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MACHINE FOR TRIMMING TRANSSPLIT RIMS.

APPLICATION FILED FEB. 16, 1916.

1,260,314. Patented Mar. 26, 1918.

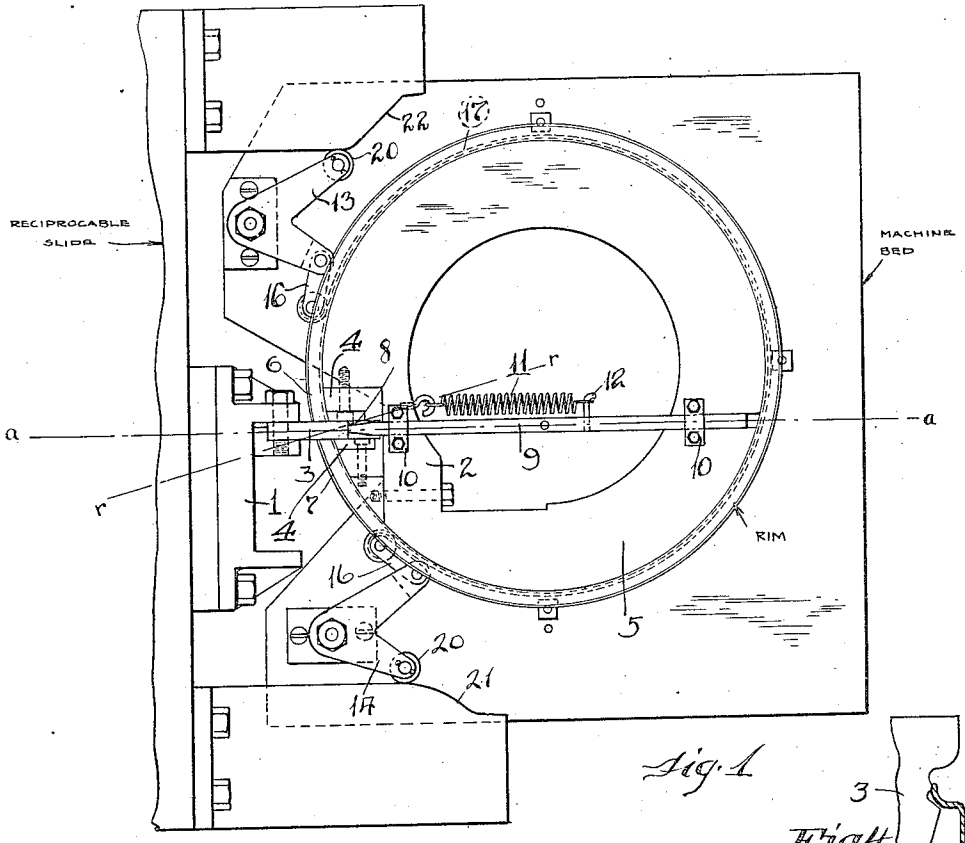


Fig. 1

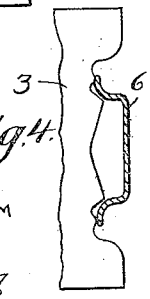


Fig. 4.

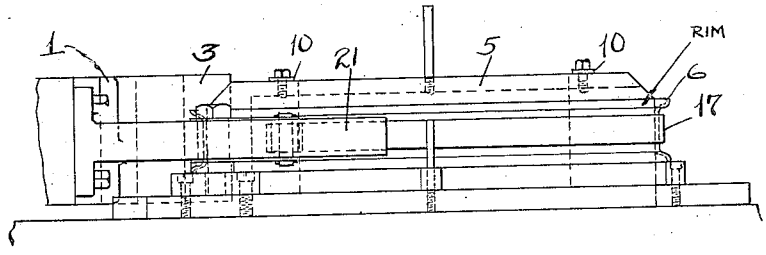


Fig. 3

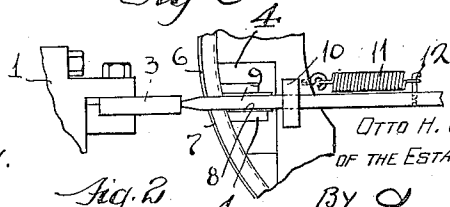


Fig. 2

WITNESSES=
O. M. Kappler.
Thos. H Fay

INVENTOR
OTTO H. JOBSKI, ADMINISTRATOR
OF THE ESTATE OF RICHARD S. BRYANT,
DECEASED.
BY Fay, Oberlin & Fay
ATTORNEYS-

UNITED STATES PATENT OFFICE.

