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 AUTOMATIC ROD LEADING MACHINE.
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951,996.

Patented Mar. 15, 1910.

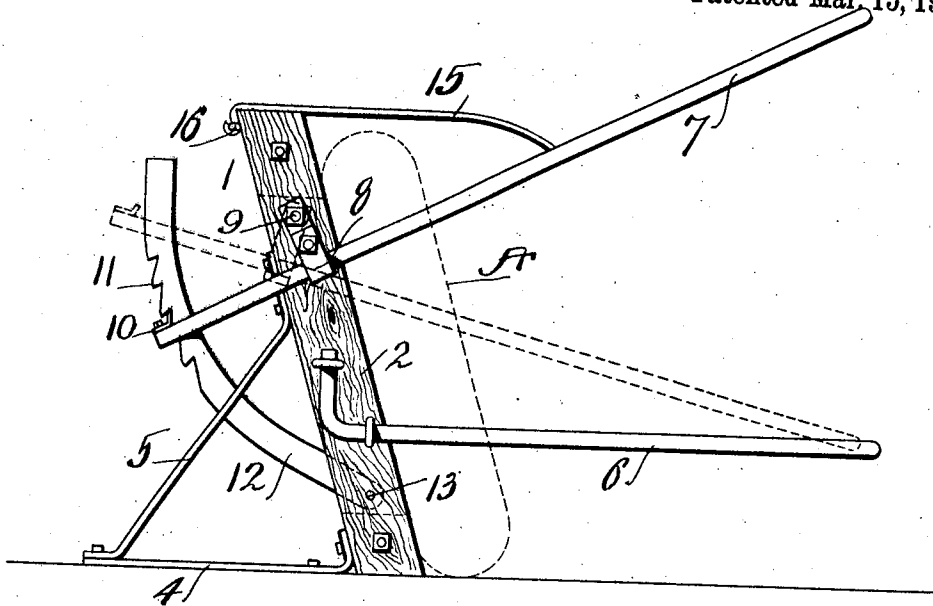


FIG. 1

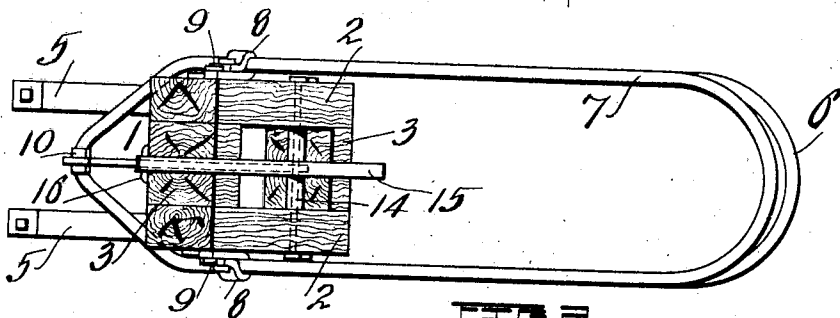


FIG. 2

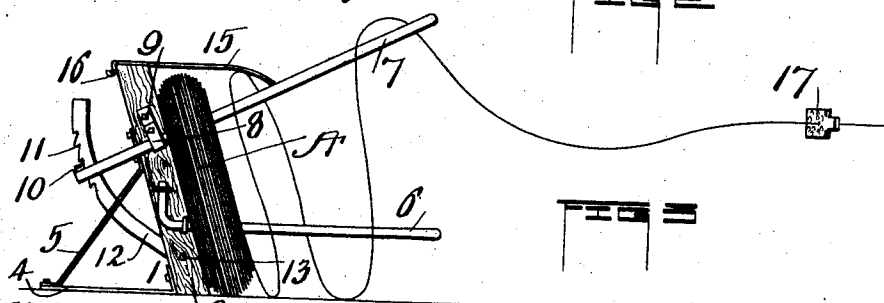


FIG. 3

Witnesses,
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UNITED STATES PATENT OFFICE.

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AUTOMATIC ROD-LEADING MACHINE.

951,996.

Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, JOSEPH W. SOMMER, a citizen of the United States, residing at Peoria, in the county of Peoria and State of Illinois, have invented certain new and useful Improvements in Automatic Rod-Leading Machines; and I do hereby declare that the following is a full, clear, and exact description of the invention, which will enable others skilled in the art to which it appertains to make and use the same.

