and writing

$$u = u_2 + u_3 x + u_4 x^2 + \ldots$$

we find

$$u = 1 + (2x + 3x^2)u + (x^2 + x^3)u' ;$$

that is

$$(-1 + 2x + 3x^2)u + (x^2 + x^3)u' = -1 ;$$

or, what is the same thing,

$$u' + \left(\frac{3}{x} - \frac{1}{x^2}\right)u = -\frac{1}{x^2(1+x)} ,$$

whence

$$u = x^{-3} e^{-\frac{1}{x}} \int \frac{-x}{1+x} e^{\frac{1}{x}} dx ,$$

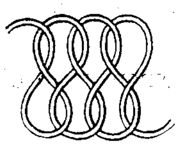
but the calculation is most easily performed by means of the foregoing equation of differences, itself obtained from the differential equation written in the foregoing form,

$$(-1 + 2x + 3x^2)u + (x^2 + x^3)u' = -1 .$$

6. On Amphicheiral Forms and their Relations. By Professor Tait.

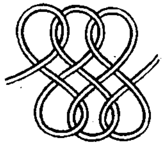
(*Abstract.*)

If a cord be knotted, any number of times, according to the pattern below

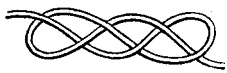


it is obviously *perverted* by simple *inversion*. Hence, when the free ends are joined it is an amphicheiral knot. Its simplest form is that of 4-fold knottiness. All its forms have knottiness expressible as $4n$.

The following pattern gives amphicheiral knots of knottin
$2+6n$.



And on the following pattern may be formed amphicheiral kno
of all the orders included in $6n$ and $4+6n$.

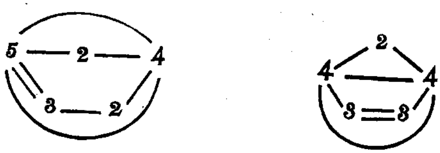


Among them these forms contain all the even numbers, so that
there is at least one amphicheiral form of every even order.

Many more complex forms are given in the paper, several of
which are closely connected with knitting, &c.

In one of my former papers I gave examples of type-symbol
which individually represent two perfectly different knots.

I now give examples of the same knot represented by type-symbols which have neither right nor left-handed parts in common. One of the most remarkable of these is



which can be analysed (but not separated) into a combination of the two forms of the 4-fold amphicheiral knot.

The following Gentlemen were elected Fellows of the Society :—

William Jolly, H.M. Inspector of Schools, Inverness.
Rob. Milner Morrison, 21 Manor Place.
John Gibson, Ph.D., 12 Greenhill Gardens.
Chas. E. Underhill, B.A., M.B., 8 Coates Crescent.
Charles Edward Wilson, M.A., LL.D., 19 Palmerston Place.
George Carr Robinson, East Preston Street.