section through one of the spray header mountings taken on line 7—7 of Figure 5 showing the locking keys, with parts broken away.

Figure 8 is a cross section through one of the spray headers illustrating the position of the spray nozzle wherein the nozzle extends outwardly from one side of a header with the spraying heads facing downwardly to prevent the nozzles being broken from the header upon contact of the header with a fixed obstruction.

Referring now to the drawings wherein like reference characters denote corresponding parts the improved collapsible or folding spray header of this invention includes a supporting post 10 designed to be mounted on a tractor housing, a horizontally disposed beam 11 extended across and secured to the post 10 by fasteners 12 and retained in a horizontal position with braces 13, and 14, spray headers 15 and 16 extended from sleeves 17 and 18, respectively, slidably mounted on pivot pins or posts 19 and 20, L-shaped arms 21 and 22 extended from end portions of the beam 11 and positioned with extended ends thereof connected by springs 23 and 24 to the headers 15 and 16, springs 25 and 26 for urging the headers downwardly with keys 27 on lower edges thereof in locking engagement with bars 28 providing stops and positioned on a horizontally disposed leg 29 of the beam 11 and braces 30 and 31 mounted by bolts 32 on the upper surface of the beam 11 with flanges 33 positioned over upper ends of the pivot pins or posts 19 and 20.

The arms 15 and 16 are rigidly secured to and extend from lower ends of the sleeves 17 and 18 on the pivot pin or posts 19 and 20 and, as illustrated in Figures 4 and 5 the arms are supported by diagonal braces 34, upper ends of which are secured to upper ends of the sleeves 17 and 18, such as by welding, as shown at the points 35 and the lower ends of which are secured to the upper surfaces of the arms 15 and 16, also such as by welding, as shown at the points 36. By this means the spray headers or arms are free to swing about the pivot pins or posts to permit the arms to be drawn to outwardly extended positions, particularly as shown in Figure 3, by the springs 23 and 24 and also whereby the arm may swing rearwardly to prevent breaking of the parts when fixed obstructions are engaged by the arms and whereby the arms may also swing forwardly to nested positions at the sides of a tractor, or the like, as

indicated by the broken lines **37** and **38**, in Figure 1, to facilitate transportation.

The L-shaped members **21** and **22** by which the springs **23** and **24** are connected to the beam **11** include vertically disposed sections **38** that are secured to the upper surface of the beam **11**, such as by welding, as shown at the point **39**, and from upper ends of the sections **38** through arms extend forwardly with sections **40**. From extended ends of the sections **40** the sections **41** of the arms extend outwardly, as illustrated in Figure 6, and extended ends of the sections **41** are twisted to an angle of 90° at the point **42** providing horizontally disposed plates **43** in openings **44** of which the outer ends **45** of the springs are secured. The opposite ends **23** and **24** of the springs, are provided with hooks **46** that extend through openings **47** in flanges **48** of clamps **49** extended around the arms **15** and **16**, as shown in Figures 5 and 6.

The keys **27** which are provided on lower surfaces of the arms **15** and **16**, are secured to the arms, such as by welding as shown at the point **50** and with the arms **15** being elevated as shown in Figures 5 and 7 the key **27** is free to pass over the lug **28** on the upper arm **29** of the beam **11** whereby the arm is free to fold forwardly to the dotted line position **37** in Figure 1. In arriving at the position **37**, shown in Figure 1, the arm is dropped downwardly whereby the key **27** is on the opposite side of a lug **51** whereby the arm is locked in the inner and traveling position. To move the arms from nested to extended positions or from extended to nested positions it is, therefore, only necessary to elevate the arms so that the keys **27** pass over the lugs **28** and stops **51**. The arms, sleeves, and keys are urged downwardly by the springs **25** and **26** at the upper ends of the sleeves **17** and **18**.

The arms **15** and **16** are provided with nipples **52** and **53** through which hose connections **54** are attached, as illustrated in Figure 5, and with the hose connections extended through the tank or container fluid under pressure may be supplied to the arms or spray headers. The spray headers or arms are provided with spray nozzles **54** carried by street L's **55** that are threaded into sides of the headers **15** and **16**, as shown in Figure 8, wherein threaded shanks **56** of the street L's are threaded into the wall at one side of the header **15**. With the spray nozzles extended from the rear of the headers the possibility of the nozzles being broken or damaged by engagement of the arms or headers with fixed obstructions is substantially eliminated.

With the spray arms or headers mounted on a tractor by the posts **10** the headers extend from the sides of a tractor and upon engagement thereof with a post, tree, or other obstruction the spray arms fold rearwardly until the obstruction is passed and at this time the springs draw the arms forwardly or to extended positions, particularly as shown in Figure 2. By the same means, elevating the spray arms with the keys passing over the lugs or stops the arms may readily be collapsed or folded to nested positions at the sides of a tractor.

It will be understood that modifications, within the scope of the appended claims, may be made in the design and arrangement of the parts without departing from the spirit of the invention.

What is claimed is:

1. In a collapsible spray header for use on a vehicle, the combination which comprises a transversely disposed beam, means for mounting the beam on a tractor with the beam in an elevated position, pivot posts spaced inwardly from the ends of the beam and extended upwardly therefrom, sleeves on the pivot posts and mounted to turn freely thereon, tubular arms extended from lower ends of the sleeves, spaced spray nozzles on said arms, diagonally positioned braces connecting the arms to the upper ends of the sleeves, lugs positioned on ends of the beam, keys on under surfaces of the tubular arms positioned to engage the lugs to limit extended movements of the arms, L-shaped brackets extended forwardly from end portions of the beam, springs connecting extended ends of the L-shaped brackets to the arms for urging the arms to extended positions with the keys in engagement with the lugs, braces extended from upper ends of the pivot posts to the intermediate part of the beam, springs on the pivot posts for urging the sleeves and arms downwardly with the keys of the arms in engagement with the lugs, the arms being designed to be elevated manually to raise the keys over the lugs for folding the arms in nested positions upon a tractor or the like, and supply nipples extended from lower surfaces of the tubular arms.

2. In a collapsible spray header for use on a vehicle the combination which comprises a transversely disposed beam, a post on the upper end of which the beam is adjustably mounted, diagonally disposed braces extended from the post to ends of the beam for rigidly supporting the beam in a horizontally disposed position, means for mounting the post on a tractor or the like, pivot posts spaced inwardly from the ends of the beam and extended upwardly therefrom, sleeves on the pivot posts and mounted to turn freely thereon, tubular arms extended from lower ends of the sleeves, spaced spray nozzles on said arms, diagonally positioned braces connecting the arms to the upper ends of the sleeves, lugs positioned on ends of the beam, keys on under surfaces of the tubular arms positioned to engage the lugs to limit extended movements of the arms, L-shaped brackets extended forwardly from end portions of the beam, springs connecting extended ends of the L-shaped brackets to the arms for urging the arms to extended positions with the keys in engagement with the lugs, braces extended from upper ends of the pivot posts to the intermediate part of the beam, springs on the pivot posts for urging the sleeves and arms downwardly with the keys of the arms in engagement with the lugs, the arms being designed to be elevated manually to raise the keys over the lugs for folding the arms in nested positions upon a tractor or the like, and supply nipples extended from lower surfaces of the tubular arms.

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