This invention has reference to an automatic rod leading machine; and has for its object suitable supporting means for a bundle of rods, and guiding and controlling means for said rods as the same are unwound and drawn from the bundle.

This invention consists essentially of a rest for sustaining a bundle of rods in an upright position; a fixed and a swingably supported arm connected with said rest over which a bundle of rods is placed; a ratchet arm pivotally connected with said rest and adapted to hold the swinging arm aforesaid in adjusted positions, and a guide and controlling finger to prevent more than one coil leaving the bundle and the arms aforesaid at a time.

For a further and full description of the invention herein and the merits thereof, and also to acquire a knowledge of the details of construction, of the means for effecting the result, reference is had to the following description and drawings hereto attached.

While the essential and characteristic features of the invention are susceptible of modification, still the preferred embodiment of the invention is illustrated in the accompanying drawings, in which:—

Figure 1 shows a side elevation of my rod leading machine; the dotted lines showing the manner of adjusting the swinging arm so as to place on the same and said fixed arm a bundle of rods, and also showing a bundle of rods; Fig. 2 is a plan of what is seen in Fig. 1, with the exception of the bundle of rods; Fig. 3 is a side elevation, somewhat reduced, showing in outline a bundle of rods and how the same is led from the machine and to a die through which the same is drawn.

Like characters of reference indicate corresponding parts throughout the figures.

It has been a common practice in mills

where wire is drawn, to place a bundle of rods in an upright position against some suitable support and a suitable distance away from and in front of a die through which it is intended the rods shall be drawn. With this method of guiding or leading rods to the dies, it is necessary to have an operator or helper for each die, who straightens out the coils as they are unwound from the bundle and who leads the same to the dies. The reason for this is, that without some suitable controlling means for the coils, more than one coil will unwind or uncoil itself from the bundle at a time, making it difficult to get the rods to the die without becoming very much entangled, and the operators or helpers are at times unable to properly control the unwinding of the coils; which results in serious accident, by the rods kinking or becoming crossed and looped in such a way as to wrap about the hand or arm of the operator, who, unless he can stop the operation of the block around which the rods are being wrapped as they are drawn through the die, will be seriously hurt. All such objectionable features are obviated in the use of my machine; the rods being so supported that only one coil may pass from the machine at a time, and the operator may give his entire attention to the dies and see that the machine is supplied as the bundle of rods are unwound from the machine.

The rest referred to is indicated as 1, and preferably composed of the inclined up-rights 2 connected at their upper and lower ends by cross-heads 3. To support the rest in the position shown in the drawings straps 4 are employed secured at one end to the lower ends of uprights 2, and with the outer ends of the straps 4 are connected the lower ends of reaches 5 which are secured at their upper ends to the uprights 2, providing a brace, as shown. The machine may then be portable and very easily fixed in any suitable place.

6 denotes an arm, bowed at its outer end, which is a suitable distance from the rest 1 and the inner opposite ends of said arm are preferably fixedly secured to the sides of the uprights 2.

7 refers to an arm, which in some respects is similar to the arm 6; however, the arm 7 instead of having an immovable connection with the rest 1, is swingably attached there-

to. The arm 7 has a bowed forward portion and the rear side portions thereof pass through loops or hangers 8 which are pivotally attached at 9 to the uprights 2; the rear end of said arm 7 has a looped or united end to which is secured a lip or piece of metal 10 having an upturned portion, adapted to engage the ratchet teeth 11 of a ratchet bar 12, which is pivotally connected to a rod 13 carried through the uprights 2 and spacing collars or sleeves 14 on said rod 13 hold the ratchet bar central of the support, see Fig. 2. By reason of the swingable connection which the arm 7 has with the rest, the ratchet bar is curved as shown, to conform to the sweep of the rear end of said arm 7.

To place a bundle of rods, which I have indicated as A, on the arms 6 and 7 and support the same against the rest 1, the ratchet bar 12 is swung inwardly toward the rest 1, which will release the lip 10 of the arm 7 from the teeth of the bar, and the arm 7 will fall, or may be lowered into the position shown in dotted lines in Fig. 1, the bundle A may then be slipped on over the looped ends of the arms 6 and 7 and up against the front face of the rest 1, when the forward end of arm 7 may be raised, allowing the lip 10 to engage the teeth of the bar 12, locking the arm 7 raised and preventing the bundle becoming dislodged; and to control and guide the rods as they are unwound from the bundle, a finger 15 which is hooked through an eye 16 attached to the rear face of the rest 1, has its front free end overlying the bundle A and between the sides of the arm 7. The end of a rod is passed through the bowed end of the arm 7, thence through a die 17, (somewhat as seen in Fig. 3) and attached to a block (not shown) on which the rods are wrapped as drawn. As the rods are drawn from the bundle and the coils separate themselves from the same they engage with the end of the finger 15, which retards the coils and allows only one coil to pass off of the arms 6 and 7 at a time, and as each coil is reeled off of the arms 6 and 7 the finger 15 will rise to allow the same to pass therefrom, and falling again in time to engage the next and succeeding coil.