RICHARD S. BRYANT, DECEASED, LATE OF CLEVELAND, OHIO, BY OTTO H. JOBSKI, SPECIAL ADMINISTRATOR, OF CLEVELAND, OHIO, ASSIGNOR, BY MESNE ASSIGNMENTS, TO THE STANDARD PARTS COMPANY, OF CLEVELAND, OHIO, A CORPORATION OF OHIO.

MACHINE FOR TRIMMING TRANSSPLIT RIMS.

1,260,314. Specification of Letters Patent. Patented Mar. 26, 1918.

Application filed February 16, 1916. Serial No. 78,668.

To all whom it may concern:

Be it known that I, OTTO H. JOBSKI, a citizen of the United States, and a resident of Cleveland, county of Cuyahoga, and State of Ohio, special administrator of the estate of RICHARD S. BRYANT, late a citizen of the United States and resident of Cleveland, Ohio, deceased, believe said RICHARD S. BRYANT to have invented a new and useful Improvement in Machines for Trimming Transsplit Rims, of which the following is a specification, the principle of the invention being herein explained and the best mode in which it was contemplated applying said principle, so as to distinguish it from other inventions.

The present improvements relate to a machine for trimming the ends of a transsplit annulus, the machine being designed particularly for use in trimming the ends of a transsplit member constituting the removable part of the present so-called "demountable" rim for vehicles. To the accomplishment of the foregoing and related ends, said invention, then, consists of the means hereinafter fully described and particularly pointed out in the claims.

The annexed drawing and the following description set forth in detail certain mechanism embodying the invention, such disclosed means constituting, however, but one of the various mechanical forms in which the principle of the invention may be used.

In said annexed drawing:—

Figure 1 is a plan view of the improved machine, showing the parts in one operative relation; and Fig. 2 is a similar view, showing only the punch and die parts and these in a different operative position; Fig. 3 is a side elevation of the machine, and Fig. 4 is a side elevation on a larger scale of a detail of the machine, specifically the shearing or cutting tool, with the rim shown, in section, adjacent thereto.

The present improvements are illustrated as incorporated in a bulldozer, which is a type of machine of well-known construction and so requires no general description. The only parts of the machine proper that are shown in the drawing are the machine bed and reciprocable slide, the latter being provided with a tool-carrying member 1, which moves back and forth with the slide relatively to a stationary member 2, the construction of which will be more specifically set forth in connection with the following description. Suitably attached to the member 1 is a shearing or cutting tool 3 adapted to contact and cut off the adjacent ends of a transsplit rim or like article. The form of this tool is immaterial so far as the present invention is concerned, that shown in Fig. 4 being merely illustrative. The rim or like article, the ends of which are to be trimmed, is designed to be mounted upon a suitably proportioned mandrel 5, which forms, in effect, an integral part of the stationary member 2 above referred to. The member 2 is provided with fixed die members 4, 4 spaced apart and so disposed as to coöperate with the shear member 3, as clearly shown in Fig. 1. In other words, the shear tool has a double cutting edge and so is adapted to simultaneously cut off or trim both ends of such a transsplit rim when the latter is properly positioned on the mandrel, as hereinafter explained.

The mandrel 5 is of slightly larger external diameter than the desired internal diameter of the rim, and hence the rim when placed on the mandrel will have its two ends 6 and 7 spaced slightly from each other. An aperture 8 is provided in the stationary member 2 adjacent to the point at which these ends are positioned, as shown in Fig. 1, this opening being normally closed by means of a plunger 9, which is reciprocably mounted in the mandrel and normally extends out past the edge of the same, serving as a locating stop against which the untrimmed ends of the rim are positioned. This locating or positioning member 9 is mounted in suitable brackets 10 and is normally maintained in its extended position by a spring 11 attached to the rod by a hook 12 and to the forward bracket 10.

On either side of the ends of the rim are two pivotally mounted bell-crank levers 13 and 14, the inner arms of which carry short links 16 adapted to be pressed against the rim and having attached thereto a circular strap of metal 17 which extends around the greater part of the mandrel on either side of the guide 9. The outer arms of the two bell cranks 13 and 14 are also provided with rollers 20 which are contacted by cams

21 and 22 carried by the same reciprocable slide that carries the tool holding member 1.

The function of the strap 17 is to press the rim uniformly and at all points against the mandrel and of course the contact of cams 21 and 22 with the rollers 20 is suitably timed to produce this action just prior to the operation of the shear or cutter 3.

