



Spin a diabolo for fun, Sam Brown, 1932.



Extract to Popular Mechanics:

- Description and fabrication
- Method and tricks



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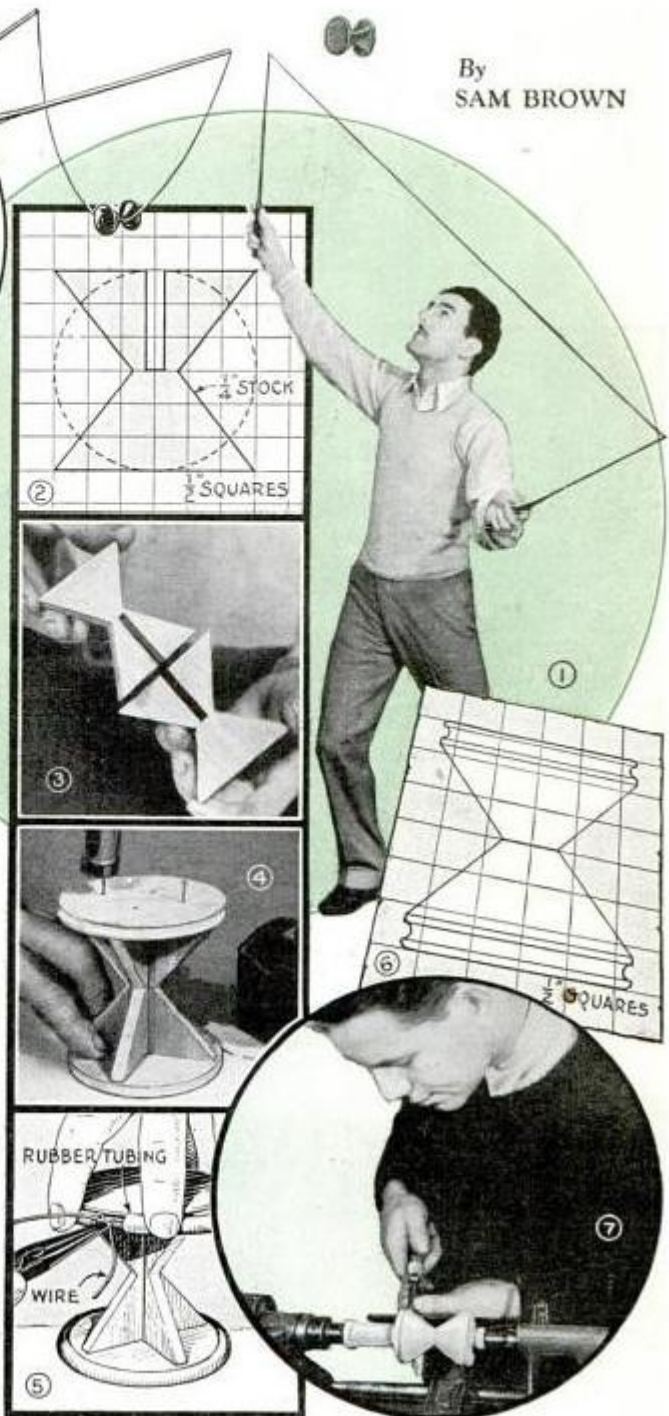


SPIN A DIABOLO FOR FUN

By
SAM BROWN

YOU have probably seen some clever stage entertainer use a diabolo as part of his juggling routine, or perhaps you remember when this toy was as popular as the "yo-yo." At any rate, spinning a diabolo is really a fascinating pastime.

To make one, cut from $\frac{1}{4}$ -in. wood two pieces of the size and shape shown in Fig. 2. Also, cut two circular pieces, 3 in. in diameter, as indicated by the dotted line. That done, you will find that the two V-shaped pieces slip neatly together, as in Fig. 3, offering a flat surface on which can be nailed two disks of wood, as pictured in Fig. 4. These circular pieces are grooved all around so that lengths of $\frac{1}{4}$ -in. rubber tubing can be used around the edges as a finish. Fig. 5 shows how the tubing is held in place by means of a light wire run through the center, and how the ends of the wire are twisted together tightly.





Best results are obtained by cutting the tube about $\frac{3}{8}$ in. oversize so that the joining edges will squeeze up snugly. Of course, the whole thing can be turned on a lathe if you happen to have one. If so, follow the template in Fig. 6 in order to get the proper size. In either case, care must be taken to have the finished diabolo balance perfectly or it simply won't spin. The rest of the equipment consists of two sticks, as in Fig. 8, fitted with a 5-ft. length of $\frac{1}{8}$ -in. cotton cord, which is threaded through the smaller end of each stick as shown in the detail.

Now that you have the outfit, let's see what can be done in the way of making

the diabolo spin. Start by placing it on the floor, directly over the cord and well along to the right hand, as in Fig. 9. Lifting up with the right hand sets the diabolo in motion along the floor. Then lift both sticks higher to clear the ground, keeping the diabolo rotating in one direction by moving the right hand up and down with a swift but not jerky movement, as indicated in Fig. 10. Don't rush. It is a common fault when learning a stunt like this to make the required movements too swiftly. Remember that the diabolo must gain momentum; it cannot be made to spin with lightning speed on the first whiplike stroke. Once you get the thing going, watch for any leaning tendencies and correct these immediately. This can be done by following the instructions given in Figs. 11 and 12—pulling the left stick in toward the body when the diabolo leans in, and pushing it outward when the diabolo starts leaning out. The right hand only moves up and down, the left being almost motionless except for the in-and-out

movement necessary to balance the diabolo. A half-hour practice session will find you the master. Then you can start on the more fascinating business of shooting the diabolo high into the air, as shown in the first photograph, and catching it again on its return. There's really nothing to this beyond keeping your eye on the spinning bit of wood and going at it smoothly. Once you have acquired some skill, you will find that an excellent game can be played by two players, standing some 10 or 15 ft. apart and throwing the diabolo between them.

Coil Springs on Tent Ropes

Small coil springs, tied in the center of tent ropes, will provide elasticity to keep the stakes from being pulled out when the ropes and tent shrink upon getting wet. It is a good idea to use steel or iron stakes, as they can be driven into the ground more easily and will hold better than wooden ones.