Dec. 15, 1936. H. OWENS 2,064,491

SELECTIVE TRAPPING OR CUTTING DEVICE FOR USE IN TWISTING, WINDING, SPINNING, OR LIKE MACHINES

Original Filed July 23, 1934 3 Sheets-Sheet 1

Fig. 1.

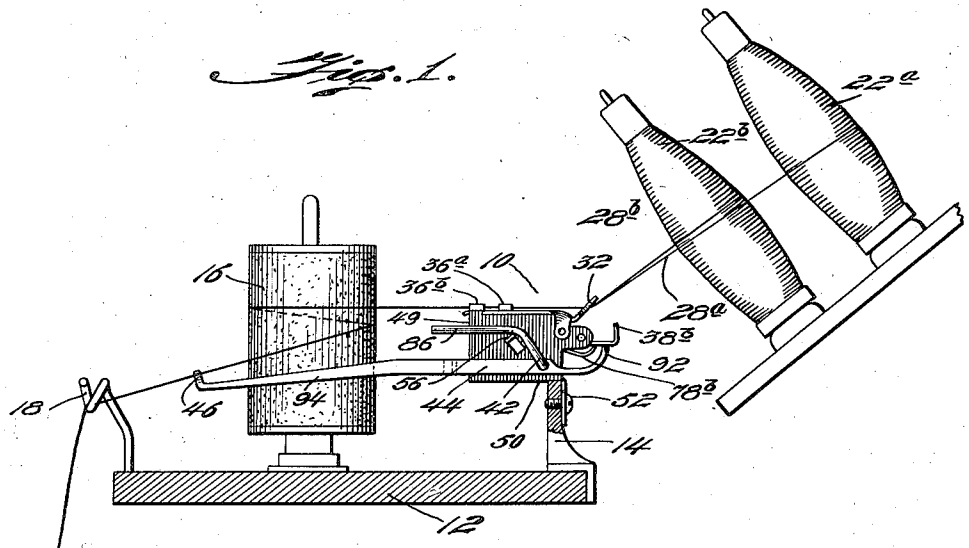
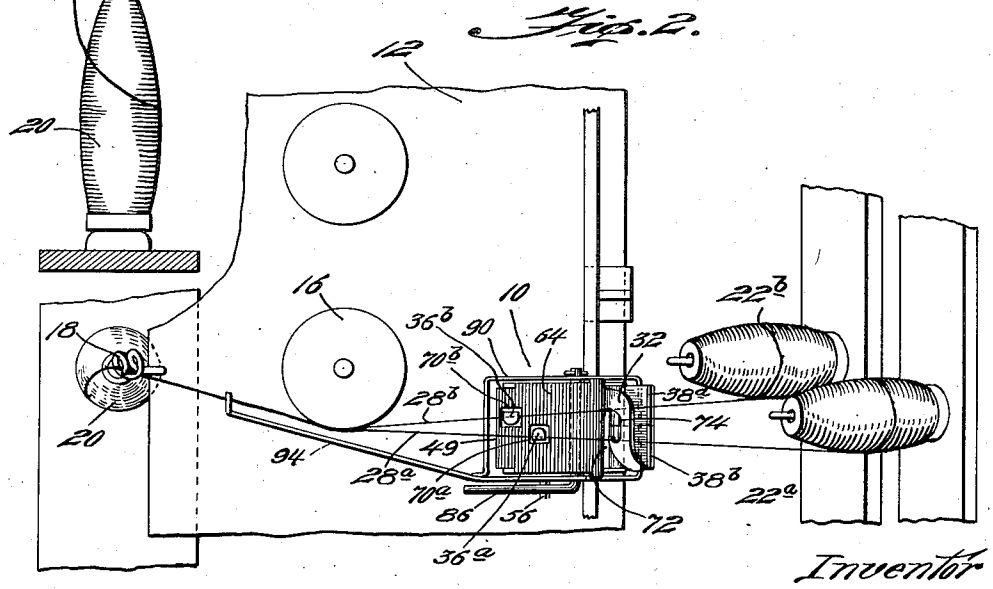


Fig. 2.



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Fig. 3.

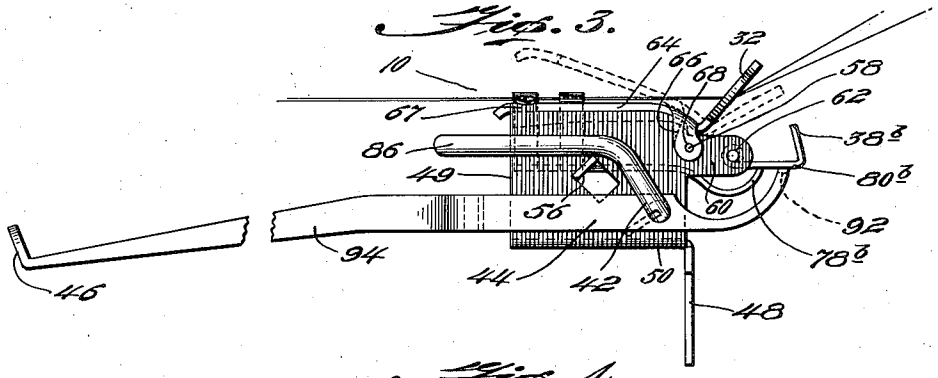


Fig. 4.

