O. A. SMITH.

REEL FOR METAL WORKING MACHINES.

APPLICATION FILED MAR. 21, 1911.

1,020,460. Patented Mar. 19, 1912.

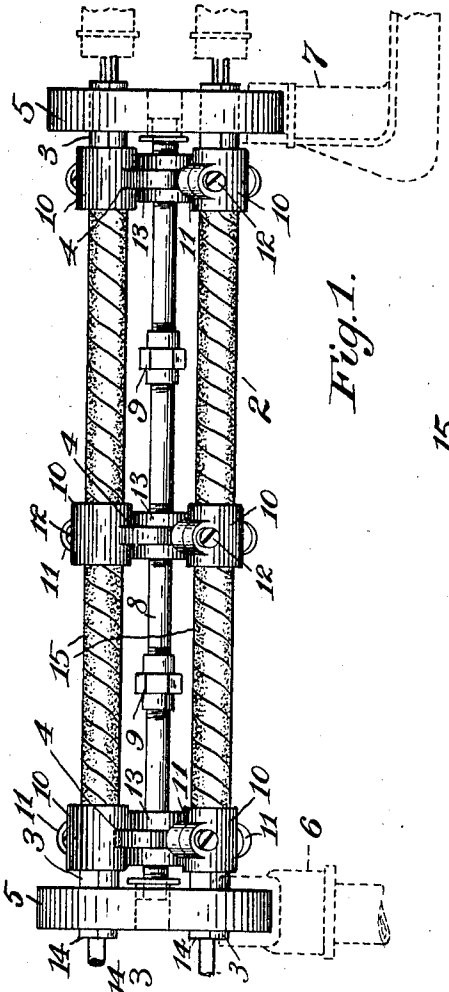

Fig. 1.

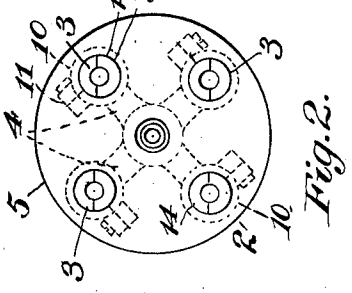

Fig. 2.

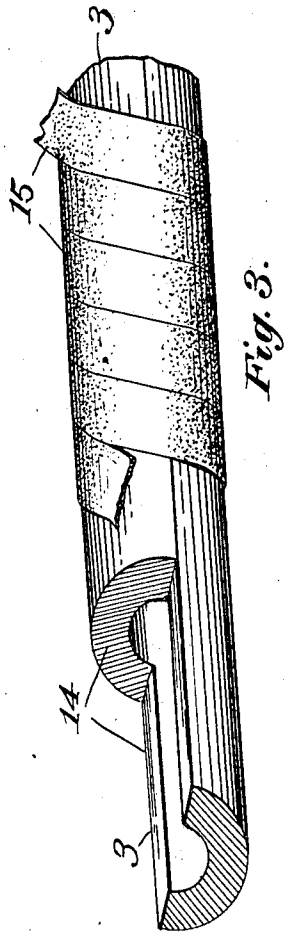

Fig. 3.

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UNITED STATES PATENT OFFICE.

OSCAR A. SMITH, OF CLEVELAND, OHIO, ASSIGNOR TO THE NATIONAL-ACME MANUFACTURING COMPANY, OF CLEVELAND, OHIO, A CORPORATION OF OHIO.

REEL FOR METAL-WORKING MACHINES.

1,020,460. Specification of Letters Patent. Patented Mar. 19, 1912.

Application filed March 21, 1911. Serial No. 615,971.

To all whom it may concern:

Be it known that I, OSCAR A. SMITH, a citizen of the United States, residing at Cleveland, in the county of Cuyahoga and State of Ohio, have invented certain new and useful Improvements in Reels for Metal-Working Machines, of which the following is a specification.

This invention relates to reels for supporting the stock as it is fed to metal working machines, such as automatic multiple spindle screw machines, the object of the invention being to provide a reel in the use of which the noise heretofore present in reels as ordinarily constructed, owing to the vibration of the stock, is avoided, and which also will not mutilate or injure the corners of the stock fed therethrough when the same is of hexagon or square shape, such for instance as brass rods.

A further object of the invention is the provision of an improved reel in which the several members thereof are connected and supported in an improved manner.

In the drawings accompanying and forming part of this specification, Figure 1 is a side view of this improved reel; Fig. 2 is an end view thereof; and Fig. 3 is a detail perspective, partly sectional view of one of the reel tubes.

Similar characters of reference indicate corresponding parts throughout the figures of the drawings.

