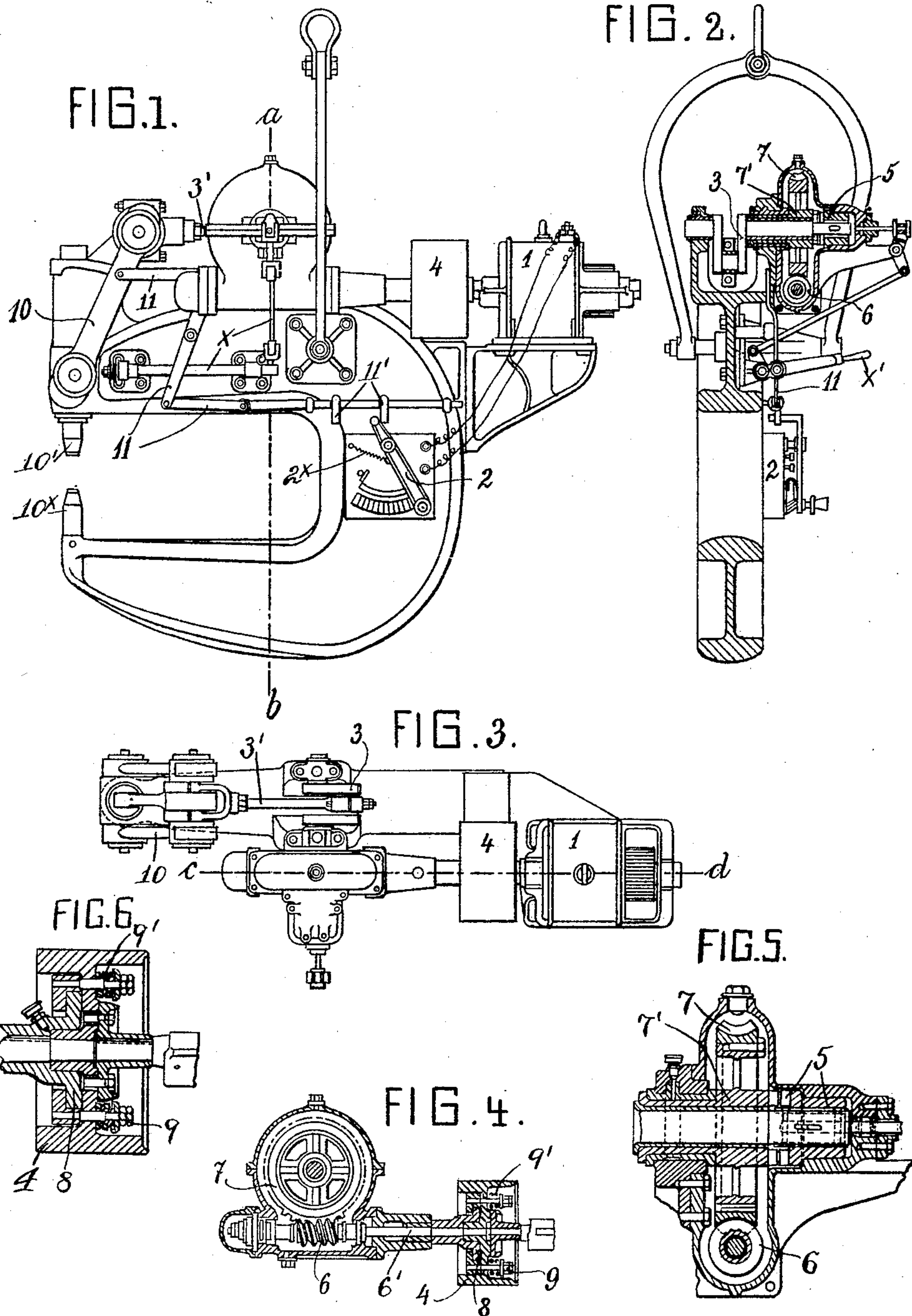


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RIVETING MACHINE.  
APPLICATION FILED OCT. 29, 1908.

940,533.

Patented Nov. 16, 1909.