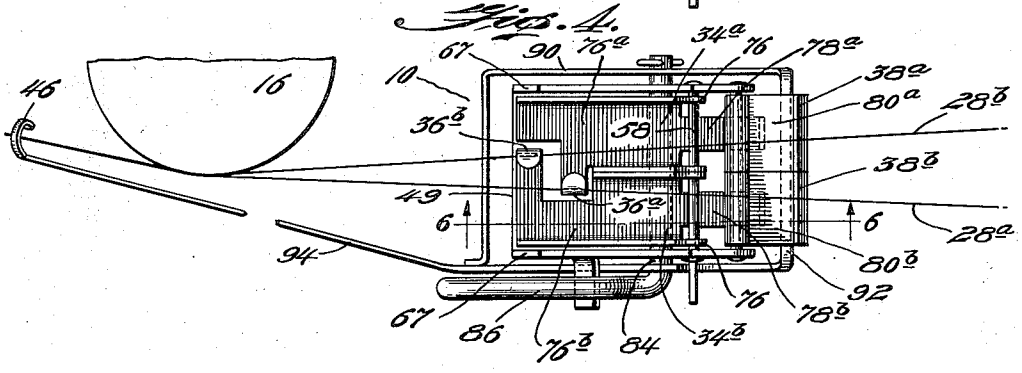


Fig. 5.

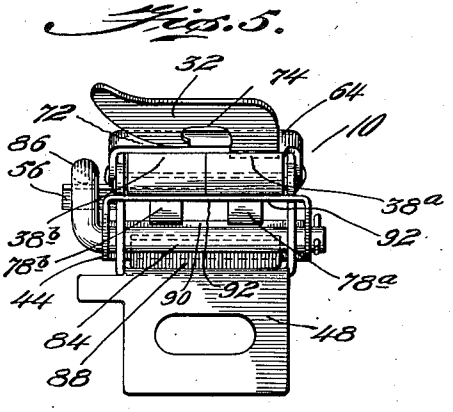
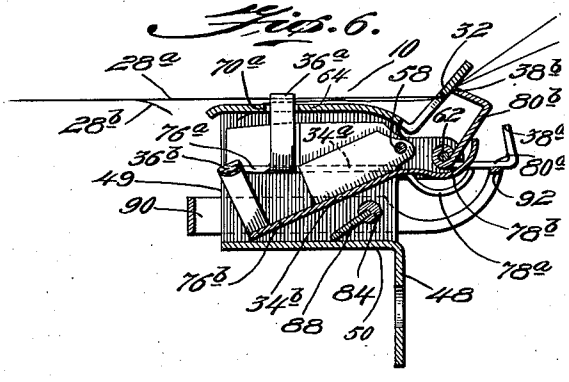


Fig. 6.



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Fig. 7.

