

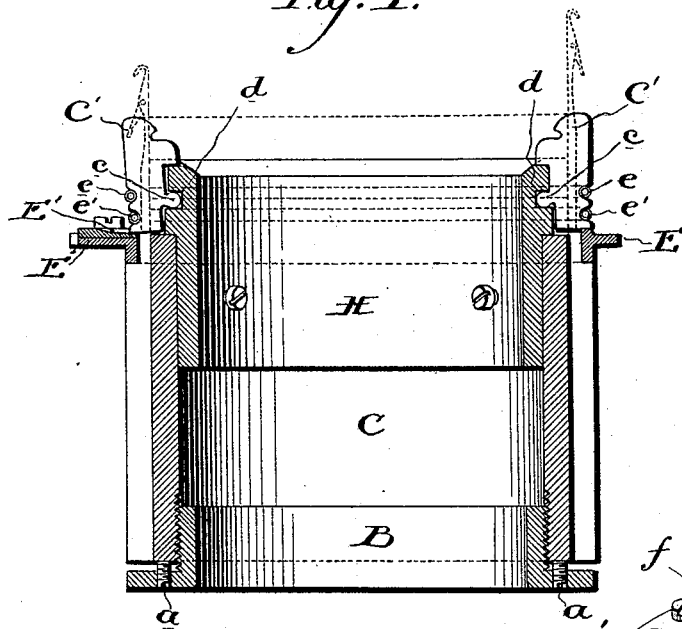
(No Model.)

W. DIEBEL.  
KNITTING MACHINE.

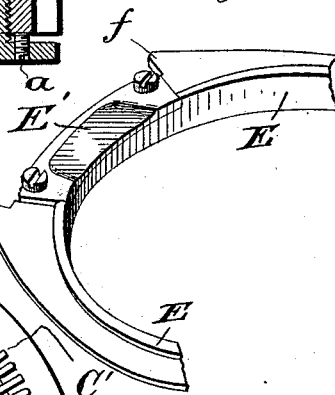
No. 492,539.

Patented Feb. 28, 1893.

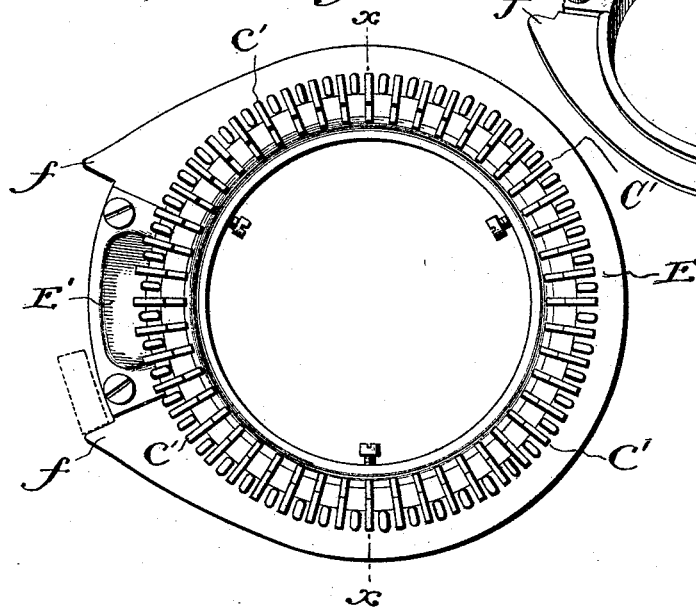
*Fig. 1.*



*Fig. 3.*



*Fig. 2.*



WITNESSES:

Frank J. Bussan  
J. A. Dunmore

INVENTOR:

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by his atty  
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# UNITED STATES PATENT OFFICE.

WILLIAM DIEBEL, OF PHILADELPHIA, PENNSYLVANIA, ASSIGNOR TO FRED-  
ERICK BUCKHALTER AND VICTOR DRIESBACH.

## KNITTING-MACHINE.

SPECIFICATION forming part of Letters Patent No. 492,539, dated February 28, 1893.

Application filed August 25, 1891. Serial No. 403,663. (No model.)

*To all whom it may concern:*

Be it known that I, WILLIAM DIEBEL, a citizen of the United States, residing at Philadelphia, county of Philadelphia, and State of Pennsylvania, have invented a new and useful Improvement in Knitting-Machines, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, which form a part of this specification.

The object of my invention is to provide a knitting cylinder with yielding sinkers to hold the loops in position and which will move to permit the passage down of the loops at that point in the head where the knitting cams are situated, each sinker being pivoted to the head and capable of independent movement.

I will now describe a machine embodying my invention.

In the accompanying drawings—Figure 1 is a sectional elevation of a knitting head. Fig. 2 is a plan view of the same. Fig. 3 is a perspective view of the cam on which the sinkers rest.

C represents the needle cylinder grooved for the reception of the needles. Within the needle cylinder is fitted a cylinder H grooved for the reception of the sinkers, each of which is provided with a pivot nut *c* fitting with a groove *d* in the cylinder. These sinkers are held to the cylinder by circular coiled springs *e e'*, the spring *e* holding the sinkers in position, the lower spring *e'* tending to force the lower ends of the sinkers in toward the cylinder and throw back the head of the sinker. This movement is resisted by a cam E resting on the top of the knitting cylinder. The cam, however, has a depressed portion *E'*, as shown more clearly in Fig. 3, which is situated immediately above the knitting cams. The cam E moves with the knitting cams, and as the depressed portion *E'* passes under the sinker it permits them to drop to the position shown on the left-hand side of Fig. 1 and per-

mits the drawing down of the loop formed on the needles. The cam E is provided with two projections *f, f*, between which fits the staff of the thread guide and by which it is carried around the cylinder.

I do not intend to limit myself to the specific construction of the parts shown, except wherein they are specifically claimed.

Having now fully described my invention, what I claim as new, and desire to protect by Letters Patent, is—

1. In a knitting machine, in combination, a needle cylinder, sinkers provided with pivot points, a spring adapted to force the lower ends of said sinkers inward, and a cam one portion of which is constructed and adapted to resist the action of the spring and another portion constructed and adapted to allow the action of the spring.

2. In a knitting machine, in combination, a needle cylinder, sinkers provided with pivot points, a spring adapted to force the lower end of said sinker inward, and a cam E, provided with a depressed portion *E'*.

3. In a knitting machine, in combination, a needle cylinder, sinkers provided with pivot points, springs, as *e, e'*, resting against said sinkers, and a cam one portion of which is constructed and adapted to resist the action of spring *e'*, and the other portion adapted to allow the action of spring *e'*.

4. In a knitting machine, a needle cylinder, sinkers provided with pivot points and a spring as *e'* which encircles all the sinkers.

5. In a knitting machine, a needle cylinder, sinkers provided with pivot points and springs as *e, e'*, which encircle all of said sinkers substantially as described.

In testimony of which invention I have hereunto set my hand.

WM. DIEBEL.

Witnesses:

LEWIS R. DICK,  
FRANK S. BUSSER.