Having thus fully described my invention, what I claim and desire to secure by Letters Patent of the United States, is:—

1. In a device of the character described, the combination of a rest, a plurality of arms connected with said rest, one of said arms so connected to the rest that its free end may be brought toward the free end of the other.

2. In a device of the character described, the combination of a rest normally in an inclined position, an arm fixed thereto and extending therefrom, and an arm swingably

attached to said rest and overlying said fixed arm, and adapted to be moved toward and from said fixed arm.

3. In a device of the character described, the combination of a rest normally in an inclined position, an arm fixed thereto and extending therefrom, an arm swingably attached to said rest and overlying said fixed arm and adapted to be moved toward and from said fixed arm, and means for locking said swingable arm when adjusted.

4. In a device of the character described, the combination of a rest, of superimposed arms attached thereto, each having bowed outer ends, and one of said arms adapted to be swung on the said rest, toward and from the other of said arms.

5. In a device of the character described, the combination of a rest, superimposed arms suitably connected to said rest, to adapt a bundle of rods to be placed thereon, means for connecting the upper arm to the rest in such a manner that its free end may be brought toward the free end of the other arm, said upper arm also arranged to have the rods drawn off around and through the same.

6. In a device of the character described, the combination of a rest, a plurality of arms attached to the rest for supporting a bundle of rods against said rest, and means projecting into the path of the release of the coils from the bundle of rods to prevent more than one coil from said bundle to leave the supporting arms at a time.

7. In a device of the character described, the combination of a rest, superimposed arms attached to said rest, and one of said arms swingable on the rest toward and from the other arm, a ratchet bar, and means on the swingable arm adapted to engage said bar.

8. In a device of the character described, the combination of a rest, of superimposed arms attached to said rest, one of said arms swingable on the rest toward and from the other arm and having an extension extending to the rear thereof, a ratchet bar, and means on the rear extension of the swingable arm adapted to engage said bar.

9. In a device of the character described, the combination of a rest, comprising an upright member, a plurality of arms for sustaining a bundle of rods in an upright position against said rest, means for adjusting one of said arms so as to place a bundle of rods thereon, and means for engaging the successive coils as they are drawn from the bundle which will prevent more than one coil from said bundle leaving said arms at a time.

10. In a device of the character described, the combination of an inclined support, a fixed arm extending therefrom, a swingable arm also extending from said support, and

movable toward and from the other arm, and means for holding the free ends of said arm apart.

11. In a device of the character described, the combination of an inclined support, a fixed arm extending therefrom, a swingable arm also extending from said support, and movable toward and from the other arm, means for holding the free ends of said arms apart, and a controlling finger connected with said support and extending forward from the same and above said arms.

12. In a device of the character described, the combination of a support, an arm formed of a looped rod having its ends attached immovably to said support, a second arm swingably attached to said support and having portions in front and rear of said support, means adapted to engage the rear portion of said swinging arm for locking said arm when its forward end is raised, and a controlling finger attached to said support and extending forwardly therefrom.

13. In a device of the character described, the combination of a support, an arm extending from and immovably connected to

said support, a second arm attached to said support and extending therefrom and arranged to swing toward and from the fixed arm, a ratchet bar pivotally attached to said support, and means on said swingable arm adapted to engage the teeth of said ratchet bar.

14. In a device of the character described, the combination of a support, an arm extending from and immovably connected to said support, a second arm attached to said support and extending therefrom and arranged to swing toward and from the fixed arm, a ratchet bar pivotally attached to said support, and means on said swingable arm adapted to engage the teeth of said ratchet bars, and a finger connected at one end to the upper portion of said support, its free end overlying said movable arm.

In testimony whereof I affix my signature, in presence of two witnesses.

JOSEPH W. SOMMER.

Witnesses:

CHAS. W. LA PORTE,
JEANETTE M. ANDERSON.