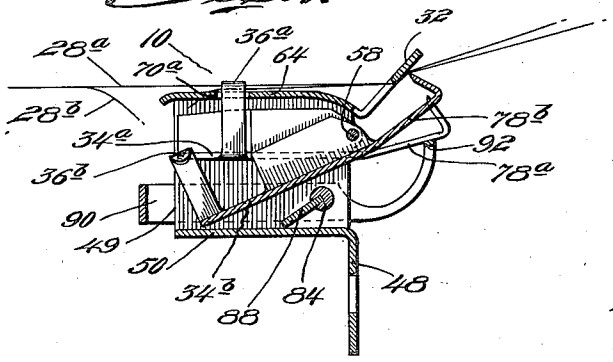
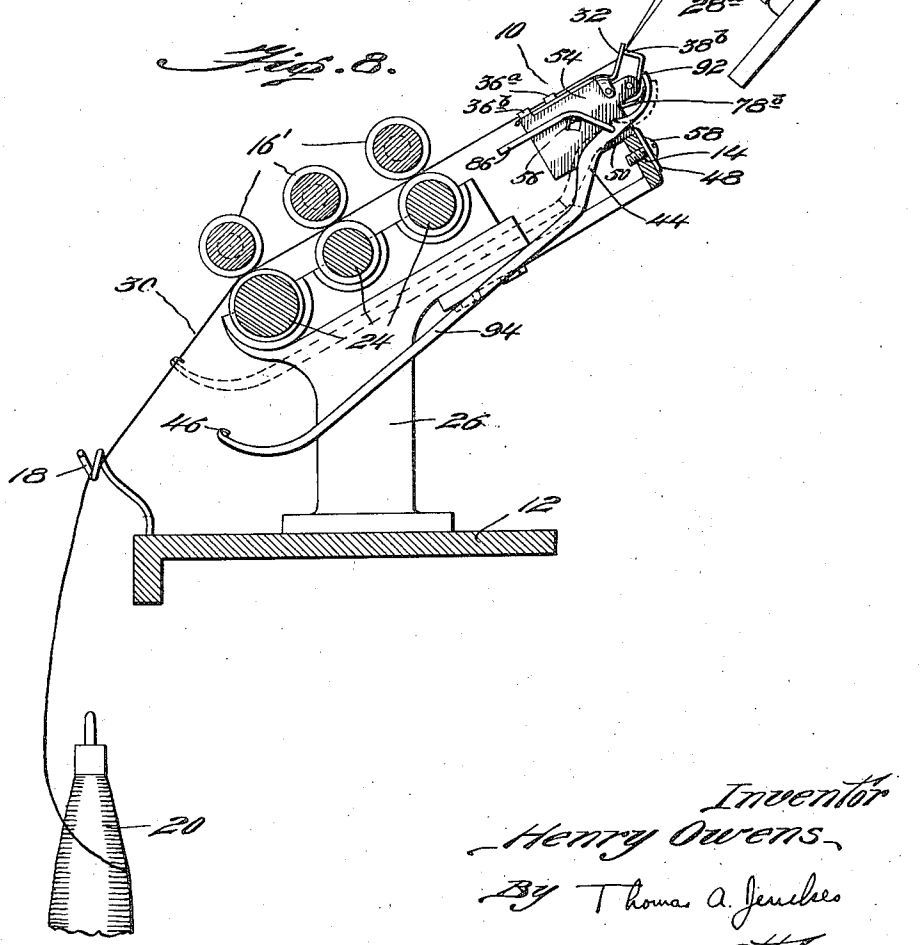


Fig. 8.



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Patented Dec. 15, 1936 2,064,491

UNITED STATES PATENT OFFICE

2,064,491

SELECTIVE TRAPPING OR CUTTING DEVICE FOR USE IN TWISTING, WINDING, SPINNING OR LIKE MACHINES

Henry Owens, Edgewood, R. I., assignor to Henry Owens & Company, Inc., Providence, R. I., a corporation of Rhode Island

Application July 23, 1934, Serial No. 736,472
Renewed March 7, 1936

13 Claims. (Cl. 117—32)

My invention relates to improvements in a selective trapping or cutting device for use in twisting, winding, spinning or like machines in which two spaced strands from two sources of supply are twisted or wound together by suitable twisting, draft or winding means, such as a dolly roll, draft rolls, etc.

In a sense my invention is an improvement on Patent No. 1,608,362, issued to Forster S. Bootes of Worcester, Massachusetts, for Cutting device for twisting machines on November 23, 1926, and now owned by me. In this patent a single knife was actuated on the breakage of one of two strands located in front of said twisting or draft means to raise said knife to positively break both strands. In practice it was found highly desirable to employ a cutting knife therein for this feature for if a mere trapping edge were employed and a thicker yarn were being twisted with a lighter yarn the device would not function to break the lighter yarn. To overcome this disadvantage of the Bootes structure I have made the Bootes structure selective by causing one of the levers shown in the Bootes structure to positively trap or break the opposite thread on breakage of the thread by which said lever is supported, thus to provide a positive means to break the other strand on breakage of one strand despite irregularities in the respective sizes of the yarns being twisted, wound or spun.

Objects of my invention therefore, are to provide an improved device of this description in some respects similar to that shown in the Bootes structure, but which in place of the single knife of Bootes, selective trapping edges each actuated by the respective levers of Bootes are employed.

A further object of my invention is to provide such a selective trapping or cutting feature in combination with the automatic threading means shown in Bootes.

A further feature of my invention is to provide a supplemental pivoted lever having a power arm extending around the twisting, winding, or draft means in the machine employed and adapted to be supported by the single strand from the front of said twisting, winding or draft means and adapted on breakage thereof to simultaneously raise both trapping means or levers to break both threads or strands in rear of the machine before they have a chance to get tangled up in the draft rolls, dolly roll, etc., of the twisting, winding or draft mechanism employed, and to provide such a supplemental device to simultaneously actuate both selective means to break both threads or strands in rear of said twisting or draft means on breakage of the single thread in front thereof and preferably also in combination with the automatic threading features shown in Bootes.

Further objects of my invention are to provide a compact, neat structure which may be readily attached between the usual supply bobbins and the twisting or draft means on a twisting, winding, spinning, or like machine, preferably comprising an open ended box member in which the cutting levers or other mechanisms are mounted to keep them clear from lint, dirt, etc., during the normal operation of the device and I preferably also provide my improved open ended box-like structure with a pivoted top wall so that if desired for cleaning purposes the top wall may be pivoted upwards.

These and such other objects of my invention as may hereinafter appear will be best understood from a description of the embodiments thereof illustrated in the accompanying drawings.