Heretofore reels for supporting the stock, such as rods and tubes, have been made of metal, in consequence of which the vibration of the stock as it passes therethrough is such that the noise is almost deafening, especially where a number of multiple spindle machines are being used at the same time. In these machines the reel is formed of a plurality of metal tubes, usually four, so that in each machine four rods are being fed simultaneously to the tools, and as each of these long rods vibrates considerably during the feeding movement it follows that the noise is such that an ordinary conversation can not be very well carried on in the shop. And not only this, but when a hexagon or square shaped rod, such for instance as a brass rod, is fed through each of the reel tubes the vibration is such that the corners of the rods are mutilated and injured. In order, therefore, to permit rods of various shapes and made of soft material to be fed through the reel without injury, and at the same time avoid the noise present heretofore in structures of this kind, I have provided an improved form of reel 2, which is shown herein as made up of a plurality, as for instance four, of tubes 3 connected by arms 4 and supported at their ends by reel rings 5, the outer one of which is usually carried by a suitable reel bracket or stand 6, while the inner one is carried by a bracket 7 extending from the end of the machine. The arms 4 are centrally connected by a rod or shaft 8, which is shown made of sections and coupled together by suitable couplings 9 turned on to the threaded ends of this axially located rod, and which rod also serves to connect the reel rings and hold them in the proper position relatively to each other.

The ends of the radially extending arms are provided with split sleeves 10 carrying lugs or ears 11 for the reception of threaded bolts 12 by means of which the arms are clamped on to the reel tubes. In the present instance three sets of radially located arms are provided, whereby the tubes are properly supported and maintained a predetermined distance apart and held against flexure, and the members of the centrally located rod or shaft are shown threaded into the hubs 13 of these sets of the radially located arms 4.

Each of the tubes of this reel is shown herein as made of a material softer than the stock to be fed therethrough, and in the present instance is shown made of wood, which prevents injury to the corners of a soft metal rod and at the same time tends somewhat to deaden the noise of the rod as it passes therethrough. These tubes are preferably made of a pair of semi-circular sections 14, whereby they may be made inexpensively and in a practicable manner. The two sections of the tube are secured together by winding the same with a suitable tape 15, such as insulating tape. While the wooden formed tubes, as stated, tend somewhat to deaden the noise, yet the formation thereof in this manner is not entirely sufficient for this purpose, but by winding them with tape in the manner shown, the tape in the present instance being wound on diagonally, practically all of the noise caused by the vibration of the stock as it passes through the tube is avoided, as has been demonstrated in prac-

tice. Of course, each tube could be made of any desired number of sections, but the construction shown herein is the preferable one.

I claim as my invention:

1. A reel for metal working machines, comprising a tube formed of a non-metallic material and covered with a soft material.

2. A reel for metal working machines, comprising a tube formed of a non-metallic material and made in sections connected together and covered with a softer material.

3. A reel for metal working machines, comprising a tube formed of a non-metallic material and made in sections connected together and having a fabric located exteriorly thereof around and along the same.

4. A reel for metal working machines, comprising a tube formed of a non-metallic material and made in sections connected together and having a fabric wound exteriorly thereon and comprising tape.

5. A reel for metal working machines, comprising a plurality of tubes, each consisting of wood having tape wound exteriorly thereon.

6. A reel for metal working machines, consisting of a plurality of tubes, each made up of longitudinally extending sections of wood secured together and a fabric covering thereon.

7. A reel for metal working machines, consisting of a plurality of tubes, each made up of longitudinally extending sections of wood secured together and having a fabric covering the exterior thereof.

8. A reel for metal working machines, consisting of a plurality of tubes, each made up of longitudinally extending sections of wood secured together and having a fabric covering the exterior thereof, said fabric consisting of a tape wound spirally around the tube.

9. A reel for metal working machines, comprising a pair of supporting rings, a plurality of tubes supported thereby and radially located arms carrying said tubes and having split sleeves clamped to the tubes.

10. A reel for metal working machines, comprising a pair of supporting rings, a plurality of tubes supported thereby, radially located arms carrying said tubes and having split sleeves clamped to the tubes, a shaft made in sections extending through the hubs of said sets of radially disposed arms, and means for coupling the sections of the shaft together.

11. A reel for metal working machines, comprising a pair of supporting rings, a plurality of tubes supported thereby, radially located arms carrying said tubes and having split sleeves clamped to the tubes, a shaft made in sections extending through the hubs of said sets of radially disposed arms, and means for coupling the sections of the shaft together, said sections of the shaft having threaded ends turned into the hubs of such arms.

Signed at Cleveland, Ohio, this 13th day of March, 1911.

OSCAR A. SMITH.

Witnesses:
A. W. HOPKINS,
W. R. MITCHELL.