WITNESSES

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# UNITED STATES PATENT OFFICE.

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## RIVETING-MACHINE.

940,533.

Specification of Letters Patent. Patented Nov. 16, 1909.

Application filed October 29, 1908. Serial No. 460,077.

*To all whom it may concern:*

Be it known that I, RUDOLF JAY, subject of the German Emperor, residing at 11 Haydnstrasse, Leipzig, Germany, have invented new and useful Improvements in Riveting-Machines, of which the following is a specification.

This invention relates to a machine with fly wheel and direct or indirect driving mechanism, said machine being operated preferably by a toggle lever and adapted for riveting and the like.

The invention is characterized essentially by the distinctive feature that the operation or working pressure proper is produced merely by the fly wheel, a positive connection between tool and driving mechanism of the latter being cut off before producing the operation or working pressure proper and reestablished only some time after said operation or pressure has been produced. Besides the positive connection between tool and flywheel, a regulable (frictional) resistance is preferably arranged for preventing an overloading of the machine stand and other parts.

Referring to the accompanying drawing, wherein a constructional form of the invention is shown by way of example, Figure 1 is a side elevation; Fig. 2 is a sectional view on line *a—b* of Fig. 1; Fig. 3 is a plan of Fig. 1 and Fig. 4 is a sectional view on line *c—d* of Fig. 3. Fig. 5 is an enlarged view of part of Fig. 2 showing the clutch mechanism, and Fig. 6 is an enlarged view of part of Fig. 4 showing the frictional clutch arrangement.

The electro-motor 1 is connected with the fly wheel 4 and this fly wheel 4 is frictionally connected with the shaft 6' by means of the coupling 8 which comprises the pins 9 and springs 9'. The shaft 6' is provided with a worm 6 which engages with the worm wheel 7 mounted on the sleeve 7', which rotates on the crank shaft 3.

5 is a coupling keyed on the shaft 3 and adapted to have sliding movement thereon and to be thrown into and out of connection with the sleeve 7' by means of the links X

and the handle X'. The crank shaft 3 is connected with the toggle joint 10 by means of the shaft 3'.

10' is the reciprocating die and 10<sup>x</sup> is a stationary die. The electromotor 1 is started and stopped by the switch 2, which is connected with the toggle levers 10 by means of the links 11. One of the links 11 has stops 11' thereon which engage with the switch 2 to move it into and out of operative position. These stops simply start the switch to move it into inoperative position as the movement is finished by the spring 2<sup>x</sup>.

The frictional coupling 8 can be so adjusted by the pins 9 that only a maximum pressure necessary for riveting is exerted. In case of greater resistance the coupling slips and thus all danger of breaking the machine is obviated. During this slipping the motor 1 would have to move relatively the two frictional faces of the coupling 8 which are under certain pressure. The motor cannot overcome this resistance because it is only of comparatively small proportions and the main work is performed by the centrifugal mass or body. The motor would thus continue to run and thus its efficiency would be seriously affected. This drawback is overcome by operating the switch 2 from the toggle levers 10. The switch is cut out some time before the maximum pressure is exerted and is thrown in again when this maximum pressure is overcome.

Having now particularly described and ascertained the nature of my said invention and in what manner the same is to be performed, I declare that what I claim and wish to secure by Letters Patent is:—

1. In a machine of the class described, an intermittently operating tool, a driving shaft therefor, a fly wheel frictionally carried by said shaft, a motor for operating said fly wheel, and means for temporarily stopping the motor at the time the tool encounters the resistance of the work, substantially as described.

2. In a machine of the class described, an intermittently operating tool, a driving

shaft therefor, a fly wheel carried by said  
shaft, a motor for operating the shaft, a  
starting device for the motor, means for au-  
tomatically disconnecting the motor and  
5 shaft when the tool encounters the resistance  
of the work and an operating connection be-  
tween the disconnecting means and starter.

In testimony whereof I have signed my  
name to this specification in the presence  
of two subscribing witnesses.

RUDOLF JAY.

Witnesses:

RUDOLPH FRICKE,  
ALFRED MÜLLER.