In the drawings, Fig. 1 is a diagrammatic sectional view taken through a twisting frame employing a single dolly twisting roll and illustrating my invention attached between the dolly roll and supply bobbins thereof.

Fig. 2 is a plan view of a portion of the twisting frame having my invention attached, shown in Fig. 1.

Fig. 3 is a side elevation of my improved selective trapping or cutting device.

Fig. 4 is a plan view thereof with the top plate thereof removed and illustrating how each respective pivoted lever thereof is connected with the opposite strand.

Fig. 5 is a rear elevational view thereof.

Fig. 6 is a longitudinal sectional view thereof taken along the line 6—6 of Fig. 4.

Fig. 7 is a longitudinal view thereof generally similar to Fig. 6 in which the ends of the levers themselves are shaped into thread breaking edges and eliminating the pivoted cutting or trapping arms shown in the other embodiment and having cutting instead of trapping edges.

Fig. 8 is a cross sectional view through a spinning frame showing my invention attached to a portion thereof.

In the drawings, wherein like characters of reference indicate like parts throughout, 10 generally indicates a selective trapping or cutting device for use in twisting, winding, spinning, or like machines, constructed in accordance with my invention.

My invention is adapted to be used where strands from two sources of supply are combined

by means or mechanism into a single strand and where it is desirable on breakage of one strand to selectively break the other strand and to provide a device which is at all times positive in its action. I have shown in Fig. 1 my invention mounted on a twisting frame 12 having the bracket 14 projecting upwardly therefrom, a twisting dolly roll 16 rotatably mounted thereon and a yarn guide 18 for guiding the twisted yarn onto the revolving bobbin 20, each of the two strands of yarn, 28^a and 28^b being led from the respective supply bobbins 22^a and 22^b. I have shown in Fig. 8 my invention applied to a spinning frame, the threads being led from the respective supply bobbins 22^a and 22^b through my improved trapping or cutting device 10, under the usual upper draft rolls 16' thereof, and through the guide 18 in a single thread 30 from said draft rolls 16'. On the spinning frame, however, the lower draft rolls 24 are mounted on the stand 26. The bracket 14 for supporting my improved selective trapping or cutting device 10 projects upwardly from said stand 26. Thus as shown in Fig. 1 the dolly roll 16 forms the twisting means, whereas in Fig. 8 the draft rolls 16' and 24 form the draft or twisting means. Thus the strands 28^a and 28^b in either embodiment are led from their respective supply bobbins 22^a and 22^b through my improved selective trapping or cutting device 10 through the twisting or draft means 16 or 16' on the machine on which my invention is employed, namely, in the two embodiments shown the dolly roll 16 shown in Fig. 1 and the draft rolls 16' and 24 shown in Fig. 8 from which means there emerges a single strand 30 conducted through the guide 18 and onto the bobbin 20.

My improved selective trapping or cutting device per se includes the yarn guide means 32 shaped to keep a pair of strands from adjacent sources of supply separate, and to space them the desired distance apart for threading on the hooked portions, a pair of selective means, such as the levers 34^a and 34^b one for each respective strand 28^a and 28^b each having a hooked portion 36^a and 36^b adapted to be supported by one of said yarn strands and a strand breaking portion 38^a and 38^b preferably adapted to function against said yarn guide means 32 or other portion of the frame to positively cut or trap said opposite strand on breakage of its respective strand. Each respective lever is provided with a hooked portion 36^a and 36^b supported by the strand opposite to the one overlying it whereby its respective strand breaking portion may break the respective opposite strand. I also provide means 42 to simultaneously thread said hooked portions 36^a and 36^b on said respective yarn strands 28^a and 28^b in combination therewith (to be described in more detail later). I also preferably provide in combination therewith means 44 including a hook portion 46 supported by the single twisted or wound strand 30 beyond said twisting or drafting means 16 of said machine adapted on breakage of said single strand to actuate both said selective means, namely, both trapping edges 38^a and 38^b to cut or trap both of said spaced strands 28^a and 28^b to prevent snarls or tangles, etc. in the respective twisting or draft means 16 thereof on breakage of said single strand 30.

In my improved embodiment my improved selective trapping or cutting device 10 is preferably constructed as follows: Said device comprises an open ended strand receiving box member 49 having means 48 depending from the base 50 thereof for securement thereto on said machine, thus in the preferred embodiments shown by means of the bolt 52 to the bracket 14, as shown in Figs. 1 and 8, and the side walls 54, one of said side walls being provided with the stop means 56 projecting laterally from one side thereof. The pivot pin 58 is transversely mounted in suitable holes on said side walls 54 near the rear end of said member 49 and in my preferred embodiment I preferably provide the pivot lugs 60 provided with the pivot holes 62 projecting rearwardly therefrom to receive the pivot pin. I also provide my improved device with a top wall 64 having depending lugs 66 provided with the pivot holes 68 for also pivotally mounting said top wall on said pivot pin 58 in order that the entire top wall may be raised up for cleaning the inside of my improved box-like device 10 as shown in dotted lines in Fig. 3. Means such as the upstanding edges 67 of said side walls are provided to frictionally engage said top wall to retain it against the upper edges of said side walls. Said top wall 64 is also provided with the two adjacent holes 70^a and 70^b therein, each laterally spaced and longitudinally offset from each other and with the strand guide 32 preferably projecting obliquely upwardly and rearwardly from the rear end of said top wall 64, being shaped as shown in Fig. 5 with the lateral slot 72 in one side thereof to receive the two yarn strands 28^a and 28^b and to hold them in spaced apart relationship on each side of the enlarged center slot 74 thereof.