When the rim is initially positioned upon the mandrel, the relation of such shear and the guide 9 is as shown in Fig. 2; thereupon the member 1 is moved toward the die member, the shear 3 in coöperation with the complementary parts 4, 4 cutting off the two ends of the rim and moving the positioning member 9 back during this operation, as shown in Fig. 3. However, before the shear 3 engages the rim, the cams 21 and 22 actuate the levers 13 and 14 to force or rather draw such rim snugly against the mandrel at all points, thus insuring that the rim shall be of exactly the desired circumference after being cut off by the shear.

It will be seen that the shear operates on a line *a*—*a* that intersects the radial line *r*—*r*, and so forms a segment across the annulus. The latter is accordingly upon a corresponding plane, as is preferable in order that the cut or split between the rim-ends in the finished product may be in a slant, *i. e.* at an angle to a radial center line. Obviously, however, the exact line of operation of this member is immaterial, save for the consideration just mentioned. It should also be noted that while the illustrated machine has been referred to as a bulldozer, in its general character, it is a matter of indifference whether the reciprocable slide be disposed to move in a horizontal plane as in a machine of this class, or in a vertical plane, as in an ordinary vertical press.

Other modes of applying the principle of this invention may be employed instead of the one explained, change being made as regards the mechanism herein disclosed, provided the means stated by any of the following claims or the equivalent of such stated means be employed.

What is claimed as new is:—

1. In a machine of the class described, the combination of coöperative, relatively movable and stationary members, one of said members being provided with a mandrel adapted to receive a transsplit annulus thereon of smaller size than said mandrel with the ends in position to be sheared upon cooperative action of said members.

2. In a machine of the class described, the combination of coöperative, relatively movable and stationary members, one of said members being provided with a mandrel adapted to receive a transsplit annulus thereon of smaller size than said mandrel with the ends in position to be sheared upon cooperative action of said members, and means operated by said other member for pressing such annulus uniformly against such mandrel at all points.

3. In a machine of the class described, the combination of a mandrel of greater diameter than the desired diameter of an annulus positioned thereon, a movable guide mounted on said mandrel between the ends of such annulus, and means for shearing off the ends of such annulus against said mandrel.

4. In a machine of the class described, the combination of a mandrel of greater diameter than the desired diameter of an annulus positioned thereon, said mandrel having an opening therein and the ends of such annulus extending over the edges of such opening, a movable member normally extending through such opening to position the ends of such annulus, and means for moving said member and shearing off the ends of such annulus against said mandrel.

5. In a machine of the class described, the combination of a mandrel of greater diameter than the desired diameter of an annulus positioned thereon, said mandrel having an opening therein and the ends of such annulus extending over the edges of such opening, a movable member normally extending through such opening to position the ends of such annulus, means for moving said member and shearing off the ends of such annulus against said mandrel, and resilient means for returning said guide to normal position.

6. In a machine of the class described, the combination of a mandrel of greater diameter than the desired diameter of an annulus positioned thereon, said mandrel having an opening therein, over which the ends of such annulus will extend, a movable member normally extending through such opening to position the ends of such annulus, a shear member adapted to move said positioning member and shear off the ends of such annulus against said mandrel, and means operated in unison with said shear member for forcing such annulus tightly against said mandrel.

7. In a machine of the class described, the combination of a mandrel of greater diameter than the desired diameter of an annulus positioned thereon, said mandrel having an opening therein, over which the ends of such annulus will extend, a movable member normally extending through such opening to position the ends of such annulus, a shear member adapted to move said positioning member and shear off the ends of such annulus against said mandrel, pivoted arms contacting such annulus on either side of said guide member, and cams carried by said shear member for actuating said arms to force such annulus tightly against said mandrel.

8. In a machine of the class described, the

combination of a mandrel of greater diameter than the desire diameter of an annulus positioned thereon, said mandrel having an opening therein with sides parallel to each other and lying at an angle to a radius of said mandrel therethrough, a movable member normally extending through opening to position the ends of such annulus, and a shear member operating in alinement with such opening for shearing off the ends of such annulus.

9. In a machine of the class described, the combination of a mandrel of greater diameter than the desired diameter of an annulus positioned thereon, said mandrel having an opening therein, over which the ends of such annulus will extend, a movable member normally extending through such opening to position the ends of such annulus, a shear member for moving said positioning member and shearing off the ends of such annulus, against said mandrel, a pivoted lever on either side of such opening in said mandrel, a strap connected to said levers and passing around said mandrel and annulus thereon, and cams carried by said shear member adapted to actuate said levers to draw said strap against such annulus and force the latter tightly against said mandrel.

Signed by me, this 11th day of February, 1916.

OTTO H. JOBSKI,
Administrator of the estate of Richard S. Bryant, deceased.

Attested by:—
R. C. COOLEY,
M. H. WILLIAMS.

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