As the selective means adapted to be supported by each respective yarn strand to break the opposite strand I preferably employ a pair of levers 34^a and 34^b respectively each pivotally mounted on opposite ends of said pivot pin 58 within said box-like member 49 and each having a strand receiving hook 36^a and 36^b respectively projecting upwardly therefrom from the heavier power arms 76^a and 76^b thereof through the laterally opposite holes 70^a and 70^b respectively in said top wall 64 to engage the laterally opposite strands 28^a and 28^b. Said levers 34^a and 34^b respectively are also provided with the upwardly projecting work arms 78^a and 78^b respectively adapted to actuate one respective cutting edge 38^a or 38^b respectively preferably against the under surface of said guide 32 to break the opposite strand when said power arm 76^a or 76^b thereof respectively drops on breakage of a respective strand 28^a or 28^b. As shown in Fig. 7 said cutting or trapping edges 38^a and 38^b are preferably placed on the upstanding portions of said work arms 78^a and 78^b respectively. In the preferred embodiment shown, however, I have found it desirable in order to affect better leverage to provide the supplemental pair of bent arms 80^a and 80^b each provided respectively with the cutting edges 38^a and 38^b on the upper ends thereof pivotally mounted on opposite sides of said pivot pins 63 and having the inner portions thereof adapted to be abutted by the upwardly projecting ends respectively of said lever work arms 78^a or 78^b to respectively break said opposite thread on respective movement thereof.

As the preferred embodiment of means to simultaneously thread the hook portions 36^a and 36^b of said levers 34^a and 34^b on the respective threads 28^a and 28^b, I provide a bar 84 transversely pivotally mounted on said side walls below said lever power arms 76^a and 76^b provided with a handle 86 projecting from one end thereof and having means such as a thin plate 88 projecting radially therefrom to abut both said lever power arms on pivotal movement thereof to

move said hooks 36[a] and 36[b] upwardly through the respective holes 70[a] and 70[b] to be hooked onto the overlying strands or yarn 28[a] and 28[b] and on further movement thereof to the position shown in Fig. 6 to move said means 88 free of said weighted power arms 76[a] and 76[b] to permit said hooks 36[a] and 36[b] of said levers 34[a] and 34[b] each to be supported by its respective strand 28[a] and 28[b] alone, whereby on breakage of one strand the heavier respective lever power arm 76[a] or 76[b] may drop to actuate the respective work arm 78[a] or 78[b] thereof to actuate said cutting or trapping edge 38[a] or 38[b] to break said other strand 28[a] or 28[b] respectively.

As the preferred embodiment of means 44, including a hook portion 46 supported by the single twisted or wound strand 30 beyond said twisting or draft means 16 of said machine adapted on breakage of said strand 30 to actuate both said selective means 38[a] and 38[b] to cut or trap both of said spaced strands 28[a] and 28[b], I provide a rectangular open box-surrounding yoke 90 having the side walls thereof also independently mounted on said bar 84, said yoke being provided with a rear work arm cross bar 92 adapted to abut and raise upwardly against said guide means 32, said lever work arms 78[a] and 78[b] as shown in Fig. 7, or said upwardly bent arms 80[a] and 80[b] as shown in the other figures and having a heavier power arm 94 projecting forwardly from said yoke 90 being supported by the single, twisted or wound strand 30 beyond the twisting of draft means 16 of said machine adapted on breakage of said strand 30 to drop to raise the work arm 92 thereof to abut both cutting or trapping arms 80[a], 80[b], or 78[a] or 78[b] to raise both trapping or cutting edges 38[a] or 38[b] against said guide means 32 or other suitable portion of the machine to break both strands.

I have found out in practice that if a trapping edge as shown in the preferred embodiment be employed, the running of the mechanism 16 will cause a breakage of the thread if it be permanently trapped between the cutting edge 38[a] or 38[b] and the guide means 32, but I may, if desired as shown in Fig. 7 employ a cutting edge in place of a trapping edge. While I have found that a better leverage may be attained by using the inwardly bent arms 80[a] and 80[b], I may also as shown in Fig. 7 eliminate these arms and extend the work arms 78[a] and 78[b] of said levers 34[a] and 34[b] to do the actual selective cutting or trapping, and I may if desired eliminate the cage or box described.

It is understood that my invention is not limited to the specific embodiments shown and various deviations may be made therefrom without departing from the spirit and scope of the appended claims.

What I claim is:

1. A selective trapping or cutting device for use in twisting, winding, spinning or like machines, comprising an open ended strand receiving box member having a base, means on the base thereof for securement thereto to said machine, upstanding side walls, one having stop means projecting laterally from one side thereof, a pivot pin mounted transversely thereof near the rear end thereof and pivot lugs projecting rearwardly therefrom and a top wall pivotally mounted for cleaning purposes on said pivot pin, having means to normally retain it against the upper edges of said side walls, and having two adjacent holes therein, laterally spaced and longitudinally offset from each other and a strand guide shaped to keep a pair of strands from adjacent sources of supply separated projecting rearwardly from the rear end thereof, a pair of levers, each pivotally mounted intermediate its ends adjacent one end of said pivot pin within said member and having an upwardly projecting work arm and a strand receiving hook projecting upwardly from the heavier power arm thereof through the laterally opposite hole in said top wall to engage the laterally opposite strand, a pivot pin mounted transversely between said side plate pivot lugs, a pair of upwardly bent arms each terminating in a trapping or cutting edge pivotally mounted on opposite sides of said pivot pin and having the inner portion thereof adapted to be abutted by the upwardly projecting end of its respective lever work arm adapted to actuate said cutting or trapping edge against the under surface of said guide to break the opposite strand when said power arm thereof drops on breakage of a strand, a bar transversely pivotally mounted on said side walls below said lever power arms having a handle projecting from one end thereof and having means projecting therefrom to abut said lever power arms adapted on pivotal movement thereof to move said hooks upwardly through their respective holes to be hooked onto the overlying strands of yarn, and on further movement thereof to move said means free of said weighted power arms and said handle against said stop means to permit said hooks and levers to be supported by the strands alone whereby on breakage of one strand thereof said heavier lever power arm may drop to actuate the work arm thereof to break said other strand, a rectangular box surrounding yoke, having the side walls thereof independently mounted on said bar, a rear work arm cross bar underlying said upwardly bent arms and a heavier power arm projecting forwardly from the power arm portion thereof having a hook projecting upwardly therefrom to be supported by the single twisted or wound strand beyond the twisting or draft means of said machine adapted on breakage of said strand to raise said work arm to abut both cutting or trapping arms to raise them both against said guide means to break both strands.

2. A selective trapping or cutting device for use in twisting, winding, spinning or like machines, comprising an open ended strand receiving box member having a base, means on the base thereof for securement thereto to said machine, upstanding side walls, a pivot pin mounted transversely thereof near the rear end thereof, and a top wall having two adjacent holes therein, laterally spaced and longitudinally offset from each other and a strand guide shaped to keep a pair of strands from adjacent sources of supply separated projecting rearwardly from the rear end thereof, a pair of levers, each pivotally mounted intermediate its ends adjacent one end of said pivot pin within said member and having a strand receiving hook projecting upwardly from the heavier power arm thereof through the laterally opposite hole in said top wall to engage the laterally opposite strand and an upwardly projecting work arm arranged to cause cutting or trapping of the opposite strand against said guide to break the opposite strand when said power arm thereof drops on breakage of a strand.

3. A selective trapping or cutting device for use in twisting, winding, spinning or like machines, comprising an open strand receiving member having a base, means on the base there-

of for securement thereto to said machine, upstanding side walls having a pivot pin mounted transversely thereof near the rear end thereof and pivot lugs projecting rearwardly therefrom and a top wall having two adjacent holes therein laterally spaced and longitudinally offset from each other and a strand guide shaped to keep a pair of strands from adjacent sources of supply separated projecting rearwardly from the rear end thereof, a pair of levers, each pivotally mounted intermediate its ends adjacent one end of said pivot pin within said member and having an upwardly projecting work arm and a strand receiving hook projecting upwardly from the heavier power arm thereof through the laterally opposite hole in said top wall to engage the laterally opposite strand, a pivot pin mounted transversely between said side plate pivot lugs, a pair of upwardly bent arms each terminating in a trapping or cutting edge pivotally mounted on opposite sides of said pivot pin and having the inner portion thereof adapted to be abutted by the upwardly projecting end of its respective lever work arm to actuate said cutting or trapping edge against the under surface of said guide to break the opposite strand when said power arm thereof drops on breakage of a strand.

4. A selective trapping or cutting device for use in twisting, winding, spinning or like machines, comprising an open ended strand receiving box member having a base, means on the base thereof for securement thereto to said machine, upstanding side walls, a pivot pin mounted transversely thereof near the rear end thereof and a top wall pivotally mounted for cleaning purposes on said pivot pin, having means to normally retain it against the upper edges of said side walls and having two adjacent holes therein, laterally spaced and longitudinally offset from each other and a strand guide shaped to keep a pair of strands from adjacent sources of supply separated projecting rearwardly from the rear end thereof, a pair of levers, each pivotally mounted intermediate its ends adjacent one end of said pivot pin within said member and having a strand receiving hook projecting upwardly from the heavier power arm thereof through the laterally opposite hole in said top wall to engage the laterally opposite strand and an upwardly projecting work arm arranged to cause a cutting or trapping of the opposite strand against the under surface of said guide to break the opposite strand when said power arm thereof drops on breakage of a strand.

5. A selective trapping or cutting device for use in twisting, winding, spinning or like machines, comprising an open ended strand receiving box member having a base, means on the base thereof for securement thereto to said machine, upstanding side walls, one having stop means projecting laterally from one side thereof, a pivot pin mounted transversely thereof near the rear end thereof and a top wall having two adjacent holes therein, laterally spaced and longitudinally offset from each other and a strand guide shaped to keep a pair of strands from adjacent sources of supply separated projecting rearwardly from the rear end thereof, a pair of levers, each pivotally mounted intermediate its ends adjacent one end of said pivot pin within said member and having a strand receiving hook projecting upwardly from the heavier power arm thereof through the laterally opposite hole in said top wall to engage the laterally opposite strand and an upwardly projecting work arm arranged to cause cutting or trapping of the opposite strand against the under surface of said guide to break the opposite strand when said power arm thereof drops on breakage of a strand, a bar transversely pivotally mounted on said side walls below said lever power arms having a handle projecting from one end thereof and having means projecting therefrom to abut said lever power arms adapted on pivotal movement thereof to move said hooks upwardly through their respective holes to be hooked onto the overlying strands of yarn, and on further movement thereof to move said means free of said weighted power arms and said handle against said stop means to permit said hooks and levers to be supported by the strands alone whereby on breakage of one strand thereof said heavier lever power arm may drop to actuate the work arm thereof to break said other strand.

6. A selective trapping or cutting device for use in twisting, winding, spinning or like machines, comprising an open ended strand receiving box member having a base, means on the base thereof for securement thereto to said machine, upstanding side walls, a pivot pin mounted transversely thereof near the rear end thereof and a top wall having two adjacent holes therein laterally spaced and longitudinally offset from each other and a strand guide shaped to keep a pair of strands from adjacent sources of supply separated projecting rearwardly from the rear end thereof, a pair of levers, each pivotally mounted intermediate its ends adjacent one end of said pivot pin within said member and having a strand receiving hook projecting upwardly from the heavier power arm thereof through the laterally opposite hole in said top wall to engage the laterally opposite strand and an upwardly projecting work arm arranged to cause cutting or trapping of the opposite strand against the under surface of said guide to break the opposite strand when said power arm thereof drops on breakage of a strand, a rectangular box surrounding yoke, having the side walls thereof independently mounted on said bar, a rear work arm cross bar underlying said cutting arms and a heavier power arm projecting forwardly from the power arm portion thereof having a hook projecting upwardly therefrom to be supported by the single twisted or wound strand beyond the twisting or draft means of said machine adapted on breakage of said strand to raise said work arm to abut both cutting or trapping arms to raise them both against said guide means to break both strands.

7. A selective trapping or cutting device for use in twisting, winding, spinning or like machines, comprising an open ended strand receiving box member having a base, means on the base thereof for securement thereto to said machine, upstanding side walls, a pivot pin mounted transversely thereof near the rear end thereof and a top wall having two adjacent holes therein laterally spaced and longitudinally offset from each other and a strand guide shaped to keep a pair of strands from adjacent sources of supply separated projecting rearwardly from the rear end thereof, a pair of levers, each pivotally mounted intermediate its ends adjacent one end of said pivot pin within said member and having a strand receiving hook projecting upwardly from the heavier power arm thereof through the laterally opposite hole in said top wall to engage the laterally opposite strand and an upwardly projecting work arm arranged to cause cutting or trapping of the opposite strand against the under surface of said

guide to break the opposite strand when said power arm thereof drops on breakage of a strand, a supplemental pivotably mounted lever having a rear work arm cross bar underlying said lever work arms and a heavier power arm having a hook projecting upwardly therefrom to be supported by the single twisted or wound strand beyond the twisting or draft means of said machine adapted on breakage of said strand to raise said work arm to abut both cutting or trapping arms to raise them both against said guide means to break both strands.

8. A selective trapping or cutting device for use in twisting, winding, spinning or like machines, comprising a pivot pin, a strand guide shaped to keep a pair of strands from adjacent sources of supply separated, a pair of levers, each pivotally mounted intermediate its ends adjacent one end of said pivot pin and having an upwardly projecting work arm and a strand receiving hook projecting upwardly from the heavier power arm thereof to engage the laterally opposite strand, a pivot pin mounted transversely below said guide, and a pair of upwardly bent arms each terminating in a trapping or cutting edge pivotally mounted on opposite sides of said pivot pin and having the inner portion thereof adapted to be abutted by the upwardly projecting end of its respective lever work arm adapted to actuate said cutting or trapping edge against said guide to break the opposite strand when said power arm thereof drops on breakage of a strand, a bar transversely pivotally mounted below said lever power arms having a handle projecting from one end thereof and having means projecting therefrom to abut said lever power arms adapted on pivotal movement thereof to move said hooks upwardly to be hooked onto the overlying strands of yarn, and on further movement thereof to move said means free of said weighted power arms and said handle to permit said hooks and levers to be supported by the strands alone whereby on breakage of one strand thereof said heavier lever power arm may drop to actuate the work arm thereof to break said other strand, a supplemental pivotally mounted lever having a rear work arm cross bar underlying said upwardly bent arms and a heavier upwardly projecting power arm having a hook projecting upwardly therefrom to be supported by the single twisted or wound strand beyond the twisting or draft means of said machine adapted on breakage of said strand to raise said work arm to abut both cutting or trapping arms to raise them both against said guide means to break both strands.

9. A selective trapping or cutting device for use in twisting, winding, spinning or like machines, comprising a pivot pin, a strand guide shaped to keep a pair of strands from adjacent sources of supply separated, a pair of levers, each pivotally mounted intermediate its ends adjacent one end of said pivot pin and having an upwardly projecting work arm and a strand receiving hook projecting upwardly from the heavier power arm thereof to engage the laterally opposite strand, a pivot pin mounted transversely below said guide and a pair of upwardly bent arms each terminating in a trapping or cutting edge pivotally mounted on opposite sides of said pivot pin and having the inner portion thereof adapted to be abutted by the upwardly projecting end of its respective lever work arm to actuate said cutting or trapping edge against said guide to break the opposite strand when said power arm thereof drops on breakage of a strand.

10. A selective trapping or cutting device for use in twisting, winding, spinning or like machines, comprising a pivot pin, a strand guide shaped to keep a pair of strands from adjacent sources of supply separated, a pair of levers, each pivotally mounted intermediate its ends adjacent one end of said pivot pin and having a strand receiving hook projecting upwardly from the heavier power arm thereof to engage the laterally opposite strand and an upwardly projecting work arm arranged to cause cutting or trapping of the opposite strand against the under surface of said guide to break the opposite strand when said power arm thereof drops on breakage of a strand, a bar transversely pivotally mounted below said lever power arms having a handle projecting from one end thereof and having means projecting therefrom to abut said lever power arms adapted on pivotal movement thereof to move said hooks upwardly to be hooked onto the overlying strands of yarn, and on further movement thereof to move said means free of said weighted power arms and said handle to permit said hooks and levers to be supported by the strands alone whereby on breakage of one strand thereof said heavier lever power arm may drop to actuate the work arm thereof to break said other strand.

11. A selective trapping or cutting device for use in twisting, winding, spinning or like machines, comprising a pivot pin, a strand guide shaped to keep a pair of strands from adjacent sources of supply separated, a pair of levers, each pivotally mounted intermediate its ends adjacent one end of said pivot pin and having a strand receiving hook projecting upwardly from the heavier power arm thereof to engage the laterally opposite strand and an upwardly projecting work arm arranged to cause cutting or trapping of the opposite strand against said guide to break the opposite strand when said power arm thereof drops on breakage of a strand, a supplemental pivotably mounted lever having a rear work arm cross bar underlying said lever work arms and a heavier power arm having a hook projecting upwardly therefrom to be supported by the single twisted or wound strand beyond the twisting or draft means of said machine adapted on breakage of said strand to raise said work arm to abut both cutting or trapping arms to raise them both against said guide means to break both strands.

12. In a selective trapping or cutting device for use in twisting, winding, spinning or like machines, having twisting or draft means, yarn guide means shaped to keep a pair of strands from adjacent sources of supply separate, a pair of selective means each having a hook portion adapted to be supported by one of said yarn strands and a strand breaking portion adapted to function against said yarn guide means to positively cut or trap said opposite strand on breakage of its respective strand, means to simultaneously thread said hook portions on said yarn strands and means, including a hook portion supported by the single twisted or wound strand beyond said twisting or draft means of said machine, adapted on breakage of said strand to actuate both said selective means to cut or trap both of said spaced strands.

13. In a selective trapping or cutting device for use in twisting, winding, spinning or like machines, having twisting or draft means, yarn guide means shaped to keep a pair of strands from adjacent sources of supply separate, a pair of selective means each having a hook portion adapted to be supported by one of said yarn

strands and a strand breaking portion adapted to function against a portion of said machine to positively cut or trap said opposite strand on breakage of its respective strand, means to simultaneously thread said hook portions on said yarn strands and means, including a hook portion supported by the single twisted or wound strand beyond said twisting or draft means of said machine, adapted on breakage of said strand to actuate both said selective means to cut or trap both of said spaced strands.

HENRY OWENS.